Addressing Harmful Bias and Eliminating Discrimination in Health Professions Learning Environments

Addressing Harmful Bias and Eliminating Discrimination in Health Professions Learning Environments

Proceedings of a conference sponsored by the Josiah Macy Jr. Foundation

Atlanta, Georgia ⋮ February 2020

CONTENTS

FOREWORD

HOLLY J. HUMPHREY, MD, MACP

The Josiah Macy Jr. Foundation has a rich history of convening conferences. These meetings bring together experts for meaningful discussions on important topics that result in widely shared recommendations intended to improve health and health care for all of us. Our 2020 conference was held in Atlanta, Georgia, and its subject was *Addressing Harmful Bias and Eliminating Discrimination in Health Professions Learning Environments*. This was the first Macy Conference since I became president of the Foundation, and I very much wanted us to produce thoughtful, actionable recommendations that are relevant, timely, and practical. I believe we succeeded.

We gathered during the last week of February, a diverse group of 44 health professions leaders, educators, and students from across the country who came together to recommend ways to advance diversity, equity, and inclusion in our health professions schools and clinical training sites. The conference topic was chosen and honed by our conference planning committee. We chose it because a feeling of urgency has been building around the issue of harmful bias and discrimination in health care. This issue touches everyone and ultimately impacts not only learners and faculty, but patients and their families as well. Research has shown that we must address all forms of discrimination in health care if we are to achieve excellence in the system, including improved quality of care and better outcomes for patients as well as improved well-being and satisfaction for health care professionals. Further, the topic is tied closely to the Foundation's strategic plan, which prioritizes promoting diversity, equity, and belonging in health care learning environments.

The events in 2020 that followed the conference would only further underscore the central importance of this topic. When the conferees gathered in late February and began developing recommendations, the COVID-19 pandemic was just taking hold in the United States (the Biogen conference in Boston, later dubbed a coronavirus "super-spreader" event, took place the same week as the Macy conference in Atlanta). The onset of the pandemic in the United States was closely followed by a wave of protests against lethal police brutality and systemic racism in the US and

around the world that continued throughout the summer and into the fall. While it's still too early to declare them as such, these developments—the pandemic and the protests, both of which disproportionately affect people of color—may in the future be deemed watershed events in American history—certainly in the history of racism in America.

Within this context, the conference and the recommendations contained in this monograph have taken on greater significance. At a time when institutions and individuals should be prioritizing the dismantling of systemic racism, the conference recommendations provide leaders, administrators, faculty, and students in the health professions with a kind of road map for mitigating harmful bias and eliminating discrimination. The recommendations provide specific, actionable steps grouped into the following four categories:
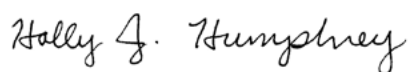
- Build an institutional culture of fairness, respect, and anti-racism by making diversity, equity, and inclusion top priorities
- Develop, assess, and improve systems to mitigate harmful biases and eliminate racism and all forms of discrimination
- Integrate equity into health professions curricula, explicitly aiming to mitigate the harmful effects of bias, exclusion, discrimination, and all other forms of oppression
- Increase the numbers of health professions students, trainees, faculty, and institutional administrators and leaders from historically marginalized and excluded populations

Also contained in this monograph are four papers and three case studies that were commissioned for the conference. The papers and case studies served as the basis for the conferees' discussions, and they provide readers with important background information. You will also find highlights of the frank discussions that occurred at the conference.

I wish to express my deepest gratitude to the members of our conference planning committee: Ann Kurth, Dana Levinson, Dale Okorodudu, Valerie Montgomery Rice, Fidencio Saldaña, Steve Schoenbaum, Mark Schuster, and Clarence Braddock. They expertly guided Macy staff in pulling the conference together; led the conferees through hours of thought-provoking discussions from which the recommendations were produced; and contributed content expertise and editing skills to the development of the materials that emerged from the conference. We kept them

very busy and are grateful for their efforts. Thank you, too, to those who authored the commissioned papers and case studies. Finally, the conference would not have been possible without the tireless efforts and many dedicated hours spent by the Foundation's staff and consultants, including Peter Goodwin, Karen Kourt, Yasmine Legendre, and Teri Larson.

I believe that 2020 has presented everyone who participates in health professions education with an unmistakable imperative—a mandate—to immediately advance diversity, equity, and inclusion in our learning environments. We must address harmful bias and eliminate discrimination. To that end, we have identified some of the steps that will take us in the right direction—toward the right side of history. Now we must act.

Holly J. Humphrey

Holly J. Humphrey, MD, MACP
President, Josiah Macy Jr. Foundation

AGENDA

3:00 – 6:00 pm	**Registration**
6:00 – 7:00 pm	**Welcome Reception**
7:00 – 9:30 pm	**Dinner with introductions of conferees**

TUESDAY, FEBRUARY 25, MORNING

7:00 – 8:00 am	**Breakfast available**
8:00 – 12:15 pm	**Plenary Session 1**
8:00 – 8:25 am	**Opening remarks**
8:25 – 9:10 am	**Discussion of themes from commissioned paper** *More than words: A vision to reduce bias and discrimination in the health professions learning environment* Camila Mateo **Moderators:** Ann Kurth and Steve Schoenbaum
9:10 – 10:05 am	**Discussion of themes from commissioned paper** *Addressing patient bias and discrimination against clinicians of diverse backgrounds* Sachin Jain and Pooja Chandrashekar **Moderators:** Dale Okorodudu and Mark Schuster
10:05 – 10:20 am	**Break**
10:20 – 11:05 am	**Discussion of themes from commissioned paper** *Acting wisely: Toward eliminating negative bias in medical education*

David Wilkes and Margaret Plews-Ogan
Moderator: Valerie Montgomery Rice

11:05 – 11:50 am   **Discussion of themes from commissioned paper**
*Medical education's wicked problem: Achieving
equity in assessment for medical learners*
Catherine Lucey and Karen Hauer
Moderators: Dana Levinson and Fidencio Saldaña

11:50 – 12:15 pm   **Charge to breakout groups**

TUESDAY, FEBRUARY 25, AFTERNOON

12:15 – 1:15 pm   **Lunch**

1:15 – 3:30 pm   **Breakout Session 1**

1:15 – 3:00 pm   **Breakout Sessions**
Conferees will break into four small groups around a
commissioned paper topic. Each group will identify
themes, objectives and resources that will be
important in ultimately making recommendations.
Each session will include a planning committee
member and a recorder.

**Breakout 1 More than words: A vision to reduce
bias and discrimination in the health professions
learning environment**
Moderators: Ann Kurth and Steve Schoenbaum

**Breakout 2 Addressing patient bias and
discrimination against clinicians of diverse
backgrounds**
Moderators: Dale Okorodudu and Mark Schuster

Breakout 3 Acting wisely: Toward eliminating negative bias in medical education
Moderator: Valerie Montgomery Rice

Breakout 4 Medical education's wicked problem: Achieving equity in assessment for medical learners
Moderators: Dana Levinson and Fidencio Saldaña

3:00 – 3:25 pm	**Break**
3:30 pm	**Bus departs from hotel lobby to National Center for Civil and Human Rights**
4:00 pm	**Arrive at National Center for Civil and Human Rights**
4:15 – 6:15 pm	**Plenary Session 2** **Case Study presentations, Report out from Breakout Groups, and general discussion of themes of the day to set agenda for the following day**

TUESDAY, FEBRUARY 25, EVENING

6:30 – 9:00 pm	**Reception & Dinner** National Center for Civil and Human Rights

WEDNESDAY, FEBRUARY 26, MORNING

7:30 – 8:30 am	Breakfast available
8:30 – 12:00 pm	Breakout Session 2
8:30 – 9:00 am	Brief recap of Day 1 and Charge to Breakout Groups
9:00 – 11:30 am	Five Breakout Groups

Breakout groups are organized around the areas where recommendations may need to be made in the report. The discussion should respond to and build on the themes, objectives and resource recommendations that emerged from Tuesday's commissioned papers and breakout groups. Each session will be facilitated by a member of the planning committee. Another member of the breakout group will be the recorder who will report to the plenary session. Each group will be responsible for a set of recommendations in this area and will begin to write the report in that area.

WEDNESDAY, FEBRUARY 26, AFTERNOON

12:00 – 1:00 pm	Lunch
1:00 – 4:30 pm	Plenary Session 3
1:00 – 3:00 pm	Report out from Breakout Groups
3:00 – 3:15 pm	Break
3:15 – 4:30 pm	Response to reports from Breakout Groups and identification of missing themes and recommendations

The group will begin to organize the first draft of the recommendations.

4:30 – 6:00 pm	Breakout Session 3
6:00 pm	Adjourn

WEDNESDAY, FEBRUARY 26, EVENING

6:30 – 8:30 pm	Reception and Dinner Trade Root Restaurant

THURSDAY, FEBRUARY 27, MORNING

7:30 – 8:30 am	Breakfast available
8:30 – 11:45 am	Plenary Session 4
8:30 – 9:15 am	Conference Conclusions and Recommendations
9:15 – 11:45 am	Final Session
11:45 – 12:00 pm	Summary Remarks Holly Humphrey
12:00 pm	Adjourn

Recommendation #1 | GROUP 1

ACTION ITEMS
1.
2.
3.
4.
5.
6.

"Build an institutional culture of respect and inclusion by making equity among all a top priority"

Recommendation 2 | GROUP 1

ACTION ITEMS

"Build an institutional culture of respect and inclusion by making equity among all a top priority."

CONFERENCE CONCLUSIONS AND RECOMMENDATIONS

Addressing Harmful Bias and Eliminating Discrimination in Health Professions Learning Environments

Dear Colleagues:

Not for the first time, Americans are peacefully protesting, calling for an end to structural racism and legalized oppression. The embers of change have been smoldering for decades—they never went away after the 1960s Civil Rights movement—and, in spring 2020, they reignited across the nation.

First, we witnessed a pandemic reaching around the globe, disproportionately affecting low-income populations, particularly people of color, across America. Then came a series of disturbing videos, forcing us to confront the continuing crisis of lethal police brutality wielded, again disproportionately, against unarmed Black people in the United States. Protest movements sprang up in cities and towns across the country and around the world, with the primary message—Black Lives Matter—finding an unreceptive audience in the White House and other parts of the government. These and many other deeply disturbing circumstances have brought us to this time of reckoning.

I can't say what will change as a result. Meaningful justice-system reform? Yes, hopefully. A presidential administration more responsive to the needs and wants of its people? Americans can make that a reality at the polls in November. A health care system that is diverse, equitable, and inclusive? Together, those of us working in the health professions—whether in clinical care, education and training, administration, regulation, licensure, professional associations, philanthropy, etc.—can make that happen. Hopefully, most of us were committed to advancing

diversity in health care long before spring 2020, but now we have an unmistakable opportunity to also prioritize equity and inclusion that we must not waste.

As you—my colleagues in health care—continue to think about this issue, I hope that the recommendations outlined in the following conference summary will help. They were developed during and immediately following a conference on Addressing Harmful Bias and Eliminating Discrimination in Health Professions Learning Environments, which was convened by the Josiah Macy Jr. Foundation in late February 2020. The summary reflects the discussions that took place during the meeting, before the COVID-19 pandemic and anti-racism protests of 2020 took root. Those events make the recommendations even more relevant and urgent. As health care leaders and professionals, we have been careful with our words and deeds for too long—careful to use polite language when talking about uncomfortable topics; careful to seek change gradually and bring people along at their own speed; careful to protect the reputation of the world-renowned clinical systems in which we trained and which have done so much good for so many; careful to be respectful of the fact that we have devoted our lives to caring for others. While being polite and doing good, however, we have also enabled injustice to flourish unchecked. We must do better.

In October 2019, the Josiah Macy Jr. Foundation's board of directors ratified a new strategic plan that prioritizes diversity, equity, and belonging in health professions learning environments. Our mission is to improve the health of the public by advancing the education of health professionals, and we recognize that we can do this only by advancing equity for all. Thus, we are committed to advancing racial justice in health care. We recognize that systemic racism and legalized oppression infect all parts of our society, including health care and the clinical learning environments where our future health professionals work and learn. The majority of people in the health professions are White and have benefited from White privilege.

We recognize the efforts of those health leaders, community advocates, and philanthropies who are working to disrupt the status quo. We pledge to amplify their efforts by catalyzing change in clinical learning environments—the field we know best. Our goal is to ensure that everyone who receives care and everyone who learns, teaches, and works in clinical environments is treated equitably and feels a sense of belonging. We will do this through our grantmaking and our conferences—we are already planning a follow-up to the February conference

focused on advancing anti-racism and antidiscrimination efforts in health professions learning environments.

We are also sponsoring a special supplement of the journal Academic Medicine, dated December 2020, whose contents will include the commissioned papers and case studies from the February conference as well as additional papers on the topic of mitigating harmful bias and reducing discrimination in health professions learning environments.

I hope you will read the conference recommendations with a renewed sense of the insidious injustices that people of color face every day in America. Now is the time not only to acknowledge the racism and resulting inequities in our health care system, but to act.

Sincerely,

Holly J. Humphrey

Holly J. Humphrey, MD, MACP
President

Consensus Vision Statement

Our nation's health professions learning environments—from classrooms to clinical sites to virtual spaces—should be diverse, equitable, and inclusive of everyone in them, no matter who they are. Every person who works, learns, or receives care in these places should feel that they belong there.

The imperative to advance diversity[1] in the US health care workforce is widely accepted, and exemplary stories of success can be found in some corners of our health system, but overall progress has been slow. This is evidenced by the low numbers of people from historically underrepresented populations enrolling in health professions schools and joining the health professions workforce, ongoing reports of bias and discrimination in health professions learning environments, and a continuing dearth of proven and replicable best practices to advance diversity. Many of our health professions schools and clinical practice sites are taking some action on diversity and the more contemporary concepts of equity and inclusion, but without making the necessary commitment to comprehensive, system-wide approaches that create meaningful culture change. As a result, addressing harmful bias and eliminating discrimination remain critical challenges to achieving excellence in health care and health professions education.

The nation's demographics are changing rapidly. Judging from trends in the US Census, in the next 20 to 25 years, America's population will continue to increase, grow older, and become more diverse. As this shift occurs, our health professions learning environments can do a better job of producing health care professionals who are reflective of, and sensitive to, the needs of the communities they serve, especially those community members who are the most vulnerable among us. This imperative seems particularly urgent now, given the pervasiveness of inequities in health, which have been thrown into stark relief most recently by the COVID-19 pandemic. Infection and death rates are disproportionately high among some historically marginalized and excluded population groups in the US, including the African American, American Indian, and Latinx populations (CDC 2020).

Advancing diversity, equity, and inclusion within and across the health professions is the right thing to do in a nation that, for far too long, has protected privilege and tolerated racism and other exclusionary "-isms," including sexism, ableism, ageism, heterosexism, and classism. Advancing an agenda of diversity, equity, and inclusion within the health professions is central to improving overall well-being in the US and reducing attrition among historically underrepresented populations in health professions schools and professional practice. Further, we must advance diversity, equity, and inclusion in the health professions because they are crucial to the delivery of high-quality, patient-centered care that addresses the social determinants of health, reduces persistent health care inequities, and fosters trust between clinicians and patients.

The Physician Charter on Medical Professionalism (ABIM Foundation 2002), the Charter on Professionalism for Health Care Organizations (Egener, et al. 2017), the American Association of Colleges of Nursing (AACN), and the Association of American Medical Colleges (AAMC) all embrace the need to advance social justice, diversity, equity, and inclusion within their professions. AACN, for example, views it as a high priority, stating: "Nursing's leaders recognize a strong connection between a culturally diverse nursing workforce and the ability to provide quality, culturally competent patient care. Though nursing has made great strides in recruiting and graduating nurses that mirror the patient population, more must be done before adequate representation becomes a reality. The need to attract students from underrepresented groups in nursing—specifically men and individuals from African American, [Latinx], Asian, American Indian, and Alaska native backgrounds—is a high priority for [the] nursing profession" (AACN 2019). Further, these more representative students must become the faculty workforce of the present and future.

The AAMC, for its part, has said, in a statement on gender equity in medical education: "The AAMC acknowledges that **gender equity** is a key factor in achieving excellence in academic medicine. To achieve the benefits of diversity, [it] must be inextricably linked to inclusion and equity. Environments are equity-minded when every person can attain their full potential and no one is disadvantaged from achieving this potential by their social position, group identity, or any other socially determined circumstance. AAMC member institutions must be intentional in identifying exclusionary practices, critically deconstructing the practices that sustain inequities within our institutions and acting to eliminate these inequities" (AAMC 2019a).

Conference Tackles a Complex Challenge

Leaders, faculty, clinicians, and learners in both health care delivery and health professions education organizations have long known that increasing diversity among health professionals is important.

They also know that efforts focused simply on recruiting more people from diverse population groups have not worked; instead, advancing diversity, equity, and inclusion must become an institutional priority, integrated into the mission (Thomas, Ely 1996). A longitudinal look at the demographics of the nation's health professions faculty, clinician, and student populations demonstrates how difficult it has been to move the needle on increasing representation among the groups that historically have been the most marginalized.

Within the registered nurse (RN) workforce, according to the National Council of State Boards of Nursing (NCSBN), 81% are White/Caucasian (vs 60% of the US population), while 19% of nurses are from underrepresented racial/ethnic populations, including: Black/African American (6.2%), Asian (7.5%), Latinx or Hispanic (5.3%), American Indian/Alaska Native (0.4%), and Native Hawaiian/Pacific Islander (0.5%). With respect to gender diversity, 9% of RNs are men (Smiley et al. 2017). In medicine, according to the AAMC, female matriculants at US medical schools now outnumber male students 50.5% to 49.4%, and 25% of matriculants are Asian students (Boyle 2019, AAMC 2019b). However, the number of Black students, particularly Black men, has essentially stagnated. According to the AAMC, in 1978, there were 542 Black male matriculants to MD-granting institutions in the US, and in 2019, that number had only increased by 77, to 619 (Gallegos 2016, AAMC 2019b).

And, while the statistics for Black men in medicine are troubling and have been intractable to date, even the news that more women than ever before are enrolled in US medical schools is tempered by the fact that they remain underrepresented in multiple specialties as well as in leadership positions at medical schools and health care delivery organizations. According to a 2019 *Modern Healthcare* article, for example, women compose about 80% of the American health care workforce, but they lead fewer than 20% of US hospitals. The numbers for Black women are worse.

These few pieces of data provide only a very narrow glimpse into diversity in the health professions. True diversity is inclusive of any and all possible voices and perspectives. In addition to race, ethnicity, and gender, a few of the many other

personal and social identities on which data are collected include differences in abilities, age, socioeconomic status, gender identity and expression, sexual orientation, familial status, religion, legal status, military service, political affiliation, and geographic origin. Data related to diversity are also difficult to track accurately because some possibly stigmatizing traits that might trigger discrimination—mental health issues or learning differences, for example—may be kept hidden.

Often used interchangeably, bias and discrimination refer to two sides of the same prejudicial coin that, together, result in health professions learning environments that stifle diversity, equity, and inclusion. Harmful bias and discrimination have been identified as significant contributors to health disparities among patients as well as to attrition among underrepresented populations in health professions schools and professional practice, and it is important to tackle these problems (Mateo, Williams 2020).

To immediately accelerate long-needed action in this area, the Josiah Macy Jr. Foundation hosted a conference, originally titled *Addressing Bias and Reducing Discrimination in Health Professions Learning Environments*. Held February 24–27, 2020, in Atlanta, Georgia, the conference convened more than 40 invitees, including deans of medical and nursing schools, faculty and clinician leaders, representatives from health professions organizations, health professions trainees and students, and others who have worked to advance diversity in the health professions. In addition to inviting conferees with knowledge and expertise related to the conference topic, the organizers made sure that the conferees represented a wide range of backgrounds, perspectives, and personal and professional experiences.

In her welcoming remarks to conferees, Macy Foundation President Holly Humphrey stated her "two straightforward but not easy goals for this conference where we are tackling a very complex topic: first, I hope we find ways to create a sense of belonging for everyone within our health professions learning environments, and second, I want us to develop actionable recommendations to address bias and reduce discrimination in those environments."

Conference Overview

Prior to the conference, invited participants read four Macy-commissioned papers and three case studies, all focused on addressing bias and reducing discrimination in health professions learning environments.[2] On the first day of the conference,

the authors of the papers and case studies presented overviews of their work. These materials, summarized briefly below, established the baseline from which the conferees launched their discussions and began to consider actionable recommendations to address bias and reduce discrimination in health professions learning environments.

Commissioned Papers Provided Basis for Discussion

The paper "More Than Words: A Vision to Reduce Bias and Discrimination in Health Professions Learning Environments," by Camila Mateo of Harvard Medical School and Boston Children's Hospital and David Williams of the Harvard School of Public Health, outlined a framework of evidence-based approaches that institutions can use to reduce bias and discrimination. According to the paper, "Addressing bias and discrimination can be daunting, but through deliberate and systemic change we can reduce their effects and promote the growth and well-being of individuals on both sides of the stethoscope." The paper stated that there is more evidence on how to reduce bias and discrimination than most health professionals realize.

The authors described a vision for the future in which health care learning environments are deliberately structured to reduce bias and discrimination across institutional, interpersonal, and individual levels through leadership, accountability, resource allocation, and data-driven interventions that are continually evaluated for their effectiveness in reaching measurable goals over time. Achieving this vision, they said, requires the following:

- Systems to assess and address the current state of bias and discrimination throughout the institution

- Reduction of harmful bias and discrimination as an institutional priority

- Comprehensive curricular offerings throughout the institution explicitly aimed at reducing harmful bias and discrimination

- Increased representation of underrepresented backgrounds in trainee, faculty, and leadership positions

- Institutional culture of respect, inclusion, and equity for all members

At the conference, Mateo briefly walked through some of the ways these recommendations can be implemented. She said that achieving equity for underrepresented population groups in opportunities and representation

may be the most important of the recommendations because, as the paper states: "Creating a workforce that reflects the broad diversity of current patient populations is one of the most powerful ways to reduce bias and discrimination within the health professions. . .Despite this, there has been little improvement in representation in the health care workforce."

According to the authors, the most effective way to increase representation is by assigning responsibility for meeting set diversity goals: "We recommend that institutions assign responsibility of demonstrating measurable change to managers, whether through a task force, leadership position, the establishment of an office dedicated to this work, or a combination of the above," the paper states. The paper explains that a comprehensive, long-term study comparing different strategies found this one to be the most effective at improving the diversity of organizations. It also enhanced the effectiveness of other diversity-focused strategies.

In "Addressing Patient Bias and Discrimination Against Clinicians of Diverse Backgrounds," authors Pooja Chandrashekar of Harvard Medical School and Sachin Jain of Stanford University School of Medicine described the ways bias and discrimination harm the patient-clinician relationship—specifically, the "less-studied and particularly complex" issue of patient bias and discrimination toward clinicians. The paper included frameworks for individual clinicians to use when faced with patient bias and discrimination and also discussed what is needed at the institutional level to address this issue.

"Clinicians work in a service industry with an implicit expectation to care for patients regardless of their behavior; the patient's right to receive care overrides everything else," said Chandrashekar when presenting the paper. "But clinicians also have the right to work without fear of being abused and the right to be treated with dignity and respect. Today, there is little explicit support for balancing the rights of patients and clinicians when they are in conflict."

The paper argued that this issue should not be ignored because it has short- and long-term negative effects on clinicians and patients. On the clinician side, researchers have found that people who are targets of discrimination and other forms of prejudice have higher rates of anxiety, depression, high blood pressure, and cardiac disease. Further, the emotional burden of caring for patients who express harmful biases can be substantial and is associated with symptoms of psychological decline as well as professional burnout, which has been on the rise

among health professions clinicians and learners even before the COVID-19 era and is a major concern (NAM 2019). On the patient side, anecdotal evidence suggests that clinicians are less inclined to spend extra time with patients who express bigoted views, which may affect the quality of the care these patients receive.

The authors suggested a framework that clinicians may use when caring for a patient who is expressing harmful views or exhibiting discriminatory conduct. They also suggested ways to apply this framework depending on the following circumstances: when a patient is requesting a different clinician, when a patient is actively exhibiting discriminatory behavior, when trainees are the target of the harmful patient behavior, and when a non-targeted bystander witnesses such behavior.

When responding to discriminatory patient behaviors, for example, the authors suggested that clinicians first ensure their own safety, asking themselves, "Do I feel safe caring for this patient?" If the answer is no, it is the clinician's right to exit the patient encounter, seek help from colleagues or a supervisor, report the incident, and consider transferring care to another clinician. While assessing their own safety, clinicians should also assess the patient's condition—is the patient in urgent need of care? In an emergency situation, it may be necessary for a clinician who feels unsafe to treat and stabilize the patient before transferring care.

If the clinician feels safe and the patient is stable, the clinician should assess the patient's motivations. The authors suggested "intentionality" as "a useful heuristic for determining whether a patient's biased behavior should be tolerated: do they convey an intent to hurt or shame the targeted clinician?" Sometimes the behavior might have a different motivation, such as prior trauma (e.g., a rape victim expressing fear). When patients appear to be motivated by prejudice, however, clinicians are within their rights to express discomfort. The authors concluded: "When a patient's views interfere with the clinician's well-being or preclude the clinician from delivering good medical care, it may be best to reassign the patient." Following incidents like these, clinicians should inform their supervisors, report the incident, and consider documenting it in the patient's chart (after weighing the severity of the incident and how the patient's care could be affected). Clinicians should be given time and space to thoroughly debrief after such incidents.

Finally, the authors suggested institutional-level strategies for addressing patient bias toward clinicians. These include making patients aware of the institution's

commitment to diversity and inclusion and developing and disseminating guidelines for appropriate patient conduct and/or a list of patients' and clinicians' rights. Further, institutions should develop explicit policies and procedures for addressing these situations, including reporting mechanisms and systems to adjudicate cases of bias. The authors also called for more systematic research into the topic.

Authors from the University of Virginia (UVA) School of Medicine—Margaret Plews-Ogan, Taison Bell, Gregory Townsend, Randolph Canterbury, and David Wilkes—wrote about wisdom as a counterbalance to bias. In "Acting Wisely: Toward Eliminating Negative Bias in Medical Education," the authors described the problems that harmful biases and discrimination create in medical education, in the medical profession, and for patients. They offered a wisdom-based framework for understanding and mitigating the effects of negative biases and turning them into positive biases.

In her presentation at the conference, Plews-Ogan explained: "I study wisdom, specifically how it develops from experiences of adversity. And, in Charlottesville, Virginia," the home of UVA and the site of a violent and deadly White supremacists' march in 2017, "in the last few years, we have had more than ample opportunity to work on developing wisdom around racism."

She defined wisdom as well as what it means to make wise decisions and to act wisely. Making wise decisions involves intellectual humility, recognizing uncertainty, seeking others' perspectives, and integrating those perspectives into decision-making. Acting wisely encompasses not only awareness, but also the exercise of affective and cognitive control over one's actions. According to the paper, "Making wise decisions and acting wisely is more likely in an environment that facilitates these affective, reflective, and cognitive capacities; an environment that is aware of biases, that strives to mitigate negative biases, and to create a platform for human interaction that positively predisposes us toward one another."

"Acting wisely," Plews-Ogan said, "involves intention, will, and the skill to do the right thing—it is not easy. It requires some fundamentals, including deep knowledge about what biases are and where they come from, their historical contexts as well as skills like awareness, compassion, humility, and reflection." The paper deeply explored all of these components.

The paper also laid out a set of actions—interpersonal, structural, and cultural—that can be taught and employed to increase "wise actions" in health professions learning environments. Interpersonal actions include training in how to mitigate our own implicit biases; building awareness and acceptance of the reality of explicit bias; and "stepping in," saying or doing something that can begin to change a situation for the better. According to the paper, a team at UVA "has developed a training program, using videos depicting scenarios of explicit bias . . . that gives participants a framework for responding to bigotry and prejudice in the training environment."

Structural actions include increasing the diversity of positive role models and clinical learners as well as creating reporting resources, standing rules, and policies that support the institution's commitment to diversity and to addressing bias and discrimination. Among the cultural actions described in the paper are setting expectations for diversity, inclusion, and respect; establishing personal accountability; and "nudging." According to the paper, "Nudging means understanding how we think, how we choose what to perceive, and how we can influence one another to do better, including how we can use social influence within the training community to 'nudge' people toward being better."

Finally, "Medical Education's Wicked Problem: Achieving Equity in Assessment for Medical Learners," by Catherine Lucey, Karen Hauer, and Alicia Fernandez of the University of California, San Francisco School of Medicine, and Dowin Boatright of the Yale School of Medicine, examined inequities in the assessment of medical students. The authors noted that "many medical schools have successfully used holistic admissions strategies to increase diversity in their classes," but students in these more diverse classes "have observed that similar increases in diversity have not been seen in honor societies, selective residency programs, and medical specialties, and among faculty in US medical schools." The authors posited that, since entry into competitive programs and careers is often dependent on grades and academic awards, there is reason to be concerned about the impacts of structural and interpersonal bias on medical school assessment practices.

Referring to inequities in assessment as a "wicked" (meaning complex and solution-resistant) problem, the authors suggested that addressing the issue "will require concerted work by educators in all medical schools and residency programs" (and educators in all other health professions). They described key concepts and examined the literature on equity in medical education assessment.

They defined equity as being "present when all students have fair and impartial opportunities to learn, and be evaluated, coached, graded, advanced, graduated, and selected for subsequent opportunities based on their demonstration of achievements that predict future success in the field of medicine and [when] neither learning experiences nor assessments are negatively influenced by structural or interpersonal bias related to personal or social characteristics of the learner or the assessor."

The authors suggested that there are three components to equity in assessment: 1) intrinsic equity, which means that the design of the assessment program and the tools it uses minimize bias against groups who have been historically marginalized by the medical profession; 2) contextual equity, which refers to fairness in the learning experience and environment in which assessment strategies are implemented; and 3) instrumental equity, which means that the assessment results are shared with and used by stakeholders in ways that create equitable opportunities for all. These three types of equity "collectively contribute to equity in assessment outcomes: the opportunities that are afforded to individuals and populations are based on the consequences of assessment."

Because their literature review substantiated concerns about equity in medical education assessments, the authors suggested a framework for creating equity in assessment. This framework, which is based on the Shingo Model for organizational and operational excellence,[3] holds that achieving equity in medical education assessment requires:

- A nationwide commitment to advancing equity as an essential element in health care and medical education

- Recalibration of long-standing beliefs (culture) about the ways in which we define, develop, and recognize excellence in medicine

- Assessment systems designed to support intrinsic, contextual, and instrumental equity

- Assessment tools that support equity

- Process and outcome indicators that indicate equity in assessment

In addition to the four papers summarized above, conferees also read case studies featuring efforts to address bias and reduce discrimination at two medical schools (Morehouse School of Medicine and Washington University School of Medicine)

and one nursing school (University of Cincinnati College of Nursing). These case studies described various ongoing institutional approaches to mitigating harmful bias and eliminating discrimination. Morehouse School of Medicine focused its case study around efforts to remove bias and discrimination from the teacher-learner relationship, while Washington University School of Medicine described a process for understanding and addressing bias in clerkship grading. The University of Cincinnati College of Nursing assessed diversity within the school and used the findings to introduce programming focused on increasing enrollment, presence, inclusion, and success of students from underrepresented population groups.

In addition to engaging with the commissioned papers and case studies, conferees were asked to provide feedback on a draft vision statement prepared by the conference planning committee. The draft was found to be too long and not well focused. A review and revision process began at the conference and continued via email afterward. The final vision statement for the future of health professions learning environments appears at the beginning of this document.

Themes from Conference Discussions

During the first full day of the conference, the authors presented summaries of their commissioned papers and case studies, which became the subject of breakout group and plenary discussions. The second full day brought several themes into focus as the conferees concentrated on developing a consensus vision statement and recommendations.

A significant theme of the conference was intersectionality. The discussion around this topic could easily have caused conferees to retreat from meaningful discourse, but instead it culminated in a difficult but open, thoughtful, and respectful exchange. Intersectionality is a concept originated by the legal scholar and civil rights activist Dr. Kimberlé Crenshaw, who described it as "a lens through which you can see where power comes and collides, where it interlocks and intersects. It's not simply that there's a race problem here, a gender problem here, and a class or LGBTQ [lesbian, gay, bisexual, transgender, queer] problem there. Many times, that framework erases what happens to people who are subject to all of these things" (Crenshaw 1989, 2017).

During a plenary discussion, a group of conferees suggested that recommendations to advance antibias and antidiscrimination efforts in health professions learning environments should focus on America's history of racism targeting Black people

and American Indians. While they recognized the many other forms of structural oppression, they felt strongly that the historical context of America's system of oppression should be stressed in the recommendations. Another group, however, warned against appearing to advance the idea that there is a hierarchy of oppression. They felt strongly that focusing on the history of racism in the recommendations without giving weight to other forms of discrimination would minimize centuries of pain experienced by other marginalized and excluded groups, including women, the LGBTQ community, people living with disabilities, people living in poverty, religious minorities, and other racial and ethnic groups.

Many important points, all revealing the complexity of intersectionality, were made during this discussion. One conferee offered insight from her own experiences as a medical school diversity officer: "This is difficult stuff to talk about, but it is critical pedagogy. We used to teach about social determinants and health disparities without providing context for where these things came from and why they persist. But now we do more on that. Understanding power and privilege is necessary. Knowing the history of racism is important. We do spend some time on understanding our own biases, but we spend more time on cognitive dissonance and our shared identities as providers within a larger system whose history we need to understand so that we can do better."

Another conferee reminded their colleagues in the room that, while there are tremendous data resources available on the harms created by racism over hundreds of years, there are very few on transgender people. "We know that [transgender people are] dying at atrocious rates and that they're not becoming health professionals," they said, "but we need to know much more." Similar calls for a broader conception of discrimination came from conferees who identified other historically marginalized and excluded groups. At one point, Macy President Humphrey reminded attendees that many marginalized voices were missing from the conference, even though the organizers did their best to include as many as possible. Humphrey wished, for instance, that international health professions students were in the room.

Another theme that resonated throughout the meeting was the need for this work to take root at the structural and systems levels rather than being implemented piecemeal within the individual institutions where health professions learning environments are found. As a conferee said, "We need to focus on systems change, on structural change. It is not enough to address discrimination when we see it.

We need to replace a system that was designed to be unfair with a system that protects, respects, and values vulnerable patients, students, faculty, and others. If we want to build a socially responsible workforce, we all need to understand the deeply entrenched barriers that people face working, learning, and seeking care in our health system. It goes beyond our health professions schools and delivery organizations. We need organizations like the ACGME [Accreditation Council for Graduate Medical Education], LCME [Liaison Committee on Medical Education], CCNE [Commission on Collegiate Nursing Education], ACEN [Accreditation Commission for Education in Nursing], NLN [National League for Nursing], AACN, AAMC, and all the other groups that have a role in incentivizing and rewarding our health professions institutions for serving the public good to commit to changing the system."

While conferees seemed to agree that structural change across the entire health care system is needed, they also agreed that, at individual institutions, this work will have to take root in the board room and C-suite in order to create culture change. Trustees and executive leaders will need to set expectations and model appropriate behaviors, such as a personal awareness of their own biases, zero tolerance for discrimination, and support for civil discourse. They will also need to hold themselves and their staff accountable for achieving measurable changes related to diversity, equity, and inclusion. "I have served at every level of academia, and I am very clear that efforts to advance diversity in the health professions must start with CEOs and their executive leadership," said a conferee. "We haven't seen the needle move much at all over the years, even though most medical schools, including the 15 newest ones, name diversity and inclusion in their mission statements. Diversity is a desired outcome, but it's not being achieved. We need to start holding leaders accountable."

Holding leaders accountable for achieving desired outcomes, however, requires giving them access to the kinds of research and data needed to develop, implement, and evaluate efforts to advance diversity, equity, and inclusion. Many conferees called for funders to support research, for institutions to collect and share more data, and for the creation of a national interprofessional resource center or other entity to coordinate research and disseminate best practices.

Conferees expressed the need for common language or an agreed-upon lexicon around the topic of diversity, equity, and inclusion. Many raised this point when they stood up to speak about something else, acknowledging that the language

being used in the room likely meant different things to different people and that a common language would go a long way toward advancing the conversation. A simple example: the planning committee titled the conference "Addressing Bias and Reducing Discrimination in Health Professions Learning Environments," but conferees quickly recommended the bolder and more precise "Addressing Harmful Bias and Eliminating Discrimination in Health Professions Learning Environments."

A few conferee quotes capture the various points made about language:

- "The language that we use is important. But do we use the language that helps people clearly link what happened historically to what is happening now? Do we call it racism and talk plainly about the history of American slavery and Jim Crow laws? Or do we use post-racism language and call it implicit bias so that people will be comfortable? Can we develop a common language?"

- "We have to admit that racism exists. It's not just bias, but we sometimes call it that just to get a message out so that people won't shut down when they hear it."

- "Not using the correct language in conversations around this work means that the oppressed people in the room immediately say to themselves, 'I need to make the other people in this room, the majority people, feel good while having this discussion, regardless of what I feel.'"

A point that cropped up repeatedly was that effective incentives are needed in order to make progress in advancing diversity, equity, and inclusion—and ineffective incentives should be removed, neutralized, or ignored. As one commenter said, "We need to take false incentives—like *U.S. News & World Report* rankings . . . and other things that don't speak to the quality of our institutions—off the table. They undermine the work we do. We have to get our deans to not care about those sorts of measures and start caring about ones that do matter—such as diversity—when it comes to creating excellence in our learning environments and in health care."

Another theme was the fact that, in our health professions learning environments, the implementation of interprofessional education training and coursework creates a valuable opportunity to also prioritize diversity, equity, and inclusion, and vice versa. The two pursuits are closely related, with each seeking to engage faculty and

learners in understanding and valuing the perceptions, knowledge, and expertise that come from having different perspectives, experiences, and backgrounds.

As mentioned above, the second full day of the conference was devoted to continuing the discussions from the previous day, but with the specific objective of identifying and drafting actionable recommendations to mitigate harmful bias and eliminate discrimination in health professions learning environments. The conferees worked in breakout groups, which were charged with identifying recommendations within one of four broad areas. These areas were defined by the conference planning committee, which had combined the five recommendation areas contained in the commissioned paper by Mateo and Williams into the following:

- Build an institutional culture of fairness, respect, and anti-racism by making diversity, equity, and inclusion top priorities.

- Develop, assess, and improve systems to mitigate harmful biases and eliminate racism and all other forms of discrimination.

- Integrate equity into health professions curricula, explicitly aiming to mitigate the harmful effects of bias, exclusion, discrimination, racism, and all other forms of oppression.

- Increase the numbers of health professions students, trainees, faculty, and institutional administrators and leaders from marginalized and excluded populations.

As with the consensus vision statement, a review and revision process involving the conferees and the conference planning committee was launched in person at the conference and continued via email afterward. The final consensus recommendations follow. They include specific action steps that every institution should take to advance the recommendations. These recommendations were identified as immediate priorities by the conferees, who also understand that there are a whole host of other actions that an institution can and should undertake to improve diversity, equity, and inclusion.

Build an Institutional Culture of Fairness, Respect, and Anti-Racism by Making Diversity, Equity, and Inclusion Top Priorities

Governing board members/trustees and executive leaders of health professions education institutions, health care delivery organizations, and clinical teaching sites should prioritize the mitigation of harmful bias and elimination of discrimination in learning environments by making bold changes that challenge the status quo. Institutional leaders should make the case to members of their oversight boards that achieving diversity, equity, and inclusion is in the best interest of the institution because it enhances the institution's ability to achieve its mission and goals. Leaders should be held accountable for achieving time-sensitive, measurable goals related to diversity, equity, and inclusion. They should promote and prioritize a culture of respect and psychological safety throughout the institution. This will require acknowledging and addressing the pervasive harm that the structural oppression of marginalized and excluded populations has caused and continues to cause in their institutions and across the entire system of health care.

Action Steps

1.1)   Governing board members and executive leadership teams should participate in evidence-based trainings and other programming to gain the foundational knowledge and tools needed to effectively commit to, prioritize, and advance diversity, equity, and inclusion across their institutions.

1.2)   Governing board members should demonstrate their commitment to advancing diversity, equity, and inclusion by increasing board representation from historically marginalized groups and ensuring that board composition is

reflective of both their workforce and patient populations. Governing boards should also carefully evaluate existing and new institutional partnerships to ensure alignment with the vision for diversity, equity, and inclusion.

1.3) Executive leaders should create, publicly commit to, and widely promote multi-year strategic plans (including concrete, actionable items and evaluation plans) focused on prioritizing the mitigation of harmful bias and elimination of discrimination throughout their institutions. Such plans establish expectations for a culture of diversity, equity, and inclusion.

1.4) Leaders should support and fund the development, implementation, and evaluation of trainings and other programming related to the advancement of diversity, equity, and inclusion for faculty, staff, and other members of their institutional communities. This should include training in advocating for patients, colleagues, trainees, and others—including themselves—who face harmful bias and discrimination in the learning environment. Critical skills include managing microaggressions, conflicts, charged conversations, and discrimination in respectful, psychologically safe ways.

1.5) Leaders should be held accountable for tracking, studying, and reporting—externally and internally—on equity metrics while ensuring the privacy of individuals throughout this process.

1.6) Leaders of health professions schools should employ existing mechanisms and/or develop new ones to incentivize clinical training sites to prioritize diversity, equity, and inclusion.

1.7) Leaders should develop policies and procedures that clearly state behavioral expectations reflective of diverse, equitable, and inclusive learning environments. This includes developing standards of professionalism for their institutions. It also includes a fair and transparent process for handling complaints of harmful bias and discrimination. If such policies and procedures already exist, they should be widely promoted.

1.8)   Deans should hold administrators, chairs, and faculty members accountable through mandatory diversity, equity, and inclusion initiatives tied to performance evaluation, compensation, promotion, and rewards (or awards for leadership around diversity, equity, and inclusion). Requirements should be structured to avoid exacting a "minority tax," where an institution's administrators and faculty members from historically marginalized population groups are expected to assume a disproportionate share of diversity-related responsibilities as mentors, committee members, community representatives, etc.

1.9)   Federal and state bodies—such as the National Institutes of Health, the Agency for Healthcare Research and Quality, the Health Resources and Services Administration, and state health departments—should prioritize and expand research agendas that support the advancement of diversity, equity, and inclusion.

1.10)   Health professions' accrediting bodies—such as the Joint Commission, ACGME, LCME, ACEN, and CCNE—should ensure institutional accountability by incorporating and reporting on metrics and programs that help to advance diversity, equity, and inclusion.

1.11)   Foundations and/or other entities should allocate resources to the National Academy of Medicine (and/or other appropriate organizations) to develop an evidence-based scorecard that reflects success in advancing diversity, equity, and inclusion at health professions education and health care delivery institutions (similar to the Human Rights Campaign's Healthcare Equality Index or the American Nurses Credentialing Center's Magnet Recognition Program).

1.12)   Leaders should ensure visual representation of historically marginalized groups in their institution's physical, visual, and virtual spaces (e.g., portraits and other wall art, TV commercials and promotional brochures, websites). It is important for such efforts to avoid "tokenism" and to genuinely reflect an institution's commitment to advancing diversity.

RECOMMENDATION #2

Develop, Assess, and Improve Systems to Mitigate Harmful Biases and to Eliminate Racism and All Other Forms of Discrimination

All health care delivery organizations and health professions education institutions include myriad systems whose assessment and improvement are essential to achieving goals related to diversity, equity, and inclusion. These systems include governance, recruitment, academic evaluation, promotion and advancement, resource allocation, compensation, recognition, communication, the physical environment, patient experience, and the measurement and improvement processes themselves. Leaders of health care delivery organizations and health professions education institutions should intentionally design and continuously improve all of their systems with a focus on advancing diversity, equity, and inclusion—and with recognition that new systems may need to be developed. They should also leverage advances in digital technology to support the use of comprehensive, high-quality data on diversity, equity, and inclusion as institutional key performance indicators.

Action Steps

2.1) Leaders of health professions schools should review their technical standards for learner performance, ensuring that they reflect a commitment to diversity, equity, and inclusion. These standards should seek equity in learning environments for health professions students who are living with disabilities. On academic health center campuses, this should be an interprofessional effort (i.e., it should engage all health professions schools in updating technical standards across the board).

2.2) Leaders of health professions schools and health care delivery organizations should identify key process and outcomes metrics for all organizational and programmatic systems that drive the culture and climate toward diversity, equity, and inclusion.

2.3)   Leaders should use common tools to regularly measure (quantitatively and qualitatively) and analyze their culture and climate with respect to diversity, equity, and inclusion. This includes developing, implementing, and evaluating systems that track complaints and resolutions related to harmful bias and discrimination. These systems should be structured to ensure due process, fair treatment, and physical and psychological safety for everyone involved.

2.4)   Leaders should develop limited data-sharing partnerships with health professions organizations that already collect data—such as AAMC, ACGME, NCSBN, NLN, AACN, CCNE, the American Medical Association, the American Nurses Association, and the Coalition of Urban Serving Universities—to ensure that data relevant to diversity, equity, and inclusion goals are gathered and shared.

2.5)   Leaders should be held accountable for institutional performance related to diversity, equity, and inclusion goals and outcomes, which should be tied to their own performance evaluations. Similarly, leaders should ensure integration of high-quality data on diversity, equity, and inclusion with other key quality performance indicators (finance, quality, safety). Diversity, equity, and inclusion are inextricably linked with both quality and safety.

2.6)   Leaders of institutions and professional organizations should be required to transparently report to both internal and external audiences on initiatives designed to improve diversity, equity, and inclusion as well as related metrics.

2.7)   Leaders should collect and analyze reliable quantitative and qualitative patient data with respect to diversity, equity, and inclusion. For qualitative data, interviews, focus groups, and social media using natural language processing and other novel tools for analysis should be used to determine the lived experiences of different patient populations.

2.8)   Data scientists and technology experts who can build robust platforms to support development, analysis, and presentation of high-quality data relevant to diversity, equity, and inclusion should be members of health professions education teams. Together with their teams, they should develop ways of assessing (such as through predictive analytics) the likely impact of proposed program changes on equity, diversity, and inclusion. If such technical expertise is not available locally, it should be sought out.

2.9)   Data designed to track and analyze efforts to advance diversity, equity, and inclusion and to mitigate harmful bias and eliminate discrimination must protect the privacy and safety of individuals; data that lack such protections may not be representative if there are real or perceived reporting barriers.

RECOMMENDATION #3

Integrate Equity Into Health Professions Curricula, Explicitly Aiming to Mitigate the Harmful Effects of Bias, Exclusion, Discrimination, Racism, and All Other Forms of Oppression

Leaders of health professions education institutions—including deans, curriculum directors and developers, and faculty—should ensure that required health professions curricula examine the harm caused by bias, exclusion, discrimination, and all forms of oppression. This means teaching health professions learners (and training faculty in how to teach learners) about the lasting negative impacts on people's health and opportunities wrought by slavery, genocide, and eugenics; legalization of racism, sexism, anti-Semitism, Islamophobia, and homophobia; and medical pathologizing of homosexuality and gender diversity. The affected population groups include but are not limited to Black people, Latinxs, Native Americans, women, LGBTQ community members, people living with disabilities, people living in poverty, and religious minorities.

All health professions leaders, faculty, staff, and learners should demonstrate competence in promoting diversity, equity, and inclusion in the learning, workplace, and patient care environments. This competence should include knowledge of the historical context and maintenance of America's deeply entrenched system of structural oppression, which contribute to today's health inequities, inequalities, and disparities. America's health professionals should understand how their personal and social identities significantly influence their patients' health as well as their own and their colleagues' opportunities in the health professions.

Action Steps:

3.1) Accrediting bodies should require all health professions schools to conduct and make transparent a rigorous and holistic self-study of their institutional histories that have positively and negatively affected curricula, the learning environment, and patient care.

3.2) Health professions education institutions should, in the spirit of continuous quality improvement, regularly assess learning environments and programs for evidence of harmful bias and discrimination, using learner feedback as a critical source of information.

3.3) Health professions schools should co-create with their communities both educational and experiential opportunities to help learners understand the places where their patients live, work, learn, and play.

3.4) Foundations or other funders, together with health professions schools, should create an interprofessional training program or institute for educators and administrators to learn about and develop robust curricula around mitigating harmful bias and eliminating discrimination (modeled, for example, on the Harvard Macy Institute: harvardmacy.org).

3.5) Foundations or other funders should support the development of a curriculum that has demonstrated effectiveness in helping learners, leaders, and members of the health professions workforce manage (in real time) bias and discrimination in clinical learning environments, including bystander training—and institutions should mandate participation.

3.6) Health professions schools should transform their admissions guidelines to require applicants to demonstrate awareness of, interest in, or aptitude in the knowledge, skills, and attitudes that promote diversity, equity, and inclusion.

3.7) Health professions schools should require learner participation in a formal health disparities curriculum and encourage faculty to incorporate health disparities content throughout their curricula. They should also undertake a thorough review of existing curricula across all subject areas to identify and eradicate racialized content, such as stereotypes that perpetuate harmful bias and discrimination. Such content should be replaced by material that promotes equity, inclusion, and diversity, such as anti-racism training.

3.8) Health professions schools should develop and incorporate learner assessment systems that measure competence in the knowledge, skills, and attitudes that promote diversity, equity, and inclusion.

3.9) Health professions schools should conduct fair and equitable assessments of their learners. Schools should adopt a system of learner assessment that seeks to mitigate harmful bias and provide frequent feedback, coaching, and transparency in order to support mastery learning and growth mindsets. Health professions leaders should also advocate on the national level for development and use of fair and equitable assessment tools.

RECOMMENDATION #4

Increase the Numbers of Health Professions Students, Trainees, Faculty, and Institutional Administrators and Leaders from Historically Marginalized and Excluded Populations

Health system and health education leaders should commit to increasing the numbers of students from underrepresented populations entering and graduating from health professions schools. They should also develop pathways to recruit, retain, and advance opportunities for underrepresented faculty. Further, leaders should innovate processes to encourage and support entry into and successful career progression through the health professions in general.

Action Steps

4.1) Institutional leaders should assess diversity and representation across their organizations, including among executives, administrators, faculty, staff, trainees, and students. They should examine which practices, processes, policies, etc., support success and retention and which present barriers and cause attrition—with the goal of building proficiency in advancing diversity, equity, and inclusion in health professions learning environments.

4.2)   Leaders should continue to advocate at local, state, and national levels for policies and funding that support diverse health professions students and faculty, beginning with high-quality, STEM-focused education at prekindergarten and from kindergarten to 12th-grade (K-12) levels.

4.3)   Leaders should codevelop, in partnership with K-12 schools and undergraduate institutions, programs and initiatives to provide students with early and continued exposure to all health professions. Learners who enter these programs should be followed longitudinally and programs should have standardized, measurable outcomes.

4.4)   Leaders should ensure collection of a set of standardized diversity-related student and faculty data and be transparent in reporting the data (StrivePartnership at strivepartnership.org is a model for collecting data on students that is made available to everyone).

4.5)   Regulatory and credentialing bodies should enforce reporting of data. Best practices for gathering and reporting diversity-related metrics should be developed and disseminated, and these metrics should be included in accreditation and national indexes. Recognition in performance reviews and promotions for meeting student and faculty diversity goals should become standard.

4.6)   Health professions institutions should diversify representation on their admissions committees and adopt and enforce holistic admissions processes. Schools should impose term limits on admissions committee members and adopt quality control processes, such as standardized interviews, to detect and mitigate harmful bias in admissions interviews.

4.7)   Institutional leaders, deans of admissions and student affairs, graduate training program directors, and members of admissions and recruitment committees, as appropriate, should be held accountable for achieving diversity-related goals in student recruitment, admissions, retention, and graduation. Inclusive and evidence-based assessments should be used for learner admissions and for progression.

4.8)   Deans of admissions, deans of student affairs, and admissions committee members as well as human resources staff and those responsible for executive, administrator, and faculty recruitment should receive training in implicit bias and advancing diversity, equity, and inclusion in health professions learning environments.

4.9)   Leaders of health professions institutions should develop and engage in evidence-based practices that support recruitment, mentoring, and retention of underrepresented faculty members.

4.10) Leaders should make it possible for more people from diverse backgrounds to choose careers in the health professions by ensuring that innovative, nontraditional pathways and collaborative educational models are developed and implemented at many educational levels (this can include early and meaningful exposure to all health professions, academic and personal support during undergraduate pre-health science classes, team education models, etc.). Such support should include access to robust and culturally aware mental health resources.
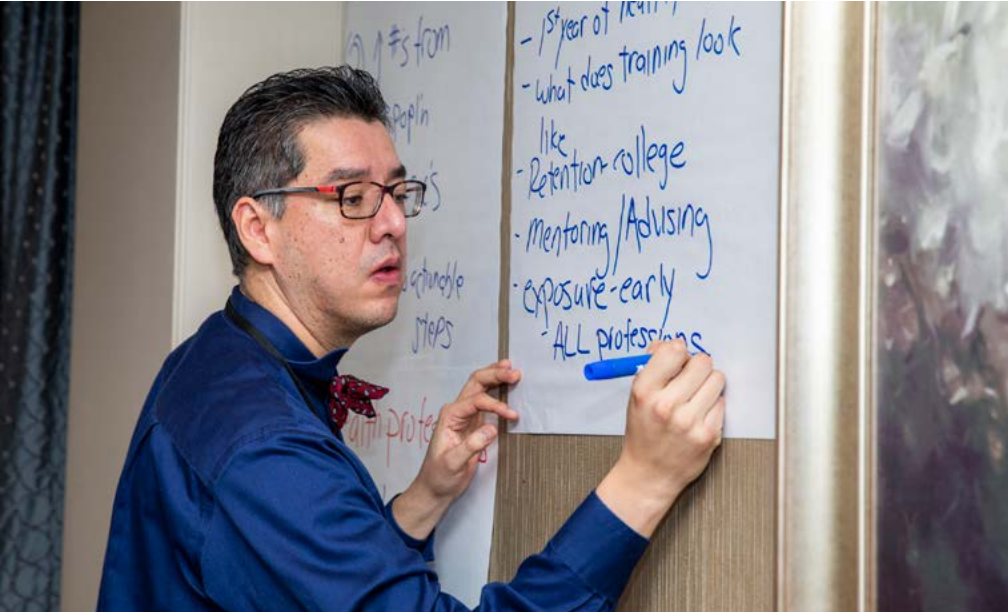
HIGHLIGHTS FROM THE CONFERENCE DISCUSSION

The Macy Foundation's conference on *Addressing Harmful Bias and Eliminating Discrimination in Health Professions Learning Environments* took place over two and a half days, during which the 44 conferees participated in plenary sessions and small-group breakout conversations that enabled them to produce a draft set of consensus recommendations. Those recommendations, which were revised and finalized via email and conference calls after the conference, are featured in the "Conference Conclusions and Recommendations" section of this monograph. Below are highlights from the daily conference discussions that produced the first draft of those recommendations.

During the first full day of the conference, participants discussed four commissioned papers and three case studies, the full texts of which can be found in this monograph. On the second day, they broke into small groups and drafted recommendations that they then discussed during a plenary session. At the close of day 2, the conference planning committee became a writing committee and drew up preliminary recommendations based on the two days of discussion. The final half day was devoted to achieving initial agreement around the draft recommendations. The writing committee continued to work on the recommendations after the conference via emails and phone meetings, and the full group of conferees was twice invited to review and provide feedback before the draft was finalized.

DAY 1: TUESDAY, FEBRUARY 25, 2020

Opening Remarks

The conference began early on Tuesday, February 25, following a welcome reception, dinner, and introductions the previous evening. In her opening remarks, Macy Foundation President Holly Humphrey laid out two "straightforward but not easy goals" for the conference. "First, I hope we find ways to create a sense of belonging for everyone within our health professions learning environments," she said, "and second, I want us to develop actionable recommendations to address bias and reduce discrimination in those environments."

Dr. Humphrey also presented a summary of conferees' responses to a pre-conference survey that elicited their preliminary thoughts on the topic of bias and discrimination in health professions learning environments. Dr. Humphrey said she was happy to hear how inspired conferees were by the commissioned papers. She quoted one respondent, who said: "It is encouraging to learn that bias is a habit, a way of perceiving and acting that can be changed with awareness, focus, and practice." Dr. Humphrey addressed several other responses when she said: "You told us the importance of understanding history. So much of our commonly taught history is that of the dominant group. History of the oppressed is not taught in our schools and is not fully understood. It is startling to realize that bias and discrimination are often hiding in plain sight." She listed several action steps suggested by conferees that apply to administrators, faculty, students, and staff, such as providing training in responding to microaggressions, recruiting those who are anti-racist and who prioritize justice and equity, and developing institutional policies that foster transparency and hold people accountable. Dr. Humphrey then turned the microphone over to the moderator of the first panel discussion.

Overview and Discussion of Commissioned Paper:
More Than Words: A Vision to Address Bias and Reduce Discrimination in the Health Professions Learning Environment

This panel discussed issues raised in a paper, by Camila Mateo of Harvard Medical School and Boston Children's Hospital and David Williams of the Harvard School of Public Health, that outlined a framework of evidence-based approaches that institutions can use to reduce bias and discrimination in health professions learning environments. Dr. Mateo summed up the framework for conferees, stating: "We envision a health care learning environment deliberately structured to reduce bias and discrimination across all levels through strong institutional leadership; accountability; adequate resource allocation; and implementation of multilevel, mutually reinforcing interventions that are data driven and continually evaluated for effectiveness in reaching measurable goals over time." She acknowledged that this vision is not new, that many of the ideas expressed in the paper have existed for some time. The difference, she said, is the need to deliberately structure the environment around the awareness of bias and the elimination of discrimination because such improvements in our health professions learning spaces have been "slow at best." Dr. Mateo went on to explain that change must not depend on individual champions successfully carrying the message; it must be a structural change, a cultural change, a change in institutional norms and expectations.

To achieve their vision, the authors recommend that all of the following be implemented by the institutions that support our health professions learning environments:

- Systems to assess and address the current state of bias and discrimination throughout the institution

- Reduction of harmful bias and discrimination as an institutional priority

- Comprehensive curricular offerings throughout the institution explicitly aimed at reducing harmful bias and discrimination

- Increased numbers of trainees, faculty, and leaders from underrepresented backgrounds

- Institutional culture of respect, inclusion, and equity for all members

At the conference, Dr. Mateo briefly walked through some of the ways these recommendations can be implemented. First, she talked about the need for bold institutional changes developed and championed from the top by very strong leadership—"people who have the power and privilege to set institutional goals, to hold people accountable for meeting those goals, and to allocate adequate resources" toward making the needed changes. She talked about an effort in the 1980s by the president of the University of Michigan to increase diversity and at the same time improve academic excellence. The "Michigan Mandate," as it was called, also allotted 1% of the institution's budget to the effort, which resulted in a variety of "improvements along several measurable metrics related to minority recruitment, retention, and promotion." Dr. Mateo provided additional examples of successful top-down leadership that resulted in greater diversity as well as examples of ways the authors' other recommendations have been implemented—all of which are outlined in the paper.

According to Dr. Mateo, achieving increased representation and opportunities for those who are underrepresented may be the most important recommendation because, as the paper states: "Creating a workforce that reflects the broad diversity of current patient populations is one of the most powerful ways to reduce bias and discrimination within the health professions . . . Despite this, there has been little improvement in representation in the health care workforce." The authors state that the most effective way to increase representation is by assigning responsibility for meeting set diversity goals: "We recommend that institutions assign responsibility of demonstrating measurable change to managers, whether through a task force, leadership position, the establishment of an office dedicated to this work, or a

combination of the above." The paper explains that a comprehensive, long-term study comparing different strategies found this one to be the most effective at improving the diversity of organizations. It also enhanced the effectiveness of other diversity-focused strategies.

Dr. Mateo's presentation prompted a vigorous discussion, primarily focused around leadership and structural change. The first person to speak remarked that he had 20 comments to make but would limit himself to two questions. He asked whether, since strong and bold leadership is needed to change institutional cultures, health professions education institutions have been "recruiting and cultivating the wrong kinds of leaders." He also asked, "How do we achieve meaningful cultural change when American culture is so stuck? . . . There's no hope in the near future for [American culture] to change outside of our academic medicine bubble." [Editor's note: this conference was held in February 2020, prior to the COVID-19 pandemic and that year's widespread protests against police brutality and structural racism in the United States.]

Dr. Humphrey picked up on this comment, stating that "that tension is something I have experienced, with students in particular . . . they think to themselves, 'Yes, I am committed to [equity], but I'm functioning in a system that is not, that does not necessarily align with what brought me to medicine.' While we may not have the power to make changes outside of our academic bubble, I think we do have that power within it." Another conferee followed up on this, raising the need to educate leaders about prioritizing equity and help them learn how to have difficult conversations around these topics.

Another person took up this topic, saying: "Having served at every level of academia, from instructor to tenured chair and [beyond], this has to start with leadership. It has to start with the CEO." She talked about the 15 medical schools founded in the last 10 years, all of which mention diversity and inclusion in their mission statements, but without discernible improvement in representation. "How do we hold CEOs accountable for achieving what's in their missions? Let's stop letting them off the hook," she said. "They all say it's important, but the numbers of Black men in medical schools are not changing."

In response, a conferee raised the idea that accountability goes beyond CEOs to governing boards. "[I work at] a public institution," he said, "and even if we had a very dynamic CEO who was strong on cultural change and prioritizing diversity,

that person would have to answer to a more conservative state Board of Regents. It's not just the CEO; the governing board and the executive team need to mirror the community too." This prompted another conferee to comment about the need to build systems that support and promote equity. "It's not enough to address inequity when we see it," she said; "we have to build an entire structure that places equity at the center." She explained that she was talking not just about individual institutions and their governing bodies, but also about the institutions that lead and represent the health professions, including accrediting and licensing bodies, professional organizations, and more.

"I think it takes a lot more courage than we believe it does to actually move the needle on these things," said another conferee. "It's actually a lonely process. I have the experience of assuming responsibility for an organization that was largely White, largely male, and starting to try to move the needle on diversity, and [my efforts to diversify] were weaponized against me. I've been the subject of lawsuits as [people have been replaced in their positions]. There is a cost to being a leader who is focused on diversity, but we never talk about it."

Picking up on this comment, a conferee said, "I think we need to talk more about the benefits of diversity; what does it bring to the [health professions]? I think right now we don't go deep enough with this. We talk about the importance of diversity, but only so far as bringing others into this elite world, this privileged group, where we influence the newcomers, but we don't let them influence us. We need to talk about that. We need to learn from them as much as they are learning from us." The same person also said, "We're talking a lot about diversity and inclusion, but are we going to talk about racism?"

The specific point about racism was not picked up in the moment, but another conferee commented on the power of language and the need to use stronger language: "We should be talking about this in the context of eliminating patient harm," he said. "We don't say we want to reduce patient harm; we say we want to eliminate it. And the papers that we read showed us that bias and discrimination in education not only harm us as practitioners, but also harm our patients. . . . I think the language should not be focused on reducing discrimination, but on eliminating it." Another person remarked that it will be very difficult for academic medicine to change its culture toward greater equity and diversity without first changing its culture toward greater humility and empathy. "We need empathy and humility in our culture first, or we are never going to get to dealing with bias

and discrimination," he said. One way to get us there, he said, is to change our approach to the health professions education process and move faculty and students out into the community to "see what has to be done."

Also raised during this discussion—and reiterated throughout the conference—was the need to eliminate "false incentives," such as those created by medical school rankings (e.g., *U.S. News & World Report*), which "don't have much to do with institutional quality, but we're told to care about them," as one person put it. He explained that, if deans learn to care less about rankings and things like test scores, grade point averages, and research dollar amounts, there will be more room for them to care about things like diversity, excellence, and true measures of quality.

Overview and Discussion of Commissioned Paper: *Addressing Patient Bias and Discrimination Against Clinicians of Diverse Backgrounds*

In their paper, authors Pooja Chandrashekar of Harvard Medical School and Sachin Jain of Stanford University School of Medicine described the ways that bias and discrimination—specifically, the "less-studied and particularly complex" issue of patient bias and discrimination toward clinicians—harms patients, clinicians, and the patient-clinician relationship. Ms. Chandrashekar began her presentation by sharing several stories in which patients exhibited harmful biases and discriminatory behaviors, including the use of racial and ethnic slurs, toward practitioners from underrepresented population groups.

"Clinicians work in a service industry with an implicit expectation to care for patients regardless of their behavior; the patient's right to receive care overrides everything else," said Ms. Chandrashekar. "But clinicians also have the right to work without fear of being abused and the right to be treated with dignity and respect. Today, there is little explicit support for balancing the rights of patients and clinicians when they are in conflict." The paper argued that this issue has short- and long-term negative effects on clinicians and patients and should not be ignored.

Ms. Chandrashekar then walked through a framework—detailed in the paper—that individual clinicians may use when they feel disrespected and abused by a patient. The framework asks clinicians in this difficult situation to consider three factors when deciding how to respond: (1) their own safety, (2) the urgency of the patient's medical condition, and (3) circumstances that might explain the patient's behavior.

The authors suggested, for example, that when responding to discriminatory patient behaviors, clinicians first ensure their own safety, asking themselves, "Do I feel safe caring for this patient?" If the answer is no, it is the clinician's right to exit the patient encounter, seek help from colleagues or a supervisor, report the incident, and consider transferring care to another clinician. While assessing their own safety, clinicians should also assess the patient's condition—is the patient in urgent need of care? In an emergency situation, a clinician who feels unsafe may need to treat and stabilize the patient before transferring care.

If the clinician feels safe and the patient is stable, the clinician should assess the patient's motivations for their behavior. The authors suggest "intentionality" as "a useful heuristic for determining whether a patient's biased behavior should be tolerated: Do they convey an intent to hurt or shame the targeted clinician?" Sometimes the behavior might have a different motivation, such as prior trauma (e.g., a rape victim expressing fear). When patients appear to be motivated by prejudice, however, clinicians are within their rights to express discomfort. The authors concluded: "When a patient's views interfere with the clinician's well-being or preclude the clinician from delivering good medical care, it may be best to reassign the patient." Following incidents like these, clinicians should inform their supervisors, report the incident, and consider documenting it in the patient's chart (after weighing the severity of the incident and how the patient's care could be affected). Clinicians should be given time and space to thoroughly debrief after such incidents.

Ms. Chandrashekar also discussed various actions and policies that are needed at the institutional level to address this issue. These include educating clinicians regarding their rights and making patients aware of an institution's commitment to diversity, equity, and inclusion, as well as developing and disseminating guidelines for appropriate patient conduct and/or a list of patients' and clinicians' rights. Further, institutions should develop explicit policies and procedures for addressing these situations, including reporting mechanisms and systems to adjudicate them. The authors also called for more systematic research into the topic.

The first conferee to comment on this paper supported the need for institutional policies for clinicians and learners to fall back on when they find themselves in a difficult situation with a biased patient, and also noted how difficult it is to create the culture change that supports such policies because "people don't believe [patients abuse clinicians] very often because it is so underreported, especially

among learners, and because we have all been trained to put patients first." Another person suggested framing such policies not so much in terms of patients' and clinicians' rights and more in terms of their responsibilities, which include the responsibility to always treat each other with respect. The paper's coauthor followed up, reiterating that health professions students are taught from day one that patients are the center of care and are always right. As a health professions student, he said, "you're taught to accommodate, treat, care for patients no matter their behavior," and if you don't, you are "shamed, told that you're not well trained, told to rise above and be better than that." He suggested that what is needed is a new social contract between practitioners and patients that involves shared responsibilities.

Several conferees raised concerns about marginalized patients whose experiences with racism and other forms of oppression must be acknowledged, saying that in some cases, the only thing health professionals can do is be resilient in the face of a patient's difficult behavior. Others brought up the patient advocacy movement, which has fought hard to give patients—particularly the most vulnerable patients—a voice in the hierarchical health care system.

Another conferee suggested that, as the health professions grow more diverse and become more representative of the general population, it will become more difficult to leave this issue to chance. "We know [patients discriminate against practitioners]; we know it's going to keep happening," she said, "so let's be prepared for it. Let's teach health professions learners how to respond effectively." Another conferee echoed this statement and, recalling that she was once spit on by a patient in the emergency room, said that learners need ways to respond that don't require them to ignore the challenging behaviors; rather, they need to be given the tools and skills to put an end to the behaviors so that necessary care can continue. "At the same time," she said, "I don't disagree that we all need to struggle through difficult experiences to help us understand and have empathy for the life experiences of others. So there is a tension there. Resilience and grit have their place in learning, but we also need to prepare people for these situations."

A conferee who is also a medical student suggested that modeling is an important component of these situations. "It's one thing when you go into an institution and there's a workshop on managing microaggressions or you spend time in class role-playing how to respond to a biased patient," she said. "But does it mean anything if you then go into the clinical setting and don't see residents or the

attending modeling that type of advocacy or stepping into a situation to back you up when a patient has discriminated against or disrespected you?" Another conferee acknowledged that faculty are obligated to "help learners navigate each circumstance as it arises" because there often isn't a single right answer; instead, there is an inherent tension between the "primacy of patient autonomy" and the "primacy of clinician safety." "You can believe in the primacy of both at the same time," she said. She believes that assessing intentionality is not always possible or appropriate, so the most important action, regardless of whether the patient's behavior is addressed in the moment, is to debrief with the learner afterward. "As teachers, we must always reflect on these situations with our learners; that is the one action that is always the right one to take."

Another conferee suggested that an institution's legal counsel should be involved in the development of policies and practices intended to address patient behavior toward clinicians, and that institutions should share their best practices and policies and explain what works and what doesn't. The same conferee described a health system that fully integrated its policies across the institution and fielded a "bias response team" that could send in highly trained interventionists to reduce tensions and help navigate conflicts.

"I think we need to be mindful that resilience doesn't mean we want people to be tolerant of intolerable situations," one person said. "Rather, we want learners to feel strong enough to use their voices and deal with these difficult situations, not just ignore them."

Overview and Discussion of Commissioned Paper:
Acting Wisely: Eliminating Negative Bias in Medical Education

Writing about wisdom as a counterbalance to bias, the authors of this paper—Margaret Plews-Ogan, Taison Bell, Gregory Townsend, Randolph Canterbury, and David Wilkes, all from the University of Virginia (UVA) School of Medicine—described the problems that harmful biases and discrimination create in medical education, in the medical profession, and for patients. Presenting at the conference, Dr. Plews-Ogan explained: "I study wisdom, specifically how it develops from experiences of adversity. And, in Charlottesville, Virginia [UVA's location and the site of a deadly White supremacists' march in 2017], in the last few years, we have had more than ample opportunity to work on developing wisdom around racism." She

described wisdom as the "pinnacle of human development," the expression of "our very best selves."

She also spoke about making wise decisions and acting wisely. Making wise decisions involves intellectual humility, recognizing uncertainty, seeking others' perspectives, and integrating those perspectives into decision-making. Acting wisely encompasses not only awareness, but also the exercise of affective and cognitive control over one's actions. "Acting wisely," Plews-Ogan said, "involves intention, will, and the skill to do the right thing—it is not easy. It requires some fundamentals, including deep knowledge about what biases are and where they come from, their historical contexts, as well as skills like awareness, compassion, humility, and reflection."

The paper deeply explored all of these components and also laid out a set of actions—interpersonal, structural, and cultural—that can be taught and employed to increase "wise action" in health professions learning environments. Interpersonal actions include training in how to mitigate our own implicit biases; building awareness and acceptance of the reality of explicit bias; and "stepping in," saying or doing something that can begin to change a situation for the better. A team at UVA has developed the Stepping In training program, which uses videos depicting scenarios of explicit bias and gives participants a framework for responding to bigotry and prejudice in the training environment (Dr. Plews-Ogan showed the conferees a snippet of one of the video scenarios). Structural actions include increasing the diversity of positive role models and clinical learners as well as creating reporting resources, standing rules, and policies that support the institution's commitment to diversity and to addressing bias and discrimination. Cultural actions include setting expectations for diversity, inclusion, and respect; establishing personal accountability; and "nudging." Nudging requires us to understand how we think, how we choose what to perceive, and how we can influence one another to do better; this includes using social influence within the training community to "nudge" people toward being better.

Wrapping up her presentation, Dr. Plews-Ogan challenged the conferees to move wisdom and acting wisely to the center of health professions education—"I'm tired of having things like compassion and addressing negative biases relegated to this little sidebar that you pay attention to only if you have time," she said; "it needs to be at the center of everything we do." What is also needed, she said, is to begin

learning together and sharing best practices, particularly in pinning down concepts like compassion that are difficult to measure.

One of the first to comment on the presentation was another of the paper's authors, who talked about the use of the stepping in and acting wisely frameworks across the entire UVA health system—it has been or will be shared with everyone, from administrators, faculty, and medical students to food service workers and the people who run the parking garage. "These are powerful conversations people are learning to have with each other; everyone needs to know how to have them," he said.

Another person asked a question that was first raised during the discussion of another paper: how to decide what language to use in situations where one person is exhibiting discriminatory behavior toward another. The questioner, referring to the discriminatory behavior on display in Dr. Plews-Ogan's "Stepping In" video, wondered specifically about the implications of different types of language that can be used in such situations—should we use euphemisms, such as "He is expressing negative bias," or more plainly state, "He is being racist"? The conferee said, "I wonder where the tension is around that, both in terms of how we're teaching this and how we're framing it here during our conference discussions. Is it racism? Are we comfortable calling it that and explaining what we mean when we do it? By linking the behavior back to slavery and the Jim Crow era, we're deliberately linking to a critical education piece that has been missing, teaching people about systemic racism. Or are we choosing different language that is more post-racist and is missing that educational link to the history of racism and oppression?"

Another person continued in this vein: "I believe we dilute a lot of things to make them more palatable for others, but sometimes you just have to call a thing a thing . . . At the end of the day, it is racism that we're talking about. It's racism and it's sexism and it's ableism. That is what it is. We can also look at ways to frame things to help advance the conversation, but we first have to label things."

Another conferee countered: "[The biased person] is a person whom I would say is ill-informed and just does not currently understand, but when given the chance to learn, to be taught, will gain some insight. So I think it's challenging to label things plainly because, for many people, there's no insight into what they are saying or what is happening. I've been amazed at how many people just don't know. And if

they're labeled as racist, they just shut down. But if they're given a chance to gain some introspection, then the experience can be revelatory."

Another participant created a bridge between these various comments: "I agree that, in interpersonal situations, it can be important to use different kinds of language to connect with people and help us get the outcomes we want. But I struggle when we're talking about the institutional, organizational, or public level. I've written about this topic for journals and I'm always asked to change 'racism' to 'bias,' and I do it because that's their policy. But I honestly think we need to take the opportunity to call it what it is, to say what we're really dealing with. As far as this conference, I think we should use the words that really describe what we're talking about."

The conversation turned again to leadership. A conferee stated that language choices usually come down to institutional leaders and what language they allow to be used and what language they model. "If an executive officer were to say, 'I see this as racist behavior,' it opens an opportunity for others to say, 'That's what I was thinking,' and to start a real conversation." She continued: "If a CEO says, 'We're not going to use certain terms because they don't bring enough people into the conversation,' then the ones who are feeling discriminated against—based on their race, or gender, or disability, or orientation—they get the message that their own feelings are secondary, that what is most important is making other people feel good about the discussion."

One conferee spoke about her own experiences teaching about racism in medical school over the last few years. She said she began by teaching about the social determinants of health—not bringing up racism, classism, sexism, heterosexism, or equity. "We were talking about things like food insecurity," she said, "but without considering how people become food insecure." She ended up creating a workshop on racism in medicine that is now mandatory. "We spend some time in the class exploring our own personal experiences with racism based on who we are and how we're classified by ourselves, by others, by society," she said, "but we spend more time talking about our shared history as providers and the history of racism in our profession and our institution. . . . I find it is helpful to do this frame shift away from our individual identities to this shared identity that we are all a part of; it allows us to have very open and honest conversations about untangling the past so that we can move forward."

Overview and Discussion of Commissioned Paper:
Medical Education's Wicked Problem: Achieving Equity in Assessment for Medical Learners

Karen Hauer, a coauthor of the paper from the University of California, San Francisco School of Medicine (UCSF), began her presentation by explaining that she and her coauthors—Catherine Lucey and Alicia Fernandez of UCSF and Dowin Boatright of the Yale School of Medicine—defined "equity in assessment" as the state achieved "when all students have fair and impartial opportunities to learn and be evaluated, coached, graded, advanced, graduated, and selected for subsequent opportunities based on their demonstration of achievements that predict future success in the field of medicine and [when] neither learning experiences nor assessments are negatively influenced by structural or interpersonal bias related to personal or social characteristics of the learner or the assessor."

Unfortunately, equity in assessment does not currently exist. According to the paper, "many medical schools and residency programs have successfully used holistic admissions strategies to increase the diversity of their classes," but "similar increases in diversity have not been realized in honor societies, selective residency programs, and medical specialties, and among faculty in US medical schools." The authors posited that, since entry into competitive programs and careers is often dependent on grades and academic awards, there is reason to be concerned about the impacts of structural and interpersonal bias on medical school assessment practices. They described the situation as a "wicked problem" in health professions education, meaning it is complex and resistant to solutions.

According to Dr. Hauer, who is a dean of assessment, she is often told that the way to improve assessment lies with training faculty and other assessors to be more objective in their evaluations of students. "But the problem is so much more complex than that," she said. "Neither the problem nor the solution lie simply in educating individual assessors about equity because the problems are also present in the assessment system that faculty use. It's also in the stated and unstated policies, processes, and procedures within the entire culture of the institution."

In the paper, the authors discuss three components of equity in assessment: (1) intrinsic equity, which means that the design of the assessment program and the tools it uses minimize bias against groups who have been historically marginalized by the medical profession; (2) contextual equity, which refers to

fairness in the learning experience and environment in which assessment strategies are implemented; and (3) instrumental equity, which means that the assessment results are shared with and used by stakeholders in ways that create equitable opportunities for all. These three types of equity collectively contribute to equity in assessment outcomes so that the opportunities afforded to individuals and populations are based only on performance and not on any underlying bias.

The paper also presents the authors' recommended framework for creating equity in assessment. This framework, which is based on the Shingo Model for organizational and operational excellence, holds that achieving equity in health professions education assessment requires the following:

- A nationwide commitment to advancing equity as an essential element in health care and medical education
- Recalibration of long-standing beliefs (culture) about the ways in which we define, develop, and recognize excellence in medicine
- Assessment systems designed to support intrinsic, contextual, and instrumental equity
- Assessment tools that support equity
- Process and outcome indicators that indicate equity in assessment

Dr. Hauer explained, "We need to recognize the ways that we've designed our assessment systems that perpetuate inequities." She spoke about the value that is placed on psychometrics. "As health care providers, we tend to view numbers as objective and correct, as evidence. But in many ways, psychometrics promotes inequities because they cause us to lose focus on individual learners, their backgrounds and experiences, and the best ways to support their unique paths to success." She said that the health professions also prioritize summative assessment, which awards grades and rankings and fosters competition among students, over formative assessment, which encourages learning as a means to achieve mastery rather than a certain grade. "We need to move our assessment culture toward valuing formative assessment because it encourages us all toward a culture of lifelong, continuous learning," she said.

At the conclusion of the presentation, a conferee raised the need for greater trust and transparency in assessment. Dr. Hauer responded by reiterating the critical importance of formative assessments as a way to build trust. "A basic way of operationalizing [formative assessment] would be to not generate a score or grade

the first time a learner is trying a new skill, that they are given the chance to practice it. Otherwise, if you start scoring on the first attempt, you're giving an advantage to those students who had early opportunities to work in the field or to shadow a practitioner." She said that UCSF has had success assigning students to coaches who only do formative assessment, which helps build a trusting relationship between the student and the coach.

This discussion about transparency and trust flowed into a broader discussion about competency-based assessment. Dr. Hauer said that competency-based assessment allows faculty to map different learners' trajectories, tracking their growth curves over time as they acquire skills. "As long as you [the educator] feel that they [the student] can achieve competence, the rate at which they do so should not matter so much," she said. "And as better technology and analytics are developed, we'll be better able to chart students' likely paths to success and even identify students who are unlikely to succeed." She mentioned the need to use the data wisely and avoid rewarding students who acquire skills faster than others because rewarding speed promotes a performance mindset as opposed to a mastery mindset. "Maybe one person will take three and a half years to finish medical school and another will take four or four and a half years; it doesn't matter because they'll be equally competent and capable providers in the long run," she said.

This led to another of the paper's authors explaining that UCSF learned two important lessons about equitable assessment from implementing the Education in Pediatrics Across the Continuum (EPAC) program, in which some fourth-year medical students were enrolled in a longitudinal pediatrics experience. "We found—and this has been found in other longitudinal clerkship programs—that longitudinal relationships are the best for equitable assessment," she said. "The longer you work with someone, the longer you're responsible for them, the more likely you are to develop a trusting relationship, which allows students to feel less vulnerable and makes them more likely to admit their areas of weakness and strength." The second lesson resulted from the EPAC students not having to participate in the residency match program. "These students were guaranteed positions in a pediatrics residency program that they were interested in," she said, "and the relief that this afforded them in terms of developing a growth mindset is something we should consider really thoughtfully."

A question about the futility of ever achieving true equity in assessment ("there will always be at least one student who can afford more and better tutoring or test

prep") prompted a conversation among conferees about the difference between equity, which is about ensuring that everyone has a fair chance to succeed, and equality, which "levels the playing field" and treats everyone the same regardless of circumstances. The authors clarified that equitable assessment is about meeting students where they are and giving them a fair chance to succeed. "We need to collect more and better data," one of the authors said, "more granular data around the lived experiences of marginalized individuals in medical [and other health professions] schools, and then devise appropriate interventions." She went on to clarify that this can't just be about creating equitable assessment; it must also involve creating an equitable environment. "You can't perform at your peak aptitude if you are being marginalized, set aside, overlooked, suffering from stereotype threat," she said. "So we can't look just at the assessment program itself; we also have to create an equitable learning environment where learners all have the opportunity to show us their best selves."

After spending the morning in the plenary session focused on the four commissioned papers, the conferees spent part of the afternoon in small breakout groups organized around the papers. Each of the four breakout groups discussed one of the papers in much greater detail, with help from a group moderator, at least one of the paper's authors, and a set of discussion prompts. The groups were charged with exploring the various themes and lessons of the papers with an eye to drafting recommendations the next day.

Following the two-hour breakout-group sessions, the conferees traveled to Atlanta's National Center for Civil and Human Rights, where the last conference session of the day was held before dinner. The session featured presentations of case studies, reports from breakout groups, and a wrap-up discussion.

Afternoon Plenary: Case Study Presentations, Breakout Group Reports, and General Discussion

In addition to the four commissioned papers, conferees also read three case studies featuring efforts to address bias and reduce discrimination at two medical schools (Morehouse School of Medicine and Washington University School of Medicine) and one nursing school (University of Cincinnati College of Nursing). These case studies, all of which described institutional approaches to mitigating harmful bias and eliminating discrimination, were presented and discussed during the final plenary session on the first day of the conference. As noted, this session was held at the National Center for Civil and Human Rights.

Case Study Presentation: Morehouse School of Medicine

This case study was presented by Marty Elks of Morehouse School of Medicine (MSM). Dr. Elks began with a history of the school, which was founded to help address the health needs of Atlanta's Black residents, whose health status was poor. At the time, Black people made up one-third of the area's population, but only nine of the area's 4,000 physicians were Black. Dr. Elks then jumped ahead, telling the conferees about the class of 2009—100% of whom, in 2007, passed Step 1 of the United States Medical Licensing Examination (USMLE) on the first try. Dr. Elks said this happened because "the class gelled, they connected as a class." She said that this class of "55 lives, 13 cultures, 12 languages, one heart, one family" nurtured their relationships with each other and with their professors and mentors—it was "a rainbow of races all coming together to achieve in medicine."

Dr. Elks also spoke about how the success of that one class inspires and informs the school today. An important component of the school's agenda is helping students learn how to navigate the issues of bias and discrimination by learning from each other, looking through the eyes of others to understand what they see. To do this, the school's students: (1) learn through their relationships with faculty, peers, and others; (2) are taught to develop a growth mindset; and (3) are committed to the school's mission. She then walked through how each of these expectations is implemented.

First, the school creates smaller, intentionally diverse learning communities within each class. Each learning community engages together in a service-learning course that works with its target population in the community to "co-create" health.

Second, to help students develop a growth mindset, the school pairs them with student tutors whose services are free. The faculty also practices "invasive advising" by tracking students closely and developing trusting relationships with them. Finally, the school promotes its mission in everything it does. "Our mission has been the same from the beginning—workforce diversity, primary care, and under-serviced populations," said Elks. "We've never changed it; we've changed the way we word it, but not what we do. Everyone on our campus knows what our mission is and is committed to that mission." She further explained that "we don't get rid of bias and discrimination," because it is everywhere, but "we nurture students individually; we give them a toolkit to help them navigate difficult situations. Mentors and faculty tell stories about how they have been discriminated against." She concluded by stating that "we firmly believe that the secret of caring for patients is caring for students."

During the discussion of this case study, a conferee asked if Dr. Elks had any advice for interviewing medical school applicants: "Are there specific characteristics that you look for in terms of identifying students who would be committed to your school's mission?" Dr. Elks explained that interviewers ask prospective students about health equity and what it means to them; they also ask applicants to discuss specific attributes of MSM that made them want to apply. She said that they look for a personal commitment to service and that there seems to be little correlation between MCAT scores and how well students perform at MSM.

Case Study Presentation: Washington University School of Medicine

The second case study was presented by Eve Colson of Washington University School of Medicine (WUSOM), who said that WUSOM leaders wanted to know how clinical grading inequities might be affecting their learners—and in particular how clerkship grading inequities might be influencing acceptance into the Alpha Omega Alpha (AOA) honor society. They looked at MCAT scores, matriculation data for self-reported identification of students' race and ethnicity, and receipt of honors and awards. A significant association was identified between race and receipt of honors in all six clerkships; White students were significantly more likely to receive honors than all other students.

The school's leaders wrote a letter to the medical school community transparently explaining the findings and launching a process, which included surveys and focus groups, to identify the root cause of the problem. Two issues in particular

were identified: a lack of diversity in the learning environment and concerns about assessment, particularly the National Board of Medical Examiners' shelf examination, which greatly influences grades, and narrative assessments conducted by supervisors who have limited interactions with students. A commission for equity in clinical grading was formed to recommend approaches to mitigating the problem.

The commission recommended the following steps, which the WUSOM has implemented or is in the process of implementing: (1) optimize clinical grading to ensure best practices, (2) provide test preparation and other study resources to all students, (3) enhance the medical school curriculum to better prepare students to succeed in the clinical environment, (4) provide advanced training to attendings, residents, and faculty as well as improved reporting mechanisms, (5) improve faculty and house staff diversity, and (6) monitor progress through program evaluation and continuous quality improvement processes. The school has also suspended AOA elections.

Following Dr. Colson's presentation, she was asked to describe the students' responses to the identified assessment inequities. Dr. Colson explained that they received the information very well and trusted that the problem was going to be addressed quickly and transparently and with student input. One conferee used the opportunity to explore the breadth of the problem. She spoke about Black men in medical school and how the grading inequities discovered at WUSOM likely exist at most schools. Inequities follow Black men their entire lives, she said, starting when they first enter kindergarten, and continue to affect them throughout their careers. Another person added that Black medical students who aren't elected to AOA also don't get into the "-ologies." "When was the last time you saw a Black dermatology or otolaryngology resident?" he asked. Also mentioned was the very high attrition rate for Black men in medicine.

Case Study Presentation: The University of Cincinnati College of Nursing

Greer Glazer from the University of Cincinnati College of Nursing (UCCON) presented the third and final case study, which looked at ways the school is addressing bias and discrimination in the nursing learning environment. First Dr. Glazer spoke about the need for health professions schools to develop leaders who are committed to a strategic plan that seeks to enhance diversity among students. UCCON's plan seeks students from underrepresented and disadvantaged

backgrounds, with the goal of graduating a diverse nursing workforce. The plan was developed with input from all stakeholders, and it keeps everyone on the same page, focused on the same goals, and holds everyone accountable for making progress. Dr. Glazer mentioned that the diversity numbers for each program within the school are reviewed and discussed at every monthly leadership team meeting.

Dr. Glazer also recommends implementing structured mechanisms for obtaining feedback and gathering data, which might include regular surveys and evaluations. UCCON also holds quarterly town hall meetings with no preset agenda—anyone from the school community may attend and raise any topic for discussion. In addition, Dr. Glazer makes a point of attending the meetings of various student groups, such as a special group that was set up for African American students. The data can then be used to make decisions. Based on its data, for example, UCCON decided to create a preadmissions program in 11 of the city's high schools, where health professions classes are now taught to students as they contemplate college and careers. UCCON also adopted a holistic admissions process to improve diversity and inclusion among its matriculants; in addition to test scores and grades, they also look for applicants who demonstrate empathy, effective communication skills, critical thinking, ethical decision-making, and leadership. The school also created dedicated education units, which allows nursing students to be embedded in a clinical health care unit.

Following the case study presentation, a conferee asked how realistic it is for a nursing school faculty member, like herself, to do effective outreach to underrepresented students at a chronically under-resourced school where she has classes with 130 nursing students, half of whom are online. "How much support can I really provide minority students in that context?" she asked, "because this is something that I am troubled by." She also said that dedicated education units are not scalable because there are too many students and not enough placements for them. Dr. Glazer responded that she understands the constraints that many schools are under. She mentioned that one important aspect of UCCON's diversity efforts is that the entire university is making similar efforts, which means the College of Nursing can rely on outreach and support efforts from other parts of the university. The university also has resources available to educators across the university, including those at the nursing school, to help them develop the skills needed to design and teach online courses effectively.

Following the presentations and discussions of the three case studies, representatives from the four afternoon breakout sessions reported back to the full plenary session about their small-group discussions. Each breakout group had been assigned a commissioned paper around which to focus its discussion. The groups were also given prompts, which asked them to review and comment on the draft vision statement created by the conference planning committee and to develop guiding principles, consider what success would look like, and identify barriers to success in implementing recommendations related to their assigned paper.

Breakout Group on Commissioned Paper: *More Than Words: A Vision to Address Bias and Reduce Discrimination in the Health Professions Learning Environment*

This breakout group offered a handful of edits to the draft vision statement, which they thought could be made stronger. They also offered some guiding principles intended to assist with the development of recommendations to advance diversity, equity, and inclusion in health professions learning environments. One suggested principle centered on the need to dismantle power differentials. "We really wanted one of the guiding principles to focus on power and how it hinders and distorts the learning process," the group's presenter said, "and we mean all types of power—between providers and patients, faculty and learners, staff and faculty."

The group also suggested a guiding principle focused on making the invisible visible, bringing exclusionary practices out into the open and recognizing that biases and double standards exist, are harmful, and must be addressed. Further, the group expressed the need to "stop dancing around racism" and admit that it exists and causes harm in health professions learning environments. Another guiding principle identified by the group focused on the need to acknowledge that there are structures and systems in place that perpetuate racism and ensure that privileged groups continue to benefit from it, and these will be difficult to dismantle.

Responding to the discussion prompt that asked what success would look like if bias and discrimination were addressed, group members said that health disparities would be eliminated and every learner would have the opportunity to reach their full potential because every aspect of our health professions learning environments would be focused on these outcomes. In terms of barriers to such outcomes, the group identified the fact that victims of oppression have no voice, that racism

is entrenched, and that leaders are fearful of change. "We ended our group discussion on the idea that success looks like courage," the group's presenter said. "Our institutional leaders would lead with courage."

Breakout Group on Commissioned Paper: *Addressing Patient Bias and Discrimination Against Clinicians of Diverse Backgrounds*

This breakout group developed three guiding principles for the recommendations related to addressing patient bias and discrimination aimed at providers. The first principle: Be very intentional, specific, and accurate with regard to the language you use. For example, instead of saying "Discrimination is unacceptable," say that it is "harmful." The second principle: Focus on patient behaviors instead of on individual patients. For example, say "You used a racist slur" instead of "You are racist." And third: Establish a framework for behavioral boundaries. A framework outlining behavioral boundaries for both patients and providers serves as a reference point when a situation arises and helps those in the situation navigate it more effectively.

In terms of what success would look like, the group wanted to see two things. First, learners must be equipped with the skills and resources to manage difficult patient encounters, and second, institutions must be proactive in establishing systems to minimize and address difficult patient encounters. The key barriers identified by this group included lack of awareness about the prevalence of and harm caused by patients' discriminatory behaviors directed at clinicians; a lack of systems, processes, policies, toolkits, and resources that support clinicians in managing difficult situations; and concerns about how to manage situations that can easily break down into accusations and denials that are difficult to validate.

This group also developed several draft recommendations and action steps for consideration by the full group of conferees. Their recommendations focused on raising awareness of the problem; developing templates for shared resources such as behavioral frameworks, model policies, and toolkits; and urging leadership to focus on this issue both nationally and locally.

Breakout Group on Commissioned Paper: *Acting Wisely: Eliminating Negative Bias in Medical Education*

After suggesting ways to improve the draft vision statement, the group's presenter reviewed several concepts that the group would like to see developed into guiding principles. These included naming social justice as the ultimate goal of any recommendations and developing the recommendations with cultural humility and wisdom in mind. The recommendations should be based on the belief that all people have value and on the concepts of actualization of knowledge sharing, shared leadership and governance, fundamental fairness, curiosity, and positive regard, with the understanding that practice leads to progress.

The group determined that success would include measurable outcomes for learners, educators, patients, institutions, and all other members of the learning community. Success would also involve "a new economy of wisdom," which would incentivize collective responsibility—when inappropriate behavior occurs or something harmful happens within the learning environment, everyone should feel empowered to speak up. Further, learning environments should reflect the populations they serve and model a culture of belonging and inclusion.

The key barriers identified by the group included the need for safe and inclusive environments for information gathering and self-disclosure, particularly around personal identity. The group also suggested that accrediting bodies hold organizations and institutions accountable for increasing diversity, equity, and inclusion and called for an end to false metrics of success, such as National Institutes of Health funding reports and *U.S. News & World Report* rankings. Instead, incentives must align with desired outcomes.

Breakout Group on Commissioned Paper: *Medical Education's Wicked Problem: Achieving Equity in Assessment for Medical Learners*

This group's members, who suggested that the draft vision statement be revised to use bolder language, began their presentation by having one person recite a statement describing "what success looks like," which the group developed, and which galvanized the rest of their discussion. The statement was: "Success looks like a synergistic system that engenders trust among all stakeholders, views assessment as a growth opportunity, and recognizes that having one prize or perceived scarcity can actually engender competition, limit growth, and prevent opportunities to

identify weaknesses and address them. With a synergistic system, we can learn from anyone and seek incentives to grow, allowing individuals to optimize their potential towards ultimately optimizing care."

This group's first guiding principle was that the current goal of the health professions assessment process, which is apparently to identify the top 10% of learners and provide them with a golden ticket to an elite practice, must be changed; the obligation to the public instead should be the 100% achievement of competency on the part of all learners and the training of providers who can reliably care for anyone in a compassionate and goal-oriented way. The second principle was that the health professions need to take a bold, macro-level approach to change because simply tweaking the assessment system at the micro level does not work. Assessment must be addressed across the entire national health care system or attempts at meaningful change will fail. Finally, the group called for an evidence-based or theory-driven approach to addressing discrimination and disparities in assessment and said it should be applied across all of the health professions, not within individual silos.

The group also expanded on its description of success, stating that every institution should have a system in place to protect students and learners from inevitable bias and toxic environments, ensuring that they have the opportunity to thrive. Success would involve the use of evidence-based assessment approaches to mitigate attrition among students and faculty of color by addressing the obstacles they face. Success also requires bringing all stakeholders to the table to identify obstacles that impede equity in assessment. The group also identified some barriers to success. One barrier is that meaningful change is impeded by profit-based companies that promote current assessment practices, such as *U.S. News & World Report*, which ranks schools based on test scores and grades. Another barrier is that health professions education is full of leaders and faculty who believe that traditional approaches should not be changed. Finally, the group called for "real teeth" to be put into accreditation standards and holding institutions accountable for implementing best practices.

General Discussion

Following the breakout-group presentations, the floor was opened to general discussion, and a conferee asked: "How can we start a national movement to create a different type of assessment system built on metrics that align with the

measurable attributes of health care professionals who are prepared to deliver the care their community needs?" One person suggested incentivizing institutions to follow specific criteria; for example, by tying their efforts to the ways National Institutes of Health funding gets awarded or the ways the Centers for Medicare and Medicaid Services pays for services.

Another conferee suggested revisiting and improving upon previously unsuccessful efforts to convince the deans of health professions schools not to participate in the *U.S. News & World Report* rankings. One idea was to create a competing system that ranks schools according to different, more desirable measures, such as their commitment to equitable assessment and to improving representation at all levels. It was mentioned at this point that the Macy Foundation helped to fund an effort by the American Association for the Advancement of Science to develop and deploy a rating system—called SEA Change—that recognizes colleges' and universities' efforts to advance diversity, equity, and inclusion, particularly in the fields of science, technology, engineering, mathematics, and medicine (STEMM).

One person suggested that engaging patients—and the public in general—in discussions about how health professions learners are assessed could inspire a movement. "I don't think most consumers know what happens in our schools," the speaker said. "I know when I talk to people about my experiences, they have no idea how things work. I think if we raised awareness and brought them in, they would have strong opinions, and there is a lot of power in that; that is how social movements happen." Picking up on this idea, another conferee suggested that a "racial equity scorecard" be developed and deployed to help the public, patients, prospective students, and others assess institutions. Another speaker mentioned that she is working with a group of students at her institution on developing a list of trans-inclusive medical schools, which they plan to promote via social media— particularly via Twitter using the popular hashtag #medtwitter.

Dr. Humphrey opened day 2 of the conference by explaining to the conferees that they would spend the morning working in new breakout groups, organized this time around four broad categories. The categories were based on recommendations for advancing diversity, equity, and inclusion that were described in the commissioned paper *More Than Words: A Vision to Address Bias and Reduce Discrimination in the Health Professions Learning Environment*. Each of the four breakout groups was responsible for discussions focused around one of the following categories:

1. Building an institutional culture of respect and inclusion by making equity a top priority

2. Assessing and regularly reassessing the status of bias and discrimination across the institution

3. Integrating equity into health professions curricula, explicitly aiming to reduce bias, exclusion, and discrimination

4. Increasing the numbers of health professions students, trainees, faculty, and institutional leaders from underrepresented population groups

Each breakout group was charged with developing draft recommendations and accompanying action steps relevant to the category they were assigned. Participants were also asked to identify terms that should be included in a glossary in the final recommendations report.

Plenary Session: Interview With Dr. Lisa Iezzoni and Reports From Breakout Groups

After several hours spent working in their breakout groups, the conferees came together for a plenary session. The session began with Dr. Humphrey interviewing Dr. Lisa Iezzoni and wrapped up with presentations from the four breakout groups.

Dr. Lisa Iezzoni Interview

Lisa Iezzoni is a professor of medicine and an advocate for physicians with physical disabilities. Not long after the conference began, she expressed to Dr. Humphrey that, as the only physically disabled person in the room, she was feeling

uncomfortable and underrepresented in the discussion. Together, she and Dr. Humphrey decided that a one-on-one interview during a plenary session would ensure that people living with disabilities were represented in the conference discussion without placing an undue burden on Dr. Iezzoni to speak up throughout the conference—the type of challenging situation often referred to as a "minority tax."

Dr. Humphrey began the interview by asking Dr. Iezzoni to share her disability story with the conferees. Dr. Iezzoni explained that she first encountered some unusual symptoms while a student at the Harvard School of Public Health. After completing her public health degree, she entered Harvard Medical School, where she struggled to complete her degree because her symptoms, which eventually led to a diagnosis of multiple sclerosis, became more persistent and obvious to others. She noticed that her professors and peers treated her differently than other students.

She mentioned, for example, the time that she talked to the head of one of the Harvard-affiliated academic medical centers; she told him her disability story and asked for advice about moving on to residency training. His response was: "There are too many doctors in the country right now for us to worry about training a handicapped physician. If that means some people get left by the wayside, then so be it." She was also told by a well-respected older physician with disabilities: "If there's anything else you can do, you should do it, because they will never, ever believe that you're a competent person with a disability."

She graduated from medical school and became a research assistant at Boston University School of Medicine, where she said she found a group of supportive colleagues "with a few exceptions." She began noticing that she was discriminated against not only because she needed two canes to walk, but also because she was a woman, which she referred to as encountering "a bit of intersectionality." This was in the 1980s, before the Americans with Disabilities Act was passed. She eventually returned to Harvard Medical School, where she was hired as a full professor. She felt the need to both overcompensate for her disability at work—eventually being invited to join both the National Academy of Medicine and the National Academy of Sciences—and speak about her experiences. She began holding "rolling focus groups," where she would pause her electric scooter, which she used in place of a wheelchair, and talk to curious people about her disability. She said she realized that "by not talking about it I was perpetuating the stigmatization of disability. I was

perpetuating the shame that I felt as a person with a disability. So I started talking, and here I am."

The interview then turned to the ways that health professions learning environments can be more supportive of learners, staff, faculty, and leaders with disabilities. Dr. Iezzoni explained that the ADA is unusual in that people with disabilities must first prove that they are eligible for protection under the law; they are then responsible for telling institutions, such as schools, what accommodations they require. Solutions are very specific to individual needs, which can create uncomfortable situations for medical students. She described her own experience taking the chartered bus to the National Center for Civil and Human Rights the night before. A special bus was needed, the wheelchair ramp needed to work, the bus driver needed to know she required the ramp, she had to sit at the back of the bus by herself, and she needed help disembarking when the bus reached the center. And the entire process needed to be repeated at the end of the evening. "Now think about being a young student who has drawn your attention to their special, stigmatized needs like that," she said. "They want to feel like the environment is welcoming; they do not want to feel marginalized or feel like they are being set aside to be dealt with separately. That's a very hard thing even though the law is now on their side."

The conversation moved on to the challenges inherent in supporting people with noticeable differences, such as physical disabilities requiring assistive devices, and including those with differences that can be kept private, such as cognitive differences. "Some disabilities, such as mental illness, are still so stigmatized, maybe more stigmatized than those we can see," Dr. Iezzoni said. "Some people may choose to keep certain personal details private, while others of us don't have that choice. At the same time, those of us who must be open about our disabilities are granted the privilege of having the law on our side; society has defined us as 'meritorious' disabled people; we have 'earned' our protections." The experiences are different, she said, but they are all difficult, and everyone just wants to have a safe space where they can feel welcome and included.

The conversation closed with a discussion of technical standards and the need for health professions schools to rewrite their standards to be more accommodating to people with disabilities. Currently, health professions schools seem to vary in how their technical standards are written and presented, possibly due to variations in each institution's competence when it comes to accommodating people with

disabilities. It was suggested that the need for schools to update their technical standards should become part of the conference recommendations. Further, a conferee asked Dr. Iezzoni for the top three points that should be made to raise disability awareness among health professions students. Dr. Iezzoni's points were: "First, that students with disabilities have a right to be there [at the school]; second, that other students should not make erroneous assumptions about people—students, patients, faculty, etc.—with disabilities; and third, that people with disabilities actually value their lives as much as everyone else does." She emphasized the importance of her last point by noting the preliminary results of a recent survey, which found that physicians rate the quality of life of people with disabilities as worse than that of people without disabilities.

Reports from Day 2 Breakout Groups

Each of the four breakout groups was asked to present a summary of their discussion, including the draft recommendations and action steps that they developed. The draft recommendations were also written on flip-chart paper and posted on the walls of the meeting room so that conferees could comment on them using sticky notes.

Breakout Group: *Assessing and Regularly Reassessing the Status of Bias and Discrimination Across the Institution*

The first group to present modified its group category to read "Assessing and improving equity, diversity, and inclusion" and identified two overarching recommendations. The first draft recommendation: To achieve equity, diversity, and inclusion in health professions education and health care delivery, institutions and professional organizations must intentionally design and continuously improve all of their systems specifically toward those ends. Diversity, equity, and inclusion should not be relegated to a separate system, but instead must be integrated into the very fabric of the institution—into everything it does. The second draft recommendation: Institutions and organizations should collect high-quality data and leverage it within a continuous quality improvement model to drive meaningful equity, diversity, and inclusion outcomes.

The group identified six action steps to support these goals: (1) institutions and organizations involved with health professions education and health care delivery should regularly measure and analyze their compositional diversity—in

all populations at all levels—as well as assessing their culture and climate; (2) institutions must identify key process and outcomes metrics that drive their culture and climate toward diversity, equity, and inclusion; (3) professional organizations that collect data on health professions education and health care delivery must stratify those data to highlight categories that allow meaningful evaluation of diversity, equity, and inclusion; (4) senior institutional leaders must be held accountable for progress in each of these system redesign efforts; (5) institutions and organizations should invest at least 1% of their annual budgets—as done by the Michigan Mandate—to ensure adequate financing of system design; and (6) institutions and organizations should be incentivized to transparently report the metrics and initiatives they've implemented to improve equity, diversity, and inclusion.

Breakout Group: *Integrating Equity Into Health Professions Curricula, Explicitly Aiming to Reduce Bias, Exclusion, and Discrimination*

The members of this breakout group identified two overarching draft recommendations and relevant action steps intended to help institutions integrate equity into health professions curricula. The first recommendation: All health professions curricula should be race-conscious, institutionally focused, systematically aware, and equity-advancing to support learners in providing outstanding patient care." The group's presenter said that they wanted to link the importance of reforming curricula to the importance of graduating clinically excellent health professions students.

To support this goal, the group identified three action steps or tactics. Group members recommended that all institutions conduct a self-study and make the social and historical contexts of exclusionary practices transparent, especially those that are embedded in policies and practices, and evaluate the impact of those practices on learners and patients. They said this should be tied to accreditation. The second action step identified by the group was that all health professions curricula should incorporate mandated mentorship or longitudinal experiences with community health providers. The third tactic was to create a state-of-the-art training program or institute for educators and administrators focused on equity, bias, and inclusion. The group's presenter said that this tactic was inspired by the evidence-based conceptual frameworks and approaches available through the Harvard Macy Institute (https://www.harvardmacy.org/).

The group's other overarching draft recommendation was that all health professionals, from pre-health to leadership, should demonstrate competence in achieving equity by addressing harmful bias and reducing discrimination in the learning, work, and patient care environments. The group suggested the following action steps to implement this recommendation. First, provide mandated, regular training for faculty, residents, and learners in how to manage bias and reduce discrimination in clinical learning environments—including how to build inclusivity and engage in courageous dialogue. Second, change pre-health requirements to include courses in health disparities, health equity, and bias and discrimination. Third, incorporate systems of assessment that provide frequent, formative feedback, coaching, and transparency to support mastery learning. Finally, institutions should regularly assess curricula and assessment systems for evidence of bias and discrimination.

This group felt strongly that learners in the health professions need to know "the history around race, the history around discrimination, race-based discrimination, how to think about race in the context of delivering patient care." Health professions curricula must include these topics, they said. An audience member responded: "I want to understand why race only and not sexism, heterosexism, the medicalization of gay identity and trans identity. There are lots of histories." The group's members explained that they framed their overarching goals around the educational equity guidelines published by the Association of American Colleges and Universities.

Another conferee, commenting on this group's first overarching goal, picked up a previous discussion thread about the use of language. "I think the history of medicine is not just one of exclusion," she said. "It's one of overt racism. When you go back and look at medical research and experimentation on patients, when you look at medicine's role in trying to explain race as a biological concept rather than a social construct. I think we need to be careful framing it as exclusionary practices . . . At some point we're going to have use the word 'racism.'" She explained that, as difficult as it is to use language that causes people pain, it is actually empowering for those who have been oppressed to hear leaders, colleagues, and others use terms like racism, sexism, and homophobia.

A group member suggested that the conference recommendations may need to take a "graduated approach to the -isms," because so many of the accreditation and other initiatives already underway frame things in terms of racial and ethnic

diversity, and we should encourage those trends while recognizing that many other -isms exist and are also harmful.

Breakout Group: *Building an Institutional Culture of Respect and Inclusion by Making Equity a Top Priority*

The first draft recommendation presented by this group was that governing board members and leaders of health professions education institutions should prioritize the reduction of bias and discrimination within their organizations and agree to be held accountable if goals are not met in a timely manner. The group's presenter outlined several action steps to support this recommendation, one of which was that leaders should fund faculty training opportunities focused on equity, diversity, and inclusion as a means of developing a pipeline of leaders, change agents, and mentors who can move this work forward. A conferee raised the point that the work of these change agents should be considered in promotion and tenure decisions.

Another proposed action step was for members of governing boards and executive leadership teams to participate in programming that gives them the foundational knowledge and tools to effectively address this topic, including training in the implementation of coordinated curricular offerings across the institution. Another action step was for leaders to work with agencies and bodies such as the National Institutes of Health, the Health Resources and Services Administration, and the Agency for Healthcare Research and Quality to fund and develop a national research agenda that will inform efforts to advance equity, diversity, and inclusion.

Continuing with more action steps, the group suggested that leaders should be accountable for tracking, analyzing, and reporting (both internally and externally) on equity metrics, while ensuring the privacy of the individuals from whom the data is collected. Another step: leaders should leverage existing mechanisms to include equity among the selection criteria for clinical training sites. Upon hearing this, a conferee cautioned that clinical training sites are precious commodities and this step should be framed thoughtfully to encourage sites to adopt equity goals that better align with the ways students are being educated. Finally, leaders should develop policies and procedures that reinforce their institution's commitment to developing a just and equitable learning environment.

This group's second overarching recommendation was that governing board members and institutional leaders should be incentivized to succeed in meeting

time-sensitive, measurable goals related to advancing diversity, equity, and inclusion. A proposed action step in support of this recommendation was to ensure accountability through mandatory initiatives tied to performance evaluations and rewards. Further, accrediting bodies should ensure accountability and enforcement through metrics related to equity, diversity, and inclusion. Leaders should also allocate resources to appropriate bodies, like the National Academy of Medicine, to develop an institutional report card on diversity, equity, and inclusion. The group suggested that this report card could be modeled on existing ones, including the Human Rights Campaign's Healthcare Equality Index and the Racial Justice Report Card issued by White Coats for Black Lives. The final proposed action step was that leaders should establish awards that recognize people working to advance diversity, equity, and inclusion within their own institutions.

A conferee followed up on this group's presentation, asking how a diversity, equity, and inclusion report card or other type of scoring system creates the change that is needed in learning environments. The response was that it would hopefully incentivize institutional leaders to prioritize diversity, equity, and inclusion. Another conferee suggested that, without a real understanding of the change needed, implementing a report card might help increase representation and possibly even civil discourse on the surface, but meaningful change isn't just about changing the numbers; it requires a deeper commitment to longitudinal, system-wide culture change. "It can't just be about the numbers," a conferee said; "it has to be about the things that make people get up and want to go to work every day." Some suggested that there are many different ways to approach a scoring system—it could be a customizable dashboard instead of a standardized report card, for example—and that it could be done to support certain measurable goals.

Breakout Group: *Increasing the Numbers of Health Professions Students, Trainees, Faculty, and Institutional Leaders From Underrepresented Population Groups*

This group drafted one overarching recommendation focused on increasing representation of marginalized populations: Health system and health professions education leaders across all the health professions should commit resources to develop a diverse pipeline of health professions learners, practitioners, and leaders using best practices to recruit, educate, and retain people from underrepresented population groups. The group also identified the following action steps to support this recommendation. First, provide young learners with early exposure to STEMM and the health professions—including educating not just the students, but also their teachers and administrators, as well as creating a repository of information for young students on opportunities to expand their knowledge and experience beyond the classroom. This effort would also be accompanied by early advising and mentoring programs in high school, college, and beyond. Mentors and coaches should be available along the entire length of the pipeline, including the professional years when graduates move from subordinate into leadership roles.

The next action step, which the group's presenter said was a bit controversial, was to develop and define metrics to ensure diversity. "What are these metrics," the presenter asked, "what exactly should we be measuring, and how do we incentivize implementation of these metrics? We had a heated discussion about how all of this might work, and a lot more discussion would be needed." The group's next action step: Leaders should consider diversity a tenet of high-quality patient care. The presenter explained, "By this we mean that we should not pursue diversity for diversity's sake; it should be a measure of quality of care, of improved patient outcomes."

Another proposed action step: Collate and disseminate best-practice tools, models, guidelines, frameworks, case studies, etc., to inform and advance efforts like holistic review for both admissions and hiring—including ways to incorporate diversity, equity, and inclusion into the processes. For example, the search committees should be diversified and hiring processes should be transparent. The group also mentioned the Michigan Mandate as an example of an initiative that should be replicated.

At the conclusion of the group presentation, one conferee raised a concern about tying diversity to an outcomes measure, like ending disparities or improving the quality of care. "There are so many reasons why we need diversity in health care," the speaker said. "It will raise up our profession in so many ways. Let's not make it a transactional goal. Let's not say, 'If we increase diversity, we will have this improvement in patient outcomes.' What if that doesn't happen, what if it takes too long or happens some other way and people lose interest and say, 'Maybe it wasn't worth it'?" Another person brought up language and semantics: "The word 'should' is optional, so I suggest replacing it with 'must' in our recommendations. 'Must' is robust, it is explicit, it is a call to action." The same speaker also mentioned that health care is facing two growing workforce-related crises: the absence of Black men in medicine and the fact that health professions students with Native American/American Indian backgrounds are even worse off in terms of representation. "This is not to say we should ignore Black women or Hispanics or other underrepresented populations," he said, "but the data on these two groups is appalling, and we need a national push [to expand their representation], not just among the institutions that are geographically located nearer to these populations, but among all schools across the nation, even those located in predominantly White areas."

A conference planning committee member, who was moderating the discussion, asked the conferees to raise their hands to indicate if their home institutions have pipeline programs. "[From a show of hands, it looks like] every last one of us has a pipeline program. If we all have one, why are they not working? Why is there a flat line or almost a reversal now of the number of Black men who are going to medical school? And when you look at people of American Indian and Alaskan Native heritage, that line is so flat it doesn't even register on the graph. Why?" She went on to explain that pipeline programs (one conferee mentioned that "pathway program" is the preferred term) don't come to fruition because schools allow MCAT scores and gatekeeping courses to keep students out. There is a barrier embedded in the pipeline/pathway that needs to be addressed.

One conferee raised a question about holistic admissions, suggesting that this model needs rigorous evaluation to determine how well it is working. "There is a big push to use it, at least in nursing schools, but is it really increasing diversity?" she asked. Another said, "I worked for several years on [my institution's] pipeline programs, and I found them to be special events, such as a one-day open house for Black students, not sustainable programming." Several people noted the

need for evaluation and assessment of many types of initiatives intended to increase diversity so that best practices and efforts that don't yield results can be identified—and they said a repository of this information needs to be created.

Other comments were made regarding the need to focus pipeline/pathway efforts on the youngest students, those in kindergarten through third grade—and include their parents. One person talked about the need for more innovation beyond pipeline/pathway programs, such as six-year medical school programs and different types of post-baccalaureate programs. Another person suggested that universities affiliated with academic health centers need to get more involved in lobbying for diversity, equity, and inclusion in public education because the health professions can't adequately address a societal ill like racism.

A planning committee member spoke up, commenting that she was hearing a lot of recommendations of long-term investments that might yield results in 2029 or 2030. "What about short-term solutions?" she asked. "How do we get more Black men into medical school tomorrow?" One conferee mentioned that some nursing schools have eliminated the requirement that applicants submit their scores on the Graduate Record Examination (GRE). "It made no difference in the quality of the students," she said, "but it did increase diversity in our classrooms." This led to a circuitous discussion about how effectively MCAT scores identify students who are likely to be successful, whether or not organic chemistry is a necessary requirement on undergraduate transcripts, and related issues.

In wrapping up the plenary discussion, the moderator reminded the conferees that, with these conference recommendations, they had the "opportunity to help the broader health professions community think about structural challenges, biases, the harmful things that come from negative biases, the processes that lead to discrimination, and make some big recommendations to address these things." Dr. Humphrey followed this up by encouraging the conferees to keep their focus on all of the health professions, not just medicine, and to keep thinking about diversity and inclusion in the broadest possible terms.

To close day 2, the four breakout groups reconvened until dinnertime to collectively refine their draft recommendations based on the plenary discussion. The writing committee then took those drafts and further refined them. Finally, Macy staff combined the various pieces into one complete first draft and distributed it to the conferees for review.

On the final morning of the conference, participants shared feedback on the draft recommendations that had been distributed overnight.

Conference Conclusions and Recommendations

In opening the session, members of the planning/writing committee who were moderating the discussion asked the conferees to refrain from wordsmithing the draft document ("We're not ready to worry about aligning verb tense and correcting punctuation at this point") and focus their feedback on larger issues such as content ("Is anything missing?"), organization ("Does the draft flow logically?"), and tone ("Does the draft hit too many gloomy or rosy notes?"). One of the moderators pointed out, for example, that international medical graduates had been unintentionally left out of the papers and discussions. The other moderator asked whether the right mix of short-, medium-, and long-term action steps had been incorporated into the draft recommendations. "Our goal right now is to try and get any thorny issues out on the table so we can discuss them in person," a moderator said. "We don't have to resolve every difference of opinion before we leave here, but we should try to get everything out and recorded so we can continue this process via conference call and email once we have adjourned."

Conferees generously praised the first draft of the recommendations document and shared many substantive comments on how to improve it. The first person to comment pointed out that several of the breakout groups drafted action steps focused on data collection, analysis, and dissemination. "They're all different and important, but it may make sense to combine some of those steps and leave out others—that should be reviewed," she said. Another conferee suggested that the draft could highlight the creation of a strategic plan that prioritizes diversity, equity, and inclusion as a short-term action step that could be undertaken immediately.

Others raised concerns about the language used. One person, for example, said the draft focused too much on individuals—those who engage in discriminatory behaviors and those affected by harmful bias and discrimination. He instead wanted to see the draft focus more on bigger concepts like structural racism and legal oppression because racism is a systemic issue in health care. "It's not really

biased individuals we're trying to sort out as much as it's a racist system that needs to change." Another person said that the draft's use of the word "diversity" was sometimes confusing and that the word "representation" is sometimes more accurate. "Diversity can mean a lot of things to a lot of people. For example, I think we generally mean compositional diversity in the draft, but there's geographical diversity, diversity in terms of the various health care disciplines, etc.," she said. "We need to be more precise in some places."

Also regarding language choice, several conferees pointed out the inconsistent use of "should" and "must" in the draft recommendations and action steps. This elicited quite a bit of back-and-forth regarding the tone that each of those words creates in the draft, with some saying "must" does not work in academia, where people with their own opinions and limited resources cannot be told what to do, and others saying "should" is too much of a suggestion and does not convey the need to take immediate action. As a possible compromise, a conferee noted that at least one health professions journal asks authors to use the word "can" when a submission contains recommendations.

Another person noted that the draft report needed to tie the recommendations to professionalism. "We need to anchor this to professional standards," he said. "We need to make it clear that you can't be a professional health care practitioner—in any of the professions—without paying attention to diversity, equity, and inclusion. We have to tie this to our professional tenets so that people understand this is not optional."

One participant began a productive debate that challenged conferees to openly address a difficult challenge—how to strike a balance between recognizing that racism is the historical root of structural oppression in America and being inclusive of all marginalized population groups and social identities. "As a Black person, I understand why we're calling out [how harmful bias and discrimination] affects African Americans and Native Americans; I do get it," he said. "But as an LGBTQI person, there are many other -isms that are also affected by structural oppression. People have died because of their trans identity, because of not getting health care, because of being excluded from our systems. People commit suicide. I feel really strongly that our recommendations need to be broad and include all -isms, not just racism. I don't agree with calling out specific populations when so many are negatively affected."

Another conferee responded, "I think that there needs to be special attention given to African American men as part of these recommendations because we've all seen the data; there is plenty to show how greatly they are underrepresented." Another conferee spoke to this issue: "I think when we don't specifically call out African Americans and Native Americans, and maybe even Latinx Americans, we're potentially diluting our ability to address very real morbidity and mortality rates that must be addressed." The same speaker, however, went on to raise the issue of intersectionality, saying, "Of course, then there are other populations that need to be addressed, and if health care professionals don't do it, who will? Black men who happen to be homosexual, they are at even higher risk than either the Black men or gay men. So how do we address that without diluting the needs of those who have been historically traumatized and demonized for hundreds of years?"

The conferee who first raised this topic followed up with: "I would just say, again, that I get what is being said about the Black experience. I understand. But I'm both Black and gay, and I'm saying that we have the profound structural component to LGBTQI discrimination in health care. When we look at the LGBTQI population, they face some of the greatest health disparities in America. We definitely have to be careful with how we handle this in the recommendations. There could be an entire conference and report just on racism and health care, but is that what we want this to be?"

Several conferees agreed, raising concerns about other populations that are missing from the discussions and the recommendations. One conferee mentioned her particular concerns for people living in poverty as a marginalized and excluded group in health care, while others mentioned that little has been said about women, transgender people, people who are elderly, and people of different religions.

"I think what we're talking about here is really tough," said one conferee. "Something I have found helpful is thinking about the histories that these different groups of people have with the health care system. They all have a history, some longer than others, but all of it is still happening, and for some, those histories intersect. We should talk about the disparities that groups face in terms of their histories stemming from structural oppression. We need to teach our learners the historical context, that health disparities were created by our system. In this context, racism can be used as a lens for understanding how all of these other oppressions came about."

One conferee brought up the fact that Congress only recently passed an anti-lynching law. "It is incredible that we are still experiencing some of the same injustices that have persisted for 400 or 500 years now. . . . It's something that really does need to be highlighted." Several conferees began suggesting ways to be inclusive of all groups in the recommendations while also highlighting certain aspects of America's history. One conferee, for example, suggested that the recommendations refer to the "lasting health impacts on marginalized groups of our country's history of slavery, genocide, and structural oppression."

Another conferee expressed her frustration that a "scarcity model of time and resources" looms over academia and causes people to debate a "false hierarchy of oppression." She went on to say that no one is just one thing, that everyone carries multitudes within them, and that a new model is needed that recognizes this. She also said that racism is everybody's problem—it doesn't belong to just one group, but to everyone. Another conferee observed: "When you lump everyone together, you provide cover and de-emphasize the problem because someone can say that there aren't enough resources to help so many different groups who feel discriminated against—and then nothing gets done. This happens over and over again in our institutions."

"I agree that we do have to focus," said another conferee. "It doesn't mean that there is not space for others to be included, but we have to focus on something, create a model that targets a specific problem, so that people can start to think differently. And the model should be racism because it is the reason we discriminate against everyone else, because we let society get away with it for 400 years." Another point raised during this debate was that structural oppression is not going to be solved quickly; it is going to take generations to dismantle it and calling out racism in health care is the right thing to do "because we're never going to get anywhere if we don't," as one conferee said. "It is the model, it is the original sin of this nation, and we have to start with that history."

In contrast, with respect to calling out racism but not discrimination against LGBTQI communities, another conferee pointed out that "some of the biggest advocates for equity and inclusion on race have systematically employed homophobic and transphobic practices. I think that's a problem that we have to recognize." A visibly frustrated conferee said, "people call for a focus on racism because a tremendous amount of data is available on the harms of racism, but no one is saying that racism does not exist or is not an issue; on the other hand, there is little data on trans and

nonbinary people because no one has looked at them; no one has gathered those data. They are not being looked at because they are not even in the room. We [trans or nonbinary people] don't receive medical care," the conferee said, "and we don't become doctors. I'm only in this room because I'm perceived as a White male. There are no Black trans women sitting here." The conferee went on to caution the room: "Going back to the scarcity-of-resources model mentioned earlier, we need to emphasize multiple complexities and be cautious that we don't rely too much on what we know, because what we know has been shaped by who created the knowledge that has been shared."

The debate wrapped up at this point with the group deciding to keep working on the framing and language used in the recommendations. Several conferees expressed gratitude that the conversation was allowed to go on so long. "This was the most authentic discussion I've heard around this topic in a long time," said one conferee, "and I'm honored to have been part of it."

The discussion moved on to the need to be very explicit about the accountability of institutional leadership. "We talked about governing board members and CEOs and deans," said a conferee, "but what about admissions directors and committee members? We need to be sure they are held accountable for increasing representation." It was suggested that equity-focused training and term limits for admissions committee members be included in the recommendations. One conferee said that the same recommendations should be made for hiring directors and committees. The comments continued, with several conferees reading out suggested additions, deletions, and modifications to various draft action steps, which they were asked to share with the writing committee and Macy staff via email.

Around lunchtime, Dr. Humphrey brought the conference to a close, thanking the conferees for the work they had done over the two and a half days of the conference and expressing particular appreciation for the open-minded, respectful debate around racism and intersectionality that had occurred that morning. "This morning's conversation was really unlike anything I have ever experienced at prior meetings," she said. "You brought not only your wise minds to the conversation, but also your hearts and souls. At these types of meetings, there are always sidebar conversations in hallways and bathrooms where people say what they're really thinking, but this morning, I heard the whisperings from the hallways expressed in this room. It was a rich, authentic, and difficult conversation. We only got to that place because of you and what you brought to this work. Thank you."

Upon conclusion of the conference, the writing committee was charged with revising the draft recommendations document based on the feedback provided by the conferees. In the weeks following the conference, the committee revised and reviewed several versions of the draft via email and phone meetings and then distributed a near-final draft to all conferees for review and comment. This cycle occurred twice before the report was finalized. The consensus recommendations report appears in this monograph.

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COMMISSIONED PAPER

More Than Words: A Vision to Address Bias and Reduce Discrimination in the Health Professions Learning Environment

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Abstract

Bias and discrimination are embedded within the history, norms, and practices of the health professions institution, and their negative impacts are pervasive in the health professions learning environment. These forces impair the ability to take care of patients, recruit and support diverse health care providers, and prepare the next generation of clinicians for practice. Fortunately, there are effective interventions and strategies for addressing bias and discrimination within learning environments and to both prevent and ameliorate their negative effects. This Perspective lays out a vision for health professions learning environments that are free from bias and discrimination and makes 5 recommendations, with supporting actions, that will help the leaders of health care institutions achieve this goal.

Inequity is pervasive in health care. Through historical injustices and modern perpetuations, marginalized communities have a lower opportunity for good health compared with socially advantaged groups.[1,2] This inequity is demonstrated through persistent disparities in access to care, quality of care, and health care outcomes for these communities.[3–7] Not only are provider-held biases and discrimination implicated as contributors to health inequities,[8–11] but reports of bias and discrimination experienced by providers and trainees are common[12–14] and create differential opportunities for learning, growth, and overall well-being. Taken together, there is a pressing urgency to transform health professions education to

reduce and prevent the negative effects of bias and discrimination in our learning environments.

Fortunately, there is more evidence on how to reduce bias and discrimination than most health professionals are aware of. Below, we provide a framework of evidence-based approaches that can be used to reduce bias and discrimination in learning environments and better prepare the next generation of health professionals to care for all patients, regardless of background. Addressing bias and discrimination can be daunting, but through deliberate and systemic change, we can reduce their effects and promote the growth and well-being of individuals on both sides of the stethoscope.

Vision and Guiding Framework

We envision a health care learning environment deliberately structured to reduce bias and discrimination on all levels through strong institutional leadership, accountability, adequate resource allocation, and the implementation of interventions that are data driven and continually evaluated for effectiveness in reaching measurable goals. To achieve this vision, we believe that institutional leaders should follow 5 recommendations and associated approaches outlined in this paper (see Table 1):

- Create systems to identify and address bias and discrimination
- Make the reduction of bias and discrimination an institutional priority
- Ensure comprehensive curricula to reduce bias and discrimination
- Ensure critical diversity in the health professions
- Create an institutional culture of respect, inclusion, and equity

Table 1: Recommendations to Reduce Bias and Discrimination in the Health Professions Learning Environment

Recommendation	Approaches
Create systems to identify and address bias and discrimination	Identify experiences of bias and discrimination within the health professions community.
	Identify health care inequities throughout the medical institution on key metrics.
	Identify disparities in recruitment and opportunity within the health professions community.
	Evaluate current training across the institution focused on reducing bias in health care.
Make the reduction of bias and discrimination an institutional priority	Align institutional excellence with the reduction of bias and discrimination.
	Allocate adequate resources to creating, implementing, and evaluating programs.
	Ensure accountability by setting goals and incentivizing success.
Ensure comprehensive curricula to reduce bias and discrimination	Integrate training to reduce bias and discrimination throughout the institution.
	Curricula must provide knowledge and skills necessary to reduce bias and discrimination.
	Provide adequate resources and support for professional development in this space.
Ensure critical diversity in the health professions	Assign responsibility to meet set goals.
	Link improved representation to institutional evaluation.
	Implementation of programs to recruit and support underrepresented groups.
	Structure recruitment practices to prevent bias and discrimination.
Create an institutional culture of respect, inclusion, and equity	Create accountable reporting systems for bias and discrimination.
	Provide institutional rewards celebrating the reduction of bias and discrimination.
	Promote psychological safety throughout the learning environment.

Vocabulary

In this vision, the health professions learning environment (HPLE) is a complex space composed of individuals, relationships, and organizations that are strongly influenced by the larger social context.[15,16] Bias and discrimination operate, impact, and can be reduced in each of these spaces.

Biases are preconceived notions based on beliefs, attitudes, and/or stereotypes about people pertaining to certain social categories that can be implicit or explicit.[17] Because biases can be based on stereotypes rather than beliefs, an individual can

hold a negative bias toward a group without believing that negative bias is true of the group. Nevertheless, biases based on stereotypes rather than beliefs may still affect behavior.

Discrimination describes inequitable treatment or impact of general policies and practices on members of certain social groups that result in advantage or disadvantage.[18] While bias describes thought processes and cognition, discrimination describes behavior and resultant impacts on individuals and communities. Discrimination does not have an underlying cause inherent in its definition and can be driven by various forces.[18] Therefore, while bias can lead to discriminatory behavior, it does not always. Notably, both individuals and institutions can be discriminatory.

These distinctions do not absolve us from the responsibility of recognizing and reducing the negative effects of bias and discrimination in the HPLE. They instead serve as a starting point from which to understand that this issue affects everyone and provides a shared understanding from which to move forward in this important work.

Achieving Our Vision

Guided by our 5 recommendations introduced above, we detail, in the following sections, strategies and interventions to address bias and reduce discrimination in the HPLE.

Create systems to identify and address bias and discrimination

We must know the extent of a problem to effectively address it. Thus, the first recommendation focuses on identifying the presence and effect of bias and discrimination in an institution's local HPLE. This evaluation should stretch into all areas in which learning occurs, including physical (i.e., classrooms, clinics, hospitals), virtual (i.e., websites and associated content) and sociocultural spaces (i.e., mentoring relationships, organizational culture, policies, and practices).[19] Below, we detail specific approaches to achieve this goal.

Identify experiences of bias and discrimination within the health professions community. Experiencing or witnessing bias or discrimination can have devastating effects on the individual.[20–25] Institutions can better understand the prevalence of

these experiences through regular surveys of trainees, faculty, and staff. Ideally, these surveys will include details on the source (e.g., peer, supervisor, lecture material), attribution (e.g., race/ethnicity, sexual orientation, gender, etc.), type (e.g., jokes, bullying, harassment), and frequency of these experiences paired with demographic information and social group membership to facilitate comparisons and identify disparities. Data should be regularly reviewed and used to guide interventions and track progress.

Identify health care inequities throughout the medical institution on key metrics. Bias and discrimination contribute to inequity in patient care through direct effects on provider judgment and negative impacts on provider–patient relationships.[2,8,9,26–31] It is important that institutions evaluate patient experience of both overt bias and discrimination as well as more subtle impacts on patient-centered care. For example, surveys can assess whether patients felt that facilities were accessible and whether they felt they were treated with dignity and respect throughout the clinical encounter. Alongside this, institutions should work to identify inequities in health care outcomes between different social groups across key quality metrics and the mechanisms by which they may arise, including through the disparate impact of general policies, practices, and norms of clinical care. To achieve this, detailed and reliable demographic data on social group membership should be collected within our electronic medical records and easily extracted and analyzed to guide improvement.[32] Finally, institutions should critically evaluate whether they are structured to deliver equitable care to all of their patient populations including acceptance of public insurance, equitable access to telehealth, and mechanisms to effectively screen and provide resources to address social determinants of health.[33]

Identify disparities in recruitment and opportunity within the health professions community. Disparities seen between social groups in our broader society are echoed within the health professions community. As such, institutions should also evaluate for the presence of disparities among their trainees, faculty, and staff. Institutions should measure and track recruitment of faculty and trainees underrepresented in the health professions. Also, the language, images, and process of disseminating promotional materials such as job listings and institutional websites should be reviewed for any bias present to identify and remove any potential barriers to the recruitment of underrepresented individuals. These materials should also include clear nondiscrimination policies. Finally, institutions can focus on how they are recruiting individuals. For example, many institutions

incorporate messages of public service in materials attempting to recruit diverse individuals based on literature that suggests providers who identify as members of marginalized groups are more likely to serve underserved populations.[34] However, studies suggest that recruitment processes that focus on this message alone are not effective in recruiting applicants who were not already planning to apply. One study found that messaging focused on personal benefits of the position, including career benefits, were more effective in recruiting new and diverse applicants, especially among women and racial/ethnic minorities.[35] Institutions can consider creating marketing materials that promote public service as well as personal benefits of available positions.

Internal recruitment processes should also be reviewed, including whether there is antibias training for and representation of diverse backgrounds among those who are involved in trainee and faculty selection.[36] Institutions should also review their technical standards for admission and graduation to ensure equitable access of opportunity for students with disabilities and compliance with the Americans with Disabilities Act (ADA). This is particularly important considering that one recent study revealed that almost 20% of U.S. medical schools did not make their technical standards available online for prospective applicants and 61% did not clearly articulate responsibility for providing reasonable accommodations as mandated by the ADA.[37] Selection processes and applicant evaluation should also be reviewed for disparities in recruitment metrics including invitation to interview, interview acceptance, rank position, and matriculation or acceptance to the program. Finally, institutions should also review whether there are programs in place focused on diverse recruitment, such as specific recruitment events targeting different communities and institutional representation at national conferences focused on the recruitment and retention of underrepresented groups in the health professions.

Parity between members of different social groups is another key area to evaluate for bias and discrimination. Among faculty, metrics could include compensation (e.g., benefits, starting salary, bonuses); advancement (e.g., discretionary training opportunities, time to promotion, retention in academics); mentorship; and representation in senior leadership roles, where disparities are particularly stark.[38–40] Attention should also be paid to the type of leadership role held. For example, whether a leadership role is one of governance (e.g., chief of a department, CEO) or limited to nurturing roles (e.g., advising, education) as members of underrepresented groups tend to be granted nurturing roles rather than those that come with governing responsibility.[41] Trainee experience should also be

closely monitored and evaluated to ensure equity of opportunity and successful advancement through training. These metrics could include time to graduation, narrative assessments, mentorship, and achievement of clinical competencies or milestones. By reviewing trainee assessment processes and outcomes, institutions can better identify disparities and address them head on.

Evaluate current training across the institution focused on reducing bias in health care. There are educational opportunities throughout the HPLE for trainees, faculty, and staff. Institutions should evaluate current curricular offerings at each of these levels for training focused on reducing bias and discrimination including a review of the content, frequency, quality, and coordination of curricula to identify any gaps and work to close them. It is important to note that evaluation should also include a review of all curricular content to ensure that the discussion of group differences is free of bias, regardless of whether the focus is on health disparities.

Make the reduction of bias and discrimination an institutional priority

The importance of strong top–down leadership in reducing bias and discrimination in the HPLE cannot be overstated. Institutional leaders have the power and resources to make broad sustainable changes and hold people accountable in meeting stated goals.

Align institutional excellence with the reduction of bias and discrimination. One important strategy is to link the reduction of bias and discrimination to institutional goals like academic excellence, high-quality care, or patient engagement. For example, in the late 1980s, the president of the University of Michigan made improving the diversity of the institution a strategic priority by coupling academic excellence to improving social diversity, pursuing them both through a unified effort known as the Michigan Mandate.[42] This coupling placed improved representation at the core of their strategic plan rather than as a separate endeavor. This initiative also included the creation of a taskforce to implement programs and monitor progress made up of the second highest ranking official in each academic unit, ensuring that each school (e.g., medical school, law school, nursing school) would have the same top–down leadership and prioritization.

Allocate adequate resources to creating, implementing, and evaluating programs. The success of any initiative depends on sustainable and adequate funding. There are successful examples in reducing bias and discrimination when

enough resources are provided. For example, the Michigan Mandate also allocated 1% of the university's budget annually into an escrow account used only for diversity initiatives. The results speak for themselves: Minority matriculation doubled, minority faculty markedly increased, minority graduation rates increased to be the highest among public universities, promotion and tenure success of minority faculty improved, and more minority faculty were promoted to leadership positions.[42]

Ensure accountability by setting goals and incentivizing success. To track progress, institutions should be held accountable. Making initiatives mandatory, setting time-sensitive goals, and providing transparency around whether goals are being met is one strategy to achieve accountability. The National Health Service (NHS) in the United Kingdom recently adopted a workforce race equality standard (WRES) for all NHS organizations.[43] The WRES requires that all NHS organizations meet and make measurable improvement on 9 diversity metrics, including adequate representation of ethnic minority staff and senior leadership, representation on organizational boards that reflect the demographics of the community, reductions in reports of discrimination, and annual public publication of progress.[44] Importantly, the WRES was made mandatory after review found that prior voluntary initiatives were not leading to positive measurable results.[43] Since implementation in 2015, there has been an increase in workforce representation of minority racial/ethnic groups in general and in very senior positions within the NHS.[45] There has also been a reduction of racial disparities in disciplinary action and in promotion practices overall.[45]

Another strategy to ensure accountability is to tie success to compensation or grant funding. The Athena Scientific Women's Academic Network (SWAN) in the United Kingdom was established in the early 2000s to promote improved representation and equality for women in science, technology, engineering, and medicine. They created awards recognizing institutional improvements in gender parity. In 2011, the chief medical officer for England restricted the allocation of government funding from the National Institute for Health Research to institutions that had at least a silver award from the Athena SWAN, indicating demonstrable improvement in gender parity within the organization.[46] Since implementation, not only did applications to the Athena SWAN from medical institutions increase by 400%, but evidence suggests that women's career satisfaction, job opportunities, and professional development have also improved at institutions that have received a silver award.[47] This approach has since been expanded to several European academic medical centers and is being evaluated for effectiveness.[48]

Ensure comprehensive curricula to reduce bias and discrimination

Reducing bias and discrimination requires curricula that provide the knowledge and skills needed to identify, prevent, and address these issues in our HPLE. Studies have demonstrated an association between participation in health equity curricula and reduced bias in health professions trainees, although curricular content and approaches have not been uniform.[49–52] For example, in a national sample of medical students, the presence of formal curricula on health equity was associated with a decrease in racial and sexual orientation biases over 4 years of medical school.[51,52] Institutions should provide the content and resources needed to ensure coordinated and effective curricula for all members of the institution. Below, we suggest several approaches that can be used to reach this goal.

Integrate training to reduce bias and discrimination throughout the institution. HPLEs are increasingly team based and multidisciplinary. Additionally, the apprenticeship model of training in the health professions makes role modeling ofs behaviors, both positive and negative, an important part of learning that can have large impacts. For example, studies have demonstrated an association between overhearing negative remarks about African Americans or lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals made by supervisors and increased racial and LGBTQ bias in medical students.[51,52] Finally, because of changes in medical curricula over time, many students may have more exposure and understanding of concepts of bias and discrimination than their supervisors. Taken together, it is important that curricula addressing these issues be integrated across all health professionals at the institution regardless of training level. Integrated training has also been shown to have successful results. One randomized, controlled trial (RCT) determining the effectiveness of a civility intervention among health professionals found that the coordinated intervention led to increased civility, job satisfaction, respect, and trust in management, as well as a decrease in burnout and work absences in the civility intervention group compared with control, with results still present a year later.[53]

Curricula must provide knowledge and skills necessary to reduce bias and discrimination. Bias and discrimination are forces that affect all aspects of learning and patient care. It is essential that curricula equip health professionals with the knowledge and skills necessary to effectively reduce bias and discrimination in their practice. Curricula should include specific content required to understand bias and discrimination including the science of bias, the negative consequences

of these forces on patient care, and a discussion of the historical roots of bias and discrimination within the medical institution and their structural perpetuation in our day-to-day work whenever discussing health disparities between different social groups.[54] By doing so, curricula not only equip students with targeted information needed to understand these issues but also foster an understanding that health differences between social groups are largely the result of societal systems of oppression, like racism and sexism, that assign social advantages or disadvantages to individuals and communities based on social group membership(s), not the result of innate biological differences between social groups.

Curricula must also provide skills necessary to reduce bias and discrimination in the HPLE and in health delivery. Individual awareness of and ability to mitigate personal biases is key to motivating individuals to reduce bias.[55,56] Curricula should strive to capture this motivation to change through providing tools and time to identify and reflect on personal biases. One way to bring awareness to personal biases is through the use of the implicit association test (IAT).[57] While there have been concerns raised about the IAT,[58] a recent meta-analysis has demonstrated that well-designed studies show a correlation between implicit attitudes as measured by the IAT and discriminatory intergroup behavior[59] and that the IAT remains the most used test to measure implicit bias.[60] It can also be a valuable tool in curricula addressing bias.[51] However, we suggest that when using the IAT within curricula, educators should always preface the exercise with the known limitations of the test and provide learners with a way to debrief their results, preferably with a skilled facilitator in small groups, to avoid feelings of shame that can lead to learner disengagement.

Other important skills include the use of individuation, the process of focusing on the individual in front of you rather than their social group membership, and perspective taking. Devine et al demonstrated reductions in implicit racial bias among psychology students that persisted for 8 weeks after a multifaceted training intervention treating bias as a habit and focusing on multiple habit-breaking strategies including individuation and perspective taking.[55] Similar sustained reductions in gender bias were demonstrated in an RCT among health professions faculty using similar training strategies.[61] Perspective taking was also used in a recent RCT in the general population where prejudice against transgender individuals was reduced after a 10-minute conversation that included perspective taking. Importantly, these effects were also sustained when evaluated 3 months later.[62] It is important to note that curricula focused on skills building in this area

require teaching approaches that focus on equity and the critical examination of how power and privilege structure our learning and work environments. Institutions should consider using several of these approaches to inform their curricula, including critical pedagogy and critical race theory[63–66] as well as structural competency.[67]

Finally, patient-centered communication that considers the social context of a patients lived experience can improve patient–provider communication and health care quality, especially among minority groups. Cultural humility is one such approach that evolved from the concept of cultural competency and is described as a lifelong process of striving to equalize power imbalances between providers and patients.[68] It includes a focus on patient-centered interviewing that creates a respectful and trusting relationship in the exam room. Here, the provider does not inhabit a role of "expert," but instead the role of student, understanding that a patient is the expert on their own life. One study evaluated provider cultural competency with a 20-item scale (see List 1) and assessed whether scores were associated with quality of care among HIV patients.[69] They found that providers with middle to high cultural competency scores had patients reporting higher quality of care. Importantly, they also found that providers with low scores on the cultural competency scale had racial disparities present in the quality of care provided to their patients, while those with higher scores did not.[69] While cultural humility grew out of cultural competency, this study reflects the power and importance of effective patient–provider communication in reducing the effects of bias and discrimination in patient care.

Provide adequate resources and support for professional development in this space. Overall, institutions should provide adequate financial support, protected time, and professional development to educators and researchers in this space. Because this work has not traditionally been viewed as an academic pursuit, many individuals working in this space often do so to the detriment of their own professional development and advancement. If we are to reduce bias and discrimination in the HPLE, we must support trainees and faculty of all levels to pursue specialized training in this work and have protected time to develop, evaluate, and implement programing in this space.

List 1: Selected Items[a] from the Self-Rated Cultural Competence Instrument for Primary Care Providers[b]

- Family and friends are as important to a patient's health as doctors are.

- Health care providers should not ask patients about personal matters like religion and spirituality. (R)

- The social history rarely contributes much to how I care for my patients. (R)

- Minority patients in the United States as a whole receive lower-quality health care than White patients.

- Being White affords people many privileges in the United States that minorities don't have.

- I am familiar with most of the lay beliefs about disease that my patients have.

- I feel less than competent working with patients from cultural backgrounds different from mine. (R)

- I ask all my patients about complementary and alternative therapies they may be using.

- I always try to find out what patients think is the cause of their illness.

- I try to maintain professional distance from my patients when caring for them. (R)

- I try to involve patients in decisions about their health care as much as I can.

Abbreviation: (R), reverse coded.

[a]*Responses for all items used a 6-point scale ranging from strongly disagree to strongly agree.*

[b]*Saha S, Korthuis PT, Cohn JA, et al. Primary care provider cultural competence and racial disparities in HIV care and outcomes. J Gen Intern Med. 2013;28(5):622–629.*

Ensure critical diversity in the health professions

Creating a workforce that reflects the broad diversity of current patient populations is arguably the most powerful way to reduce bias and discrimination within the health professions. Increased diversity among trainees and faculty and an inclusive climate decreases bias among health professions trainees.[51,52,70] While there has been marked improvement over time for women and some Asian communities, there has been little improvement in representation of other marginalized groups

in the health care workforce.[71–73] While initiatives promoting institutional diversity are common, they are too often decoupled from concrete and purposeful improvements in representation. This has led some to suggest that "diversity" is used by organizations to maintain the status quo and detract from significant changes in representation within the health professions workforce.[74] Meaningful change will require moving from diversity initiatives reflecting good will to measurable improvements in representation.

Institutions should strive to achieve critical diversity, the equal inclusion of people from all backgrounds and a commitment to parity throughout the organization, by examining and confronting issues of discrimination while paying special attention to social groups that have been kept out of the health professions space through exclusionary practices.[75,76] It is also important to understand that many individuals are members of multiple marginalized communities and that living at these intersections of identity can provide unique opportunities for success that must be captured by the institution as well as challenges requiring thoughtful institutional support. Earlier, we reviewed the importance of making initiatives an institutional priority to ensure effectiveness.[42,44,46] In addition to this, there are other important strategies to achieve critical diversity including assigning responsibility to meet set goals, linking improved representation to institutional evaluation, implementing targeted programs to recruit and support providers underrepresented in the health professions, and structuring recruitment practices to prevent bias and discrimination.

Assign responsibility to meet set goals. While it is important to recognize that the improvement of diversity is an overall goal at the institution, meaningful change is more likely if there is a specific person or entity explicitly assigned the responsibility of promoting and fulfilling stated goals.[77] We recommend that institutions assign the responsibility of demonstrating measurable change to managers, whether through a taskforce, leadership position, the establishment of an office dedicated to this work, or a combination of the above. Assigning responsibility can be a combination of including improvement in diversity as a goal tied to general leadership positions as well as having individuals or groups of individuals with an expertise in diversity and inclusion tasked with supporting this work across the organization. In a comprehensive, long-term study comparing different organizational strategies to improve diversity in over 700 private sector firms, programs assigning responsibility in one or several of the above ways had the broadest and strongest effect in improving the diversity of organizations.[77] Notably,

this strategy also enhanced the effectiveness of other strategies, including bias reduction training.[77]

Link improved representation to institutional evaluation. Another way to ensure the success of diversity initiatives is to tie improved diversity to institutional evaluation. For example, institutions in the NHS are judged on whether they are making progress toward meeting the WRES, and if they are not, they may not be considered "well led"—a technical designation that can be used to reduce funding in subsequent budget negotiations.[43] This provides a major incentive for ensuring that leadership is committed to working to meet set standards. Another example comes from the Liaison Committee on Medical Education, the accrediting body for U.S. medical schools. In 2009, they introduced 2 accreditation metrics related to diversity: one focused on systematic efforts to recruit and retain diverse medical students to their institutions and the other focused on pathway programs for underrepresented groups.[78] Since the adoption of these metrics, there has been an increase in the matriculation of Black, Hispanic, and female medical students.[78] We recommend that institutions and accreditation bodies throughout the health professions include metrics related to reducing bias and discrimination in general evaluation processes.

Implementation of programs to recruit and support underrepresented groups. The road to a career in the health professions starts long before the application process and is affected by the same structural discrimination we have discussed, putting marginalized groups at a disadvantage at many points before, during, and after training. Institutions should provide resources and programing that focus on addressing the unique challenges and experiences of underrepresented groups on the path to and during their health professions career. This includes targeted pathway programs for underrepresented students in high school and undergraduate training focused on promoting interest and providing exposure to health professions careers, which may otherwise seem out of reach.[79,80]

Recruitment is another space where institutions can work to create an inclusive environment welcoming to underrepresented applicants. Some strategies include clearly stating and demonstrating institutional commitment to diversity in all material provided to prospective applicants, as well as facilitating interpersonal connections with trainees, faculty, and institutional leaders who also emphasize their desire to improve representation of diverse groups at their institution.[81,82] Finally, individuals from underrepresented groups are less likely to have the

effective mentoring or network necessary for success in academic spaces.[82] As such, institutions should provide resources for targeted professional development programs aiming to close this gap and support underrepresented providers at their institutions. [83–86]

Structure recruitment and evaluation processes to prevent bias and discrimination. There is a large body of evidence detailing disparities in the recruitment and evaluation of underrepresented trainees in the HPLE, including bias in honors and awards, narrative evaluations, and a lack of modernization and standardization of technical standards across health professions institutions.[87–89] These disparities are thought to arise from disparate impact of general practices and processes that leave underrepresented groups at a disadvantage. By creating thoughtful recruitment and evaluation structures with equity in mind, institutions can help prevent bias and discrimination from impacting recruitment and evaluation in the HPLE.

It is important to note that faculty involved in recruitment and evaluation act as gatekeepers to health professions training and supporting them is an important part of supporting any diversity initiative. As such, faculty should be provided with protected time for their recruitment and evaluation responsibilities. Given the activation of bias under time pressure, this should help to prevent bias from interfering in the evaluation process. Next, faculty should participate in bias reduction training and education that reviews the literature of bias that exists in health professions evaluation and assessment[87,88,90–92] within the health professions and provide guidance on how to approach evaluation to meet institutional diversity goals.[93]

Recruitment and evaluation processes can be structured to reduce bias and discrimination. For example, during recruitment, the use of structured interviews that ask the same questions in the same order to all interviewees can increase fairness and reduce variability.[94] Also, during the evaluation of applicants it is important for programs to determine what qualities make an applicant a "good fit" for the program. Without a shared definition, this designation can lead to strong biases and keep programs from making meaningful changes in representation.[95,96] Programs can work to reduce this by creating clear guidelines for faculty engaged in the selection process of what qualities or work experience the training program or position requires for success.

Once this definition is agreed upon, the tiebreak strategy or the threshold strategy can be used to improve the representation of diverse applicants at the point of acceptance or ranking for a program. The tiebreak strategy was included in the United Kingdom's 2010 Equality Act and suggests that when 2 or more equally qualified candidates apply to an opportunity, selection can be based on a demographic characteristic (such as race/ethnicity or gender identity) because selection of this qualified individual is used to address a shortfall in the organization, namely a lack of diverse representation.[97] The threshold strategy allows managers to make choices that favor candidates from socially disadvantaged groups as long as they have met the threshold needed to succeed in the position being offered; in this case, underrepresented candidates are not being compared with other applicants but, instead, with the required standard qualification for success in an organization.[43]

These strategies help institutions choose applicants based on explicitly stated procedures that focus on a shared institutional goal to improve representation in the organization. Another important consideration is that the benefits of organizational diversity are activated only after reaching a critical threshold of representation.[98] Thus, lack of adequate representation hinders the ability for the benefits of diversity to manifest on an organizational level. Given the slow progress we have seen despite the prevalence of diversity initiatives throughout the health professions, the use of these explicit strategies may do more to meet the need for transformative change in this area.

Create an institutional culture of respect, inclusion, and equity

While programs like those mentioned above will likely increase representation if applied to HPLEs, organizations must also ensure that the institution is designed to help all members work together and feel valued. This can be done through ensuring a culture of respect and promoting psychological safety among health professionals throughout the institution.

Create accountable reporting systems for bias and discrimination. A culture of respect requires shared core values of transparency, accountability, and mutual respect of all members of the institutional community.[99] One core part of developing a culture of respect is the need to establish clear systems to report events of disrespect, such as discrimination and bias, without fear of retribution or lack of action on the part of the organization.[99] Creating accountable reporting

systems that all members of the health professions community believe will lead to actionable change is imperative. Understanding that individuals sharing negative instances of bias and discrimination will not be subject to reprisal help to reduce feelings of hopelessness and fear associated with reporting discrimination. The establishment of these types of reporting systems has been shown to increase awareness of reporting processes and reporting overall as well as early evidence suggesting a decrease of certain types of discrimination.[100]

Provide institutional rewards celebrating the reduction of bias and discrimination. Institutions should create spaces to report and recognize instances where personnel or systems help to reduce or bring awareness to bias and discrimination. The ability to celebrate the ways individuals within institutions are improving climate can serve to encourage this behavior in the organization overall. Institutions can consider the establishment of annual awards for exemplary work focused on reducing bias and discrimination given to individuals, units, or departments who are doing well.

Promote psychological safety throughout the learning environment. In psychologically safe environments, community members feel confident in expressing their ideas and beliefs without fear of negative consequences.[101] Psychological safety is of particular importance in health professions training where learning tasks are team based, complex, and high stakes.[102] While all groups benefit from psychological safety, the benefits are likely even stronger among members of disadvantaged groups. The reduction of bias and discrimination in the HPLE will require constant critique and improvement of the organizations in which we work. By promoting psychological safety, institutions are effectively creating structure to support the reduction of bias and discrimination in their learning environments.

Conclusion

Bias and discrimination are long-standing and pervasive issues in the health professions with historical roots and structural perpetuations. Nevertheless, as we have discussed here, there are a multitude of approaches and strategies that have demonstrated success in reducing bias and discrimination throughout the HPLE and other organizations. By focusing on the 5 recommendations discussed in this paper, institutions can position themselves to create learning environments that adequately prepare the next generation of health professionals to provide high-quality care to all patient populations regardless of background.

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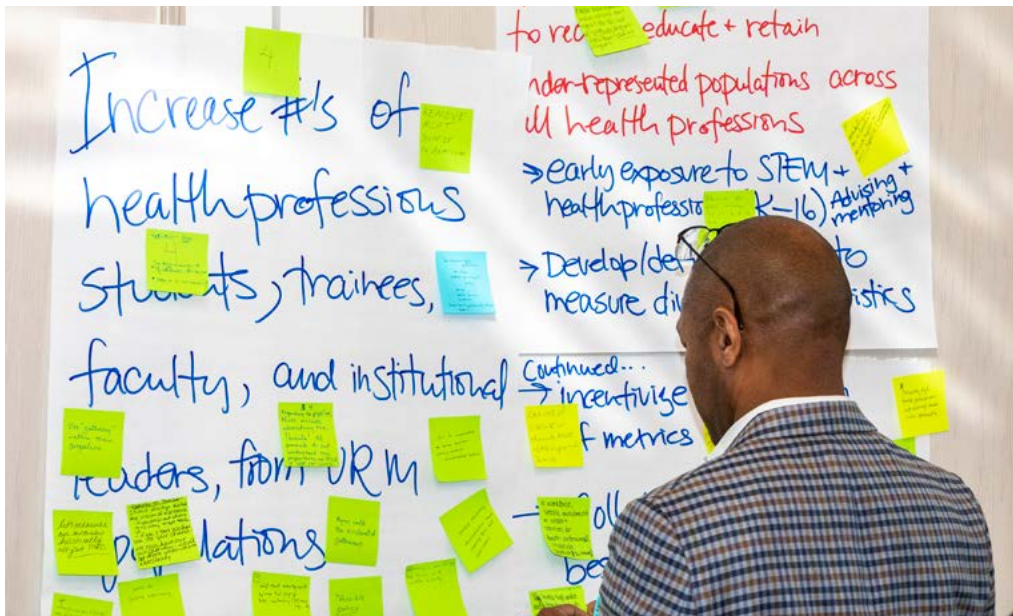
COMMISSIONED PAPER

Addressing Patient Bias and Discrimination Against Clinicians of Diverse Backgrounds

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Abstract

The duty to care for all patients is central to the health professions, but what happens when clinicians encounter patients who exhibit biased or discriminatory behaviors? While significant attention has focused on addressing clinician bias toward patients, incidents of patient bias toward clinicians also occur and are difficult to navigate.

Clinicians anecdotally describe their experiences with patient bias, prejudice, and discrimination as profoundly painful and degrading. Though this phenomenon has not been rigorously studied, it is not unreasonable to postulate that the moral distress caused by patient bias may ultimately contribute to clinician burnout. Because women and minority clinicians are more likely to be targets of patient bias, this may worsen existing disparities for these groups and increase their risk for burnout. Biased behavior may also affect patient outcomes.

Although some degree of ignoring derogatory comments is necessary to maintain professionalism and workflow, clinicians also have the right to a workplace free of mistreatment and abuse. How should clinicians reconcile the expectation to always "put patients first" with their basic right to be treated with dignity and respect? And how can health care organizations develop policies and training to mitigate the effects of these experiences?

The authors discuss the ethical dilemmas associated with responding to prejudiced patients and then present a framework for clinicians to use when directly facing or witnessing biased behavior from patients. Finally, they describe strategies to address patient bias at the institutional level.

While a neurology resident at Massachusetts General Hospital and Brigham and Women's Hospital, Dr. Altaf Saadi cared for a patient who asserted that his religion was superior to her own. As she auscultated, he pointed at her headscarf and added, "Why do you wear that thing on your head anyway?"[1]

The duty to care for all patients, regardless of beliefs or circumstance, is central to the medical profession, but Dr. Saadi's experience embodies the tension that clinicians feel taking care of biased patients. How should clinicians respond when patients exhibit biased or discriminatory behavior, and how can health care organizations develop policies and training to mitigate the effects of these experiences?

Introduction

While significant attention has focused on documenting and addressing clinician bias toward patients, incidents of patient bias toward clinicians also occur and are difficult to navigate.[2,3] In a recent survey of 822 U.S. physicians, 59% reported having heard offensive remarks from patients about their age, gender, ethnicity, race, weight, or other personal characteristics in the past 5 years and 47% had patients request a different physician.[4] These incidents begin early in training: One study of 242 family medicine residents revealed that patients accounted for 35% of the intimidation, harassment, and discrimination experienced by trainees.[5]

Biased patient behavior can manifest in various ways in the clinical setting. In a qualitative study of 50 trainees and physicians, participants reported incidents of patient bias that ranged from explicit rejection of care and prejudiced epithets to inappropriate compliments, flirtatious comments, and belittling jokes reflecting ethnic stereotypes.[6] It is important to make the distinction between bias, prejudice, and discrimination. Individuals are often biased against others outside their social group (and sometimes against those in their social group), and prejudice refers to biased thinking, while discrimination refers to biased actions against a group of people.[7]

Clinicians anecdotally describe their experiences with patient bias, prejudice, and discrimination as profoundly painful and degrading.[8] For example, after a patient refused to see Dr. Cornelia Wieman because she was Indigenous, she recalls feeling humiliated and helpless, eventually calling for another physician because she

"didn't feel like [she] had a choice."[9] Similarly, Dr. Esther Choo, an Asian American emergency room physician in Oregon, recounts her experience "cycling through disbelief, shame, and anger" after patients refused her care exclusively based on her race.[10]

Though this phenomenon has not been rigorously studied, it is not unreasonable to postulate that the moral distress caused by patient bias may ultimately contribute to clinician burnout.[8,11] This has particular implications for minority patients. Because minority clinicians are more likely to experience patient bias, this may increase their risk for burnout and lead to fewer minority clinicians in medical practice. Research suggests that racial and ethnic minority patients might achieve better outcomes when cared for by minority clinicians, so the alienation of minority clinicians by biased patients may actually worsen outcomes for minority patients.[12]

The ethical and legal obligations of the medical profession make it challenging for clinicians to confront patients' prejudiced remarks and behavior. There is an implicit expectation that clinicians must care for patients no matter their behavior.[6,13] Although some degree of ignoring and "rising above" derogatory comments is necessary to maintain professionalism and workflow, clinicians also have the right to a workplace free of mistreatment and abuse. How should clinicians reconcile the expectation to always "put patients first" with their basic right to be treated with dignity and respect?

During health professions education and training, clinicians receive little instruction on answering this question; instead, they learn to filter their own responses to ensure patients feel safe and secure.[14] In one study of pediatric residents, 50% indicated not knowing how to respond to mistreatment by patients and their families.[15] Moreover, few health care organizations have clear policies and procedures to guide staff in responding to incidents of biased patient behavior.[8] As the clinical workforce becomes increasingly diverse, it is possible that such interactions may occur more frequently. Medical schools and health care organizations should therefore strive to create an environment that respects the diversity of both patients and clinicians.

Patient Bias and Discrimination Against Clinicians

Despite slow progress, the U.S. health care workforce is becoming increasingly diverse: Women now outnumber men in medical school, 19% of registered

nurses are from minority groups historically underrepresented in the health care workforce, and 28% of practicing physicians are foreign-born.[16,17] As patients encounter clinicians whose identity may be discordant with their personal notion of a trustworthy, competent clinician, some may reject or demean them based on their personal characteristics. Although systematically collected data on the prevalence of these interactions is lacking, anecdotes from individual clinicians and reports from online surveys suggest most health care professionals will experience patient bias over the course of their careers.[6]

The immediate and downstream impacts of bias and discrimination are especially damaging in the health care environment, where they can compromise the patient–clinician relationship and directly influence the quality of care provided. In this section, we describe patients' discriminatory behaviors and their effects.

Patients' biases and discriminatory behaviors

Patient bias can take many forms in the clinical setting, and this variation emphasizes the need for teaching clinicians what behaviors and attitudes constitute bias and discrimination. In one study of physician and trainee experiences with patient bias, the authors interviewed 50 hospitalist attending physicians, internal medicine residents, and medical students to understand how clinicians react and respond to these incidents. They found that types of demeaning behaviors by patients included: (1) explicit refusal of care, (2) explicit or socially based remarks, (3) questioning clinician role, (4) nonverbal disrespect, (5) jokes or stereotypes, (6) assertive inquiry into participant's background, and (7) contextually inappropriate compliments or flirtatious remarks.[6]

Patients' biases and discriminatory behaviors can target a broad range of personal characteristics associated with clinicians. These include, but are not limited to, gender, age, ethnicity or national origin, race, weight, accent, political views, religion, medical education from outside the United States, and sexual orientation.[4] Further, patient bias affects all health care professionals. WebMD/Medscape and STAT, both online publishers of news and information related to health and well-being, conducted an online survey of 1,186 health care professionals drawn from a random sample of Medscape members. They found 59% of surveyed physicians, 53% of nurses, 55% of nurse practitioners, and 57% of physician assistants reported having heard prejudiced remarks by patients.[4]

Some groups are targeted more often than others. Compared with physicians, nurses and ancillary staff spend more time with patients and receive less protection from organizational policies regarding patient requests.[14,18] In 2013, Tonya Battle, a Black nurse at Hurley Medical Center, sued the hospital for discriminating based on race and conceding to a White swastika-tattooed father who demanded that no Black nurses care for his newborn. In a classic example of the medical culture of accommodation, the hospital posted a notice prohibiting African American nurses from caring for or touching the baby.[19] This case, and the dozens of others that followed, revealed the insidious effects of bias and discrimination on those at the frontlines of patient care.

Nationally, it is estimated that 25% of nurses experience mistreatment by patients each year, but many fail to report these episodes.[20] The reasons are complex and include (1) power differentials that situate nurses as having less authority and knowledge than physicians, (2) hospital management reluctant to hold patients responsible for inappropriate conduct, and (3) learned helplessness that patient mistreatment is simply part of the job and must be tolerated.[21,22] For these reasons, it is crucial that all health professionals, especially nurses, aides, and other staff at a higher risk of exposure, benefit from initiatives to protect staff from discriminatory patients.

In addition, women and clinicians from minority groups may bear a greater burden of patient bias and discrimination. Research shows that female physicians are more likely to hear prejudiced comments and Black physicians report regular instances of racist treatment from patients.[4,23–25] In an essay about racism shifting the power dynamic in medicine, Dr. Nwando Olayiwola, a Black female physician at San Francisco General Hospital, recounts her experience caring for a patient who explicitly stated, "You didn't tell me I was going to see a Black doctor. And not just a Black doctor, but a Black woman!" Though Dr. Olayiwola had become more resilient to these kinds of situations—as a resident, she had cared for a patient who said, "All Black, Hispanic, Asian, and Jewish doctors should be burned alive," and another who said she would "rather die than be touched by a filthy Black doctor"—this patient's remarks still left her feeling powerless and embarrassed.[26]

Effects of patient bias and discrimination

Patient bias and discrimination may impact clinician well-being in the short and long terms. Studies conducted in the general population have shown that individuals

who are targets of racism, sexism, homophobia, and other forms of prejudice have higher rates of anxiety, depression, high blood pressure, and cardiac disease.[27] In addition, the emotional burden of caring for a biased patient can be substantial and is associated with symptoms of psychological decline and professional burnout, such as emotional exhaustion, fear, cynicism, and self-doubt. Research shows these emotions linger long after the inciting event and can generate a profound sense of invalidation and isolation among health care professionals.[28–30] In addition, they may lead to imposter syndrome, defined by persistent feelings of self-doubt and an inability to internalize one's accomplishments and abilities. Imposter syndrome is already widespread in medicine—studies have found evidence of imposter syndrome among clinicians at all stages of their careers—and exposure to biased patient behavior may worsen these feelings.[31,32] At a time when clinician well-being and burnout remain at the forefront of national discourse, medical schools and health care organizations that champion diversity must strive to address the emotional burden associated with caring for biased patients.

The emotional toll of discriminatory patient behaviors may also affect clinicians' learning and practice. Some trainees report avoiding rotations and clinical sites where encounters with biased patients are common, while others note a decreased ability to focus on learning, training, and developing into a better clinician.[6] Consequently, repeated encounters with biased patients may impact trainees' professional development and eventual career choices, though this has not been explicitly studied.

Biased behavior may also affect patient outcomes. Many clinicians believe they can rise above the negative emotions conjured by biased patient behavior, but anecdotes from individual clinicians suggest that they may feel reluctant to spend extra time with patients who broadcast bigoted views.[27] Given that decreased time spent with patients is associated with decreased patient satisfaction, suboptimal visit content, and higher rates of inappropriate prescribing, we surmise that bias may impact the quality of care that patients receive.[33]

Lastly, the fact that women and minority clinicians are most often the targets of biased patient behavior raises an important question: can bias worsen existing disparities for these groups? This is an area of active investigation, and it is hypothesized that women and minority clinicians may receive lower patient satisfaction scores partly due to increased exposure to bias and, because clinician reimbursement is associated with patient satisfaction, lower pay. Patient satisfaction

scores can also influence whether—and which—clinicians are offered opportunities for career advancement and leadership.[24]

Clinician Response to Patient Bias and Discrimination

Incidents of patient bias and discrimination, such as patients' requests for reassignment based on clinicians' personal characteristics, present a complex business, legal, and ethical dilemma. Because this type of mistreatment cannot be prevented, effective preparation is crucial. In these situations, clinicians are responsible for balancing patient preferences with the duty to treat and demands of justice and nonmaleficence.[34] In this section, we begin with an overview of the rights of patients and clinicians related to situations where bias may arise. We then discuss the ethical principles that clinicians and institutions must consider when responding to patient bias and describe barriers to responding. Finally, we present a framework for clinicians to use when facing or witnessing patient bias.

Rights of patients and clinicians

Both patients and clinicians have professional and legal rights that should be balanced within the practical realm of providing effective care for all patients. Informed consent rules and common law grant competent patients the right to refuse medical care, including treatment provided by an unwanted clinician.[35] The American Medical Association (AMA) Code of Ethics confirms that patients have the right to choose their clinicians.[36] In addition, the Emergency Medical Treatment and Active Labor Act (EMTALA) is a federal law that requires hospitals to stabilize and treat any patient that comes to the emergency department or, with patient consent, arrange for a transfer to a more suitable facility.[37]

The employment rights of clinicians are slightly more complex. According to Title VII of the 1964 Civil Rights Act, employees of health care organizations have the right to a workplace free of discrimination on the basis of sex, race, color, national origin, and religion.[38] However, many physicians are independent contractors rather than hospital employees and are not covered by Title VII. Thus, while nurses and nursing assistants have successfully sued their employers who required employees to accede to a patient's bigoted demands, physicians have not brought forth such lawsuits because they are often not protected by Title VII.[8] This ambiguity makes it challenging to use legal standards to distinguish between patient demands that should be accommodated and those that should be denied.

Ethical dilemma presented by patient bias and discrimination

When confronting patient bias, clinicians must balance patient autonomy with the ethical principles of justice and nonmaleficence. Patients are entitled to their individual beliefs and opinions, but when patients express views rooted in bias and bigotry, how should clinicians proceed?

For example, consider the experience of Dr. Bernard Sussman, a Jewish internist caring for Mr. W. During one visit, Mr. W revealed that he had served in the armed forces of Nazi Germany in Hitler's personal honor guard. Pressed further, he grew angry, claiming that the "Jews were responsible for everything that happened to them." Dr. Sussman, whose moral consciousness was shaped by his family's history of persecution during World War II, was left stunned. Though he completed the appointment, Dr. Sussman grew increasingly distant in Mr. W's subsequent visits— he did not examine him or evaluate potentially concerning symptoms, treated him over the telephone whenever possible, and prescribed medications without seeing or speaking to him. Dr. Sussman struggled to reconcile his patient's beliefs with his own integrity, and upon realizing that their patient–doctor relationship had been irreversibly damaged, informed Mr. W that he needed to find another physician.[39]

Although "first, do no harm" is the moral compass that guides clinicians in their interactions with patients, we contend that nonmaleficence should apply for both patients and clinicians.[40] In this situation, Mr. W's beliefs conflicted with Dr. Sussman's personal identity and impeded his ability to deliver excellent medical care.[36] Thus, when considering possible responses to a prejudiced patient, clinicians must weigh the primacy of patient preferences against their own values, feelings, and consequent ability to provide high-quality, patient-centered care.[34] While the medical profession mandates clinicians to subordinate self-interests to patients' best interests, no ethical duty is absolute.

At the same time, we note that terminating a patient–clinician relationship is not the right solution in most cases. The nature of the patient–clinician relationship means clinicians have a professional and ethical obligation to ensure all patients receive the best care possible. The clinician has knowledge, influence, and power in the relationship, which confers special responsibilities. During an encounter with a biased patient, it can be challenging to see them as vulnerable, but their vulnerability would only be compounded without a clinician's help.[41] As such, we

should be careful not to jump to conclusions and instead pursue a more deliberate, thoughtful approach consistent with our commitment to patient care.

Challenges of responding to patient bias and discrimination

Since most health care organizations provide little guidance on responding to patient bias, there is significant variability in how clinicians respond. Some may choose to ignore hurtful comments or accommodate requests for reassignment to avoid confrontation with biased patients.[6] Others may elect to ignore or accommodate behavior due to the potential consequences associated with responding (e.g., poor grades, professional evaluations). However, allowing the behavior to continue unfettered may (1) signal to the patient that such behavior is acceptable and (2) instill a mindset, especially among trainees, that these incidents are simply part of the job. It also raises the question of whether clinicians are tacitly endorsing the patient's behavior.

Other clinicians may react differently. For example, in an incident at the Brigham and Women's Hospital, an Indian American resident (S.H.J., when he was a trainee) saw a patient who angrily shouted, "You people are so incompetent … why don't you go back to India?" On instinct, the resident responded with, "Why don't you leave our [expletive] hospital?" and after leaving the room in a cold sweat, absolved himself of future clinical interactions with the patient.[42] This example shows that responding to patient bias is hard and can drive clinicians to say or do things they normally would not. The resident is emotional, but nonetheless, his response was not professional and could have led to punitive action against him. This case illustrates the need for additional training and education materials to help clinicians learn to better handle these situations and avoid saying or doing something inappropriate themselves. The current lack of training on what constitutes biased behavior and appropriate responses is a key barrier to responding professionally in these situations.

There are other barriers that also make it challenging for clinicians to respond to biased patient behavior. Some clinicians prioritize the importance of building a lasting patient–clinician relationship and excuse derogatory remarks from patients with impaired cognition, such as mentally ill or intoxicated patients. Many are unaware of institutional policies regarding discriminatory patients and fear that responding might compromise professional evaluations. Finally, a perceived lack of support from colleagues, supervisors, or institutions can prevent clinicians from

addressing biased behavior with patients.[6] These barriers underscore the benefits of integrating training on biased patients into clinical curricula and revamping organizational policies and protocols around patient discrimination.

There are also barriers that make it challenging for institutions to respond to biased patients. Although hospitals and health systems should strive to help clinicians navigate issues of patient bias, the reality is that no policy, recommendation, or ethical guidance can anticipate every possible situation. In addition, we operate in a resource-limited health care system that can prevent us from following a prescribed course of action. For example, if a patient refuses care from a Black nurse in a rural clinic, but there is no other nurse available, we have a greater obligation to make the relationship work. Here, we might try a more exhaustive array of negotiation and persuasion tactics since we cannot simply transfer care to another provider. For example, clinicians could explain the impact of the patient's refusal on their health or ask the patient to accept care until an alternative solution is found. In these cases, the legal right that patients have to choose their own clinician can make it more challenging to refute requests for reassignment.[34]

Framework for responding to patient requests for clinician reassignment

How should we respond to a patient's refusal of care from a specific clinician based on sex, race, sexual orientation, or other characteristic unrelated to patient care? As an example, consider a patient's race-based request for reassignment. As per the AMA Code of Ethics and an analysis of race-based accommodation by the University of California Los Angeles Law Review, accommodating patient preference for clinicians of a specific race or ethnicity appears to be consistent with ethical principles of informed consent and autonomy.[35,36] However, clinicians also have the right to a workplace free of discrimination (although Title VII may not apply, as explained earlier), and these rights must be balanced with patients' rights before race-based reassignment requests are accommodated.[38] Some also contend that granting a patient's bigoted request for reassignment is analogous to institutionalized racism.[43]

In their landmark *New England Journal of Medicine* paper on responding to patients' race-based requests for reassignment, Paul-Emile et al recommended making a decision based on: the patient's medical condition, decision-making capacity, options for responding, reasons for the request, and effect on the

physician.[8] In our framework, we build upon the tenets espoused by Paul-Emile et al.

We believe there are reasonable motives for reassignment and patients are not required to feel equally comfortable with all clinicians.[34] This does not mean patients are bigoted—a Black patient may simply feel more comfortable being cared for by a Black physician. The role of clinicians involves understanding the factors that contribute to this comfort and determining whether these factors are rooted in bigotry. One strategy is to ask the patient about the reasoning behind their request. A deeper investigation of the reasons underlying a Black patient's preference for a Black physician may reveal an understandable distrust of health care professionals stemming from the medical establishment's historical exploitation of Black patients (e.g., the Tuskegee experiment, Henrietta Lacks, the "father of gynecology" who experimented on enslaved Black women).[44,45] For these reasons, we are inclined to accommodate the patient's request.

In contrast, consider an example from the *AMA Journal of Ethics* in which a Black patient requests a Black physician instead of Dr. Chen, her current physician who is East Asian, after stating "Dr. Chen is good, but sometimes I can barely even understand what he's saying. You know? The accent? I mean, everywhere you go now, it's immigrants. Sometimes you just want someone who looks like you, you know?"[34] Now the situation becomes more complicated. Are the patient's beliefs motivated by xenophobia or grounded in an increased comfort with Black physicians and difficulty communicating with Dr. Chen? In this case, further information is needed to determine why the patient holds these views and whether the patient's health will be adversely affected if her request is not granted.

There is no one-size-fits-all answer for responding to patients' requests for specific clinicians, and it is impossible to anticipate every possible situation, but we believe that culturally or religiously appropriate requests should be accommodated. This includes religious dictates (e.g., a Muslim woman requesting a female physician), gender preferences (e.g., a woman requesting a female physician for a gynecological exam), and language barriers (e.g., a Spanish-speaking patient requesting a Spanish-speaking physician). In these cases, patient–clinician concordance is known to be associated with greater comprehension, trust, and satisfaction.[46]

Even if requests are not considered culturally or religiously appropriate, there are exceptions for which accommodation may be ethically justifiable. For example, some patients may have prior experiences with trauma that directly inform their requests for a different clinician. This includes victims of sexual assault or veterans with posttraumatic stress disorder who refuse treatment from a clinician of the same ethnic background as a former enemy combatant. In addition, if the patient's condition is emergent or cognition is impaired, we would err on the side of granting the patient's request.[8] In all of these cases, accommodation is justified because there is a real possibility the patient's health will be affected if their request is denied.

Requests motivated by bigotry are far less deserving of accommodation. In these cases, clinicians can negotiate with the patient and attempt to establish mutually acceptable conditions for providing care. They can also try to persuade the patient, perhaps with the help of family members, to accept care. If these approaches are not effective and the patient continues to persist in their bigoted demand for reassignment, clinicians can consider transferring the patient's care to another provider in the same clinic (resources permitting) or to a different clinic. If the patient continues rejecting care and their health is not at risk, administrators can intervene and inform them of their right to seek care elsewhere.

When weighing these considerations, it is important to understand and respect the effect on the clinician. Expressions of patients' racial preferences can degrade the therapeutic alliance, defined as the affective relationship between patients and clinicians, and clinicians should feel free to express their discomfort to patients when such requests are made.[47] When a patient's views interfere with the clinician's well-being or preclude the clinician from delivering good medical care, it may be best to reassign the patient.

Framework for responding to biased patient behavior

As a cardiology resident at the Mayo Clinic, Dr. Sharonne Hayes encountered male patients who commented, "You're too beautiful to be a doctor," and then proceeded to describe, in detail, what sexual acts they wanted to engage in with her. And Dr. Kali Cyrus, a psychiatrist at Sibley Memorial Hospital, supervised a female trainee who reported that a male patient grabbed her crotch during a physical exam.[48]

Clinician safety and well-being are paramount when confronting patients who demean, harass, or mistreat them.[48–50] Thus, the central question when responding to biased patient behavior is, "Do you feel safe caring for this patient?" If a clinician feels unsafe, it is their right to exit the patient encounter and seek help from a colleague or supervisor, report the incident to the appropriate organizational leadership, and consider transferring care.

Concurrently, clinicians must assess the patient's medical condition and determine whether there is time to safely transfer care. In an emergency situation, clinicians must weigh personal safety against the ethical and legal obligation to treat. EMTALA protects patients presenting with an emergency condition, so if other clinicians are unavailable or time is limited, it may become necessary for clinicians to treat and stabilize the patient before making alternative arrangements.[37]

If the clinician feels safe and the patient is stable, they should assess the patient's reasons for biased behavior. Though we do not condone them, there are legitimate reasons for why patients may direct derogatory comments at clinicians.[51] For example, patients with impaired cognition, such as those with dementia or traumatic brain injury, may suffer from reduced decision-making capacity and are generally not held responsible for biased or discriminatory behaviors.[8] Or, patients may have experienced past traumas that affect how they perceive and react to certain groups. For example, we may be sympathetic toward a woman who begins cursing at a male physician because his touch conjures painful memories from her past history of sexual assault.

Intentionality is a useful heuristic for determining whether a patient's biased behavior should be tolerated: Do they convey an intent to hurt or shame the targeted clinician? When making this determination, clinicians should factor in information about the patient as a person, their attitudes, and their usual style of communicating with others. When biased behavior does not meet criteria for intentionality, tolerating or accommodating this behavior may be appropriate.

If biased patient behavior is rooted in bigotry, clinicians should respond to hurtful comments or actions. They could begin by acknowledging how the patient's inappropriate behavior made them feel (e.g., "It makes me feel uncomfortable when you comment on my appearance") and asking them to please stop, since such behavior is not tolerated as per organizational policy. Clinicians can also redirect the

conversation to focus on the medical problems at hand and try to use empathetic language to deescalate a tense situation.[52]

If the patient relents, then clinicians can continue cultivating a therapeutic alliance. Clinicians can strive to build rapport and explore patient biases without the intention of changing them or recognize that patients' comments are often motivated by fear and anxiety and should therefore not be taken personally.[15] Before proceeding with caring for a biased patient, clinicians must evaluate their own values and feelings and consider their ability to forge a therapeutic alliance rooted in trust.[34] Although professionalism requires clinicians to anticipate a broad range of human behavior in response to illness, it does not require that clinicians acquiesce to attacks on their self-worth, dignity, and identity.[53]

If the patient persists in their biased views, clinicians can consider other alternatives. Assuming availability of other qualified clinicians, the patient's care could be transferred to another clinician. Or, in severe cases, administrators can inform the patient of their right to seek care elsewhere. Given the impact on a patient's health, this approach should only be considered when all other avenues for negotiation, persuasion, and compromise have been sufficiently exhausted.

Following an encounter with a biased patient, clinicians should inform hospital administration and training supervisors. Depending on the severity of the incident, clinicians can also consider documenting the interaction in the patient's chart. Though documenting the interaction can help protect other clinicians from harm, it may also impact the quality of care the patient receives in the future. It can be difficult to distinguish between incidents that should and should not be documented, but we recommend documenting all incidents deemed to be rooted in bigotry.

If care is ultimately transferred to another clinician, handoffs should incorporate a formal ethics consultation. If an ethics consult is not available, then clinicians should seek counsel from other health professionals and engage in a balanced discussion of whether a patient's behavior warrants transferring care, and the pros and cons of doing so. These steps are necessary to ensure a safe learning and working environment for trainees and clinicians. In addition, we recommend that biased patient behavior be discussed during team debriefings soon after the incident. Doing so can emphasize the importance of clinician safety, allow for critical

reflection, and transform a painful experience into an opportunity for professional growth and learning.

Responses to patient bias directed at trainees. As a medical student at the University of Virginia School of Medicine, Dr. Jennifer Okwerekwu was on her internal medicine rotation when a patient called her "colored girl" 3 times in front of the attending physician. The attending did not correct the patient or address the incident with Dr. Okwerekwu privately, leaving her wondering if she too thought of her as a "colored girl." And because Dr. Okwerekwu worried that calling attention to the incident might jeopardize her grades or evaluations, she ultimately decided to stay silent.[54]

Trainees are particularly vulnerable to patient bias. A recent study showed that 15% of pediatric residents at an academic medical institution have personally experienced or witnessed mistreatment, and of these instances, 67% involved mistreatment by patients and families.[15,55] The prevalence of patient mistreatment of trainees is complicated by their position in the medical hierarchy. Like Dr. Okwerekwu, trainees may be wary about drawing attention to encounters with biased patients due to the risk of being perceived as weak, vulnerable, or flawed by supervisors, and the potential repercussions on grades or professional evaluations.[56]

While our recommendations for responding to patient requests for clinician reassignment and biased patient behavior apply to trainees, this leaves the question of how supervisors and peers should react in such situations. Because trainees generally have little decision-making authority to protect themselves, it is crucial that supervisors and peers step in when needed.[56]

In light of these challenges, we propose the following strategies for supervisors and peers to address patient bias directed against trainees. If necessary, trainees should separate themselves from a biased encounter (and should expect support from supervisors), but we believe that terminating an uncomfortable patient encounter should not be a trainee's immediate response, as vital learning opportunities could be foregone.

Supervisor intervention. Supervisors should strive to set expectations and discuss protocols for responding to biased patients at the start of their relationships with trainees, including when a trainee might wish to handle a situation independently.

If a supervisor observes patient bias against a trainee and discerns that the trainee does not wish to handle the situation independently, they should intervene.

Supervisors can begin by acknowledging the inappropriateness of the patient's comments and describe their impact on the trainee (e.g., "I don't think you meant to be hurtful, but your comments made us feel uncomfortable"). In cases of requests for reassignment, they can proceed to reaffirm the trainee's role and clinical competence (e.g., "She is a well-qualified medical student, and I am confident we will take good care of you together"). The supervisor can also reiterate their goals to deliver the best possible care and strive for comfortable patient–clinician relationships. Finally, supervisors can explain that such comments are not tolerated as per organizational policy.

If the patient persists in their behavior, then alternative options can be considered. For example, the trainee could be recused from caring for the patient and the patient's care could be transferred to another clinician. It is essential that supervisors are trained in managing these types of situations. Research shows that trainees who have seen faculty members model appropriate responses to biased patients are better prepared to manage similar situations when they arise in the future.[57]

Peer intervention. If a trainee observes patient bias against another trainee, they can consider intervening or alerting supervisors. Because it can be challenging for trainees to understand when and how to intervene, training programs should establish guidelines around peer intervention. Demeaning patients can reinforce trainees' feelings of invisibility in the clinical workplace, so it is crucial for peers to show support and acknowledge the impropriety of such behavior.[58]

Debriefing. Research has consistently demonstrated the value of purposeful reflection in processing and learning from emotionally challenging clinical encounters.[59,60] Following the event, supervisors should debrief with the affected trainee and provide them with an opportunity to talk about the experience in a safe and nonjudgmental environment. It is important that supervisors not minimize the trainee's experiences and guide them in crafting a meaningful future response. To facilitate learning, supervisors can empower students to brainstorm and discuss alternative responses to biased patients and families.

Nontargeted bystander responses to patient bias. Nontargeted bystanders frequently experience moral distress and uncertainty regarding how to protect colleagues.[6] Thus, institutional guidance for navigating biased patient encounters would benefit from training on bystander intervention. Drawing from examples of bystander intervention to combat public harassment, we present 4 methods that nontargeted bystanders can use to support colleagues experiencing patient bias.

Direct or indirect intervention. Before deciding to intervene and directly respond to a biased patient, clinicians must assess their personal safety and the safety of the targeted clinician, the likelihood that the situation will escalate, and whether the targeted clinician desires assistance. When intervening, clinicians should focus on assisting the targeted clinician and refrain from engaging in dialogue or debate with discriminatory patients. Examples of phrases to use when intervening include, "I'm sure you didn't mean to be hurtful, but that is inappropriate, disrespectful, etc."[61,62]

In situations with particularly inflammatory patients, indirect intervention may be the more suitable approach for assisting colleagues. An indirect approach to deescalating the situation may involve distraction (e.g., interrupting the encounter to speak with the targeted clinician about an unrelated topic) or asking for help from supervisors or colleagues.[62] These approaches can provide targeted clinicians with an opportunity to exit a threatening situation.

These approaches should be used with caution. In many cases, a targeted clinician may not want assistance and might prefer to manage the situation themselves. There is also the possibility that intervention can inadvertently cause a debate or damage the targeted clinician's relationship with the patient. In light of this concern, organizations should create structured opportunities for all trainees and supervisors to think about, discuss, and establish consensus around best practices before these situations arise in real life.

Check in and offer support. Following an encounter with a biased patient, bystanders can check in with targeted colleagues, acknowledge what happened, and offer empathy and support. Sharing past experiences with biased patients can be particularly useful. Clinicians, especially trainees, report that hearing similar accounts from their peers reduces feelings of isolation and self-doubt about their professionalism.[57] In addition, because institutional guidance regarding discriminatory patient behavior is lacking, bystanders can share resources to help

colleagues process or report the incident. Such resources include brochures or online resources on patient bias, information on institutional policies, and contact information for institutional offices or faculty champions equipped to deal with these incidents.

Convene team meeting. A team meeting can allow clinicians to care for each other, share experiences, and discuss options for navigating and responding to patient bias. This can help targeted clinicians feel visible and supported. A team meeting may help prevent clinicians from internalizing the damaging impacts of bias and discrimination by demonstrating that others have experienced similar incidents out of no fault of their own. In addition, bringing these incidents to light can help nonaffected team members develop the skills necessary to manage biased patients in the future.[57] When convening team meetings, administrators need to make sure that clinicians are aware of and understand reporting laws. In some states, if an employee confides in another employee regarding abuse in the workplace, they are required to report the incident to the institution's Title IX officer.[63]

Strategies for Addressing Patient Bias at the Institutional Level

Institutions have an ethical obligation to ensure the safety and well-being of clinicians. As such, they must develop comprehensive policies and procedures around patient bias. Concurrently, patient bias must be integrated into health professions education. In this section, we describe specific strategies for addressing patient bias through patient and clinician education, trainee development, and organizational policy change. To ensure our recommendations are consistent with patient rights, we conclude by providing a legal perspective on the limits to addressing patient bias.

Guidelines for patients

While most institutions encourage a culture of respect through slogans and their website, few have antidiscrimination policies for patients. We recommend that institutions strive to proactively communicate expectations around values, commitment to diversity, and intolerance for patient conduct that is biased or harms staff. This information should be readily available and provided to patients before requesting an appointment.[52] Some organizations have begun to address this topic. For example, the Mayo Clinic recently revised its "patient responsibility" policy to state, "We won't grant requests for care team members based on race,

religion, ethnicity, gender, sexual orientation, gender identity, language, disability status, age, or any other personal attribute."[64] This policy is available at each clinical site, patient appointment portals, and the frequently asked questions webpage. A separate policy delineates the consequences of abusive behavior or threats to employee safety.[52]

We recommend that all health care organizations develop similar guidelines for patient conduct. Doing so can emphasize the organization's commitment to cultivating a safe, respectful, and supportive workplace for staff. Organization leadership should play an active role in creating and enforcing these guidelines since executive endorsement is crucial to their success. Concurrently, institutions must define the consequences of violating these guidelines.[62] A "zero tolerance" policy is insufficient—the consequences of violation must be considered alongside the duty to provide care.

Education for clinicians and trainees

Changes to organizational policies should be followed by efforts to educate clinicians on (1) their rights and responsibilities as caregivers and employees and (2) how to respond when facing or witnessing discriminatory patient behavior. This training should be longitudinal and mandatory for all staff. At the Mayo Clinic, content on managing biased patients is included in new employee and trainee orientation sessions, online learning modules, and case scenarios.[64] Similarly, a team of psychiatrists at the Yale School of Medicine runs 90-minute workshops to help faculty physicians manage patient mistreatment of residents and medical students. Their approach is summarized by the acronym ERASE: Expect that mistreatment will occur, Recognize mistreatment when it does occur, Address the situation in real time, Support learner after the incident, Establish and encourage a positive culture.[48,65]

Drawing from these examples, we propose that education for clinicians include training on institutional protocols and deescalation techniques. Protocols could include different options for responding to inappropriate or prejudiced requests. However, organizational protocols cannot anticipate the nuances of every possible situation, and clinicians should be prepared to approach each situation on a case-by-case basis. Similarly, while deescalation techniques can help prevent a potentially dangerous situation from escalating, they are only useful in scenarios where patients are overtly agitated or aggressive.[66] Opportunities for active

learning should also be provided—just as morbidity and mortality conferences allow clinicians to revisit errors without blame or judgment, hospitals can facilitate ad hoc discussions centered around responding to biased patients.[62] These communities can offer healing and serve as safe spaces to discuss an emotionally charged but morally ambiguous topic.[67]

Given trainees' heightened vulnerability, health professions educators should integrate training on patient bias into required curricula. Currently, few health professions schools provide comprehensive education on confronting and managing biased patients, leaving students woefully unprepared to handle discrimination during clinical rotations and training.[68] We recommend that health professions educators include case discussions of biased patients in preclerkship curricula. Faculty members could simulate encounters with biased patients to generate discussion and explore options for responding. For example, the Georgetown University School of Medicine provides short video vignettes to guide medical students in diffusing contentious situations, and the Brigham and Women's Hospital holds a mandatory facilitated workshop to lead newly minted residents through actual scenarios of patient bias.[48,69] These types of exercises can support students in preparing for real-life encounters with biased patients.

Lastly, health professions schools must better sensitize students to issues around culture, cultural differences, and stereotyping.[70] At the Drexel University College of Nursing and Health Professions, faculty discuss power, privilege, and oppression in a leadership course required for all undergraduate health profession students. And at the University of Texas–Pan American nursing department, nursing students spend 2 weeks learning about the impact of culture and stereotypes on nursing care.[71] A better understanding of these topics can help students appreciate what constitutes bias and discrimination and how they manifest at the bedside.

Institutional policies and reporting mechanisms

Health care organizations must develop and enforce clear policies protecting clinicians from patient bias. As stories of discriminatory patients continue to emerge, some institutions have started creating guardrails—such as a decision-guiding algorithm for physicians who experience patient-initiated sexual harassment and abuse at the University of Michigan, and a protocol for transferring the care of prejudiced patients at the Penn State Health Milton S. Hershey Medical Center—but it remains to be seen whether these policies result in true

protection for staff.[72–75] We believe that, similar to the Patient's Bill of Rights, which guarantees patients the "right to considerate, respectful care" from all health care professionals, a "Clinician's Bill of Rights" should detail clinicians' right to fair treatment by patients and accompanying persons.[76]

Alongside policies and procedures governing patient bias against clinicians, organizations must implement reporting mechanisms for violations. Reporting mechanisms should be centralized to capture data across an entire organization. An example is the Mayo Clinic, where clinicians who have experienced, witnessed, or are aware of patient bias or misconduct can report incidents to the Integrity and Compliance Office. They are then reviewed and resolved as appropriate.[62] So far, results are promising; in 2018, after a male patient groped a female physician, she immediately reported the incident and the patient was terminated from her practice within 48 hours.[72]

Aggregating data on patient bias can help drive organizational change. By mapping reported incidents, organizations can detect trends and identify departments or groups of clinicians at a higher risk for experiencing patient bias. This type of "hot spotting" analysis can inform revisions to organizational policies and highlight opportunities for providing additional support and education, especially to groups consistently targeted by discriminatory patients.

It is important to acknowledge that fair treatment is a balancing act. There are situations where the clinician's prejudiced views elicit a patient's "inappropriate" behavior.[77] Achieving patient–clinician relationships free of bias and discrimination requires institutional systems to adjudicate blame between the patient and clinician. A reviewing committee could first speak with both parties individually, engage in a balanced discussion, and then levy appropriate penalties against patients or clinicians at fault. For clinicians, these penalties might include additional training on cultural competency or bias and discrimination in health care. In severe cases, institutions may consider suspending or even terminating a clinician's employment. For patients, penalties might include being transferred to another clinician or clinic. In severe cases, institutions may consider barring the patient from seeking care there.

Legal limitations to addressing patient bias

There are legal restrictions on the extent to which clinicians and institutions can address patient bias. For one, EMTALA prohibits hospitals from denying patient

care in an emergency, so it may be necessary to accommodate a patient's reassignment request or ignore discriminatory behavior in an emergent situation.[37] Second, because physicians are not considered employees at many hospitals, they are not protected under Title IX.[63] This can make it challenging to justify physicians' right to a workplace free of discrimination in the legal arena. Lastly, there is always the risk of legal action against clinicians who terminate the patient–clinician relationship. Patient abandonment, defined as the unreasonable discontinuation of treatment without reasonable notice or excuse, and failure to help connect the patient to another provider, can make clinicians vulnerable to a civil lawsuit.[78] It is crucial that clinicians who choose to terminate the patient–clinician relationship only do so after helping the patient secure another qualified provider.

Moving Forward and Conclusions

Culture change is necessary to meaningfully address patient bias against clinicians. Health care organizations must acknowledge and address the prevalence and harm caused by biased patients, rather than continuing to treat discrimination against clinicians as the elephant in the room.[79,80] Furthermore, a culture of nonreporting can undermine efforts to revamp institutional policies and procedures around discriminatory patients. Health care professionals, and particularly trainees, express feeling unsafe or worried about the impacts of reporting on their career prospects.[55,75]

Organizations thus have a responsibility to normalize reporting and support clinicians experiencing discrimination from patients.[76,81,82]

Given the paucity of systematic research on patient bias against clinicians, further investigation is warranted.[6] In particular, research should explore: (1) the causes and impacts of biased patient behavior and (2) interventions to address biased patient behavior. Data from additional studies can motivate sustained organizational change and inform the development of standardized, broadly applicable guidelines for responding to biased patients.

For clinicians, patient bias and discrimination can contribute to emotional exhaustion. Although crucial to high-quality care, the emphasis on patient-centeredness has unintentionally emboldened a "patient's first" approach at the expense of emotional or physical distress to clinicians. We contend that health care organizations must carefully balance their duty to provide high-quality care

and tend to the vulnerability of patients, with their responsibility to cultivate a supportive, respectful work environment. Achieving patient–clinician relationships free of bias and discrimination is a complex issue that should be jointly addressed by individual clinicians, health care institutions, and health professions educators. Instead of perpetuating a culture of silence—or worse, denial—we must commit to creating a health care environment where discrimination against both patients and clinicians is unacceptable.

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COMMISSIONED PAPER

Acting Wisely: Eliminating Negative Bias in Medical Education—Part 1: The Fundamentals

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Abstract

Bias is a ubiquitous problem in human functioning. It has plagued medical decision making, making physicians prone to errors of perception and judgment. Racial, gender, ethnic, and religious negative biases infest physicians' perception and cognition, causing errors of judgment and behavior that are damaging. In Part 1 of this series of 2 papers, the authors address the problem of harmful bias, the science of cognition, and what is known about how bias functions in human perception and information processing. They lay the groundwork for an approach to reducing negative bias through awareness, reflection, and bias mitigation, an approach in which negative biases can be transformed—by education, experience, practice, and relationships—into positive biases toward one another. The authors propose wisdom as a conceptual framework for imagining a different way of educating medical students. They discuss fundamental cognitive, affective, and reflective components of wisdom-based education. They also review the skills of awareness, using debiasing strategies, compassion, fostering positive emotion, and reflection that are inherent to a wisdom-based approach to eliminating the negative effects of bias in medical education. In Part 2, the authors answer a key question: How can medical educators do better? They describe the interpersonal, structural, and

cultural elements supportive of a wisdom-based learning environment, a culture of respect and inclusion in medical education.

Clinicians have been worrying about bias in clinical decision making at least since the 1970s, when Kahneman and Tversky first wrote about it.[1] Cognitive bias stalks physicians' clinical judgment, making us prone to potentially life-threatening diagnostic errors.[2] Racial, gender, religious, and ethnic biases, like other cognitive and affective biases, have the same capacity to undermine our decisions and our actions and to cause errors in judgment and behavior that are harmful,[3–5] including decisions and actions in the context of the educational environment.[6–9]

Like other biases, these have context and are rooted in history, prior experience, and culture. Also, like other biases, their negative effects can be mitigated using evidence from cognitive and social psychology research.

Introduction

In this paper (Part 1 of 2), we address the question: What is it that we seek when we articulate a desire to have a student–teacher relationship free of bias and discrimination? Given what we know about bias and how it functions in human perception and information processing, perhaps we do not really mean "free of bias"; rather, we seek a world in which we are aware of our potential limitations resulting from bias and can mitigate them; a world that is free of the negative effects of discrimination in large part because we are aware and engaged in mitigation strategies; and a world in which our negative biases are transformed—by education, experience, practice, and relationships—into positive biases toward one another.

We present the case for wisdom as a helpful framework, not only for that aspirational state but also to guide the steps we take toward that state. We propose a wisdom framework for understanding and mitigating bias in medical education (Figure 1). This framework builds off other frameworks that take into account the social psychological literature on, respectively, bias and wisdom.[10,11] We discuss the science of cognition and what is known about how bias functions. We lay the groundwork through a description of dual process theory, and the influence of bias on System 1 decision making. We discuss in detail a variety of "debiasing" strategies and how they might apply specifically to mitigating racial, gender, ethnic,

and religious biases and their destructive effects on behavior. We describe an approach for debiasing that begins with basic education and skill building. In Part 2 of this 2-article series, we describe how those skills can be applied to create the interpersonal, structural, and cultural elements supportive of a culture of respect and inclusion in medical education.

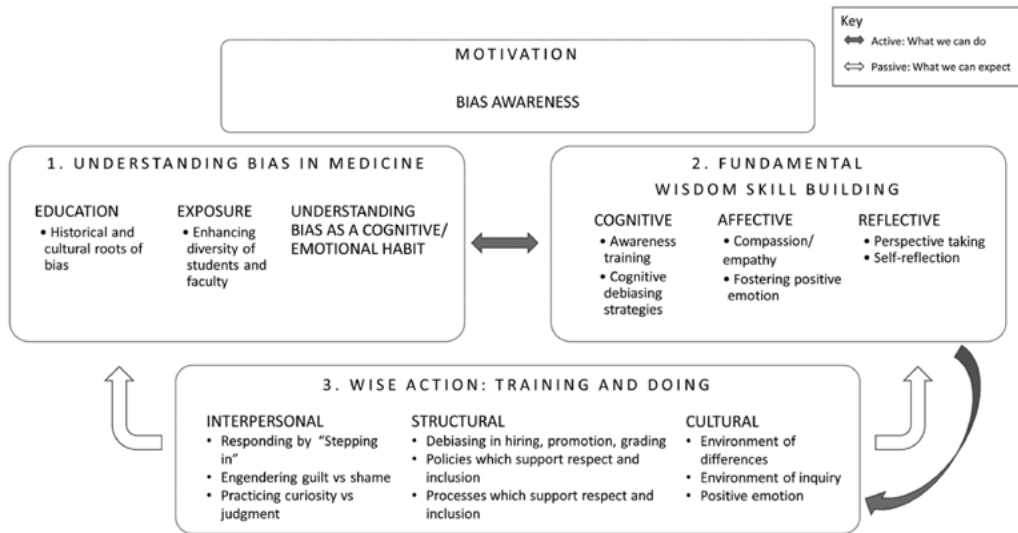## Addressing Harmful Bias in Medicine: The Role of Wisdom

Addressing the negative influence of bias in medical training is a deep, complex problem that involves our intellectual and our emotional selves, our conscious and our unconscious attitudes and behavior. It will take humility, intellectual curiosity, tolerance for ambiguity, and an advanced understanding of how to change attitudes and behaviors that are deeply rooted in society and history. Wisdom is considered to represent humanity at its best. Wisdom involves affective capacities (compassion/empathy), reflective capacities (ability to reflect on one's own perspective and to take on the perspective of another), and cognitive capacities (humility, tolerance of ambiguity, awareness of limitations).[11] Making wise decisions involves intellectual humility, recognizing uncertainty, seeking others' perspectives, and integrating those perspectives into one's decision making.[12]

Acting wisely necessitates not only awareness but also *affective and cognitive control* over one's actions; in other words, not just thinking wisely but *being wise* in complex circumstances. Making wise decisions and acting wisely are more likely to occur in an environment that facilitates these affective, reflective, and cognitive capacities, an environment that is aware of biases, that strives to mitigate negative biases, and that works to create a platform of human interaction that positively predisposes us toward one another. Grossman and Dorfman have studied wise reasoning and described it as ego decentered, involving an awareness of the limits of one's knowledge and the ability to take different perspectives.[12,13]

In her work, Judith Gluck points out that wisdom's opposite—foolishness—has been characterized by a number of fallacies, including thinking of oneself as omniscient, omnipotent, and invulnerable: "That is, as being influenced by biases that are not particularly helpful for good decisions."[14] Knowledge about something is not enough. Gluck and Weststrate describe wise persons as having deep knowledge *and* the ability to apply that knowledge to difficult circumstances. They have studied the wisdom-generating response to a difficult circumstance and have noted a certain type of processing, "exploratory processing," as a "wisdom-

Figure 1: Conceptual framework for understanding and mitigating bias in medical education.

Adapted from "Reducing racial bias among health care providers: Lessons from social-cognitive psychology" by Burgess and colleagues[10] and "Wisdom as expert knowledge system: A critical review of a contemporary operationalization of an ancient concept" by Ardelt.[11]

MOTIVATION

BIAS AWARENESS

Key
- Active: What we can do
- Passive: What we can expect

1. UNDERSTANDING BIAS IN MEDICINE

EDUCATION
- Historical and cultural roots of bias

EXPOSURE
- Enhancing diversity of students and faculty

UNDERSTANDING BIAS AS A COGNITIVE/ EMOTIONAL HABIT

2. FUNDAMENTAL WISDOM SKILL BUILDING

COGNITIVE
- Awareness training
- Cognitive debiasing strategies

AFFECTIVE
- Compassion/ empathy
- Fostering positive emotion

REFLECTIVE
- Perspective taking
- Self-reflection

3. WISE ACTION: TRAINING AND DOING

INTERPERSONAL
- Responding by "Stepping in"
- Engendering guilt vs shame
- Practicing curiosity vs judgment

STRUCTURAL
- Debiasing in hiring, promotion, grading
- Policies which support respect and inclusion
- Processes which support respect and inclusion

CULTURAL
- Environment of differences
- Environment of inquiry
- Positive emotion

fostering" self-reflection. In this type of processing, individuals who are processing a difficult event "*explore* their own role in the occurrence of negative life events, confront and examine negative feelings, and do the effortful work of finding meaning in the difficult experience."[15] As they remark, "this type of self-reflection is rare, probably because it is less pleasant than other processing modes."[15] It seems that if we are to make progress toward an aspirational state in medical education with regard to ethnic, racial, religious, gender, or other social biases, it will take this type of humility, self-awareness, perspective taking, exploratory processing, and practice. In short, it will take wisdom.

Fundamental Wisdom Skill-Building

Wise action is built through cognitive, affective, and reflective skills. Overcoming the negative effects of bias takes not only the will to do so but also the skill. We propose that cognitive and social psychology science be the foundation of how we understand bias and how to mitigate its negative effects in our teaching and mentoring. In the early days of the patient safety movement, it was a major accomplishment to move medical error out of the realm of moral failing and into

the arena of understanding how human perception and cognition put physicians at risk for error. It is true that a very small percentage of errors are the result of true negligence and moral failing. Much more often, though, medical error is the result of failed thought processes that are both predictable and amenable to safety interventions. This same science can offer hope that our biases can be mitigated, that in addition to trying harder, we actually might be able not only to mitigate the effects of our biases but also to change our biases through examined experience, and cognitive, affective, and reflective skills and practice.

Cognitive skills

System 1 and system 2 thinking and the influence of bias. Kahneman describes what he calls the dual process theory of decision making, in which there are 2 systems we can access when we are making decisions or performing a task.[16] System 1 thinking is fast, intuitive, largely unconscious, and is based on heuristics—rules of thumb or patterns that make things easy. Some examples: in clinical decision making, we develop patterns of symptoms and signs, "illness scripts," that help us to identify quickly a particular disease. Congestive heart failure (CHF) is identified quickly by shortness of breath, orthopnea, lower extremity edema, and lung crackles on exam. Once we know that script, when we see it in a presenting patient, we can make the diagnosis quickly by pattern recognition. In contrast, System 2 thinking is deliberate, slow, and incorporates things like the epidemiology of the disease and other means of estimating probability. This takes energy, focused attention, and time. It is the process we invoke when we derive a prioritized differential diagnosis with justifications for each diagnosis. Expert decision makers use System 1 thinking most of the time and also are very good at knowing when they need to engage in System 2 thinking. They make a habit of using System 2 thinking as a regular, final check on their decisions. They might intuitively sense that the presenting patient has CHF, but they generate a full differential diagnosis as a routine check on their important clinical decisions. That is because expert decision makers know about bias and its impact on System 1 thinking.

Haidt and Lukianoff describe what they call the great emotional *untruth,* which is "always trust your feelings" as being a particularly damaging approach.[17] In fact, as Gluck suggests, "not everything that feels right is right" and "relying solely on intuitive judgment is deeply unwise."[14] But ignoring intuition, or pretending it does not exist in our decision making, is also unwise and leaves us more at risk for the effects of bias.[8] "Wise individuals do not ignore their intuitions; in fact, they

may be more aware of them than other people because they consider affect as an important source of information."[18] "While wise people may often do the right thing intuitively, they also spend a lot of time thinking about the things they do. We have found that wisdom involves extraordinary amounts of self-reflection."[14]

Thus far, we have focused on how dual process theory applies to clinical decision making and how bias influences our System 1 thinking in that context. How does dual process theory apply to other kinds of decision making and behaviors? And how might gender, racial, religious, and other social biases influence our perceptions, decisions, and actions in the teacher–student context?

We do a lot of fast, subconscious, System 1 thinking in education in general, and in medical education in particular. Some examples include the following:

- Teachers differentially respond regarding disciplining boys, girls, Blacks, and Whites[9]
- Assessments or grading in the clinical environment is characteristically System[17,8,19,20]
- Awards, recognition may be dominated by System 1 thinking[21] and
- Stereotype threat: individuals themselves who are members of a group characterized by negative stereotypes in a particular domain perform below their actual abilities in that domain when group membership is emphasized. This can play a critical role in whether students, trainees, and faculty can overcome the negative effects of stereotypes and is an example of System 1 thinking affecting the target individual's own behavior.[22–25]

Debiasing strategies. There are multiple debiasing strategies that have been studied over the past 10–15 years.[26–29] Most of this evidence comes from the cognitive or social psychology literature. In the past 10 years, these strategies have been used to enhance patient safety, and evidence of their effectiveness is increasing in that realm. One example of a project that pulled many strategies together into a training program to reduce unintentional (implicit) gender bias is the gender bias habit-breaking intervention.[30] It was based in the understanding that biases must be combated through the development and practice of these bias-combating strategies. It is not enough to know about these strategies; to be effective, like exercise, they must be practiced.

Following are examples of debiasing strategies.

Consider the opposite. When we observe a behavior, we might make an assumption about intent or meaning, and we might be wrong. "Consider the opposite" encourages us to consider another explanation. This strategy can help us notice, before we take action, that we might be functioning under a bias that will cause an error in judgment or behavior. Experimental studies in psychology show "considering the opposite" counteracted biases.[31,32]

Slowing-down strategies. The student–teacher partnership is more at risk for unnoticed bias entering into the relationship when we are emotionally triggered, stressed, pressed for time, fatigued, or under cognitive overload. The use of slowing-down strategies (e.g., taking a deep breath, centering yourself) before critical encounters (student evaluations, debriefing, feedback, or addressing difficult encounters) can be helpful in interrupting thought processes long enough to notice the bias at work and to consciously choose a response.[33]

Get more information. Premature closure and the "fundamental attribution error" are common mistakes that polarize and damage ongoing relationships in medicine. In clinical decision making, we learn the importance of creating a differential diagnosis even when one pattern seems obvious. Suspending judgment, asking questions ("I wonder why?"), and getting more information ("tell me more about that … help me understand") can be used in solving problems and creating behavior change. This opens the door to learning about one's own biases and how they may have affected another.

Cognitive forcing strategies. There are predictable circumstances in which we are more prone to rely (inappropriately) on System 1 thinking and are, therefore, more prone to bias. These include fatigue, stress, cognitive overload, and time constraint. Being aware of this risk and applying cognitive forcing strategies (like always beginning a difficult conversation with a question or having a checklist for feedback) can be an effective means of mitigating bias.

Using the debiasing strategies described above might look like this:

An African American student is late for an agreed-upon meeting. You, as the attending physician, might jump to the conclusion that the student is careless, lazy, or disorganized. You might be so certain that you don't even ask the student

*why they are late. It may be that you are more likely to jump to that conclusion if the student is Black or female. Beginning with the **slowing-down** strategy, you take a breath. You then **consider the opposite** and ask yourself, "What if that is not true? What if they are actually very hardworking, organized, and careful?" Using the **get more information** strategy, you ask yourself, "What else might have happened to cause their tardiness?" This should lead you to ask the student, "Help me understand. What caused you to be late today?" Now the student has an opportunity to explain why they are late, which might be a very compelling story (perhaps: "I was in my patient's room, and she began to tell me about her real fears of the upcoming procedure. It took a little longer than I thought, but I was able to successfully explain things and allay her fears.")*

Reflective skills

The following are examples of reflective skills.

Self-decentering. An important factor that appears to help people think wisely is what Grossmann calls "self-decentering."[34,35] This involves talking or thinking about a particular problem in the third person and taking the personal out of the equation. It turns out, even thinking about a problem in the third person can help an individual reason more wisely.[34]

Perspective taking. As Burgess and colleagues point out, perspective taking and empathy may be particularly promising strategies for overcoming negative biases.[10] Perspective taking is a cognitive practice that has been shown to reduce bias toward stigmatized groups.[36]

Metacognition. Deliberately reflecting on initial diagnoses has led to better diagnoses in difficult cases and counteracted availability bias.[37,38] The same strategy can be applied to interpersonal interactions; rushing to judgment about why someone said something can lead to the wrong "diagnosis." Deliberately reflecting on that initial diagnosis and thinking about other possibilities (a "differential diagnosis" on intent) can help avoid this problem. Many medical schools are beginning to teach mindfulness, which may be one method for enhancing the capacity to notice thoughts and feelings and bring them to conscious awareness, thus enabling greater capacity to respond rationally rather than react. This may be an effective means of combating implicit bias.[39]

Recalibration. Situations that often lead to bias (in clinical decision making, this might be a patient with chronic somatization and medical comorbidities; in social biases, this might be a female student who is not speaking up in conference) may be mitigated by a process of recalibration. When we know that we may be prone to dismiss the other person in this exchange, we actively recalibrate to attune appropriately to these concerns.

Affective skills

The following are examples of affective skills.

Empathy. In the Cognitive Habits and Growth Evaluation study, both cognitive and emotional empathy (the affective capacity to feel what another feels) predicted positive explicit attitudes toward gay and lesbian people.[40] Multiple strategies to enhance empathy and compassion are being investigated. Knowing more of the story of the "other" and seeing oneself in the other are ways to enhance empathy, as are practices of mindfulness and compassion training.

Compassion, empathy, and perspective-taking training and strategies help us consider the key question, "How is this person like me?" This leads us naturally to being willing to engage in appreciating how they are different and learning from it. It leads naturally to the curious question, "I wonder what it is like to be them." Mindfulness and compassion training are being incorporated into some medical schools' curricula (e.g., the University of Virginia's Foundations of Clinical Medicine curriculum), as are exercises in perspective taking.[41]

Shame vs guilt in promoting positive change. Recent psychological research has shown an important difference between shame and guilt. Shame is a negative motivator, more likely to result in negative behavior in the future. Guilt is a positive motivator, more likely to result in positive behavior change. Burgess and colleagues note, "recently developed procedures (such as the Implicit Association Test) can reveal unconscious prejudice and stereotypes. These procedures can engender negative emotional states that motivate people (guilt) to become more sensitive to and attempt to counteract the effects of unconscious prejudice and stereotypes… [However,] anticipated public censure can have paradoxical effects: (shame)."[10] More research needs to be done to understand how these emotions are triggered and how to use these effectively to achieve positive change rather than precipitating negative, more hostile behavior.

Conclusions

This article makes the case for wisdom as a helpful framework not only for eliminating the negative effects of bias but also for guiding the steps we take toward that state. Acting wisely necessitates not only awareness but also affective and cognitive control over one's actions. We also described the fundamental cognitive, affective, and reflective skills needed to act wisely in challenging circumstances. Part 2 describes how these skills can be applied to create a wisdom-focused training environment, a culture of respect and inclusion in medical education.

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COMMISSIONED PAPER

Acting Wisely: Eliminating Negative Bias in Medical Education—Part 2: How Can We Do Better?

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Abstract

In Part 1 of this 2-article series, the authors reviewed the problem of unmitigated bias in medical education and proposed a wisdom-based framework for a different way of educating medical students. In this article, Part 2, the authors answer a key question: How can medical educators do better? Is a bias-free environment possible? The answer to the latter question likely is "no." In fact, having a zero-bias goal in mind may blind educators and students to the implicit biases that affect physicians' decisions and actions. Biases appear to be a part of how the human brain works. This article explores ways to neutralize their destructive effects by: (1) increasing awareness of personal biases; (2) using mitigation strategies to protect against the undesirable effects of those biases; (3) working to change some negative biases, particularly learned biases; and (4) fostering positive biases toward others. The authors describe the concrete actions—interpersonal, structural, and cultural actions—that can be taken to reduce negative bias and its destructive effects.

Having reviewed, in Part 1 of this 2-article series, the fundamental building blocks of wisdom-based bias education, we come to the key questions: How can we do better? Is a bias-free environment possible? The answer to the latter question likely is "no." Having a zero-bias goal may blind us to the biases that continue to operate in our decisions and actions. Biases appear to be a part of how the human brain works. Instead, we can (1) increase awareness of the biases that we are prone to; (2) use mitigation strategies to protect against the undesirable effects of those biases; (3) work, in some cases, through habit, to change negative biases, particularly learned biases; and (4) foster positive biases toward others, including those who are very different from ourselves. In this follow-up article, we detail the concrete actions—interpersonal, structural, and cultural actions—that we can take to reduce negative bias and its destructive effects.

Interpersonal Action

Building awareness of *implicit* bias in medical education

The influence of implicit biases, in particular, on our perceptions, decisions, and actions can be powerful and vexingly beyond our conscious awareness at the time, and their effect can be devastating. Mitigating racial, gender, religious, and ethnic biases requires self-awareness—specifically, awareness of when we are using System 1 thinking and what biases we may be prone to in a particular situation. Awareness, or "bias inoculation," as some authors characterize it, is what implicit bias training is about.[1–3] In fact, the Cognitive Habits and Growth Evaluation (CHANGE) study found that having completed the Black–White Implicit Association Test during medical school remained a statistically significant predictor of decreased implicit racial bias among physicians.[4]

Implicit bias training

Implicit or unconscious bias training generally revolves around a few key concepts—a description and examples of implicit bias, an exploration of why it exists and is pervasive, and ways to mitigate it. To make the topic real for them, trainees may be asked to examine and discuss times when they exhibited and/or experienced implicit bias. Examples may include those taken from studies (research on hiring or evaluation related to gender, race, ethnicity, etc.) and/or examples from "real life" (e.g., newspaper stories contrasting reports of individuals from different

demographic groups engaged in similar activities). The science of unconscious bias will include discussions of its advantageous evolutionary role and of the unconscious processes and cognitive biases that contribute to its formation and maintenance. Interventions to mitigate bias may include bias awareness training, increased exposure to individuals from differing demographic groups, increased participation of individuals from minority groups in key decision-making processes, and the use of structured systematic tools in decision making. These elements are most effective when trainees are active participants in the training process.[5,6]

Building awareness of *explicit* bias in medical education

Judith Gluck suggests there are ways to "invite wisdom" that have to do with creating a context for wisdom to take hold. A first step in this process is awareness *and a* radical acceptance of the truth of the circumstance.[7–10] In the case of *explicit* bias in our health care and health professions education systems, the radical truth is that racism and other explicit biases are alive and well.[11–13] The following are some examples that we, the authors, have documented in our own health system.

- A female resident wearing a hijab is asked by a visitor to get off the elevator, so the visitor does not have to ride with a "terrorist."
- A patient asks a physician where they are from, and when the physician responds that they are from a Middle Eastern country, the patient responds: "Oh, you're one of those we're supposed to shoot."
- An African American nurse was attending to a White, female patient when the patient ordered the nurse out of her room, saying, "I don't want no 'n-----' taking care of me."
- A gay PhD student was told by her supervising faculty member that it was "so great" that, because the student was a lesbian, the supervisor did not have to worry about the student getting pregnant.

Accepting that explicit bias and its highly damaging resultant behavior is a reality in our hospitals and clinics is only half the battle. The second half is accepting that we have not been successful in responding to discriminatory incidents.[11,12,14,15]

Responding to interpersonal explicit bias

In the CHANGE study, faculty role modeling of discriminatory behavior was associated with increasing implicit bias among medical students,[16] and having heard

negative comments from attending physicians or residents about African American patients was a significant predictor of increased implicit racial bias in medical school.[4] Similarly, in multivariate models, contact with African Americans predicted attitudes toward African Americans, and students who reported witnessing instructors making racial comments or jokes were significantly more willing to *express* racial bias themselves, even after accounting for the effects of contact.[17] It is, therefore, imperative to teach faculty, residents, and students how to speak up and stop these events in real time. In fact, without this, we are unlikely to see sustained positive change in the medical education environment.

Stepping in. Drawing on what we know about the wisdom-generating response to difficult circumstances, the next step after acknowledging the truth is stepping in—doing something or saying something that can begin to change the circumstance for the better.[7,8,18–21] Medicine has prioritized the duty to care for all regardless of their beliefs or even their actions. This is an honorable commitment, and it distinguishes our profession from many others. Unfortunately, this commitment has also been used as an excuse to avoid the difficult conversations, to remain silent when patients exhibit bigoted behavior toward our trainees or other colleagues. This silence is another violence against that trainee—and a serious breach of our commitment to our students and residents.[14,19]

Wheeler et al examined the barriers to stepping in, in a 2019 qualitative study of hospitalists, residents, and students.[22] Barriers included:

- Clinical care priorities: "Other times, we just let things pass because we're trying to develop a therapeutic alliance."

- Lack of skills or uncertainty over appropriate response: "These are often such small moments that occur, but sometimes pretty continuously. It's not very clear cut as to what you can't do."

- Lack of support: "What would have made me feel better is if the attendings had acknowledged the incident at all, because I know they noticed the biased language."

- Lack of knowledge of institutional policies. "It would be really helpful to have the institutional support to be able to go to a patient or a family member or anybody and say, 'If you continue to engage in these behaviors, these will be the consequences.'"

- Fear of being perceived as unprofessional: "I was much more focused on how other people were reacting to my reaction to this (biased behavior)."

- Perceived ineffectiveness of responding: "It didn't feel like I was meaningfully going to change any outcomes or any downstream effects by trying to give this man a new perspective at this point in his life. I think that calculation comes up a lot."

- Emotional burden too high: "I think that if I processed everything that was said to me, I'd go crazy."

So, what facilitates responses to these events? Participants in the same study[22] suggested the following:

- Behavior perceived as egregious: "When something is really blatant, it's really easy to respond."

- Support from colleagues or institution: "When I feel like my team has got my back, and we're on the same page, that's much less of a horrible experience for me."

- Professional responsibility to others: "I find it much, much easier to respond to things that are directed at people who are junior to me [rather] than to myself or someone senior to me."

- Individual ethics: "I feel that because I really care about addressing things like racism and discrimination, I feel a lot more pressure to say something when things happen now."

- Role models and skills: "That was a really positive modeling by our senior resident; it made us think through what we can do in those situations and how we can still take care of the patient and maintain a good rapport with them, but also feel like we are being respected in our professional role."

Teaching bystanders how to step in. Knowing what to say and how to say it in the face of discriminatory behavior is not easy. Our work at the University of Virginia (UVA) to develop the "Stepping In" bystander training program (described below) suggests that attending physicians either do not know what to say or worry that what they say might make the situation worse. Training in how to step into these difficult circumstances, including practice and role playing, can be empowering. Like other difficult conversations we have in medicine, having a framework for how to have these conversations can give people the tools and the expertise to engage productively.

The "Stepping In" training gives participants a framework for responding to bigotry and prejudice in the training environment.[10] It is based on an understanding of interpersonal interactions,[23] as well as strategies for regulating emotions and cognitive debiasing. It uses a simple framework known by its acronym, B.E.G.I.N. (here demonstrated with suggested phrases in the context of a patient refusing to be cared for by a team member of color):

1. **Breathe:** Calm yourself and prepare for the conversation. Suspend judgment.

2. **Empathy:** Start with empathy: "I can imagine it is hard to be in the hospital for so long."

3. **Goal:** State the values or goals of the conversation: "Here, we work as a team and every member of our team is essential. Here, we treat everyone with respect, and we expect you to do the same."

4. **Inquire:** Ask a curious question: "Help me understand; why are you concerned?" (This question can often reveal an underlying concern that can be mitigated.)

5. **ENgage** in next steps: Move the conversation forward: "So, now that we understand that every team member is essential, let's get on with what we all are here to do, and that is to get you better."

6. **Debrief** with the trainee, target, and others involved. This is a critical step. No matter how the conversation goes with the patient, debriefing with the trainee is a critical step in changing the culture for the better. This is part of "exploratory processing," which Weststrate and Gluck suggest is critical to the wisdom-generating response to difficult circumstances.[24] If we take this opportunity to, with humility, "do the effortful work of finding meaning in these challenging situations," then we are creating an environment in which wisdom is fostered.

Participants respond to a variety of videotaped scenarios ranging from a situation at the bedside to an encounter at the elevator. They practice and critique, and practice again. Pilot data suggest that this workshop provides practical tools and helpful practice. Participants were more likely to report feeling comfortable stepping into these conversations after the workshops than before, and the vast majority reported it likely that they would change their response to discriminatory behavior because of the program.

An important observation regarding implementation: we found support from leadership to be crucial to achieving wide participation in Stepping In training. Key leadership support for the program included the UVA Health System chief executive officer, who made the online awareness brief training a requirement for all employees and placed participation on the scorecard for managers. The dean of the school of medicine, who prioritized the in-person training for faculty and incorporated it into performance reviews for all department chairs, also offered key support.

Other examples of bystander/upstander training. There are multiple examples of bystander/upstander training in the nonmedical literature. UVA's Stepping In program includes the work of Goodwin,[21] which provides helpful phrases that enable the following actions.

- Pivoting: "Hey, can I introduce you to …"
- Interrupting: "I'm sorry, could you repeat that? I'm not sure I understood you."
- Arousing dissonance: "I'm surprised to hear you say that. You've always supported equity."
- Disagreeing: "I don't think that's a gay thing."
- Expressing emotion: "What you said makes me uncomfortable."

Structural Action

Promoting diversity throughout the organization necessarily involves setting up committee structures, hiring processes, and promotion and other decision-making processes that hard-wire diversity and structurally challenge bigotry and prejudice. This structural diversity is a critical part of reducing the effects of negative bias in medical education.

Increasing the diversity of positive role models and the medical student body

The CHANGE study shows that lower *explicit* bias against gay men and lesbian women was associated with more favorable contact with faculty who identify as lesbian, gay, bisexual, or transgender (LGBT), and lower *implicit* sexual orientation bias was associated with more favorable contact with LGBT faculty.[16] Contact with

African Americans predicted positive attitudes toward African Americans relative to White people,[17] and having had unfavorable vs very favorable contact with African American physicians was a statistically significant predictor of increased implicit racial bias.[4]

Efforts directed at hiring and promoting underrepresented minorities in medicine, such as the Harold Amos Medical Faculty Development Program,[25] can provide crucial positive role models to students. Increasing the diversity of the medical school class naturally creates the opportunity for human connection and openness to another point of view. A part of any comprehensive effort to reduce the negative impact of bias in the teacher–learner relationship would be to diversify the pool of role models (faculty and residents) and learners, creating proximity, opportunity for human connection, openness to another point of view, and a diverse community for the learner.

Note, however, in the endeavor to create structural diversity, medical schools must be cautious not to cause undue burden on the few underrepresented minority persons to serve on committees. The unintended consequence of this can be students and faculty from underrepresented groups being pulled away from their primary tasks of learning, research, education, or clinical care, inhibiting their advancement and further increasing the disparities. It is also important to note that increasing numbers alone will not correct the problem if negative role models and structural issues are not corrected.

Reporting resources

Reporting is one way that we learn the truth. Having robust, accessible reporting options makes it more likely that an organization will be aware of what is happening on the ground. While reporting with accountability allows for follow-up action, there is a role for anonymous reporting for those who fear retaliation of some sort. Anonymous reports generally are not actionable, but they do allow for surveillance of the culture and may represent better the true baseline of discriminatory behavior. They carry the significant disadvantage of having events reported without any way of understanding more deeply the circumstance, and, perhaps more importantly, without the opportunity for a restorative conversation—apology and healing of relationship. Without that restorative process, the reporter also suffers, often not knowing what happened in response to their report.

Institutions will need to evaluate how their reporting mechanisms fit into an overall strategy to reduce the negative effects of bias, including discrimination, in the medical education environment. They will need to weigh anonymous vs nonanonymous reporting of events of negative bias and how they respond to each. They will need to understand how anonymous reporting can enhance their progress toward reducing bias in some ways and may inhibit progress in other ways.

Standing rules

Rules can be put in place to mitigate anticipated bias. An example might be the removal of any gender or race cues available to reviewers when reviewing applicants for a particular position or award. Another might be anticipating that there may be bias functioning in the compensation of female vs male faculty members, establishing rules on equality in compensation for comparable work and creating auditing processes to assure this is fulfilled.[26] Establishing rules that require diversity on search committees and diversity of applicant pools can mitigate the anticipated biases in selection.

Policies

When we look toward positive change in reducing discrimination, policy and law are powerful tools. At the same time, policy may have limitations in addressing some of the changes to which we aspire.[10] As Goluboff suggests, "We live under the law, but just as often we live under social norms that operate in relation to the law. In other words, what the law allows and what a community expects from its members are different things."[27]

Institutional policies that support respect for all are critical for establishing the behavioral expectations within a community and the possible consequences for ignoring those expectations. The expectation of respect for all is a critical backstop for health professionals working within an institution. When violations occur, it answers the question (at least on paper): "Does anyone have my back?" It clearly sets the expectation for all involved. There are, however, limitations to policies as detailed below.

1. There are limitations of implementation. If a patient is exhibiting prejudiced behavior, a policy might say that those in charge of the patient's care can offer a transfer of care. The limitation may be that, *in practice*, no

one will take that patient in transfer. This does not mean that we should not have such a policy, it just means that such a solution may not always be achievable. Thus, training in other ways to limit negative behaviors of patients in such circumstances is valuable.

2. Policies are blunt instruments that may have unintended consequences. A policy that specifically states that substitutions will not be made on grounds of race, gender, or ethnic status may have the unintended consequence of *requiring* an employee to care for a patient who is abusive. That nurse or therapist may *want* substitution and may object to being forced to care for a patient who does not want their care.

3. Policies, if too specific, may limit reasonable and compassionate exceptions. Consider the following example: A female rape victim requests that she have a female, rather than a male, forensic nurse do the postrape examination. Is this a reasonable request? There are many others. Policies that specify the circumstances under which substitutions of providers may be considered run the risks of limiting the exceptions that would be considered reasonable in a given circumstance. This is similar to limitations on judges (the 3-strikes rule or mandatory minimum sentences are good examples). Such policies limit discretion in an effort to make large-scale change.

Policy is critical to enforcing the norms of the culture we expect. Each institution must scrutinize how to use policy as instruments for positive change in supporting a learning environment that is respectful and inclusive.

Cultural Action

Setting expectations for diversity, inclusion, and respect

What expectations are set for patients, employees, and trainees when they enter the doors of the health system in which they work, train, or seek care? What do they see on the walls, in the patient brochures, and in the information provided to new employees? Do those messages set the expectation that they are entering an environment that embraces diversity and inclusion, and that expects respect for all? The health system sends a message through pictures on the walls, videos playing in the waiting areas, and what is said in the patient rights and responsibilities. Each of these can be a way of setting expectations for inclusion and respect, or the expectation that I will see "only people like me." If the photos in the hospital's

brochures, for example, show only White men as doctors, people coming to that medical center might be more likely to be taken aback at seeing an African American physician.

Nudging

There is an increasing body of research on how people can be "nudged" to do good things rather than bad things, how they can be nudged to be better people. Nudging means understanding how we think, how we choose what to perceive, and how we can influence one another to be better, including how we can use social influence (both information and peer pressure) within the training community to "nudge" people toward being better.[28]

Group decision strategy

How do we make decisions in our schools of medicine and nursing? Surowiecki showed that groups of people can make smarter decisions than any individual member, but only if (1) the group is heterogeneous and (2) the group has a culture that values the diversity of backgrounds and assures that all voices are heard.[29] Setting up groups to be heterogeneous and setting a culture and process where all are heard is more likely to result in unbiased decisions. In many cases, there are not enough diverse members of the faculty to create diverse groups. Thus, hiring to create a more diverse group becomes a priority.

Personal accountability

Having a culture in which people are accountable for their actions in these tough situations may help them to step in even when it is hard. A key study showed that participants who knew they would be justifying their responses performed better than participants who knew their responses were anonymous.[30] In the student–teacher relationship, in committee work, or among colleagues, creating an environment that establishes expectations and invites accountability may help people to both do better and learn more quickly. For example, if an attending knows, because they have had the same training in responding to bigotry that the students have had, that the students expect that someone will step in when something like this happens, they may be more likely to do so.

Exposure control: Limiting the passing down of negative biases

Goddu and colleagues report that exposure to stigmatizing language in the medical record was associated with more negative attitudes toward the patient and less aggressive management of the patient's pain.[31] This study was about our attitudes toward patients, but there is plenty of evidence that these negative social biases affect attitudes about colleagues and trainees. It is possible that positive references may be an effective way to positively predispose us toward one another. Positive social construction tools, like positive gossip and the use of positive stories, may help people to get beyond differences by emphasizing positive traits, giving them the platform on which to work through and embrace differences. It has been shown, for example, that believing that a person is of positive moral character is associated with the expectation that they may behave inconsistently, whereas immoral (e.g., unfair) persons are assumed to hardly ever behave in a fair way.[32] Thus, it seems that the assumption of positive moral character may help us to navigate difficulties more flexibly and positively (e.g., if I believe that James is a fair person, I am more likely to expect to navigate a difference productively).

Environments that support positive change and transformative learning

Literature on positive emotion in decision making suggests that a positive emotion (gratitude, openness to experience) has a positive influence on decision making, optimal functioning of teams, and wisdom-generating transformative learning.[10,33] As Burgess and colleagues note, "recent research suggests that providers who experience higher levels of positive emotion during clinical encounters may be less likely to categorize patients in terms of their racial, ethnic, or cultural group, and more likely to view patients in terms of their individual attributes."[5] They go on to note that "positive emotion has also been shown to lead to the use of more inclusive social categories, so that people are more likely to view themselves as being part of a larger group, which can facilitate empathy and increase the capacity to see others as members of a common 'ingroup' as opposed to 'outgroup.'"

Creating an environment of differences

An environment that celebrates differences is visible in many ways, from the pictures on the walls to the diversity of people who serve as preceptors. If all of the pictures on the wall are old White men, and the majority of preceptors are of that same demographic, that is a pretty clear message that differences are not valued, or important. Efforts to enhance proximity, to create positive experiences over

time, have the potential to change learned biases. Burgess and colleagues note, "The most successful way to alleviate intergroup anxiety and increase provider confidence is through direct contact with members of other groups."[5] A 2006 meta-analysis done by Pettigrew and Tropp found that intergroup contact typically reduces intergroup prejudice.[34]

Environment of inquiry vs judgment

Do we make organizational fundamental attribution errors, or do we seek more information before making judgments? Simple information can enhance our ability to overcome biases. Gill and Andreychik note that social explanations (i.e., low socioeconomic status of Blacks stems from historical maltreatment) is important in initiating a self-regulatory cycle that can foster prejudice reduction.[35] Providing that kind of information in the educational community, and creating an environment of inquiry rather than judgment, can be a significant organizational step toward mitigating our negative biases.

Restorative justice

Acosta notes,

> We are in desperate need of new forums of interaction so that we can achieve more positive learning and workplace environments. Restorative justice practices can help a group identify and gain mutual understanding of the personal and collective harm that has occurred, create the conditions that incentivize offenders to admit responsibility rather than deny or minimize the harm, and explore and define a set of problem-solving steps to address the harm and rebuild community trust.[36]

In the UVA Health System, we have begun a program of 1:1 coaching that is focused on the ultimate goal of a restorative conversation between people when a disrespectful encounter has occurred. Unfortunately, a system that relies on anonymous reporting is not able to achieve this level of apology, growth, and restoration of relationships. Instead, many institutions have a culture of reporting and retributive justice. If there is any comparison to the criminal justice system, restorative justice programs have been shown to reduce recidivism and enhance healing for the victim. Perhaps, we should be adopting some of these principles in how we respond to reports of disrespect in our educational environment.

Safety, risk, and growth

Learning how to reduce and mitigate the effects of bias in medical education will be enhanced by creating a learning environment where challenge and risk are preamble to intellectual and emotional growth.[37] Changing our minds requires openness to new ideas and new ways of seeing events and circumstances. This openness necessarily involves risk.

Call to Action: Questions and Answers to Guide Next Steps

Question: What does the medical profession (and the health professions in general) need to do in the next 5 years to move the needle to reduce the negative effects of racial, ethnic, religious, and gender bias in education?

Answers:

- Increase diversity overall
    - Institute more holistic admissions processes to create a more diverse student body (including all of the strategies below)
    - Increase diversity of faculty to provide role models—focusing on faculty retention, as well as faculty recruitment (including all of the strategies below)
- Provide training as follows:
    - Provide practical training for faculty, residents, students, and other health professionals on how to step in and respond to *explicit bias*, disrespectful and discriminatory behaviors
    - Provide *implicit* bias awareness training
    - Provide training in mitigation strategies (or debiasing strategies) to mitigate the negative effects of implicit biases
- Address policies, processes, and the environment to enhance a culture of respect and inclusion
    - Assure policies at training centers support respect, inclusion, and diversity
    - Create the expectation of respect and inclusion in our health systems through messaging to patients and employees

- Create a culture of personal responsibility through training, clear expectations, and accountability for respectful and inclusive behaviors by faculty, residents, leaders

- Employ a variety of debiasing strategies to enhance selection, hiring, and promotion practices for residents and faculty

- Create structural diversity in important committees and processes in the medical school and health system

- Assure accessible and effective reporting resources for students, trainees, and faculty to report discriminatory and disrespectful behaviors

- Consider coaching resources to address events of disrespectful and discriminatory behaviors and a restorative justice approach to resolving such events in a generative manner

- Use social influence strategies to "nudge" people toward the behavior we want in our training environment

- Address potential biases in grading, evaluation, references, awards, hiring, and promotion

  - Employ a variety of debiasing strategies to enhance grading and reference processes for medical students

Question: What is the role of research?

Answers:

- Develop the evidence base for interventions to mitigate the effects of implicit bias on

  - Selection and retention of students and faculty
  - Grading, awards, references, promotion

- Develop the evidence base for interventions to encourage stepping in and responding to events of explicit bias, disrespect, and discrimination in the training environment

- Develop the evidence base for how implicit biases might be changed over time

- Develop the evidence base for mitigation strategies to reduce the negative effects of implicit biases

Conclusions

Racial, gender, ethnic, and religious biases, both implicit and explicit, are pervasive in the medical profession and in medical education. Their negative effects—including limiting diversity and, therefore, excellence in medicine; adversely affecting education and patient care; and, at worst, overt disrespectful and discriminatory actions—are also pervasive. In this article, we present ways to understand bias and how it functions in human cognition, ways to mitigate the effects of bias and to reduce negative biases, and ways to enable direct and effective responses to explicit bias in medical education. These can be applied to address the numerous areas in which negative biases are affecting medical education and the teacher–learner relationship. Addressing the negative influence of bias in medical training is a deep, complex problem that involves our intellectual and our emotional selves, our conscious and our unconscious attitudes and behaviors. It will take humility, intellectual curiosity, tolerance for ambiguity, and advanced understanding to change attitudes and behaviors that are deeply rooted in society and history. In short, it will take wisdom.

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COMMISSIONED PAPER

Medical Education's Wicked Problem: Achieving Equity in Assessment for Medical Learners

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Abstract

Despite a lack of intent to discriminate, physicians educated in U.S. medical schools and residency programs often take actions that systematically disadvantage minority patients. The approach to assessment of learner performance in medical education can similarly disadvantage minority learners. The adoption of holistic admissions strategies to increase the diversity of medical training programs has not been accompanied by increases in diversity in honor societies, selective residency programs, medical specialties, and medical school faculty. These observations prompt justified concerns about structural and interpersonal bias in assessment. This manuscript characterizes equity in assessment as a "wicked problem" with inherent conflicts, uncertainty, dynamic tensions, and susceptibility to contextual influences. The authors review the underlying individual and structural causes of inequity in assessment. Using an organizational model, they propose strategies to achieve equity in assessment and drive institutional and systemic improvement based on clearly articulated principles. This model addresses the culture, systems, and assessment tools necessary to achieve equitable results that reflect stated principles. Three components of equity in assessment that can be measured and evaluated to confirm success include intrinsic equity (selection and design of

assessment tools), contextual equity (the learning environment in which assessment occurs), and instrumental equity (uses of assessment data for learner advancement and selection and program evaluation). A research agenda to address these challenges and controversies and demonstrate reduction in bias and discrimination in medical education is presented.

Increasing diversity in medicine and other health professions improves access and the quality of care provided to minority populations, enhances the educational environment for both minority and majority students, optimizes team-based problem solving, and expands the focus and relevance of medical research.[1–4] Driven in part by accreditation standards and national organizations,[5–8] many medical schools and residency programs have successfully used holistic admissions strategies to increase the diversity of their classes. However, similar increases in diversity have not been realized in honor societies, selective residency programs, and medical specialties, and among faculty in U.S. medical schools.[9] Because entry into competitive careers and programs is often dependent on student grades and academic awards, these observations have prompted concerns about whether the assessment practices of medical schools may be subject to structural and interpersonal bias.

Medical schools have a moral responsibility to respond to these concerns about equity in assessment. Assessment guides learning, enables student progress, and impacts career choice and opportunity while also assuring stakeholders of graduates' competence. Inequitable assessments in medical education perpetuate barriers to advancement and career opportunities for learners from groups underrepresented in medicine (UIM). Even if unfounded, concerns about the possibility of inequitable assessments burden UIM learners and add to the challenging nature of the learning environments in which they are expected to perform.

Equity in assessment meets the definition of a wicked problem.[10] Wicked problems are characterized by conflicts, uncertainty, dynamic tensions, and susceptibility to contextual influences. Many faculty believe that our current approach to teaching and assessing students is defensible, rewarding merit and hard work. Increasingly, others believe that it has been tainted by the same structural racism that has perpetuated a state of educational opportunity and career privilege for populations that have historically constituted the majority of medical students,

residents, and faculty. The literature that explores issues of equity in assessment is providing greater clarity into the complexity of the problem but has yet to resolve the fundamental questions about the nature of equity in assessment or propose solutions to observed differences.

Addressing this wicked problem will require concerted work by educators in all medical schools and residency programs. To help catalyze this work, we begin this paper by defining key concepts to establish a shared mental model of equity in assessment.[11] We continue with a review of the literature, exploring concerns about equity in assessment in medical education, and follow with a proposed framework modeled on work in the field of organizational excellence. Finally, we describe challenges and controversies that future research should explore.

What Is Equity in Assessment?

Equity is the state of being fair and achieving social justice.[12,13] An equitable assessment system thereby facilitates future educational and career opportunities. Equity in assessment is present when all students have fair and impartial opportunities to learn, be evaluated, coached, graded, advanced, graduated, and selected for subsequent opportunities based on their demonstration of achievements that predict future success in the field of medicine, and that neither learning experiences nor assessments are negatively influenced by structural or interpersonal bias related to personal or social characteristics of learners or assessors. An equitable assessment system should enable both majority and minority learners to learn more and learn better.[14]

Figure 1: Components of Equity in Assessment
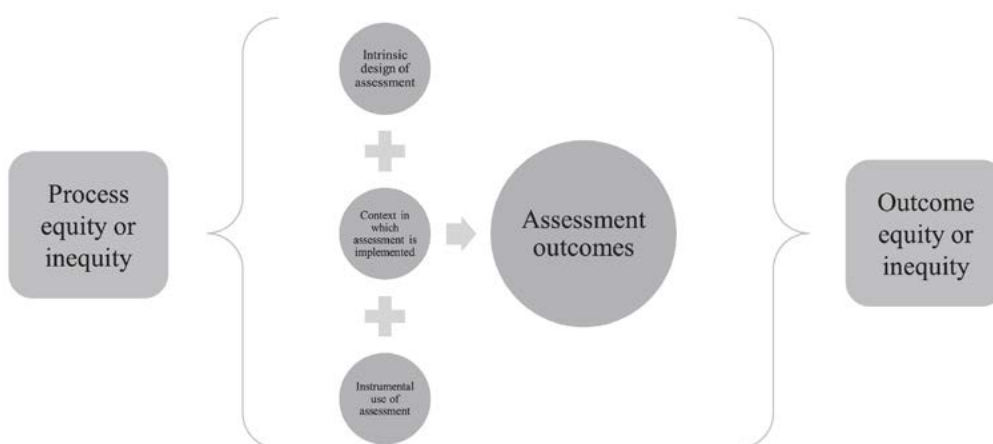
Components of equity in assessment

There are 3 components to equity in assessment: intrinsic equity, contextual equity, and instrumental equity (see Figure 1). Intrinsic equity means that the design of the program of assessment and the assessment tools used minimize bias against groups historically marginalized by the medical profession. Established criteria define high-quality assessment strategies and also inform efforts to achieve equity in assessment. These criteria include: (1) validity or coherence, (2) reproducibility or consistency, (3) equivalence, (4) feasibility, (5) educational effect, (6) catalytic effect, and (7) acceptability.[15] Adhering to these criteria guides educators to align curriculum and assessment and to ensure that what is measured reflects what is valued, guides learning, and ensures accountability of the system to patients and the public. When these criteria are not met, *inequity* in assessment may result. Table 1 summarizes definitions for these criteria and provides an example of how failing to meet them can enable inequity in assessment.

Contextual equity refers to fairness in the learning experience and the environment in which assessment strategies are implemented. Contextual equity includes fairness in: assigned environments and tasks within those environments, support and social structures available within and outside the learning environments, and the preparation of supervisors who implement assessment procedures. These factors impact the climate experienced by learners and, thus, the opportunity learners have to perform and be assessed at their peak abilities.

Equity in assessment in medical education also requires attention to instrumental equity: How results of assessment processes are shared with and used by stakeholders to create equitable opportunities for all, regardless of their social class or personal characteristics. Instrumental equity is present when the results are shared and used in a manner that neither over- nor underpredicts subsequent performance in the context for which assessment was designed (see Table 2).

Intrinsic, contextual, and instrumental equity are process equity values that collectively contribute to equity in assessment outcomes: the opportunities afforded to individuals (such as selection for a prestigious residency) or populations (such as diversity of faculty in academic health systems) based on the consequences of assessment.

Table 1: Criteria for High-Quality Assessment and Examples of Inequity Resulting From Failure to Meet These Criteria[37]

Criteria for high-quality assessment	Definition	Example of inequity resulting from failure to meet this criterion
Validity or coherence	Assessment tools and strategies measure the intended construct and are used for the purpose for which they are intended.	The numeric results of a licensing examination designed to ensure minimal competence in medical knowledge are used for selection for graduate medical training, despite known structural differences in education that favor majority groups on high-stakes examinations.
Reproducibility or consistency	The same assessment yields the same results under a variety of conditions.	Supervisors are observed to rate the clinical skills of non-UIM and men higher than those of UIM and women learners.
Equivalence	Information is used similarly across settings or institutions to make assessment decisions.	Clerkship directors, grading committees, program directors, or honor society committees synthesize assessment information in ways that consistently favor non-UIM learners.
Feasibility	The assessment tool or strategy is practical to implement.	Clinical faculty do not observe UIM learners' unique contributions to the care of UIM patients through language concordance, advocacy, and doctor–patient relationships due to time demands on a busy clinical service.
Educational effect	Assessment methods motivate learners and drive them to focus on certain activities.	UIM learners are aware of the literature and experience documenting lower clinical scores and grades for members of their group and therefore underperform in the clinical environment because of stereotype threat.
Catalytic effect	The effects of assessment results on learners and the system.	A progress committee reviews differences in performance data for UIM and not-UIM learners and concludes that UIM learners may not be qualified for the program.
Acceptability	Learners and educators find the assessment tools and procedures to be workable and credible.	UIM learners have a blog that discusses the flaws in assessment of UIM learners in the program.

Abbreviation: UIM, underrepresented in medicine.

Table 2: Examples of Challenges to Instrumental Equity

Assessment	Intended use of assessment information	Instrumental use of assessment information
USMLE Step 1 licensing examination scores	Determination of minimal competence for licensure to practice medicine, to ensure safety of the public	Sorting applicants for residency training into groups who will or will not be invited for interviews
Clerkship grades	Quantitative ratings and qualitative comments from team members ensure that students have achieved expected competence and inform future learning	Ranking students and sorting students to determine who will receive the highest grades
Examinations of medical knowledge during clerkships	Assurance that all medical students achieve the expected minimum medical knowledge across varied clerkship sites and settings	Numerical data serve as easy, "objective" metrics that can be weighted heavily alongside clinical performance data to rank or sort students into groups for purposes of grade assignments
Milestone ratings of resident performance	Monitor and support all residents' developmental trajectory	Quantitative milestone ratings enable ranking of residents

Abbreviations: UIM, underrepresented in medicine; AOA, Alpha Omega Alpha Honor Society.

Why a focus on psychometric rigor shortchanges equity in assessment in the clinical learning environment

The definition of contextual equity—fairness in the learning environment in which assessment occurs—is inherently challenging in the complex clinical environment. Learners experience different patients, clinical conditions, team dynamics, time constraints, supervisor skill, and other factors. This variability makes the conditions for assessment similarly variable, and in conflict with traditional expectations for tightly controlled, reproducible conditions sought for high-stakes testing. For example, it is entirely feasible to pursue psychometric rigor—reproducible, reliable results that are often touted as "objective"—in the environments of high-stakes

Inequity resulting from assessment	Consequence of inequity
Students from backgrounds underrepresented in medicine are at risk for lower scores due to structural factors throughout their education	UIM students do not match into top residency programs
Bias in quantitative and qualitative ratings favors students who are White; bias exacerbated when faculty providing ratings may comprise a less diverse group than the student population	UIM students are less likely to be elected to the AOA honor medical society
Medical knowledge contributes more to or drives clinical grade assignments rather than other competencies essential for high-quality patient care	UIM students earn fewer honors in core clerkships
Women residents receive lower milestone ratings than men in certain domains that are traditionally valued as "male" characteristics	Women residents are less likely to be selected for chief resident positions or faculty appointments

national licensing and certification examinations. However, these examinations only measure some aspects of the competencies relevant to physician performance and thus, used alone, have only modest predictive ability for future patient care.[16–20] For most competencies other than knowledge, patient care skills are an essential component of the valid and equitable assessment of learner performance. Creating the conditions for equitable assessment of clinical skills has thus far been challenging for medical educators. In the psychometric era of assessment, the major focus on reliability or reproducibility of workplace assessments fueled an assumption that fairness would result if raters were sufficiently trained to provide similar ratings of different levels of learner performance. However, assessment of clinical performance has fallen grossly short of this vision of highly reliable ratings.

In fact, more recent literature advocates that we embrace the variability in ratings as a meaningful reflection of the complexity of clinical tasks, contexts, and different supervisors whom learners encounter.[21–24] This guidance embraces the importance of contextual equity; failure to consider contextual equity perpetuates inequitable assessment practices, as described below.

Existing Literature: Concerns About Equity in Assessment in Medical Education Are Warranted

Exploration into the question of equity in assessment has begun with multiple studies focused on concepts such as bias, fairness, differences, and differential attainment in assessments used for entry to, progress through, and graduation from medical school and successful competition for residency programs and faculty careers.[25–35] These studies consistently document population group differences in standardized examinations, clinical assessments, grading, and academic awards between UIM and well-represented in medicine (WRIM) students and residents, differences that virtually always favor WRIM learners. Furthermore, studies have also documented that minor differences in assessment outcomes can have a powerful impact on residency and career opportunities.[9,30]

Population group differences exist in high-stakes standardized exams

National high-stakes standardized exams are often used to select students for entry into medical school and into the most competitive specialties, residency programs, and careers. Unfortunately, in many of these exams, population group differences exist that consistently favor White applicants over their non-White peers and men applicants over women. The Medical College Admission Test (MCAT) is one of the most important selection criteria used by medical school admissions officers to determine which applicants are offered medical school interviews and acceptance.[36] Although individual women and UIM students score across the range of MCAT scores, population group differences exist in MCAT scores, with Black and Hispanic students, on average, scoring lower than their White peers.[35,37,38] Similarly, the United States Medical Licensing Exam (USMLE) Step 1 exam has played an important role in residency selection.[39] Similar population group differences have been demonstrated on the USMLE Step 1. Studies have consistently shown that Black, Hispanic, and Asian medical students, on average, have lower USMLE Step 1 scores than White students and women, on average, score lower than men.[40–42] These group differences in USMLE Step 1 scores are not explained by students'

prior academic achievement, and they persist even after accounting for students' total grade point average and MCAT scores.[43]

Psychometric analysis of the predictive ability of the MCAT on future performance of students in medical school and the USMLE Step 1 exam on performance on future licensing exams shows no evidence of intrinsic bias of the exams.[35] The prevailing theory explaining population group differences in the MCAT, the USMLE, and other high-stakes standardized exams is that the differences result from consequences of structural racism on educational opportunities afforded to UIM students.[35,38] The recent change to pass/fail scoring for the USMLE Step 1 examination represents a promising strategy to address inequity while maintaining assurance of minimal competence in medical knowledge for licensure.

For both the MCAT and USMLE examinations, students with a broad range of scores are capable of future success in medical school, residency, and physician practice. However, many medical schools (for the MCAT) and residency programs (for the USMLE) choose to restrict the candidates they consider for interviews and admission to those with the highest scores.[38,44] They cite concerns about need to efficiently screen large numbers of applicants, false beliefs about the predictive ability of minor differences in scores, and pressure from leadership to craft a class with the highest exam metrics to increase institutional rankings according to *U.S. News & World Report.* Given the demonstrated population group differences on these exams, this restriction of opportunity to the highest scorers systematically disadvantages UIM students and presents a barrier to diversifying medical school classes and residency programs.[37,45,46]

Population group differences exist in narrative evaluations, grades, and awards

Narrative evaluations and medical school grades are thought to provide a more holistic view of the competencies needed for future success as a medical resident, fellow, or practicing physician. Population group differences also exist in departmental and institutional assessments of students by faculty and administrators. Descriptions of medical students used by faculty in narrative evaluations and letters of recommendation vary by sex, gender, race, and ethnicity. These differences favor White students over non-White students.

Medical student performance evaluations (MSPEs) are the documents prepared by medical schools to summarize student performance for the purpose of residency selection. In a recent study of MSPEs, White students were more likely to be described with "standout" words such as "best," "excellent," and "outstanding" compared with their non-White peers.[32] Further, female students were more likely than males to be described as "caring" and "compassionate" and less likely to be described with words that denote intelligence and competence. Another recent study of language in core clerkship evaluations found that evaluators reinforce gender stereotypes through their choice of words. For example, women were more likely than men to be described as "lovely," while men were more likely to be described as "scientific."[3]

Studies have also demonstrated racial and ethnic differences in awarded grades. A single academic medical center recently found that students historically UIM (Black or African American, Hispanic, American Indian/Alaska Native, or Native Hawaiian/Pacific Islander) received half as many "honors" grades across all clerkships compared with White students.[9] An examination of numeric global assessment rankings in the Standard Letters of Evaluation used to rank 2,884 medical students applying to emergency medicine (EM) programs found that Black applicants were rated lower than White applicants across several domains, including ratings on future success in EM, rank list prediction, and overall applicant ranking.[47]

Population group differences also arise in selection of students for membership in the Alpha Omega Alpha Honor Society (AOA). AOA membership is predictive of future success in academic medicine, and membership often advantages students in obtaining the most competitive residency positions.[39,48,49] Recent studies reveal racial and ethnic disparities in society membership, with Asian medical students being approximately 50% less likely than White students to be selected into AOA. Black medical students are nearly 80% less likely than White students to be elected into AOA, even when accounting for numerous measures of academic achievement including USMLE Step 1 and 2 scores, dual degrees, research productivity, and hours dedicated to leadership activities and community service.[30] This disparity suggests that racial and ethnic minority medical students are differentially rewarded for comparable achievement. Some institutions have chosen to suspend membership in AOA because of these concerning observations.[50]

These differences in narrative assessments, clerkship grades, letters of recommendation, and honor society membership impart sustained, negative

consequences for both individuals and the profession. In an analysis of U.S. medical school graduates from 2005 to 2015, Black or African American, Hispanic, Asian, and American Indian/Alaskan Native graduates were all less likely than White graduates to secure training positions in graduate medical education (GME), even after accounting for USMLE Step 1 scores.[51] Moreover, the number of Black and Hispanic graduates unplaced in GME after medical school graduation increased throughout the study. Because GME training is requisite for medical licensure, delayed entry or inability to enter a residency program after medical school has substantial economic consequences for students who may also have considerable student debt. The consequences on goals to diversify the profession are clear.

Potential causes of population group differences in assessment in medical education

Population group differences exist in medical education assessments between majority and racial, ethnic, and gender minorities; they constrain individuals' opportunities and contribute to challenges in diversifying the profession. It is tempting to seek a simple explanation to this problem. Some have argued that the mere existence of population group differences in assessment confirms overt bias and discrimination in the assessment process. Certainly, some assessments may be poorly designed, and some assessors may be consistently biased. Others have posited that population group differences reflect differential aptitude within affected populations. Indeed, within any medical school, different students from many different social groups and identities demonstrate different aptitudes for and interest in various specialties. If the origins of this problem resided with individual learner or assessor performance, we would not expect to see the same results in studies done at different institutions with different assessment methods. The universality and consistency of differences advantaging those from groups WRIM suggest that systematic forces are likely operational.

As with other wicked problems, solving the problem of inequity in assessment requires a broader view of possible causes and potential solutions. The social–ecological model used in public health recognizes that individual outcomes must be considered in the context of broader organizational and social systems.[52] Applying this model to the issue of equity in assessment provides insights into possible causes of observed population group differences and illustrates the need to plan interventions at multiple levels (see Figure 2).

Our working definition of equity in assessment can be used to test institutional systems for their potential contributions to inequity in assessment. Equity in assessment is present when students have equitable opportunities to: learn (contextual equity); be evaluated, coached (assessment *for* learning); be graded, advanced, graduated (assessment *of* learning); and be selected for subsequent opportunities based on demonstrated achievements that predict future success in medicine (instrumental, assessment *for* ranking) and that neither learning experiences nor assessments are influenced by structural or interpersonal bias related to personal or social characteristics of the learner, assessor, or context of the assessment. Inequity in assessment exists if these conditions are not met. Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/B18 summarizes examples of inequity in each of these domains relevant to assessment.

Figure 2: The socioecological model applied to medical education: Examples of decisions at multiple social system levels that impact equity in assessment.
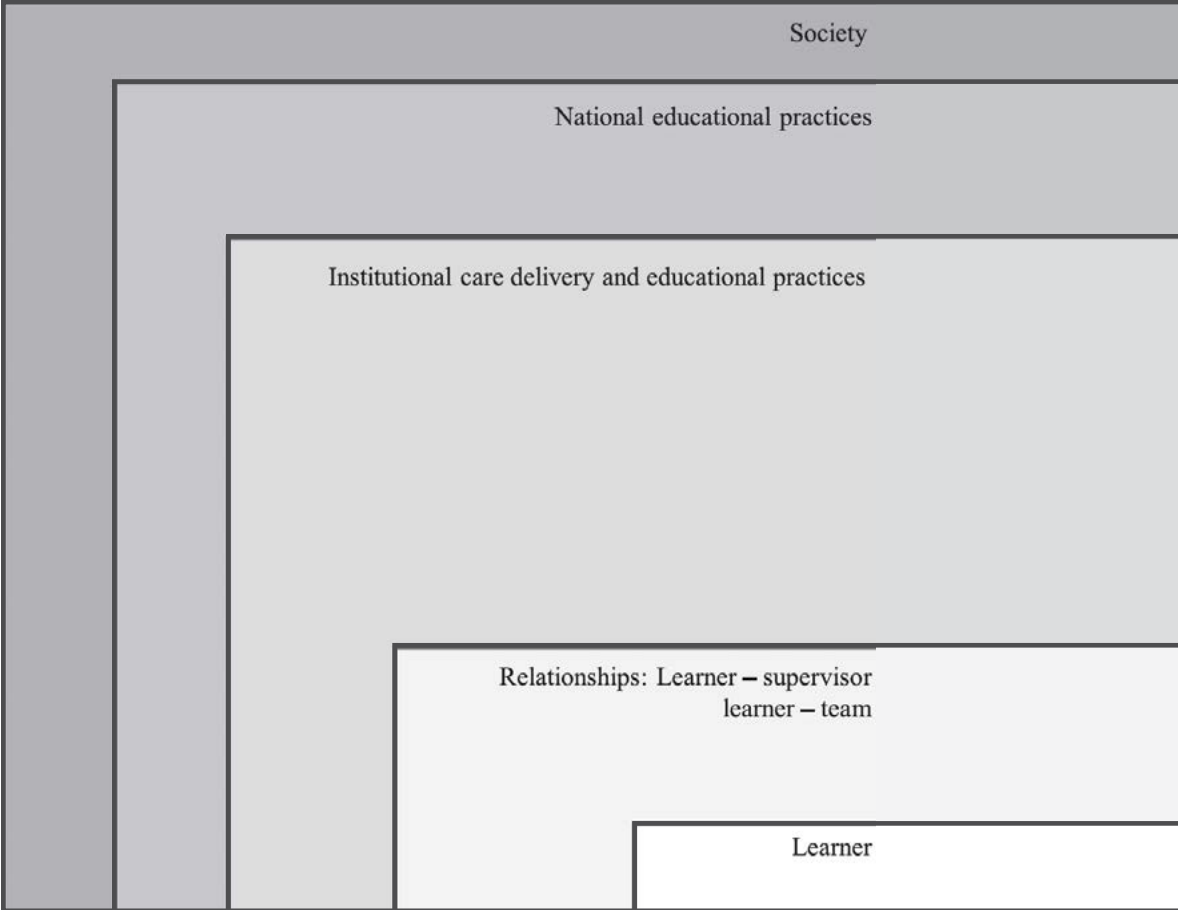
It is vital to consider contextual equity, even though it may not be under the direct control of educators who design programmatic assessment strategies. If work is done to optimize equity in intrinsic and instrumental assessment procedures and policies without addressing challenges in the learning environment that systematically disadvantage one population and not others, then inequity in assessment outcomes will remain. Case studies outlined in Supplemental Digital Appendix 2 at http://links.lww.com/ACADMED/B18 illustrate how the elements of inequity impact learners in the clinical learning environment.

Population group differences may occur for reasons other than inequity or bias. Population group differences may exist because one population is consistently more likely to demonstrate the characteristics valued and measured by the

Abbreviations: UIM, underrepresented in medicine; SOGI, sexual orientation and gender identity.

• National policy and legal decisions governing economics, education, criminal justice, housing, and health
• Design of national application systems that support ranking of learners using metrics known to disadvantage UIM learners • Accreditation policies and procedures that neglect issues of equity • Collective acceptance (explicit or tacit) of use of assessment data for reasons that they were not designed for (i.e., institutional rankings)
• Institutional promotion and tenure decisions that do not reward faculty contributions to equity, inclusion, or excellence in teaching and assessment • Policy decisions about faculty work assignments and compensation strategies that disincentivize teaching and relationship building with learners • Institutional policies that lead to provision of unequal care to minority patients (i.e., insufficient number of certified interpreters or social workers) • Policies and procedures on management of racism in the workplace • Policies and procedures on assignment of grades that place greater emphasis on knowledge than other competencies and on performance rather than growth • Resource decisions about student support that do not take equity into consideration
• Policies and procedures regarding preparation of faculty for work with diverse populations of learners • Team dynamics and strategies that intentionally or unintentionally exclude populations of learners • Team assignments to learners that differ based on the race/ethnicity/gender/SOGI status of the learner
• Learner preparation for learning experience • Learner susceptibility to stereotype threat and microaggressions

assessment process. Wijesekera and colleagues identified that women were more than twice as likely as men to be inducted into the Gold Humanism Honor Society (GHHS), with criteria emphasizing empathy and patient centeredness.[53] Our working definition of equity in assessment is a lens to explore the question of whether one population group is consistently more likely to demonstrate the characteristics valued or whether the selection process is inequitable. Do women have more empathy and patient centeredness then men (individual aptitude and achievement)? Are the ways that men demonstrate empathy and patient centeredness equally captured by assessors and/or by the assessment method (intrinsic equity)? Do men and women have equal opportunity to receive coaching (assessment for learning) in the expected ways to demonstrate these traits? Does the assessment context allow men and women equal opportunities to demonstrate these traits (context and conduct of learning)? And finally, an organizational value statement: Are these traits important enough to future physicians to be measured and used to differentiate among individuals (intrinsic and instrumental equity)? This example both highlights the importance of antecedent institutions, cultures, and experiences that shape men and women students differently and may lead to true differences in demonstration of these traits while also raising valid questions about assessment strategies. How the GHHS responds to these findings will reflect, embody, and ultimately promote institutional values.

A Framework for Equitable Assessment in Medical Education

Drawing on insights from the literature on equity and fairness in medical education assessments, hypotheses for why disparities in assessment exist in medical education assessment, and theories supporting high-quality assessment, we propose a framework for considering equity in assessment. This framework is based on the Shingo model for organizational excellence, which recognizes that effective organizations begin their improvement work from a purpose-driven and principled platform and then move to shape the culture, build the systems, and select the tools that can achieve the results that reflect those principles.[54] List 1 outlines principles that guide application of the Shingo model to equity in assessment.

Guiding principles

Because results of assessments at any given institution will be used by multiple institutions and organizations (residency and fellowship programs, licensing and certifying boards, hospital credentialing units, professional societies, and

governmental authorities), a model for equity in assessment in medical education must transcend program and institutional borders. Thus, successfully achieving equity in assessment in medical education requires a nationwide, collective commitment to advance equity as an essential element in our work in health care and medical education.

The aim of all assessment in medical education is to ensure that every graduate of schools and training programs has demonstrated the competencies needed to provide high-quality, patient-centered, equitable care for all patients. This purpose must drive the design, implementation, and continuous improvement of the culture of medicine and medical education; the systems and strategies we use to assess, grade, promote, graduate, and certify learners; and the tools we select to implement our strategies.

List 1: Achieving Equity in Assessment: A Model Based on the Shingo Model of Organizational Excellence

Guiding principles:

- The purpose of medical education is to prepare a physician workforce capable of and committed to providing high-quality, safe, and equitable care to our increasingly diverse patients and communities.

- The purpose of assessment in medical education is to ensure that medical education fulfills our social contract by ensuring that all who graduate from a school or training program have the competencies needed to provide excellent and equitable care to all patients.

A culture committed to equity in assessment values:

- Diversity, equity, and inclusion as drivers of a high-quality health care system.

- Equity as an essential characteristic of high-functioning learning and assessment systems.

- Excellence in all individuals and teams as defined by achievements in the comprehensive set of competencies that are required to provide highquality patient care.

- A commitment to growth and improvement as an essential requirement for sustained excellence over the course of a career.

Equitable systems and programs of learning and assessment:

- Are centrally designed and continuously monitored for evidence of equity, using contemporary theories of assessment and learning.

- Focus on structures and processes that optimize intrinsic equity by mitigating the impact of unconscious bias by individuals and groups in assessment for learning, including:

    - explicit criteria by which achievements are assessed, rather than relying on normative criteria

    - a diversity of assessment strategies and metrics to validly assess the breadth of competencies needed for physicians to provide excellent care

    - preparation of all supervisors who assess learners and the learners themselves to have a clear understanding of assessment procedures and desired competency attainment criteria

    - strategies that ensure that all students receive frequent, actionable, formative assessment before summative, high-stakes decisions are made

- Focus on structures and processes that optimize intrinsic equity by mitigating the impact of unconscious bias by individuals and groups in assessment of learning, including:

    - Summative decisions about competency achievement are based on evidence collected from multiple observers who interact with the learner in a wide range of clinical contexts, with a diversity of patients.

    - Summative decisions about competency achievement are made by committees of diverse individuals, expert in assessment procedures and data analysis, and educated about the ramifications of unconscious bias and dysfunctional group think.

- Focus on structures and processes that optimize contextual equity, including:

    - Curricular environments that afford all learners with the opportunity to learn while participating in clinical situations of varying complexity to optimize their chance of maximizing their achievements.

- Learning environments designed and monitored to address bias, stereotype threat, unmeasured workload, and other causes of inequitable learning that contribute to inequitable assessment.

- Faculty work assignments and promotion criteria that enable and incentivize them to dedicate the time and effort needed to optimize assessment for learning.

- Advocate for structures and processes that support instrumental equity and equity in assessment outcomes.

Tools that facilitate equity in assessment include:

- Criterion-based competency descriptions.

- Assessment strategies that incorporate qualitative and quantitative data selected for their ability to predict future performance as a physician, rather than on ease of collection or interpretation.

- Faculty development and just-in-time tools that allow faculty and learners to understand and embrace roles and expectations in learning and assessment.

- Workflow, work assignment, and technologic strategies that support and reward supervisors to use direct observation of learner performance (with patients, on rounds, during chart review) to gather evidence and make formative judgments about competency of a given learner.

- Coaching strategies to enhance a learner's ability to understand and act upon feedback.

- Strategies and technologies to collect and display data on learner progress for use by learners and their coaches and supervisors.

Results that indicate equity in assessment include evidence that:

- Process indicators:
    - Assessment procedures are fully aligned with a clear understanding of their benefits and limitations in predicting future performance.

- Assessment strategies are employed to increase educational and career opportunities for all learners and only function to prevent these opportunities when their rigor is unquestioned.

- Assessment data are used as intended and not for situations for which their relevance is unproven.

- Programs routinely investigate issues of validity, fairness, and equity in their programs of assessment and work to minimize population group differences that unfairly disadvantage any particular group.

- Outcome indicators:

  - Population group differences in educational and career opportunities for groups underrepresented in medicine are eliminated.

Culture

Culture represents an organization's norms, expectations, beliefs, and values. Cultural norms are both explicit and tacit and are reflected in the behaviors exhibited and rewarded by individuals in the organization. Climate is the individual experience of culture.

Achieving a culture that supports equity and inclusion requires recalibration of long-standing beliefs about how we define, develop, and recognize excellence in medicine. In the 21st century, the team-based delivery model needed to provide care for patients with complex chronic diseases requires that all team members be excellent. Therefore, what matters to the health of our patients and communities is not how good the very best physician is, but how good every physician is. This view aligns well with equity in assessment. Our culture of assessment must embrace the belief that all learners can and must grow and develop throughout their medical careers, aided by systems and other professionals committed to supporting this growth. Our focus must be to design assessments to ensure every graduate exceeds the competency thresholds necessary for safe, high-quality patient care, rather than to identify the top 10% of a graduating class.

Systems of assessment

Systems must be designed to support intrinsic equity in assessment. Educators must engineer systems that explicitly articulate criteria for assessment, equalize the learning opportunities, provide formative feedback for all learners, minimize the deleterious impact of unconscious bias of any individual evaluator on a learner's grades, and recognize and reward growth rather than performance mindset. While little empirical data guide the design of equitable programs of assessment, 2 current frameworks for assessment align with and can support development of equitable programs of assessment: competency-based medical education (CBME) and programmatic assessment focused on equity. These approaches have the potential to minimize unconscious bias in individuals and groups that contribute to inequities in assessment and assessment outcomes.

CBME defines desired outcomes of medical education and outlines the expected trajectory of competency achievement using milestones.[55–57] Assessment in CBME is based on the belief that all individuals on the continuum of medical school into independent practice are continuing to learn and grow.[58] In contrast, traditional approaches to assessment focus not on supporting growth but on identifying learners with shortcomings.[59–62] This deficit approach disproportionately disadvantages UIM learners and misses the opportunity to use assessment information to foster a growth mindset in all learners. From a learning perspective, a focus on identifying struggling learners typically contradicts a developmental focus in which all learners are assumed to have areas in need of development and to be continuously learning and growing.[63] Any learner with less exposure or less rigorous premedical training, scenarios that disproportionately affect UIM learners, is particularly vulnerable to being labeled a struggling learner. Once this label is applied, the learner suffers the consequences, both personally and professionally.

Programmatic assessment focused on equity strives for a holistic, well-rounded view of individual learners and their trajectory. This aim is achieved by collecting and analyzing many samples of learners' work in multiple different contexts. In addition to quantitative data, qualitative assessments, such as narrative descriptors of performance, provide information about the nuances of performance that can guide learner improvement and contribute to rigorous decisions about learner competence.[64]

For further support of equity, programmatic assessment includes systems that rely on committees rather than individuals to make high-stakes, summative decisions about advancement and graduation.[65,66] Three critical elements of optimal committee structure and function can advance equity: group membership, data management, and decision-making procedures. A group invites opportunity for the "wisdom of the crowd," armed with a large number of data points, to draw on a diversity of opinions to make well-considered decisions. Diverse groups outperform individuals or homogeneous groups because members strengthen the quality of decisions made.[67] Training about common biases brings awareness of the human vulnerability for cognitive shortcuts and personal preferences that can shortchange every learner's opportunity for fair assessment.[68] The quality of data available and ease of accessing well-organized information strengthen group decision making. Absent well-rounded data from multiple sources, group members may default to making decisions based on impressions or limited data, a process that again introduces risk for bias. Finally, structured procedures for data review and group discussions help ensure that all learners are evaluated based on the totality of information available.

Systems must be designed to address contextual equity. Achieving equity in assessment outcomes requires attention to contextual equity. Both curricula and programs of assessment are highly dependent on other institutional systems, specifically those that orchestrate patient care and faculty support for teaching and learning. Educators who design systems of assessment must work with other leaders in academic health systems to optimize the learning environment for minority learners.

Systems must be designed to address instrumental equity and equity in assessment outcomes. Accreditors (Liaison Committee on Medical Education and Accreditation Council for Graduate Medical Education) and leaders of organizations that collect and use assessment data (National Resident Match Program, certifying boards) can support equity in assessment by designing systems of data presentation that align with principles of equity and by holding educational institutions and leaders accountable for using assessment data only for intended purposes.

Tools

Tools are the technologies, processes, incentives, and disincentives employed by individuals within the system to achieve desired results. Tools used in equitable

assessment are selected to support and operationalize system priorities. Tools include evidence-seeking tools (direct observation of and discussion with learners about interactions with patients, clinical reasoning, and written work products), data display tools, data analytic tools, faculty development tools, and communication tools.

Results

Results are the measurable outcomes that demonstrate and affirm the assessment model's guiding principles. Outcomes serve an essential feedback mechanism for refining the tools and systems engineered to achieve the desired results. Results reinforce the culture of the institution, organization, or professional medical education community.

To fulfill our commitment to advancing equity in health care delivery and in medical education, individuals, institutions, and national organizations must commit to striving for the results outlined in List 1. Adhering to equity principles and evidence-based strategies for assessment does not guarantee that any given institution will avoid all population group differences in their classes. The small sample size of a given class and variability of student interest and aspirations from year to year may make a goal of eliminating any differences unfeasible. Instead, a better indicator that equity in assessment in medical education has been achieved will be the absence of national-level disparities for populations of learners from groups that are historically URM or that have been marginalized by medicine.

Research Agenda

The above proposed model for equity in assessment demands commitment to addressing inequities that have pervaded the medical education system. A robust research agenda to guide the collection of needed evidence demonstrating reduction in bias and discrimination is outlined below.

Research into intrinsic equity in assessment

Learner assessment: While much has been written about obstacles and barriers to success for UIM learners, the antideficit lens takes a different approach by drawing focus to the strengths and characteristics that position UIM learners for success. Harper's rigorous work used an antideficit lens to describe the factors that

contributed to success rather than the shortcomings of Black men preparing for and pursuing college education. This approach can serve as a model for studying the motivations, performance features, and individual and institutional characteristics that set UIM learners up for success.[69]

Educators will benefit from rigorous studies that explicate the characteristics of learner trajectories that predict success in practice. Educators can then determine which assessment methods can capture valid data about favorable learner trajectories and, thus, shift focus away from normative assessment methods.

Research into contextual equity in assessment

Learner experience: Understanding the influential aspects of the learning environment for UIM learners empowers researchers to examine relationships between the environment, learner satisfaction, and achievement to inform improvements that address any structural barriers impeding UIM learners' opportunities to maximize their achievement.[70] Another approach, with a focus on person, social, physical, and organizational elements of the learning environment, is Gruppen's framework, which holds potential for evaluating unique experiences of UIM learners and proposing solutions to address experiences that are counter to growth.[71]

The current configuration of the clinical learning environment, with dual aims to optimize both education and patient care, creates tensions that deserve investigation to find solutions. Further research is needed into systems and structures that foster meaningful relationships and trust between learners and supervisors, particularly those who may be of different backgrounds or identities, in a rotational model of medication education. This work must include a focus on optimizing organizational culture and climate. An organization may espouse diversity and inclusivity, but struggle to change long-standing ideologies of senior members or minimize microaggressions; evidence-based strategies for intervening on these problems are needed.

Research on instrumental equity in assessment

Selection of learners for positions in training programs is another aspect of learner assessment deserving of further research due to potential for conscious or unconscious bias to influence decision making. Current evidence examining

admissions to health professions training programs comprises mainly single-institution studies but encouragingly shows that, in general, interventions are effective at diversifying class composition.[72] Further research is needed through multicenter, longitudinal studies to demonstrate effective approaches to not only selection but also academic support to ensure that UIM and other diverse learners achieve success in health professions careers. Research efforts must acknowledge tensions in assessment.[73] For example, the tension between assessment for learning vs assessment for ranking and selection remains central in discussions regarding equity in assessment.

Research on preparation of faculty for their roles supporting equity in assessment

Faculty development: Studies demonstrate the negative effects of physicians' implicit bias on their patients[74]; similar bias exists in evaluation of medical learners.[9,30] Research is needed to understand how to intervene and measure the benefits of faculty development to conduct high-quality assessment that minimizes the risks of bias.

Research into equity in assessment outcomes

Evidence is needed to confirm whether and how equitable assessment practices produce better outcomes for learners and the patients they serve. For example, interventions to enhance providers' cultural competency, though well-intentioned, do not all achieve desired outcomes.[75] Research is needed to examine what approaches to assessment optimize UIM learners' pursuit of careers in any and all specialties and settings as well as in academic careers.

Research into assessment for program evaluation

Counteracting inequity and bias in assessment requires a programmatic approach with careful attention to program evaluation. A realist approach to program evaluation meets these needs not only by asking what interventions work or don't work but also by considering the context of the interventions. Put simply, realist evaluation asks: "What works for whom in what circumstances, and why?"[76] Understanding the context allows other programs to consider the feasibility and applicability of interventions to their own context.

Challenges and Unintended Consequences

Any discussion of equity assessment creates unease for many and confronts the notion of merit. Termed "the foundational myth" of U.S. society, merit is thought to be a property of the individual, his (sic) work ethic and intrinsic talents.[77] Merit is Horatio Alger's alone—not a property of a social group or a parental legacy. Rivera's research, for example, describes how cultural capital enables children of the elite to: perform better in interviews and receive more coaching before interviews; have childhood experiences that allow for more bonding and mirroring with decision makers; have mistakes discounted (vs students for whom mistakes confirm stereotypes); and otherwise exhibit the fit, drive, skills, and talents necessary to secure a highly competitive job.[78] Challenging the existence of a true meritocracy remains an uphill battle.

Another challenge to discussions of equity assessment is the link to bias; many educators reject the notion of unconscious bias. Equity in assessment is about ensuring that we assess all learners for the skills, knowledge, and competencies required to care for their patients. Finally, no system of assessment will do away with group differences due to social inequities. In part, that is because elites adapt. The SAT test was developed to offer talented youth opportunities to elite colleges. Its developers never dreamed that test prep services would follow. Because the drive for equity in assessment is linked to equity in learning and opportunities that derive from social inequities, it must be a process of continuous quality improvement.

Conclusions

We have surveyed issues of equity in assessment, distinguishing various forms of assessment and various aspects of inequity. Informed by the evidence base on inequity in assessment, this manuscript puts forth a framework for optimizing assessment to achieve equity. Key issues underlying debates on equity serve as the agenda for ongoing needed research and practice improvement to achieve equity in assessment that will ultimately improve patients' health. Individual medical schools can begin seeking solutions to the wicked problem of equity in assessment by working locally to design and continuously improve our learning and patient care ecosystems and by joining together to make equity in health professions education a national workforce priority.

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CASE STUDY

Morehouse School of Medicine Case Study: Teacher–Learner Relationships Free of Bias and Discrimination

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Abstract

Bias can impact all aspects of human interactions and have major impacts on the education and evaluation of health care professionals. Health care and health professions education, being very dependent on interpersonal interactions and learning as well as on the assessment of interpersonal behaviors and skills, are particularly susceptible to the positive and negative effects of bias. Even trained and experienced evaluators can be affected by biases based on appearance, attractiveness, charm, accent, speech impediment, and other factors that should not play a role in the assessment of a skill. At the Morehouse School of Medicine, elements in the curriculum and the milieu help decrease the burden of bias experienced by learners. In addition, many of the learners develop knowledge, skills, and attitudes that appear to assist them with navigating bias in other learning or practice environments. In this case study, the authors reflect on these elements and how they can be replicated in other settings. According to the authors, modifying the learning environment to enhance and sustain relationships is key in addressing toxic bias.

Bias can impact all aspects of human interactions and have major impacts on the education and evaluation of health care professionals. Bias in these settings is a systematic error in judgment by an assessor. In interpersonal interactions, human beings act on the basis of assumptions that are based on prior experiences or

instruction. We learn from interpersonal interactions, develop assumptions based on these interactions, and apply them to subsequent interactions. These heuristics facilitate daily functioning,[1] but can lead to unfair presumptions that impair learning and contribute to a toxic learning environment.

While it is true that these biases, which we apply in interactions every day, can be positive or negative, they can cause errors in judgments. We make assumptions, we infer, that, in general, individuals who smile and interact warmly are knowledgeable, caring, and empathetic because that has been the character spectrum we have associated with these observable behaviors. The truth is that we may be dealing with an uncaring but convincing actor or heartless manipulator. Or we may be put off by quirks, attire, or mannerisms and make other assumptions which may or may not be true. These assumptions—positive or negative—can lead to bias in assessment. These biased assessments, in turn, impact the effectiveness of interpersonal interactions in health care settings, can impact not only the quality of care and quality of learning assessments but also fairness of the learning environment.

Health care and health professions education, being very dependent on interpersonal interactions and learning and on the assessment of interpersonal behaviors and skills, are particularly susceptible to the positive and negative effects of bias. Verbal communication skills are commonly evaluated in a clinical setting. Even trained and experienced evaluators can be affected by biases based on appearance, attractiveness, charm, accent, speech impediment, and other factors that should not play a role in the assessment of a skill. Yes, ample data show that first impressions matter and that, regardless of content, appearance and superficial behaviors can enhance or impair effective interaction or communication. These effects are probably most salient for a single brief encounter. Alas, in the current health care education world, there is strong structural bias to favor skills in brief superficial interaction over the skills of sustained relationship. These assessments value the glib and charming over a more reserved but longitudinally deeper style. Learner evaluations are often done after limited time for clinical observation. This is to the strong disadvantage of those who are different in any way that triggers a negative or less favorable stereotype.

In addition to bias leading to unfair assessments, awareness of biases can produce dysfunctional, "defensive" behaviors on the part of learners. First, awareness of the possibility of bias can result in lack of trust. Effective learning environments

are characterized by learner trust of the instructor and of the evaluation process. Perceived unfairness in instruction or assessment can lead to learner disengagement that impairs the ability of the student to learn or master the tasks. Wearing the protective armor of distrust is an added psychological burden that can prevent effective learning. These effects can reinforce the self-fulfilling prophesy (i.e., "I knew that student would be weak").

What approaches in medical education can address bias in clinical evaluations? What systemic changes can create and sustain a welcoming environment that allows the flourishing of academically, culturally, and economically diverse individuals, especially those from populations that are underrepresented in medicine (URiM)? How can one create a clinical learning environment that fosters personal awareness of these biases so that we can see each other, each learner, and each patient as the unique person that they are?

The Morehouse School of Medicine (MSM) is a historically Black institution with about 70% of the MD program student body being from URiM groups—about 64% Black, 5% Latino, and 1% other URiM. Faculty are about 66% Black and 2% Latino. MSM has a track record of students outperforming their entering credentials on Step 1.[2] Part of this success is due to elements in the curriculum and the milieu that decrease the burden of bias experienced by learners. In addition, many of the learners develop knowledge, skills, and attitudes that appear to assist them with navigating bias in other learning or practice environments. In this case study, we reflect on these elements and how they can be replicated in other settings.

Environment Supports Learning Through Relationships

From the beginning, the tripartite mission of the MSM has been to enhance diversity of the health care workforce, expand the primary care workforce, and address the health care needs of underserved populations. In fulfilling this mission, MSM developed a uniquely nurturing environment with high expectations, sustained support, and strong and lasting faculty–student interactions. Recruiting an academically diverse student body, MSM has achieved key outcomes including being recognized as number one in social mission[3] as defined by percentage of URiM graduates, graduates practicing in underserved areas, and graduates practicing primary care. MSM is also recognized for "shifting the curve" of academic performance,[2] enabling students whose performance on the Medical College Admission Test was a standard deviation below the mean for national

matriculants to accredited medical schools to have Step 1 scores at and above the national mean.

MSM has built on the student-centered focus intrinsic to its roots as a historically Black institution to support a family atmosphere and a welcoming environment that is characterized by a high degree of engagement by a core of highly dedicated faculty and staff so that every learner can succeed. MSM has created a way to address bias in the health care environment through a threefold approach:

1. Creating a relationship-centered, welcoming environment that values faculty–student and student–student relationships and diversity in the broadest sense;

2. Fostering a growth mindset, with high standards and high support; and

3. Preparing learners to collaborate in changing the environment and be "agents of positive social change" committed to mission.

This approach is summarized in Table 1 and is described below.

Commitment to relationships in a welcoming environment

MSM, like many historically Black institutions, fosters a family-like environment in which students are known as individuals and faculty bring their whole selves to work. Regardless of background, race, gender, orientation, or other factors, MSM faculty, staff, and students are bound together by a shared commitment to mission

Table 1: Elements at Morehouse School of Medicine That Diminish the Impacts of Bias

Domain	Elements	Results	Impact on bias
Learning in relationship	Core cadre of faculty with significant longitudinal student contact	Students and faculty come to know each other as individuals	Relationship diminishes stereotypical biases
	Strong faculty–student and student–student interactions	Trust and belongingness	Trust diminishes negative bias
	Diverse role models	Identification of shared experiences	Overt awareness of bias and impact
	Story-telling and sharing	Diminished barriers of differences	Can build insights on navigating bias
Growth mindset: All belong here and can succeed	High expectations	No "racism of low expectations"	Readiness to confront bias
	High support	Academic success	Skills to overcome bias
	Support for all	Diminished stigma of receiving support	Sense of right to support without bias
	Variety of perspectives for defining success	Broader definition of success	Awareness of narrowness of biased views
Commitment to mission: "You are agents of positive social change"	Discussion of biases and their impact on health and health care	Awareness of the role of bias	Skills in recognizing bias
	Role models of activism and commitment to service	Insights on navigating bias	Skills in responding to bias
	Focus on social determinants of health	Awareness of the context of bias	Ability to recognize and deal with bias
	Meaning and purpose of mission	Awareness of the central role of confronting bias	Importance of navigating bias

and to learning in relationship. To foster the development of strong student–faculty and student–student relationships, our students participate in longitudinal learning communities from day one of year one of the MD program. These communities, named for our core values (including Knowledge, Wisdom, Excellence, Service, Integrity, Innovation, Leadership, and Compassion) include a cross section of the diverse class and are led by 2 or more faculty.

In these learning communities, students discuss and practice teamwork, communication skills, leadership skills, dealing with ethical dilemmas, career awareness, transitions, and other similar skills and tasks. The communities are structured to be relational and to help students form strong connections with each other. They continue in these same learning communities throughout their 4 years. The differences in points of view in these groups help students to develop approaches to dealing with different opinions and to be able to disagree without being disagreeable. This foundation in learning communities helps students to appreciate different perspectives and to practice skills in keeping peers on task.

Supportive relationships between faculty and students are nurtured through a curriculum that assures significant longitudinal faculty–student contact. These core faculty are a cadre of diverse and highly committed teachers who have each provided more than a thousand hours of direct medical student education. In every contact, they demonstrate that they truly care for the students and embody the commitment of the institution to our students and to excellence. Rather than a different faculty member for every session of the curriculum, students have significant contact over months to years with these 20+ core faculty. This relationship-centered learning empowers a sense of belongingness on the part of the students that allows them to excel academically. These interactions foster the trust of faculty and the hard work necessary to succeed. This environment enables the students to develop an empowering self-confidence that counteracts the toxicity of prior experiences with bias and prepares them to navigate future bias.

Core to the mission is a commitment to the community we serve. We are surrounded by an underserved community, and we engage with the community in every way. First of all, we are of this community, with many of our faculty, staff, and students coming from Atlanta and Georgia. Our students are in and with the community from the first year. In small groups, MD students participate in a yearlong service-learning course in community health. The groups (same as for the learning communities, but with different faculty mentors) work with a local

community to do a needs assessment and to design and carry out an intervention. Core to this experience is focusing on community self-assessment of health needs rather than abstractly applying what the experts say. This experience supports teamwork as well as truly and respectfully engaging with community members. In this course, as well as in multiple other activities of MSM, we are of the community, in the community, and with the community, as we cocreate a healthier community. This experience helps the learners to confront personal, peer, and other biases and to start to build a repertoire of skills to navigate these many biases.

Faculty role models are an important aspect of this welcoming, connected environment. MSM has Black and African American faculty as well as a broad spectrum of faculty of diverse cultures, races, ethnicities, religions, countries of origin, sexual orientation, disability status, and other characteristics. These faculty demonstrate strong interpersonal skills and commitment to mission. They serve as role models for learning in relationship as well as providing guidance on navigating complex sociocultural experiences. MSM is blessed with large numbers of women in leadership positions, as well as faculty representing the lesbian, gay, bisexual, transgender, queer spectrum who serve as role models for a variety of learners. Through personal stories and reflections on lived experiences, they provide guidance for navigating bias and demonstrate approaches to confronting and ending injustice. Our faculty and our students are diverse in so many ways, with a broad spectrum of races, ethnicities, and cultures of origin. Our students have clinical experiences not only at Grady Memorial Hospital but also in a variety of settings across the state of Georgia. Thus, MSM students work with a broad spectrum of faculty, staff, and patients during their training. This diversity hones their skills of adapting to multiple cultures and expectations.

Together, these elements of a connected, welcoming environment create safe opportunities to explore the elements of bias and to develop skills in navigating complex situations of differences. The commitment of leadership to diversity and awareness of bias is also key. Unconscious bias is addressed experientially in class sessions. These are addressed in year one in lecture and discussion on the context of the racism and bias that has been a part of American history since its founding and has impacted national policies on health care throughout history. This discussion is continued in years 2 and 3 both in clinical skills instruction and experience and in small-group discussions.

In these ways, MSM prepares learners for an environment of bias by connection, role modeling, shared stories and experiences, and structured experiences. Students learn from each other and from the diverse family that is MSM. These strong relationships with each other, the faculty, and members of the community provide students a direct experience of the ways true relationships can overcome the biases of superficial contacts. These experiences give learners a richer context in which to view the issues of health care and bias and to develop skills to perceive and navigate the biases intrinsic to health care.

Growth mindset with high expectations and high support

In recruiting and supporting an academically diverse student body, MSM faculty and leadership systematically promote a growth mindset[4] of high expectations in an environment of high support. As outlined by Carol Dweck, a growth mindset focuses the potential for learning and skill-building in everyone.[4] Using metrics, analytics, feedback, and support, MSM students academically outperform their entering credentials. The strong student–student and student–faculty relationships support overcoming stereotype threat and the residual toxicities of prior bias. The academic success of students in this nurturing environment helps students to develop the skills, confidence, and tools to navigate bias in the environments that they will experience. Even after leaving MSM for residencies, alumni network with faculty and current learners to help guide their pathways in less supportive environments.

Student academic performance is closely monitored by the team of faculty course leaders. Faculty course leaders review scores as a team, and students with deficits in any area are closely monitored and linked to resources. These resources include free tutoring by paid near-peers (available to all students regardless of academic performance), as well as counseling and academic coaching. Faculty are approachable and often provide one-on-one or small-group sessions as needed to help students master certain key concepts.

Another aspect of support is through the Office of Student Learning and Educational Resources. This office oversees more intensive coaching of students who show a pattern of low exam performance. This effort includes coaching on study skills, time management, use of learning materials, critical thinking skills, and content and concept review. The faculty involved with the students seek to know the students well and provide appropriate guidance based on the student's

individual skills and strengths as identified by the student, by exam performances, and by faculty assessments. Key faculty with extensive content knowledge meet as needed with students and groups to build concept knowledge and critical thinking skills.

Commitment to mission: "You are agents of positive social change"

MSM recruits and admits with specific attention to our mission. We then create learning environments that train for the mission, and we foster our students' seeking residencies and practice sites that fulfill the mission. MSM faculty, staff, and students share a passion for excellent care for all peoples. For MSM, the mission has been core from the foundation and is present in all aspects of the institution. This commitment to the mission is broadly welcoming. From the first day at MSM, MD students are in an environment where they are regularly coached that they are "agents of positive social change" and "the doctors America needs." Class sessions engage directly with the limitations of the health care system in addressing the needs of underserved patients, the impacts of social determinants, and the importance of being a part of changing the system for the better. With a school vision of "leading the creation and advancement of health equity," there is no doubt about the expectation that MSM will catalyze vital changes in health for our nation. This audacious vision turns the personal challenge of bias to a surmountable barrier in the necessary struggle to improve health for all. The global commitment of the institution to this mission creates and sustains a sense of meaning and purpose that energizes students and faculty to exceed expectations.

In these ways, MSM students experience a multifaceted experience to prepare them for the bias that they or their colleagues will face. MSM does not eliminate bias. It does not simply train bias away. Neither of these is possible. Through the shared experiences of our diverse student body, environment, curriculum, support, and a relational culture, MSM prepares our graduates to recognize and navigate bias and to help minimize and detoxify bias in the health care environment. Many of these elements can be replicated in other settings to decrease bias in the learning environment.

Impacts of Bias in American Culture and Health Care

The culture and priorities of health care and medical education may exacerbate the development and perpetuation of negative biases or restrictive/biased

stereotypes. The cultures of American health care have often been hierarchical and impersonal. While professing commitment to "excellence," hierarchical structures have overvalued the demands of certain physicians in power and have silenced the needs of trainees and fellow professionals on the health care team. Competitive pyramidal training programs and overlong training hours have been partially curtailed by current graduate medical education policies. Unfortunately, work-hour restrictions may have further impersonalized the residency training experience as shift work, treating physicians, trainees, and patients as interchangeable parts. The electronic medical record (EMR) and the ubiquitous computer screen have further added to the disconnect between people. With eyes on the i-patient rather than on the patient, the caregiver is deprived of the breadth of deeper human connection. The overemphasis on multiple-choice, single-best answer testing to progress into and through medicine and health care training creates and sustains some biases. We inadvertently encourage all of our health care trainees to favor typical associations and take mental shortcuts that lead to heuristic errors and bias in the management of specific patients from certain backgrounds. Risk associations such as sickle cell in African Americans, cystic fibrosis in Caucasians, or ischemic heart disease in men can result in correct answers on critical exams and blindness to these conditions in those not expected to be at risk.

In addition, the lived experience in many health care settings is that persons of color and women are more likely to be in custodial or support roles rather than leadership roles. Combined with historical hierarchies in medical centers, biases based on gender, race, ethnicity, sexual orientation, disabilities, or other differences enhance the development of dysfunctional biases when learners have clinical experiences. If one's only experiences with people of a certain race, culture, ethnicity, disability, or other difference is only in the context of serving such populations in a safety-net hospital or free clinic setting, one may incorrectly develop a mental heuristic that "this is the way all people of this background are." Without intentional action to change or counteract these realities, the milieu of American health care enhances the development of biases that impair the achievement of the vision of a diverse engaged health care workforce.

The antidote to bias is relationship. As President Abraham Lincoln famously stated, "I don't like that man. I must get to know him better." Neither faculty nor learners nor patients are interchangeable parts; they do not have all the same talents or the same needs. These differences are best explored in developing strong relationships. Edward T. Hall defined high-context and low-context cultures.[5] In

low-context cultures or transactional cultures, a relationship is not necessary for business to take place. This is exemplified in the chains of fast food establishments that line our interstates. One knows exactly what one will get when one orders the hamburger. It is different in the high-context or relational culture of the independent restaurant that one may frequent in the neighborhood. One may know the servers, and they know one's preferences. In a relational culture, building trust is central and there is connection before content. Marginalized and underserved populations in the United States have often experienced direct bias in health care settings because their lives and realities do not fit the model of "the ideal patient." They are different, more complex, more time-consuming.

The ideal educational environment involves trust and relationship between teacher and learner. This is a core aspect of success in historically Black colleges and schools.[6] As noted by educator Lisa Delpit (referring to K-12 students), "Our students don't learn FROM a teacher, they learn FOR a teacher."[7] A common theme in stories of success for students who are URiM is the strong relationship with a teacher or teachers who believed in the student and had a long-term trusting relationship with the learner. These environments would be characterized by sociologist Edward T. Hall as high context or relational (as opposed to low context or transactional).[5] American medical schools are commonly transactional in nature. Students may have only one session of contact with many faculty. With constantly rotating assignments and shift work, there can be very little continuity of relationship between a faculty member or resident teacher and a student. This can be to the advantage of a charming, extraverted learner who looks and sounds like a doctor and to the disadvantage of anyone without these characteristics. In these transient settings, superficial biases are likely to take predominance over deeper assessments. Combined with the time stress of work-hour restrictions, the time-consuming EMR, and increasingly complex evaluation forms, deep and careful assessments are unlikely. These transactional environments foster the perpetuation of biases that favor the privileged. This perpetuation is antithetical to our goals of an equitable and fair learning environment that supports the training of a diverse workforce to meet the needs of the diverse patients who need care. Time in a relationship is critical. If the clinical supervisor does not have enough time to truly come to know the learner, then the evaluation will perforce be generic and undetailed.

Bias in the health care learning environment not only adversely impacts underrepresented students, but it can also lead to the perpetuation of bias in

fellow trainees that will adversely impact their ability to optimally care for their future diverse patients. The experience of upper-class and upper-middle-class trainees with people from some backgrounds may be entirely limited to those they encounter in safety net settings. If 90% of the African American people with whom one has had interactions in one's life are those using safety net systems, then one's mental heuristics inevitably build a construct of African Americans as impoverished, poorly educated, and marginalized. If one does not consciously weave cultural diversity and mutual appreciation into a multicolor tapestry of health education and health care, one may not be able to fully address these challenges of bias. Failure to address this deficit in the educational experience of nondiverse trainees will perpetuate biased health care and derail the creation and advancement of health equity.

Conclusions

For these reasons, addressing bias requires awareness and action on the part of teachers and leaders and also requires skills and awareness on the part of learners. Addressing bias requires educational leadership to set a tone of openness and to model inclusion. It also requires modifications to the learning environments, including elements of setting, timing, recurrence, team structures, learning materials, curricula, and other elements that can impact individual bias, responses to bias, and perpetuation of bias. As noted above, sufficient time and duration of contact can be a critical element to diminish the impact of bias in learner evaluation. Obviously, decreasing bias in the health care environment is also a critical though more challenging goal to completely address. With supportive guidance and trusting relationships with supervisors/teachers, trainees can learn to recognize and navigate bias in the learning environment.

As has been demonstrated at MSM, having diverse faculty, residents, physicians, and high-level administrators is important in helping individuals who are not from underrepresented populations to see underrepresented learners as having capacity to serve in nonmenial and supportive roles. This will help change the script regarding how such individuals may be perceived by individuals who come from majority segments of the population. Medical schools recruiting a diverse class must also recruit and retain a diverse faculty, high-level staff, and administrators to provide role models and mentors for students from underrepresented groups and to help redefine the mindset that such individuals serve only in low-level supporting roles. Seeing health care as a business has invited industrial models that seek to

standardize all interactions and codify best practices in guidelines. These can work well for what are truly transactional medical encounters—routine screening, immunizations, and similar tasks. Chronic diseases and life-threatening conditions are another issue. We all long for that all-knowing physician who will take the time to know us, know our circumstances, and tailor the remedy to our uniqueness. In the shift work of today's medical center, this is often an unfulfilled wish. What we deeply crave is relational care.

Our students crave relational learning. It is human nature to learn. It is also human nature to learn best from each other. It is human nature to crave direct approval from those who guide us. Medical center faculty, staff, and students are burning out due to a lack of relational experience, which is a human need. Modifying the learning environment to enhance and sustain relationships is key in addressing toxic bias. These are changes that are possible. These are changes that are energizing and vital for us to thrive.

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CASE STUDY

Washington University School of Medicine in St. Louis Case Study: A Process for Understanding and Addressing Bias in Clerkship Grading

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Abstract

In 2018, in response to a news story featuring the Icahn School of Medicine's decision to eliminate its chapter of Alpha Omega Alpha (AOA) due to perceived racial inequities, students at Washington University School of Medicine in St. Louis (WUSM) brought similar concerns to leadership. WUSM leadership evaluated whether students' race, ethnicity, and gender were associated with their receipt of honors in the 6 core clerkships, key determinants of AOA selection. In preliminary analysis of the school's data, statistically significant racial and ethnic disparities were associated with receipt of honors in each clerkship. Leaders shared these findings with the WUSM community along with a clear message that such discrepancies are unacceptable to the school. An effort to further analyze what lay behind the findings as well as to identify steps to resolve the problem was launched. Using a quality improvement framework, data from focus groups and student surveys were analyzed and 2 overarching themes emerged. Students perceived that both assessment and the learning environment impacted racial/ethnic disparities in clerkship grades. In multivariable logistic regression models, shelf exam scores (a

part of student assessment) were found to be associated with receipt of honors in each clerkship; in some (but not all) clerkships, shelf exam scores attenuated the effect of race/ethnicity on receipt of honors, so that when the shelf scores were added to the model, the race/ethnicity effect was no longer significant. This case study describes WUSM's process to understand and address bias in clerkship grading and AOA nomination so that other medical schools might benefit from what has been learned.

In September 2018, a provocative newspaper headline read: "A Medical School Tradition Comes Under Fire for Racism."[1] The story featured a medical student from the Icahn School of Medicine at Mt. Sinai who explained that, for the first time in the school's history, students would not be elected to Alpha Omega Alpha (AOA), the academic honor society. The school decided to eliminate its AOA election due to perceived racial inequities.

The decision by the Icahn School of Medicine came in the context of a larger national conversation triggered by research demonstrating inequities in student grading and awards. Teherani et al, for example, found that medical students from racial and ethnic groups historically underrepresented in medicine (URiM), despite small differences in clerkship director ratings, were 3 times less likely to be selected for AOA compared with their non-URiM counterparts.[2] In another study, researchers found that even after adjusting for several demographic and other educational factors, AOA membership was less likely among both Black and Asian medical students compared with White students.[3]

Although the conversation about disparities in medical school awards was gaining momentum in 2018, it should be noted that it was not a new finding. In 2007, researchers observed an association between clerkship grades and URiM status. In that study, URiM students were more likely than White students to report receiving lower grades in all clerkships.[4] Since AOA is an academic honor society, clerkship grades are often tightly linked to nomination to AOA.

Election to AOA matters because it impacts the residency selection process. Researchers have shown that students who are elected to AOA may be more likely to receive invitations to interview for highly competitive specialties and to be ranked higher in the match. For example, a study of plastic surgery residency programs showed that, among residency program directors, the primary objective

criterion in their selection process was membership in AOA.[5] Similarly, Rinard et al found that membership in AOA was significantly associated with higher rates of matching in a number of surgical specialties.[6]

Given that disparities seen in clerkship grades and AOA may impact how medical students fare during the residency selection process, it is not surprising that, on that same September day when the Mt. Sinai story made national headlines, medical student class officers at Washington University School of Medicine in St. Louis (WUSM) requested an urgent meeting with the relatively new senior associate dean for education (E.A.). Their main question: Is this happening here? Thus, began our school's concerted efforts to investigate evidence of racial, ethnic, and gender bias in grading and to identify the root causes that would inform approaches to addressing any problem (Figure 1).

Figure 1: Timeline of activities to address racial/ethnic and gender differences in clerkship grades at Washington University School of Medicine in St. Louis (WUSM).
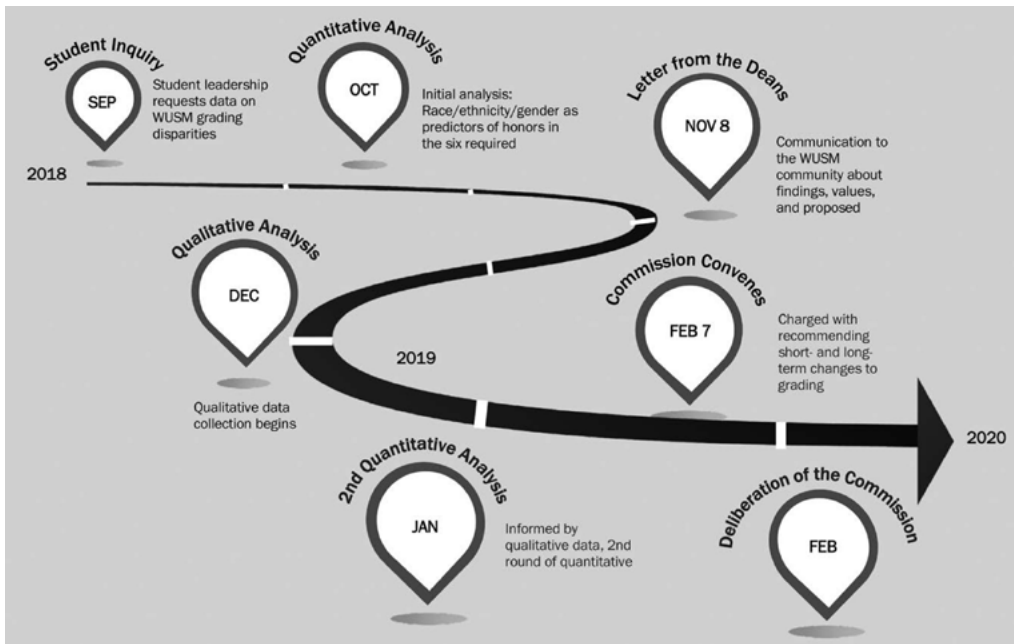
Past is Prologue: Recent History of Diversity, Equity, and Inclusion at WUSM

To understand our ability for a rapid and unified response to concerns about equity in grading, it is helpful to know the recent history of WUSM's systematic efforts to improve diversity, equity, and inclusion. In 1972, the Office of Minority Affairs was established with the initial goal of recruiting and supporting minority students at WUSM. The office was soon renamed the Office of Diversity Programs as the goals expanded to include, among other things, creating more opportunities for students to be involved directly with families and service organizations in St. Louis. By 2014, the school required antibias training for all faculty and staff and implemented additional focused training for members of search committees to ensure that inclusive search practices and policies are followed.

The advancement of diversity, equity, and inclusion at WUSM accelerated in 2015 with the establishment of the dean's senior leadership committee (SLC) on diversity and inclusion. The mission of the SLC is to "oversee deliberate, wide-reaching actions that will create a framework for meaningful change." The committee formed as a result of a senior leaders' diversity and inclusion 2-day retreat, which was attended by the WUSM executive faculty (the governing body of WUSM), in June 2015. The SLC subsequently identified 5 areas of focus: campus climate, staff hiring, employment culture, students/trainees curriculum design and delivery, and professional training for clinical research faculty and staff.

The SLC has made significant progress with notable accomplishments, including the 2016 creation and implementation of a new school-wide faculty hiring policy emphasizing diversity and inclusion. In 2017, WUSM set out to increase the diversity of its workforce, setting the goal of increasing the URiM faculty to a minimum of 8 percent. In addition, the SLC created a new senior-level position, associate vice chancellor and associate dean for diversity, equity, and inclusion, whose work fosters a strategic focus on diversity, equity, and inclusion initiatives at the school of medicine, filled in 2018 by Dr. Sherree Wilson.

Evaluating Equity in Grading

We were thus poised to make a swift and considered response as a natural extension of the work already underway at WUSM. Key education leaders met together and with students to create a plan. Of critical importance, especially given

the sensitive nature of the topic, was the support of and collaboration with leaders at the highest level.

Since, like many other schools, our current election to AOA is largely based on clinical clerkship grades, and in particular, students' receipt of honors in clerkships, we began by examining whether students' race, ethnicity, and gender were associated with their receipt of honors in our 6 core clerkships. In these preliminary bivariate analyses, we observed statistically significant racial and ethnic disparities related to receipt of honors in each core clerkship. Only 1 of 6 clerkships also demonstrated an association between gender and grades. This information was quickly presented to the executive faculty. Of critical importance: the dean along with the senior associate dean for education (E.A.) and associate vice chancellor and associate dean for diversity (S.A.W.), equity, and inclusion immediately wrote a letter to the WUSM community that included a statement of the findings, a clear message that such discrepancies are unacceptable to the school, and an outline of our plan to further understand and then to address the issue. An excerpt from the letter follows:

> Deeply concerned by recent national reports demonstrating racial differences in Alpha Omega Alpha nomination and clinical grading, we have begun to look at our own data at Washington University School of Medicine. Our preliminary results demonstrate similar racial differences, with white students being more likely to receive honors grades in the clinical clerkships and more likely to be nominated for Alpha Omega Alpha than students of color. At AAMC [Association for American Medical Colleges] this week, we heard similar reports from several peer institutions. There is still more investigation to be done, but as a school, we are deeply committed to understanding why this is and how to ensure that the system is fair to all of our students now and in the future.

Further, the letter outlined the planned approach to use qualitative methods to explore with current students the underlying issues that might explain our observation of racial/ethnic differences in clinical grading and then to expand the quantitative analysis as needed. Much like the approach taken by researchers at the University of California, San Francisco,[2] we used a quality improvement (QI) framework to better understand the problem.[7] To start, students were invited to participate in 2 main activities: an anonymous web-based survey and/or focus groups. We also examined student comments from the AAMC Graduation

Questionnaire administered to our graduating students in 2017 and from the most recent Year 2 Questionnaire. From these qualitative data, we observed 2 main overarching themes: assessment and the learning environment.

Assessment

Similar to other medical schools, the assessments of our students on the clerkships included primarily 2 components: the multiple-choice National Board of Medical Examiners (NBME) specialty-specific shelf examination and an assessment of students' clinical performance using our standard clinical evaluation form (CEF) completed by their supervisors, mostly faculty and residents. The CEF included a scaled ranking of student performance in different competency domains with space for written comments about the performance.

We found that students expressed a number of concerns about the CEF and the process for using the CEF to establish their grades. Some students perceived that they had limited contact with and lacked longitudinal relationships with their supervisors, those completing the CEF. Accordingly, they expressed concerns about how well the supervisors actually knew them. For example, several students reported that their supervisors' CEFs sometimes referred to things that the students did not do, such as care for patients the students never knew, suggesting that the supervisor did not truly know them and could not knowledgeably comment on their skills. For example, one student said:

> In many cases, your preceptor does not spend enough time with you to be able to wholly critique you…. It isn't fair that much of your grade for a rotation can depend on only a few hours of subjective interaction.

In other comments about the accuracy of the CEFs, several students noted perceived biases they observed in the clinical setting that they believed impacted the CEFs. Several women cited specific critical comments supervisors either said or wrote in their CEFs about the tone or volume of their voices. Further, students perceived that some supervisors seemed to favor certain innate personal characteristics of students that were sometimes driven by race, culture, or upbringing. One student wrote:

> I think we should consider the role of implicit bias in grading, especially since grading is subjective. Those of us from the U.S. have grown up in a culture with

many negative stereotypes about people of color. People of color often have to go above and beyond to be recognized. Attendings might also think more highly of students whom they like as people, which can be affected by how much you can relate to someone on a personal level, with similar backgrounds, interests, etc.

Students not only expressed concerns with their CEFs, but some students also pointed to the shelf examination, the other determinant of the grade, as a potential factor in grading disparity. They explained, for example, that they received honors in all the clinical parts of the clerkship, but a lower shelf examination score, by just a few points, brought their grade to a high pass. These students felt that the shelf examination score was playing too large a part in the overall grading for the clerkship. In addition, several students voiced concerns about disparities in access to both time and resources to prepare for the shelf examination. Those with resources could buy more study materials, have someone help with daily chores, and not worry about spending extra money on food, like take-out meals. Others without such resources experienced stress while trying to find time to study for these examinations during the busy clerkships. In sum, multiple students recommended reevaluating the grading system in the clerkships.

Learning environment

Students discussed the challenges of the learning environment in the clinical setting. Several students noted the lack of diversity among their supervisors. Others either experienced or witnessed episodes where they perceived bias. Multiple students recommended both increasing the diversity of WUSM faculty, including in leadership roles, and revisiting strategies for diversity, equity, and inclusion training for the WUSM community as a whole. One student noted, for example, that WUSM should consider "training for people who are expected to receive microaggressions as well as ally training for how to intervene."

Further quantitative analysis of clerkship grading

Using information gleaned from our qualitative data, we revisited our preliminary quantitative models by adding the shelf examination score to look at its contribution to clerkship grades. We obtained, from NBME, our students' shelf exam percentage scores. We also reexamined our preliminary coding of students' race/ethnicity as students have multiple opportunities to self-identify this

information throughout their medical education, potentially creating inconsistencies across data sources.

In these revised analyses, using data for students who matriculated between academic years (AYs) 2008–2009 and 2015–2016 and took the shelf exam between AYs 2011–2012 and 2017–2018 (n = 840), bivariate tests again demonstrated a statistically significant relationship between medical students' race/ethnicity and receipt of honors across all clerkships. Black/African American students were less likely to receive honors as compared with White medical students in all 6 of our clinical core clerkships (each $P < .05$). Both Asian and Hispanic students were also less likely to receive honors compared with White students in half of the clerkships (each $P < .05$). Additionally, we observed that women were less likely to receive honors as compared with men in a single clerkship ($P = .014$).

Also in bivariate analyses, higher scores on the shelf exam were significantly associated with greater odds of receiving honors in all 6 clerkships (each $P < .001$). We also observed significant differences in mean shelf exam scores by race/ethnicity in all 6 clerkships (each $P < .001$) and by gender in 3 of 6 clerkships (each $P < .05$). Using separate multivariate logistic regression models for each clerkship, we explored whether or not students' gender and race/ethnicity were independently associated with receipt of honors in each clerkship after including students' shelf exam in the logistic regression models. In all 6 clerkships, the shelf exam score was a significant predictor of receipt of honors (each $P < .001$); students were more likely to receive honors with higher shelf exam scores. While gender was not independently associated with receipt of honors in any these models, race/ethnicity remained significantly associated with clerkship grades in 3 clerkships, even after accounting for student shelf exam scores (each $P < .05$).

In summary, using both qualitative and quantitative methods, we discovered disparities in clerkship grades that could, in part, be attributed to differences in shelf examination scores. Of note, when looking closely at the shelf examination scores, we found that even a small difference in percentage scores could lead to larger differences in national percentile scores, potentially resulting in a lower overall grade. To date, we have not examined the impact of the supervisor-generated CEF on disparities in grading, but hypothesize it may explain some of the observed grading differences seen after including the shelf examination score in our model. Others have found potential bias and inequity in comments from

supervisors grading students on the clerkships, suggesting that implicit as well as explicit bias could play a role in grade discrepancies.[8]

The Commission for Equity in Clinical Grading

At the start of this investigation of grade disparities, our senior leadership also charged a commission for equity in clinical grading to use the qualitative and quantitative data collected to identify potential root causes of grade inequities and to recommend interventions to mitigate them. Two co-chairs (S.J.L. and S.A.W.) assembled a diverse team of 6 students representing each class; all 6 core clerkship directors; 2 faculty members with expertise in assessment and diversity, equity, and inclusion; and 3 key administrative staff members. Using a QI approach, all data collected were reviewed and organized into themes using a fishbone diagram model similar to that used by Teherani et al.[2] A total of 25 factors were identified as potentially contributing to the clinical grading inequities. We created smaller teams to address clusters of related factors by reviewing the literature and proposing interventions, taking into account both possible positive and negative impacts. Teams presented the proposed interventions for discussion by the entire commission and for subsequent inclusion in a report to our executive faculty, the highest body in the WUSM governance structure.

The proposed interventions fell into 6 categories: (1) improving and standardizing clerkship student assessment; (2) providing equitable access to study resources; (3) enhancing the medical student curriculum to better prepare students for learning in the clinical environment, including content and activities aimed at helping them to recognize and to respond to negative experiences; (4) improving the learning environment through enhanced training for attendings, residents, and staff as well as through improved reporting mechanisms; (5) pursuing strategies to improve faculty and house staff diversity; and (6) monitoring progress through our program evaluation and continuous QI processes. Some interventions, including implementing more standardized and evidence-based assessment practices and providing test preparation resources for all students, were fast-tracked for implementation at the start of the current AY (2019–2020). We anticipate other interventions being incorporated into our new curriculum and the faculty development that will accompany its launch in July 2020. Interventions that address culture change and enhancing diversity of the institution are in process and will be implemented over a longer time period. In the meantime, we have made a decision to suspend AOA elections.

Conclusions

Like many medical schools in the United States, we face discrepancies in our clinical grading system. We developed an approach for understanding and a preliminary strategy for addressing this important issue using a QI framework for rapid clarification of the problem and quantitative and qualitative methodologies to uncover the "how much" and the "what and why" behind the problem. Such a strategy and the findings enable our next steps, which include short- and long-term interventions accompanied by a clearly defined path to track our processes and defined outcomes and any unintended consequences of change going forward. We believe such an approach might be a useful model for other schools exploring similar issues in their own institutions.

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CASE STUDY

The University of Cincinnati College of Nursing Case Study: Bias and Discrimination in the Nursing Learning Environment

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Supplemental digital content for this article is available at http://links.lww.com/ACADMED/B16.

Abstract

The purpose of this case study is to outline strategies employed by the University of Cincinnati's College of Nursing (CoN) to increase underrepresented racial and ethnic (URE), and economically and educationally disadvantaged student acceptance, presence, inclusion, and success. The case study method was used to examine strategies used at the CoN to address bias and discrimination, identify student success strategies for URE students, and outline college initiatives to facilitate an inclusive environment. CoN leadership has instituted several programs involving faculty and students in efforts to decrease bias and discrimination and promote inclusion. They continue to engage faculty and others in adding to and improving their efforts. This is a process of culture change and must involve everyone. CoN leadership is committed to both demonstrating by example and holding all accountable for progressively improved continued efforts to create a more inclusive environment.

Despite efforts by institutions to promote diversity and inclusion in nursing education, explicit and implicit bias and personal and institutional racism and discrimination exist, limiting the ability of schools of nursing to recruit, retain, and graduate a diverse student body, and eventually, diverse faculty more representative of the population we serve. This case study outlines strategies

employed by the University of Cincinnati (UC) College of Nursing (CoN) to increase underrepresented racial and ethnic (URE) and economically and educationally disadvantaged student acceptance, presence, inclusion, and success. Nearly 3,000 students are enrolled in the college from the bachelor's degree program (BSN) through the doctoral programs (DNP, PhD), including RN-to-BSN, master's, direct entry accelerated master's, and BSN-to-PhD.

In January 2012, G.G. was appointed as dean of UC CoN. She was struck by the visible lack of diversity in the student body and started asking questions and analyzing data. Data on the diversity of enrolled students in the CoN confirmed her first impression. She then began working to understand how many students of diverse backgrounds apply, how many are accepted, how many actually enrolled, and retention rates. Far too few URE students were applying, getting accepted, choosing UC, and being retained. It was startling to see that, in 2011, a mere 33% of URE students were retained from freshman to sophomore year (see Table 1). The CoN began a concerted effort to increase URE presence, acceptance, and performance excellence.

Table 1: Pre- and Post-Leadership 2.0 Retention Data

	Pre-Leadership 2.0						Post-Leadership 2.0					
Year admitted	2011		2012		2013[a]		2014		2015		2016	
Demographic	Non-Hisp White (%)	URE (%)	Non-Hisp White (%)	URE (%)	Non-Hisp White (%)	URE (%)	Non-Hisp White (%)	URE (%)	Non-Hisp White (%)	URE (%)	Non-Hisp White (%)	URE (%)
Fr. to so. retention	67	33	45	39	75	60	88	95	95	88	97	90
So. to jr. retention	100	75	99	100	96	83	100	100	99	100	—	—
Jr. to sr. retention	99	100	100	100	99	100	99	100	—	—	—	—

Abbreviations: Hisp, Hispanic; URE, underrepresented racial and ethnic; Fr., freshman year; So., sophomore year; Jr., junior year; Sr., senior year.
[a]In 2013, the University of Cincinnati College of Nursing transitioned from prenursing to direct admission to the College of Nursing.

Current Major Initiatives or Interventions

The CoN, in partnership with local communities, offers diversity pipeline and retention programming through federally funded and college-funded programs.

Leadership 2.0: Nursing's next-generation program

Leadership 2.0 is an innovative, multifaceted recruitment and retention program originally funded by the Health Resources and Services Administration aimed at enhancing diversity within the undergraduate program at the CoN. Since 2016, Leadership 2.0 has become part of the programming at the CoN and will continue. The program targets applicants from URE and economically and educationally disadvantaged backgrounds with the intent to retain and graduate a diverse

nursing workforce. The Leadership 2.0 program includes 8 key components: preadmission, summer bridge, academics, research, leadership and professional development, socialization, community engagement, and diversity. A variety of strategies are used to achieve the aforementioned components.

A key part of Leadership 2.0 is Summer Bridge, a 7-week residential program between high school and college to prepare the students for a successful transition into postsecondary education. Additional benefits of Leadership 2.0 include personalized student academic and financial advising, study groups, tutoring, and mentoring support. The Leadership 2.0 program through its multifaceted approach has proved successful in improving engagement and retention rates for URE students, as shown in Table 1. Elements of Leadership 2.0, such as leadership and professional development, community engagement, and personalized student advising, are extended to everyone, accounting for the improved retention rates for all students.

Pathways for emerging health care leaders program

A key discovery of the dean's data analysis was that not enough eligible URE students were applying to the CoN. Affordability and need-based scholarships are a starting point for institutional recruitment and retention when considering increasing the number of URE students. Furthermore, given the state of public education, we believed that waiting until the senior year to engage with the students was too late. Subsequently, Pathways for Emerging Healthcare Leaders, funded through June 2020 by the U.S. Department of Health and Human Services Office of Minority Health, was implemented to increase the diversity of the health

Table 2: Pathways High School GPA

Academic year	HEALTH Pathways Academy student GPAs	GPAs of matched peer students not enrolled in the Pathways Academy	Difference
2015–2016 (baseline, year 1)	3.37 (n = 14)	2.05 (n = 32)	1.32
2016–2017 (year 2)	3.02 (n = 16)	1.94 (n = 32)	1.08
2017–2018 (year 3)	2.87 (n = 16)	2.20 (n = 32)	0.67

Abbreviation: GPA, grade point average.

Table 3: HEALTH Pathways Academy High School Attendance

Academic year	HEALTH Pathways Academy students	Peer students not enrolled in the Pathways Academy
Days present (mean)		
2015–2016[a] (baseline, year 1)	147.11	135.88
2016–2017[b] (year 2)	160.11	146.80
2017–2018[c] (year 3)	159.12	143.90
Days absent (mean)		
2015–2016[a] (baseline, year 1)	3.56	6.18
2016–2017[b] (year 2)	8.73	10.23
2017–2018[c] (year 3)	7.53	7.58

[a]2015–2016: academy students, n = 14; nonacademy matched peer students, n = 31.
[b]2016–2017: academy students, n = 16; nonacademy matched peer students, n = 32.
[c]2017–2018: academy students, n = 16; nonacademy matched peer students, n = 32.

professions workforce pipeline by: (1) fostering high school student awareness and interest in health professions degrees and (2) increasing readiness for admission into 2- and 4-year health professions degree programs.

The program consists of monthly student and parent academies, health professions coaches (32 hours per week) in the classroom, health professions clubs (2 hours per week), and intersession. The student and parent academies are staffed by the Pathways for Emerging Healthcare Leaders co-project director, program coordinator, and health coach coordinator. Students involved in the program have higher grade point averages and better attendance each year compared with other students (see Tables 2 and 3). All students in the program receive individualized assistance applying for postsecondary opportunities. Of the Pathways cohort (n = 16), 2 are pursuing nursing school in direct-entry baccalaureate programs, 2 are in prenursing at UC, and 3 are pursuing health care-related associate degrees. Eighty-one percent of academy students entered college post-graduation, which is significantly higher than the percentage of 2016 graduates (45.1%). The Pathways grant funding ended in June 2020. Like Leadership 2.0, successful elements of Pathways will be embedded in CoN programming.

Holistic admissions

A decision to implement a holistic admissions process was made in 2016 to increase diversity. CoN faculty and staff were invited to a 1-day workshop sponsored by the Association of American Medical Colleges to learn about the process. A taskforce of faculty and staff was created to develop a formal plan for implementation. It

took a year of engaging with the university admissions office and faculty to agree upon a process for the CoN that was different from every other college within the university. Generally, centralized admission professionals use guidelines provided by the colleges and programs to make admissions decisions. With the incorporation of qualitative metrics and interviews, the UC CoN faculty/staff were able to participate in the subjective decision making. Timelines normally observed by the central office were altered to allow time for the holistic review and interviews, and additional communication plans to applicants were implemented.

Applicants are screened and selected based on quantitative and qualitative metrics determined to demonstrate readiness and fit for the academic rigor of the nursing program. Baseline standards were developed based on historical data associated with success in the program. Experiences and attributes of each applicant—as evidenced in essays, recommendation letters, choice of extra- and cocurricular activities, awards, accolades, certifications/credentials, work experience, and life experience—are considered. Applicant reviewers assign a star rating (1 to 5) based on strength of applicant. Those with a higher rating are determined to demonstrate characteristics aligned with success in the nursing program. Using the quantitative and qualitative ratings, applicants are either automatically admitted, considered eligible for multiple mini-interviews (MMIs), or denied (see Table 4 and Figure 1). The MMI process consists of applicants participating in multiple short interviews to assess noncognitive attributes such as effective communication, ethics, situational awareness, critical thinking, diversity/inclusion, empathy, and leadership.[1]

In 2018, of 1,503 applications, 95 high-achieving, highly qualified students exceeded the standards for admission, had strong applications, and automatically were offered admission. After initial review, 208 applicants were denied. Of the

Table 4: University of Cincinnati College of Nursing Screening/First Round Rubric

ACT score	GPA	Other	Star rating	Screening outcome
27 or higher	Unweighted: 3.752 Weighted: 3.831 or higher	Exceeds all other	4 or higher	Auto admit
Below 27	Unweighted: 3.752 Weighted: 3.831 or higher	Meets or exceeds all other	4 or higher	Offer interview
27 or higher	Unweighted: < 3.752 Weighted: < 3.831	Meets or exceeds all other	3 or higher	Offer interview
Below 22	Below 3.0	Meets or exceeds all other	4 or higher	Offer interview
Below 22	Below 3.0	Below standard	3 or lower	Auto denial

Abbreviations: ACT, American College Testing; GPA, grade point average.

Figure 1: University of Cincinnati College of Nursing 18FS BSN Direct Admission Rubric with MMI Screening

	Category	Exceeds Standard	Meets Standard	Below Standard
Quantitative (Metrics)	**High School GPA**	>3.6	3.5	<3.0
	High School College Prep Courses	Biology with "A" grade Chemistry with "A" grade Taken A&P Foreign Language PSEOP/AP/HONORS	Biology with "B" grade Chemistry with "B" grade	Biology with "C" or below grade Chemistry with "C" or below grade
	ACT/SAT Test Scores	ACT = e 29 Composite; minimum 22 on Math or SAT = e 1350 Composite Minimum 540 on Math	ACT = 22 or above Composite; minimum 22 on Math or SAT = 1100 or above Composite; minimum 540 on Math	ACT = <22 Composite; consider if Math is 22 or higher or SAT = <1100 Composite; consider if Math is 540 or higher
Qualitative (Experiences & Attributes)	**Writing samples**	No errors in punctuation, spelling, or capitalization. No errors in sentence structure or word usage. Samples reference the nursing profession or health care and are substantive.	Almost no errors in punctuation, spelling, and/ or capitalization. Almost no errors in sentence structure and/or word usage. Samples reference the nursing profession or health care.	Several errors in punctuation, spelling, and/or capitalization. Several errors in sentence structure and/or word usage. Samples may or may not reference the nursing profession or health care but do not add value to the sample.
	Recommendation Letters	Good Recommendations; Credible sources for academics/healthcare	Good Recommendations	Not Good Recommendations
	Co-Curriculars/Honors/ Awards/Accolades	Leadership roles/length of involvement	Involvement	No involvement
	Certifications/Credentials/ Work Experience/Life Experience	Health care related in 2 or more categories	Health care related in at least 1 category	None

List of Characteristic Attributes for Qualitative Factors*

Effective Communicator	Critical Thinker	Diversity & Inclusion
Empathy	Ethical	Leadership
Situational Awareness		

*See descriptions of Characteristic Attributes

List of Social/Geographic Factors to Consider

Resident of Hamilton County, Ohio	Cincinnati Public Graduate	Single parent household
Low socioeconomic	Gen-1	
Male Gender	Hrs. worked in HS	

remaining 1,200 applicants who met standards of admission, 309 were invited to interview and 223 were interviewed. As interview dates fill up, the college's enrollment priorities (URE, high academic achievement, and out-of-state residents) are considered in addition to the star ratings when selecting candidates for interviews. At the conclusion of interviews, those candidates considered fit for the profession who score well during the interviews are considered. If spots are still available after the interviews, the remaining applicants are selected based on admission standards and strength of application using the star rating.

Committee for Equity and Inclusive Excellence

Dedicated to promoting a culture of inclusive excellence, the CoN has the Committee for Equity and Inclusive Excellence (CEIE), which is composed of faculty, staff, and students. CEIE activities have included diversity training of committee members; culture climate assessments of faculty, staff, and students;

college- and community-wide events, such as book clubs and culture festivals; a microaggressions survey; and curriculum consultation for incorporating cultural competencies throughout the undergraduate curriculum.

Challenges in the Current Learning Environment

The UC CoN believes diversity is integrally connected to the ultimate goal of providing excellent patient care. This is why we are focused on selecting a diverse student body; offering a bridge program that is sustainable; and having intrusive advising, mentoring, tutoring, peer groups, and college personnel available to support a diverse student body. Intrusive advising is the concept of "… deliberate structured student intervention at the first indication of academic difficulty in order to motivate a student to seek help."[2] UC uses retention software to quickly identify at-risk students as well as students who are doing well. Faculty and the students' academic advisors are alerted when at-risk students are identified so steps can be taken to support the students. We believe that if we admit a student, we have the obligation to provide support to that student to ensure a positive academic journey that concludes in graduation.

Prioritizing funding for programming is a challenge. Our bridge programs were grant funded and unsustainable without additional funding, so the dean obtained philanthropic support to continue the program. Balancing priorities for fundraising (endowed chairs/professors vs student success programming) is delicate and determining whether scholarship funds should reward high-achieving students or support those with demonstrated financial need is not easy, nor are they mutually exclusive. We also need to continue to recruit and retain diverse faculty. UC has a strategic hiring opportunity program designed to diversify the faculty in ways that increase representation from diverse intellectual traditions, educational institutions, life experiences, and backgrounds, including but not limited to gender, sexual orientation, race, ethnicity, and culture. The office of the provost provides partial support for faculty salaries for a limited time, with the intent of providing bridge funding to support strategic hires. In addition to what is currently required, we plan to add implicit bias training and incorporate cultural competencies.

We need to create learning environments of respect, psychological safety, acceptance, and affirmation where students can devote all of their cognitive resources to learning.[3] Students should feel that they are among friends and supporters where they can ask for and receive help when they need it.[4]

Unfortunately, there can be bias in instruction/preceptor evaluation of students in the clinical setting. On the undergraduate evaluation form, a space is available for summative comments about a preceptor's overall impression of a student's strengths, deficits, and general assessment of whether or not the student's clinical practice is safe. This section is unsupported by specific indicators and allows for subjective input that may be biased. To minimize bias, faculty and preceptors are not supposed to provide peer-to-peer feedback, either formal or informal, about students; however, we suspect this sometimes occurs.

This passing on of perceptions can result in prejudice by faculty or clinical instructors. Sharing previous students' performance evaluations and/or speaking with future instructors has been a common experience at 4 institutions in which the primary author has worked. The possible negative ramifications of biasing new instructors may not be worth the "heads up" to an instructor to provide adequate supervision and additional teaching. Faculty and preceptors could benefit from implicit bias training; however, preceptors are not employees of the university— they are voluntary. We plan to add voluntary preceptor training and recommend that all preceptors complete the training.

Looking to the Future and Recommendations

We find Bleich and colleagues'[5] 6 strategies a useful way to approach the work of addressing bias and personal and institutional racism and discrimination issues within the context of a 24/7 focus on culture where "identity safety" overrides "identity threat." They are: (1) improve admission processes, (2) reduce the invisibility of underrepresented cohorts, (3) create communities of support, 4) ensure promotion and/or tenure structures are balanced, (5) eliminate exclusion, and (6) stand against tokenism.

Addressing bias and discrimination in the learning environment cannot be a stand-alone initiative—it must be embedded within an institution's strategic plan and priorities (see Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/B16). At the CoN, we have developed a strategic map that addresses strengthening student, faculty, and staff success by recruiting and "… retaining a diverse population." We are committed to increasing "… diverse pipelines" and addressing "… social determinants of health." We define inclusive excellence as an environment where the concepts of diversity and inclusion are put into practice. This strategic map is integral to all we do, and outlines what is important to us as a

college. However, there must be accountability for alignment with the strategic plan at the leadership level if it is to be meaningful. The following recommendations for creating a culture of inclusive excellence are based on our experience.

Start with data. It is useful to set short- and long-term goals with faculty and staff, and hold everyone accountable for reaching target enrollment, retention, and graduation rates.

Assess the climate. UC conducts climate surveys every other year, but we believe the CoN should do them yearly. The results should be transparent and compare the data year over year. Action plans need to be developed to address issues. While these surveys let us know how we're doing, we can't wait for the surveys to tell us what we should already know. We need to create an environment where there is a mechanism for ongoing feedback, and where people feel comfortable speaking up, so we can respond to situations in real time and address issues of bias, discrimination, racism, and exclusion when they occur.

Continue holistic admissions and MMI. We believe the MMI process is important in identifying students with the qualitative attributes predictive of academic success. We need to continue to refine the process.

Focus on retention strategies. Students from racially diverse schools generally have experience and skills interacting with a predominantly White student body. However, this is not the case for students who attended predominantly urban, Black schools. These students often require a more supportive network. Consequently, we are learning the importance of understanding how the social differences "within" the community of students is as important in planning strategies for their academic success, as is their academic advising.

Consider personal philosophies related to diversity and inclusion in the hiring process. The hiring of prospective faculty and some staff at UC requires a personal statement summarizing their thoughts and contributions to diversity and inclusion.

Address bias, discrimination, and microaggressions immediately. When these happen, acknowledge the moment and address the situation immediately. Implicit bias training is a critical need for faculty, staff, and students. We need a mechanism for students to share their experiences with microaggressions when they happen.

A combination of anonymous feedback and open sessions with students and/or faculty is recommended.

Conclusion

At the UC CoN, we agree that students of different races, ethnicities, sexual orientations, physical abilities, and other identities and life experiences need to be supported to promote retention and success—resulting in an increasingly diverse workforce and preparing faculty for the future.[6] Leadership has instituted several programs that have involved faculty and students in efforts to decrease bias and discrimination and promote inclusion. We are continuing to engage faculty and others in adding to and improving our efforts. This is a process of culture change, and ultimately it must involve everyone. Leadership is committed to both demonstrating by example and holding all accountable for progressively improved performance.

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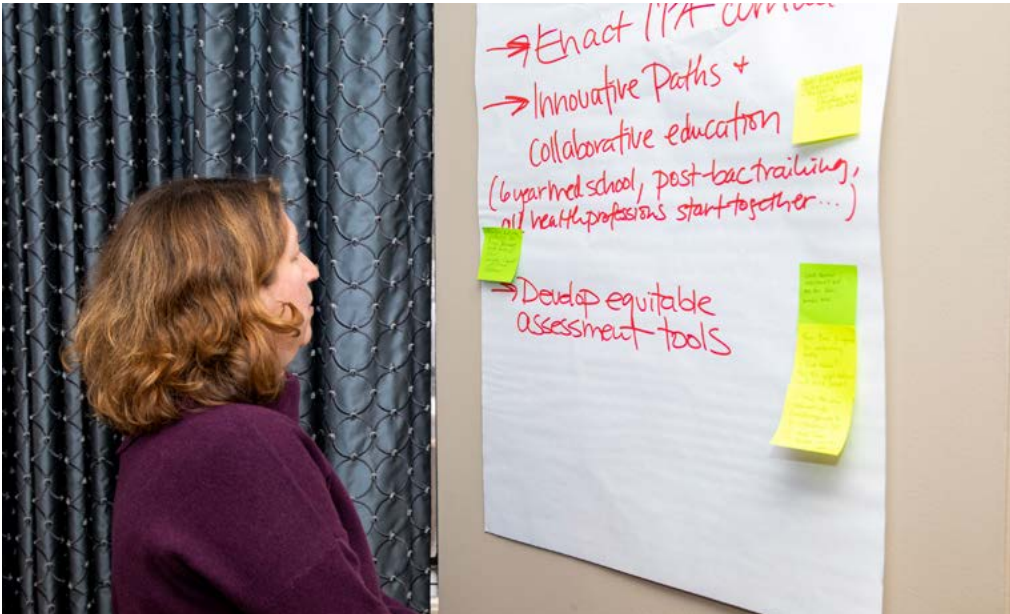
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BIOGRAPHIES OF PARTICIPANTS

Pamela Y. Abner, MPA, CPXP, is vice president and chief administrative officer for the Office for Diversity and Inclusion at Mount Sinai Health System in New York.

Ms. Abner has more than 14 years of experience working with industry leaders to establish best practices and set strategic, innovative, and programmatic plans for diversity, inclusion, and equity across business lines. As a certified patient experience professional, a certified unconscious-bias educator, and an inclusion trainer, Ms. Abner strives to develop and guide initiatives to create inclusive and culturally aware environments. She continuously seeks to help organizations structure and implement initiatives to identify disparities and eliminate barriers to care, employment, and education for underserved and underrepresented groups and to foster relationships with community partners.

Due in large part to Ms. Abner's thought leadership and strategic management guidance, Mount Sinai Health System attained a national ranking as the No. 1 health and hospital system on the *Forbes* 2019 list of Best Employers for Diversity and maintained leading status for five consecutive years on the DiversityInc Top Hospital System list, ranking No. 1 in 2017 and 2018. Among her many distinctions, Ms. Abner was named one of the "Most Influential Women in Corporate America" by *Savoy* magazine in 2019. She often serves as a guest presenter at national and international forums, and she heads her own consulting practice, where she provides expert advice to organizations.

Ms. Abner is a member of the board of trustees at Phillips School of Nursing Mount Sinai Beth Israel, a member of the board of advisors for MBE Capital Partners, a member of the National Center for Healthcare Leadership Diversity and Inclusion Council, and a volunteer for Brown University's alumni interviewing program. She serves as a mentor to those seeking career and professional advice, with particular emphasis on guiding and supporting students from underrepresented backgrounds interested in health care careers.

Ms. Abner received her bachelor's degree from Brown University and her master's degree in public administration from Columbia University.

David A. Acosta, MD, FAAFP, serves as chief diversity and inclusion officer at the Association for American Medical Colleges (AAMC). In this role, Dr. Acosta provides strategic vision and leadership for the AAMC's diversity and inclusion activities across the medical education community and leads the association's Diversity Policy and Programs unit.

A board-certified physician of family medicine, Dr. Acosta joined the AAMC from the University of California (UC), Davis School of Medicine, where he served as senior associate dean for equity, diversity, and inclusion and as associate vice chancellor for diversity and inclusion and chief diversity officer for the UC Davis Health System. He previously served as the inaugural chief diversity officer at the University of Washington (UW) School of Medicine, where he established a rural health fellowship program for Tacoma Family Medicine, a residency program affiliated with the UW Department of Family Medicine.

Dr. Acosta received his bachelor's degree in biology from Loyola Marymount University and earned his medical degree from the University of California, Irvine School of Medicine. He completed his residency training at Community Hospital of Sonoma County in Santa Rosa, California, and held a faculty development fellowship in the UW Department of Family Medicine.

Omonivie H. Agboghidi, BA, is the 56th president of the Student National Medical Association and has a deeply rooted passion for diversifying the face of medicine. She is a rising third-year medical student at Wright State University, Boonshoft School of Medicine.

After completing her undergraduate degree, Ms. Agboghidi worked for the Alameda County Public Health Department and created the Alameda County Health Coach Program. As program director, she trained young people of color to serve as health coaches to patients to help them manage chronic diseases like diabetes and hypertension. She was a Health 4 All fellow at Stanford University's Stanford Prevention Research Center.

After years of working to diversify the health care workforce in partnership with academic, nonprofit, county, and statewide entities, Ms. Agboghidi continued her passion for health and wellness by enrolling as a medical student. She hopes to become an emergency medicine physician with a focus on social emergency medicine, addressing social determinants of health.

Ms. Agboghidi received her undergraduate degree in African American studies and public health from the University of California, Berkeley. She is currently taking an academic year to complete her MPH there.

Jennifer Best, MD, is an associate professor of medicine in the Division of General Internal Medicine at the University of Washington (UW). In addition, she serves as UW associate dean for graduate medical education (GME). She practices hospital medicine at Harborview Medical Center on the clinician-educator pathway.

In her leadership role for GME, Dr. Best oversees the accreditation of 113 training programs accounting for nearly 1400 trainees, as well as diversity, equity, and inclusion initiatives. She also serves as associate program director for resident professional development and wellness for the UW Internal Medicine Residency Program. Her scholarly interests include communication in the clinical learning environment, work-life integration in GME, identity formation and narrative, and advancing equity.

Dr. Best completed the UW Teaching Scholars program in 2009 and has received several teaching awards. She is a fellow of the American College of Physicians and the Society of Hospital Medicine and a past deputy editor of the *Journal of General Internal Medicine*. She has been voted one of Seattle's top doctors and is a member of the board of International Health Partners, Inc.

Dr. Best received her undergraduate degree from Seattle Pacific University and her medical degree from Northwestern University. She returned to the UW for residency training in internal medicine and went on to serve as chief resident.

Dowin Boatright, MD, MBA, MHS, is an assistant professor of emergency medicine at the Yale School of Medicine.

Dr. Boatright's research focuses on diversity in the health care workforce and on racial and ethnic disparities in health care treatment and outcomes. His publications can be found in journals such as *JAMA*, *JAMA Internal Medicine*, *Academic Medicine*, and *Academic Emergency Medicine.*

Dr. Boatright earned his undergraduate degree from Morehouse College. He received his medical degree from Baylor College of Medicine along with an MBA from Rice University. Dr. Boatright completed his residency and chief residency in emergency medicine at Denver Health. He is a former Robert Wood Johnson Clinical Scholar at Yale University.

Pooja Chandrashekar, AB, is a first-year medical student at Harvard Medical School. Along with clinical medicine, she is passionate about improving the quality and delivery of health care, and she hopes to leverage emerging technologies and policy to transform care for underserved populations. Her current research focuses on using data analytics and informatics to measure the cost, quality, and appropriateness of care and inform the development of high-performing health systems and equitable policies. She also serves as the managing assistant editor for *Healthcare: The Journal of Delivery Science and Innovation*, a peer-reviewed journal on health care delivery science published by Elsevier.

Ms. Chandrashekar has broad experience in health services and policy research at the organizational, state, and federal levels. She has worked on the Merit-Based Incentive Payment System at the U.S. Department of Health and Human Services, on digital health strategy and policy at the National Health Service in England, and on community hospital reinvestment programs at the Massachusetts Health Policy Commission. Ms. Chandrashekar's work in health care information technology includes research at Boston Children's Hospital on the use of social media data to understand population-level health trends and research at the MITRE Corporation to develop a rapid screening method for mild traumatic brain injury among athletes and military personnel.

As a champion for education equity, Ms. Chandrashekar is the founder and CEO of ProjectCSGIRLS, an international nonprofit dedicated to encouraging middle school girls to pursue technology and computer science. She also cofounded the Action and Civic Tech Scholars Program to teach civic technology to underrepresented high school students in Dorchester, Massachusetts. She serves on the boards

of She Rocks the World and the National Girls Collaborative Project. For more information, see www.poojachandrashekar.com.

Ms. Chandrashekar received her undergraduate degree in biomedical engineering from Harvard College and subsequently completed a Fulbright scholarship in India.

Eve R. Colson, MD, MHPE, is a professor of pediatrics in the Department of Pediatrics and associate dean for education program evaluation and continuous quality improvement in the Office of Education at Washington University School of Medicine in St. Louis. She recently joined the faculty there after serving for 20 years as a faculty member in the Department of Pediatrics at Yale School of Medicine.

Following a fellowship in clinical research, Dr. Colson accepted a junior faculty position at Yale, where she served in various roles including director of the well-newborn nursery, associate program director for the pediatric residency, and director of the medical student clinical curriculum. In 2011, she became a Macy Faculty Scholar, and during this time she collaborated with colleagues at the Yale School of Nursing and the Physician Associate Program to establish the Interprofessional Longitudinal Clinical Experience for all first-year health professional students at Yale.

In addition to her passion for and work in medical education, she runs a robust research program funded by the National Institutes of Health examining strategies for infant mortality prevention using a mixed-methods approach.

Dr. Colson graduated from Brown University with a degree in history and biology and then from the Yale School of Medicine before completing her residency and chief residency at the University of Rochester.

Theodore J. Corbin, MD, MPP, is a professor and vice chair for research in the Department of Emergency Medicine at the Drexel University College of Medicine. He is also the founder and medical director of Healing Hurt People, an emergency-department-based, trauma-informed intervention for victims of intentional injury, which has been implemented at five level-one trauma centers in Philadelphia. Dr. Corbin also co-directs the Center for Nonviolence and Social Justice at the Dornsife Drexel University School of Public Health, where he holds a joint appointment in

the Department of Health Management and Policy. Dr. Corbin is board certified in emergency medicine.

Dr. Corbin's research focuses broadly on addressing the trauma in the lives of victims of violence, especially boys and men of color for whom violence is a leading cause of disability and death. He has received funding from the Philadelphia Department of Behavioral Health and the Annie E. Casey Foundation to explore the impact of post-traumatic stress disorder on violently injured youth and young adults, and to evaluate the effectiveness of the intervention that he developed for Healing Hurt People. He is also the principal investigator on a Department of Justice/Office for Victims of Crime grant to develop and test a community health worker peer training institute, designed to enhance and diversify the health care workforce. Over the past 10 years, Dr. Corbin has received in excess of $9 million in funding for his translational work as a principal investigator. More recently, Dr. Corbin was the recipient as co-investigator of grants from the Robert Wood Johnson Forward Promise Initiative and the Pennsylvania Commission on Crime and Delinquency to support the work for boys and men of color.

Dr. Corbin has received a number of honors including a Soros physician advocacy fellowship from the Open Society Foundation and a Stoneleigh Foundation fellowship to support his career development in serving the needs of vulnerable children and youth. He was also selected as one of Philadelphia's 40 under 40 Leaders in 2006. Dr. Corbin provided expert testimony to the Defending Childhood task force, charged by Eric Holder, US Attorney General, to speak about his work in addressing adversity and violence in urban youth. Dr. Corbin has also provided practice-based evidence to the National Academy of Medicine on public health approaches to violence intervention.

Dr. Corbin received his medical degree from the Medical College of Pennsylvania-Hahnemann School of Medicine and his MPP degree from Princeton University.

Stephan Davis, DNP, MHSA, NEA-BC, CNE, FACHE, is an accomplished healthcare executive and educator. His leadership experience spans hospitals, health systems, insurance companies, and various task forces and boards. He currently serves as assistant professor and director of the Master of Health Administration (MHA) program at the University of North Texas Health Science Center, School of Public Health. Since joining the Health Science Center, he and the

MHA faculty have established "inclusive leadership" as one of three programmatic cornerstones.

Dr. Davis is a fellow and national faculty member of the American College of Healthcare Executives (ACHE). He also serves as the national chair of the ACHE LGBTQ Healthcare Leaders Community. In March, he will transition from his role as chair to the Regent-At-Large position for ACHE District 4, representing ACHE membership in 10 states and promoting diversity, equity, and inclusion in healthcare leadership at regional and national levels. His prior work on diversity and inclusion enabled organizations to achieve the leadership designation in health care equality with the Human Rights Campaign and publication in the Hastings Center's inaugural report on LGBT bioethics.

 Dr. Davis holds a Doctorate of Nursing Practice in healthcare leadership, systems and policy from Yale, a master's degree in health systems administration from Georgetown and a Bachelor of Science in nursing from the University of Maryland. He holds several board certifications in healthcare management, quality, executive nursing leadership, and healthcare finance.

Lisa Day, PhD, RN, CNE, is professor, clinician educator at the University of New Mexico College of Nursing in Albuquerque

Dr. Day has worked as a staff RN in post-anesthesia recovery, cardiac medicine, and neuroscience, and as a clinical nurse educator and neuroscience clinical nurse specialist. Dr. Day has held faculty positions at the University of California, San Francisco School of Nursing; Duke University School of Nursing in Durham, North Carolina; and at Washington State University College of Nursing where she was also Associate Dean for Academic Affairs. As clinical faculty, Dr. Day has served as a voluntary member of the hospital ethics committee and clinical ethics consult service at UCSF Medical Center, Duke Hospital, and Providence Health's Sacred Heart Hospital in Spokane, WA.

Since 2008, Dr. Day has consulted on several national projects focusing on nursing education, including the Carnegie Foundation for the Advancement of Teaching's National Study of Nursing Education and the first phase of Quality and Safety Education in Nursing (QSEN), a project funded by the Robert Wood Johnson Foundation.

She is a coauthor of the landmark publication *Educating Nurses: A Call for Radical Transformation*, which reports the results of the Carnegie study, and has given many faculty development workshops and curriculum consultations for schools of nursing in the US and Canada. She is certified as a nurse educator (CNE) by the National League for Nursing (NLN) and was selected as a Josiah Macy Jr. Foundation Faculty Scholar in interprofessional health sciences education from 2013 through 2015. She recently collaborated with a communication scientist to coauthor an innovative book on safe communication in nursing practice.

Dr. Day is currently a member of the NLN Commission for Nursing Education Accreditation residency program accreditation task force and was inducted as a Fellow of the American Academy of Nursing and the NLN Academy of Nursing Education. Since 2019 she has been a member of the board of the American Society of Bioethics and Humanities Affinity Group for Nursing.

Dr. Day received her associate degree in nursing from Long Beach City College and then her bachelor's degree in nursing as well as her master's and doctoral degrees from the University of California, San Francisco.

Oscar E. Dimant, MD, is an internal medicine resident at Staten Island University Hospital who will be going into physical medicine and rehabilitation.

As a medical student at the New York University School of Medicine, Dr. Dimant led the LGBT+ People in Medicine Club and served as a board member for the Student Diversity Initiative, through which several clubs focusing on minority populations worked together to achieve change. Dr. Dimant is passionate about and has a history of advocacy, education, and collaboration, including directly training mental health professionals, chairing community advisory boards, and serving on various committees regarding how to best serve the LGBTQ+ community. Dr. Dimant is also passionate about research advancing health equity and health care education for people from marginalized communities, with a specific focus on transgender and nonbinary people.

Joycelyn Dorscher, MD, is the former associate dean for student affairs and admissions and associate professor in the Department of Family and Community Medicine at the University of North Dakota School of Medicine and Health Sciences.

Dr. Dorscher was previously associate director of the Center of American Indian and Minority Health and assistant professor in the Department of Family Medicine at the University of Minnesota Medical School, Duluth.

Dr. Dorscher received her bachelor's degree in medical technology from the College of St. Scholastica. She worked in the field until she entered the University of Minnesota Medical School, where she completed her medical degree. She went on to complete a residency in family medicine at St. John's Hospital in St. Paul, Minnesota.

Martha Elks, MD, PhD, is senior associate dean of educational affairs, associate dean of undergraduate medical education, and a professor of medical education and medicine at Morehouse School of Medicine. In her leadership roles at Morehouse, she has led the integration of the MD curriculum and the expansion of degree programs. She is recognized nationally as a leader in medical education.

Dr. Elks served as chief of the Division of Endocrinology and director of student education in the Department of Medicine at Texas Tech Health Science Center in Lubbock from 1985 to 1998. In 1998, she was recruited to Morehouse School of Medicine as chair and professor of medical education, associate dean for medical education, and professor of medicine. In 2008, she was promoted to senior associate dean for education and faculty affairs.

Dr. Elks has more than 60 peer-reviewed publications. Her scholarly activity has included research on serotonin synthesis and release in the rat brain, the biochemistry of fat-cell metabolism, and control of insulin release. She has also published on clinical conditions, including premenstrual syndrome, obesity, and diabetes, as well as on ethical and educational issues. She has received funding from the Arnold P. Gold Foundation for establishing the White Coat Ceremony and the Student Clinician Ceremony at Morehouse. Her research has been funded by the American Diabetes Association and the Health Resources and Services Administration.

Dr. Elks has received numerous teaching awards, including the John Templeton Foundation Award in 1997, and was honored by the Gold Foundation with the Humanism in Medicine Award.

Dr. Elks was born and raised in rural eastern North Carolina. She is a graduate of Duke University and received her medical degree, as well as her doctoral degree in neurobiology, from the University of North Carolina at Chapel Hill. She completed her internship in internal medicine at Johns Hopkins University and her residency in medicine at Johns Hopkins and at the National Institutes of Health in Bethesda, Maryland. She also completed a fellowship in endocrinology at the NIH. She is board certified in medicine and endocrinology.

Catherine A. Georges, EdD, RN, FAAN, was elected by the AARP board of directors to serve as the AARP's national volunteer president from June 2018 to June 2020. The president's role is filled by an AARP volunteer who is also a member of the board. Dr. Georges is also professor and chair of the Department of Nursing at Lehman College and the Graduate Center of the City University of New York. She is president of the National Black Nurses Foundation. Previously, Dr. Georges was a staff nurse, team leader, supervisor, and district manager for the Visiting Nurse Service of New York. She serves on the board of the Black Women's Health Study and RAIN (the Regional Aid for Interim Needs Home Healthcare).

In her role as AARP president, Dr. Georges acts as the principal volunteer spokesperson and liaison between the board and those AARP serves—those who are 50-plus and AARP's members and volunteers. The president engages with these groups to promote the mission and strategic goals of AARP and to hear their perspectives.

Dr. Georges was appointed to the US Health and Human Services' RAISE Family Caregiving Advisory Council in August 2019. In October 2019, the American Academy of Nursing named Dr. Georges a Living Legend, the organization's highest honor.

Dr. Georges earned her undergraduate degree from the Seton Hall University College of Nursing, her master's degree in nursing from New York University, and a doctoral degree in educational leadership and policy studies from the University of Vermont.

Cheryl L. Woods Giscombé, PhD, PMHNP, FAAN, is the LeVine distinguished associate professor of quality of life, health promotion, and wellness and PhD lead faculty at the University of North Carolina at Chapel Hill School of Nursing, as well

as an adjunct associate professor in the School of Medicine. She is director of the Interprofessional Leadership Institute for Behavioral Health Equity.

Dr. Giscombé is a social/health psychologist and psychiatric nurse practitioner whose research focuses on community-engaged interventions to improve health among diverse populations. She developed the groundbreaking Superwoman Schema conceptual framework and questionnaire to conduct research on stress and health in African American women. She uses holistic approaches (such as mindfulness-based interventions) to improve mental health, reduce disparities, and promote provider well-being.

Dr. Giscombé is a Fellow of the American Academy of Nursing and has been recognized as a leader in the field by the American Psychological Association. She has published and presented broadly to international audiences. She has received grants from the National Institutes of Health, the Substance Abuse and Mental Health Services Administration, the Robert Wood Johnson Foundation, the Josiah Macy Jr. Foundation, and the Health Resources and Services Administration. She is a Harvard Macy Institute scholar and faculty member. She is an inaugural fellow and design partner for the Harvard Macy Institute Art Museum-Based Fellowship for Health Professions Educators, sponsored by the Harvard Medical School, the Boston Museum of Fine Arts, and the Cambridge Health Alliance. She is co-chair of the Scope and Standards of Psychiatric Nursing Practice Task Force and a member of the American Association of Colleges of Medicine's Arts and Humanities Integration Committee.

Dr. Giscombé completed a bachelor's degree in psychology at North Carolina Central University and a BSN at Stony Brook University in New York. She earned master's and doctoral degrees in social and health psychology from Stony Brook and an MSN from the Psychiatric-Mental Health Nurse Practitioner/Clinical Nurse Specialist program at the University of North Carolina at Chapel Hill.

Greer Glazer, RN, CNP, PhD, FAAN, serves as dean of the University of Cincinnati (UC) College of Nursing and associate vice president for health affairs at UC. Dr. Glazer previously served as dean and professor at the University of Massachusetts Boston College of Nursing, director of parent-child nursing and professor at Kent State University, and assistant professor at Case Western Reserve University.

Dr. Glazer is the rare academic who combines teaching, research, practice, community service, and policy work. She has transformed nursing education and influenced hundreds of thousands of nurses through new admission processes, innovative pedagogy, and modern learning environments. Dr. Glazer has worked in large and small higher education institutions, research-intensive and non-research-intensive environments, public and private universities, and colleges that are part of an academic health center. She has taught both undergraduates and graduate students and developed new programs and educational models in several institutions. To date, she has been responsible for more than 100 publications and more than 220 presentations, in addition to abstracts and contributions to newspapers, radio, and TV. She also coauthored the book *Nursing Leadership From the Outside In.* She is the cofounder and legislative editor of the *Online Journal of Issues in Nursing.*

Dr. Glazer's significant national accomplishments include having been a 1998 Fulbright Scholar in Israel; a Robert Wood Johnson Executive Nurse Fellow; chair of the American Nurses Association Political Action Committee; a recipient of the National League for Nursing Mary Adelaide Nutting Award for Outstanding Leadership in Nursing Education; a recipient of the 2018 American Association of Colleges of Nursing (AACN) Diversity, Inclusion and Sustainability in Nursing Education Lectureship Award; a recipient of the 2019 AACN Innovations in Professional Nursing Education Award; and a recipient of the 2019 AACN Exemplary Academic-Practice Partnership Award.

Dr. Glazer holds a bachelor's degree in nursing from the University of Michigan and master's and doctoral degrees in nursing from Case Western Reserve University.

Pedro J. Greer Jr, MD, joined the Roseman University of Health Sciences – College of Medicine on June 1, 2020 with the goal of establishing an innovative mid-21st century, Las Vegas-based medical school that will align students, educators, and community in designing and delivering an inclusive and collaborate environment for learning, healthcare and research.

Previously, Dr. Greer served as a professor of medicine; founding chair of the Department of Humanities, Health, and Society; and associate dean for community engagement at the Florida International University Herbert Wertheim College of Medicine in Miami. Working with various FIU colleges, Dr. Greer spearheaded

the nationally and internationally recognized interprofessional medical education program, Green Family Foundation Neighborhood Health Education Learning Program (NeighborhoodHELP). This program prepares medical students and other health professions students to address the social determinants of health through a hands-on longitudinal experience caring for underserved households in Miami-Dade County.

Better known as Joe, Dr. Greer has been an advocate for health equity by engaging communities to create effective health and social policies and accessible health care systems. He established Camillus Health Concern, Inc. and Saint John Bosco, health centers for underserved populations in Miami-Dade County. He has received numerous recognitions, including: one of the 500 Most Influential Business Leaders in Life Sciences listed on the Florida Trend 2019; June 2019 AMA Foundation Pride in Profession Award; Bob Graham Center for Public Service 2017 Citizen of the Year; 2014 National Jefferson Award in the category of Greatest Public Service Benefiting the Disadvantaged; 2013 Great Floridian Award; the 2009 Presidential Medal of Freedom; and in 1993, was honored as a MacArthur Foundation "Genius Grant" Fellow. He has published more than 30 articles and book chapters and wrote Waking Up in America, an autobiographical account of his life experiences, from providing care to homeless individuals to advising Presidents George Bush Sr. and Bill Clinton on health care policy.

Dr. Greer is currently a trustee at the RAND Corporation (America's oldest and largest think tank) and is the chair of the Pardee RAND Graduate School board of governors. He served as chair for the Hispanic Heritage Awards Foundation from 2002 to 2012 and is an independent board member of American Funds 2016 to present. He completed his medical studies at La Universidad Católica Madre y Maestra in the Dominican Republic. He trained in Internal Medicine, served as chief resident, and completed two post-doctoral fellowships (hepatology and gastroenterology) at the VA/University of Miami Miller School of Medicine. Before joining FIU, Dr. Greer ran a successful private practice and was chief of Gastroenterology and Hepatology at Mercy Hospital in Miami.

Jessica Halem, MBA, was recently the LGBTQ outreach and engagement director at Harvard Medical School and was unique in her role among medical schools in the United States.

Under her leadership, the first-year class has grown from 4% to 15% self-identified LGBTQ, and the faculty and resident OutList has quadrupled in size. Most recently, Ms. Halem secured a major grant to overhaul the entire curriculum to integrate sexual and gender minority health equity.

Prior to joining Harvard, Ms. Halem ran the Lesbian Community Cancer Project in Chicago, where she implemented the nation's first cultural competency trainings for the Centers for Disease Control and served on then-candidate Obama's first LGBT advisory committee. She has fought for the inclusion of transgender health on the national agenda since 2001. She coaches students, faculty, and administrators on dealing with difficult moments and is a sought-out speaker nationally on issues of workplace diversity and inclusion.

Ms. Halem has published on treating transgender patients (*AMA Journal of Ethics*, 2016), microaggressions (*Medical Care*, 2018), and mentoring across difference (*Mentoring Diverse Leaders,* Routledge, 2017). She currently serves on the board of the Tegan and Sara Foundation.

Ms. Halem received her undergraduate degree from Sarah Lawrence College and her MBA from Simmons University.

Karen Hauer, MD, PhD, is associate dean for competency assessment and professional standards and a professor of medicine at the University of California, San Francisco (UCSF). She is a practicing general internist in primary care.

Dr. Hauer designs and leads the program of assessment in the UCSF School of Medicine Bridges curriculum and directs the school's medical student coaching program. She is an active researcher in medical education and a research mentor for fellows, residents, and students, with a focus on competency-based medical education, learner assessment, coaching, and remediation.

Dr. Hauer is active on leadership committees with the National Board of Medical Examiners, serves as deputy editor for the journal *Medical Education*, and is past president of the Clerkship Directors in Internal Medicine national organization.

Dr. Hauer earned her undergraduate degree at Stanford University and completed medical school and residency in internal medicine at UCSF, where she served as

chief resident. In 2015, she completed a doctoral degree in medical education in a joint program with UCSF and the University of Utrecht in the Netherlands.

Sharonne N. Hayes, MD, is a professor of cardiovascular medicine who founded and maintains an active clinical practice and research program in the Women's Heart Clinic at Mayo Clinic in Rochester, Minnesota. She was appointed Mayo Clinic's first director of diversity and inclusion in 2010.

Under her leadership, Mayo Clinic has been nationally recognized for its diversity and inclusion accomplishments. Dr. Hayes leads efforts aimed at optimizing women's health and applies her considerable expertise to advance health and workforce equity. Dr. Hayes has led efforts to optimize clinical practice and research activities in women's health at Mayo Clinic and developed programs to enhance the professional and personal development and mentorship of women and minority physicians and to mitigate unconscious bias in order to promote a more diverse workforce at Mayo and in the field of medicine. She was a founder of Time's Up Healthcare and is a tireless advocate for safe, equitable, and dignified health care workplaces that promote high-quality patient care. Dr. Hayes's research interests include sex- and gender-based cardiology, spontaneous coronary artery dissection, health equity, participation of women and minorities in medical research, health care workforce equity, and the utility and optimal role of social media in clinical practice, medical research, and health education.

Dr. Hayes has received the WomenHeart's Wenger Award, the *Woman's Day* magazine Red Dress Award, and the American Heart Association's women's mentorship award. She received an invitation from First Lady Laura Bush to speak at the White House for the first National Wear Red Day in 2004. Dr. Hayes is a nationally recognized speaker and educator and has been featured on the *TODAY* show, *Good Morning America*, CNN, and *Talk of the Nation*, among other appearances. Dr. Hayes is a fellow of the American College of Cardiology and the American Heart Association and a member of the Association of Black Cardiologists.

Dr. Hayes received her medical degree from Northwestern University in Chicago and pursued fellowships in internal medicine, cardiovascular research, and cardiovascular diseases at Mayo Clinic.

Holly J. Humphrey, MD, MACP, is the eighth president of the Josiah Macy Jr. Foundation. Prior to her appointment, she served for 15 years as the Ralph W. Gerard professor in medicine and dean for medical education at The University of Chicago.

In 1989, Dr. Humphrey and a colleague delivered the country's first White Coat Ceremony address at The University of Chicago. The Gold Foundation later adopted and formalized this ceremony and today supports similar events in medical and nursing schools across the country. During her tenure as dean for medical education, she led efforts at The University of Chicago to increase diversity and belonging by developing pipeline programs and formal mentoring, including cofounding the Bowman Society, which explores issues of health inequity and provides mentoring for those underrepresented in medicine. She was the founding dean of the school's Identity and Inclusion Committee, which advances civil discourse on campus. She is also the founding dean of the Academy of Distinguished Medical Educators and the MERITS fellowship program for faculty pursuing research, innovation, teaching, and scholarship in medical education. The NorthShore University HealthSystem gave a $1 million gift creating the Holly J. Humphrey Medical Education Fund at The University of Chicago in recognition of her leadership in medical education.

Dr. Humphrey is chair of the Kaiser Permanente Bernard J. Tyson School of Medicine's board of directors. She is chair emeritus of the American Board of Internal Medicine and the American Board of Internal Medicine Foundation and a past president of the Association of Program Directors in Internal Medicine.

Dr. Humphrey earned her medical degree with honors from The University of Chicago. Following an internal medicine residency, a pulmonary and critical care fellowship, and chief residency, all at The University of Chicago, she served a 14-year tenure as director of the internal medicine residency program. Graduating medical students at The University of Chicago honored Dr. Humphrey five times with the Gender Equity Award and more than 25 times with the Favorite Faculty Teaching Award.

Lisa I. Iezzoni, MD, MSc, is professor of medicine at Harvard Medical School and is based at the Health Policy Research Center, Mongan Institute, Massachusetts General Hospital.

Dr. Iezzoni has conducted numerous studies for the Agency for Healthcare Research and Quality, the National Institutes of Health, Medicare, and private foundations. Her early career focused on risk-adjustment methods for costs and clinical outcomes and assessing quality of care; she wrote and edited *Risk Adjustment for Measuring Health Care Outcomes*, now in its fourth edition. Since 1998, her research has focused on improving the lived experiences and health care quality of adults with disability. Her book *When Walking Fails* was published in 2003, and *More Than Ramps: A Guide to Improving Health Care Quality and Access for People with Disabilities,* coauthored with Bonnie L. O'Day, appeared in 2006.

Dr. Iezzoni also spends considerable volunteer time advocating for persons with disability. Representing the Boston Center for Independent Living, she chaired the Medical Diagnostic Equipment Accessibility Standards Advisory Committee for the US Access Board from 2012 to 2013. Dr. Iezzoni is a member of the National Academy of Medicine and the National Academy of Sciences.

Dr. Iezzoni received her master's degree in health policy and management from the Harvard TH Chan School of Public Health and her medical degree from Harvard Medical School.

Sachin H. Jain, MD, MBA, FACP, became president and CEO of SCAN Group and Health Plan on July 1, 2020.

Most recently, Dr. Jain was president and CEO of CareMore Health and Aspire Health, innovative integrative healthcare delivery companies. He led growth, diversification, expansion and innovation of these companies and they grew to serve over 180,000 patients in 32 states with $1.6B in revenues. Under his leadership, CareMore built and scaled industry-leading programs to address loneliness, deliver hospital and primary care at home, and address the clinical needs of the highest-risk, highest-need patients.

Dr. Jain was previously chief medical information and innovation officer at Merck and Co. He also served as an attending physician at the Boston VA-Boston Medical Center and a faculty member at Harvard Medical School and Harvard Business School. From 2009–2011, Dr. Jain worked in the Obama administration, where he was senior advisor to Donald Berwick, who led the Centers for Medicare and Medicaid Services. Dr. Jain was the first deputy director for policy and programs at the Center for Medicare and Medicaid Innovation.

He has published over 100 peer-reviewed articles in journals such as the *New England Journal of Medicine*, *JAMA* and *Health Affairs*, and was an editor of the book, *The Soul of a Doctor*. Dr. Jain is adjunct professor of medicine at the Stanford University School of Medicine and a contributor at *Forbes*. In addition, he serves on the Board of Directors at Make-A-Wish America.

Dr. Jain graduated magna cum laude from Harvard College with a BA in government and earned his medical degree from Harvard Medical School and MBA from Harvard Business School. He trained in medicine at the Brigham and Women's Medicine,.

Pamela R. Jeffries, PhD, RN, FAAN, ANEF, FSSH, serves as professor and dean of George Washington University School of Nursing. She is internationally known for her research and work in nursing, simulation, and health care education. Throughout the academic community, she is well regarded for her scholarly contributions to the development of innovative teaching strategies, experiential learning techniques, new pedagogies, and the delivery of content using technology.

As the principal investigator on grants funded by federal and state agencies and numerous national organizations, including the National League for Nursing (NLN) and the National Council of State Boards of Nursing, Dr. Jeffries has provided leadership and mentorship on groundbreaking projects impacting both nursing practice and education. With the NLN, Dr. Jeffries developed her major contribution to simulation scholarship, the framework and monograph now known as the NLN Jeffries Simulation Theory.

Dr. Jeffries is a sought-after keynote speaker and delivers presentations nationally and internationally on nursing leadership and her research. Throughout her career, she has shared her expertise in clinical education, simulations, and other emerging technologies as a consultant to health care organizations, corporations, and publishers. Her numerous publications cover a wide range of topics pertinent to nursing education, clinical simulations, and health care policy.

Dr. Jeffries received her bachelor's degree in nursing from Ball State University. She completed master's and doctoral degrees in nursing at Indiana University.

Ann Kurth, PhD, CNM, MPH, FAAN, is dean and Linda Koch Lorimer professor at the Yale University School of Nursing and a professor of epidemiology of microbial diseases at the Yale School of Public Health. Yale Nursing was the world's first university-based school of nursing, and it advocates for "better health for all people."

Dr. Kurth is an elected member of the National Academy of Medicine and a Fellow of the American Academy of Nursing. She was a member of the 2014–2018 US Preventive Services Task Force, which sets screening and primary care prevention guidelines for the United States. She is a member of the New York Academy of Medicine and the Connecticut Academy of Science and Engineering. Dr. Kurth is the 2018–2020 chair of the Consortium of Universities for Global Health, an academic global health network with more than 190 university members, whose mission is to support "academic institutions and partners to improve the wellbeing of people and the planet through education, research, service, and advocacy."

Dr. Kurth is an epidemiologist and clinically trained nurse midwife. Her research focuses on HIV/reproductive health and global health system strengthening, particularly in the context of climate change. Her work has been funded by the National Institutes of Health (NIAID, NIDA, NIMH, NICHD), the Bill and Melinda Gates Foundation, UNAIDS, the Centers for Disease Control, the Health Resources and Services Administration, and others, for studies conducted in the United States and internationally. Dr. Kurth has consulted for the NIH, the Gates Foundation, the WHO, USAID, and the CDC, among others.

Dr. Kurth has published over 200 peer-reviewed articles, book chapters, and scholarly monographs and presented at hundreds of scientific conferences and invited talks. Dr. Kurth has received awards for her science and leadership, including the Friends of the National Institute of Nursing Research Award and the International Nurse Researcher Hall of Fame award from Sigma Theta Tau International, the global nursing honor society. She chairs the National Academy of Medicine's Board on Global Health, 2018–2020.

Dr. Kurth received her undergraduate degree from Princeton University and her MPH in population and family health from Columbia University. She completed her MSN degree at Yale University, focusing on maternal-newborn nursing, and received her doctoral degree in epidemiology from the University of Washington.

Dana Levinson, MPH, is the associate dean for medical school administration at The University of Chicago Pritzker School of Medicine. In this role, she provides leadership and administrative oversight for undergraduate medical education. She has served as a key member of the leadership team at Pritzker since 2003.

While serving at Pritzker, Ms. Levinson has participated in the launch of numerous programs to enhance the stature of the medical school and to provide effective support to medical students. She helped to design and lead the implementation of a robust career advising program, which included the use of data analytics in a match database, allowing advisors to provide individualized advice to medical students in the residency application process. Unlike national databases, this tool allows students and advisors to assess their process and competitiveness on a discipline and program level with the benefit of data from multiple prior classes of Pritzker students. The Pritzker School of Medicine was honored in 2019 with the Careers in Medicine Excellence in Medical Student Career Advising Program Award for this multifaceted and holistic program.

In the last five years, Ms. Levinson has supported and led coordinated initiatives in admissions and multicultural affairs, which resulted in significantly enhanced diversity of the medical student body, with an increase in students who are underrepresented in medicine, first-generation college students, low-income students, and members of other minority or marginalized groups in medicine. Recognizing that improving structural diversity without attending to inclusion fails to leverage the full benefits of that diversity, Ms. Levinson was instrumental in developing and implementing the Identity and Inclusion (i2i) initiative in 2016, which promotes a respectful and supportive learning community as well as effective communication around issues of identity.

In collaboration with faculty and staff, Ms. Levinson has conducted research and coauthored numerous peer-reviewed publications on issues related to mentoring, professionalism, and diversity and inclusion in medical education.

Ms. Levinson received her bachelor's degree from Princeton University and completed her MPH degree at the University of Illinois at Chicago.

Catherine R. Lucey, MD, MACP, is vice dean for education and executive vice dean for the School of Medicine at the University of California, San Francisco (UCSF). She directs the undergraduate, graduate, and continuing medical education programs of the School of Medicine and the Office of Medical Education. Dr. Lucey is on the executive management team for the School of Medicine's Differences Matters initiative and oversees other strategic initiatives for the medical school and the campus. Dr. Lucey joined UCSF from Ohio State University, where she was vice dean for education for the College of Medicine and associate vice president for health sciences education for the Office of Health Sciences.

Dr. Lucey's national portfolio of work has included membership in the National Academy of Medicine, the board of directors of the Association of American Medical Colleges, and the American Board of Medical Specialties. Additionally, she served as chair of the American Board of Internal Medicine. In these roles, she has worked to influence the direction of academic medicine and the continuum of medical education in ways aligned with UCSF's approach to education, culture, and community.

Dr. Lucey earned her medical degree from Northwestern University School of Medicine. She completed her residency in internal medicine at UCSF, including service as chief resident at the UCSF-affiliated San Francisco General Hospital.

Camila M. Mateo, MD, MPH, is a primary care pediatrician at Boston Children's Hospital and Martha Eliot Health Center focusing on the care of underserved children. She is an instructor of pediatrics and affiliate faculty of global health and social medicine at Harvard Medical School, where she is currently the co-director of social medicine. Dr. Mateo also serves as faculty advisor for the Office of Multicultural Affairs at Harvard Medical School and diversity officer for the Boston Combined Residency Program. Dr. Mateo's research focuses on the impacts of bias and discrimination on the health of patients and programming to reduce bias in health providers. Her medical education work focuses on diversity and inclusion, health equity, and bias in medicine.

Dr. Mateo attended the University of Florida before completing her medical degree at the Columbia College of Physicians and Surgeons. She completed her residency

in pediatrics and served as chief resident in the Boston Combined Residency Program at Boston Children's Hospital and Boston Medical Center, where she was a part of the Urban Health and Advocacy Track. Following her medical training, Dr. Mateo completed the Harvard-wide pediatric health services fellowship and obtained an MPH at the Harvard TH Chan School of Public Health.

William A. McDade, MD, PhD, is the chief diversity and inclusion officer for the Accreditation Council for Graduate Medical Education (ACGME). In this new role for ACGME, he works to fulfill its mission to increase physician diversity and ensure inclusive clinical learning environments for our nation's residencies and fellowships.

Dr. McDade previously served as executive vice president and chief academic officer for the Ochsner Health System, Louisiana's largest nonprofit, academic, multispecialty health system. In addition to serving on the executive leadership team, he directly oversaw undergraduate, graduate, and continuing medical education and allied health programs and shaped the research agenda.

Prior to his appointment at Ochsner, Dr. McDade was a professor of anesthesia and critical care at The University of Chicago, where he also served as deputy provost for research and minority issues and as associate dean for multicultural affairs for the Pritzker School of Medicine. Dr. McDade served as a director on the ACGME board and chaired its planning committee for diversity in GME in 2018. He has been a member of the National Board of Medical Examiners (NBME) and the US Department of Education's National Committee on Foreign Medical Education and Accreditation, and he currently serves as the American Medical Association's board representative to the NBME's Coalition for Physician Accountability.

Dr. McDade has long been a champion for the elimination of health disparities and for diversifying the medical workforce. He served on the Commission to End Health Care Disparities and founded the Dr. James E. Bowman Society at The University of Chicago. In 2016, he was elected to the board of trustees of the American Medical Association, and he has served the AMA in multiple roles.

Dr. McDade is a past president and past chair of the board of trustees of both the Illinois State Medical Society and the Chicago Medical Society. A recipient of the National Medical Fellowships Distinguished Alumni Award, the National Medical Association's James Whittico Award, and The University of Chicago Biological

Sciences Division's Distinguished Faculty Award for Excellence in Diversity and Inclusion, Dr. McDade was named a senior scholar of the Bucksbaum Institute for Clinical Excellence and has been recognized by The University of Chicago Alumni Association for distinguished service.

Dr. McDade received his undergraduate degree in chemistry from DePaul University. He earned his doctoral degree in biophysics and theoretical biology and his medical degree from The University of Chicago. He stayed there to complete his internship in internal medicine, then completed his residency in anesthesiology at Massachusetts General Hospital. A member of Alpha Omega Alpha, Dr. McDade focuses on clinical anesthesiology and the treatment of sickle cell disease.

Fredric B. Meyer, MD, is a consultant and neurosurgeon. He is enterprise chair of the Department of Neurologic Surgery at Mayo Clinic and holds the distinction of a named professorship, the Alfred Uihlein family professorship in neurologic surgery. He is currently the Juanita Kious Waugh executive dean for education of Mayo Clinic College of Medicine and Science and dean of Mayo Clinic Alix School of Medicine.

Dr. Meyer has held many leadership positions in professional organizations. He has been the president of the American Academy of Neurological Surgery and a member of the board of directors of the American Association of Neurological Surgeons. He has been director, secretary, and chair of the American Board of Neurological Surgery and is currently serving as executive director.

Dr. Meyer attended Deerfield Academy and earned a bachelor's degree in biology at the University of Pennsylvania. He earned his medical degree at Boston University and then trained in general surgery, neurosurgery, and cerebrovascular research at Mayo Graduate School of Medicine.

Valerie Montgomery Rice, MD, FACOG, is the sixth president as well as dean of Morehouse School of Medicine (MSM) and the first woman to lead the freestanding medical institution. A renowned infertility specialist and researcher, she most recently served as dean and executive vice president of MSM. She provides a valuable combination of experience at the highest levels of patient care and medical research as well as organizational management and public health policy.

Prior to joining MSM, Dr. Montgomery Rice held faculty positions and leadership roles at various health centers, including academic health centers. Most notably, she was founding director of the Center for Women's Health Research at Meharry Medical College, one of the nation's first research centers devoted to studying diseases that disproportionately impact women of color.

Dedicated to the creation and advancement of health equity, Dr. Montgomery Rice lends her vast experience and talents to programs that enhance pipeline opportunities for academically diverse learners, diversify the physician and scientific workforce, and foster equity in health care access and health outcomes. To this end, she holds memberships in various organizations, including the National Academy of Medicine, and participates on a number of boards, such as those of the National Center for Advancing Translational Sciences, the Metro Atlanta Chamber, Kaiser Permanente Bernard J. Tyson School of Medicine, the Nemours Foundation, UnitedHealth Group, Westside Future Fund, the Josiah Macy Jr. Foundation, the Association of American Medical Colleges Council of Deans, and the Horatio Alger Association.

Dr. Montgomery Rice has received numerous accolades and honors. She was named to the Horatio Alger Association of Distinguished Americans and received the 2017 Horatio Alger Award. For three consecutive years *Georgia Trend* magazine selected Dr. Montgomery Rice as one of the 100 Most Influential Georgians. Other honors include the Girls Inc. Smart Award, the National Medical Association OB/GYN 2019 Legend of the Section Award, the Turknett Leadership Character Award, the Visions of Excellence Award, Atlanta Business League CEO Appreciation Recognition, the Links Incorporated Co-Founders Award, the Trumpet Vanguard Award, the Dorothy I. Height Crystal Stair Award, the National Coalition of 100 Black Women – Women of Impact Award, the YWCA Women of Achievement Award (Atlanta and Nashville), the American Medical Women's Association Elizabeth Blackwell Medal, and the Working Mother Media Multicultural Women's Legacy Award.

Dr. Montgomery Rice holds a bachelor's degree in chemistry from the Georgia Institute of Technology, a medical degree from Harvard Medical School, an honorary degree from the University of Massachusetts Medical School, and a doctor of humane letters honorary degree from Rush University. She completed her residency in obstetrics and gynecology at Emory University School of Medicine and her fellowship in reproductive endocrinology and infertility at Hutzel Hospital.

David Muller, MD, is dean for medical education, professor of medical education and medicine, and the Marietta and Charles C. Morchand chair for medical education at the Icahn School of Medicine at Mount Sinai.

Dr. Muller's current work focuses on the impact of racism and bias on medical education, creating alternative pathways to medical school in an effort to redefine national standards for undergraduate and postbaccalaureate pre-med preparation, and developing creative training opportunities for medical students who are interested in diverse careers in medicine. Dr. Muller cofounded and directed the Mount Sinai Visiting Doctors Program. Founded in 1995, Visiting Doctors is now the largest academic physician home visiting program in the country.

Dr. Muller's recent honors include the 2015 Alpha Omega Alpha Robert J. Glaser Distinguished Teacher Award and the 2009 American Medical Association Foundation Pride in the Profession Award. Under his leadership, the Icahn School of Medicine was recognized with the Association of American Medical Colleges Spencer Foreman Community Service Award in 2009. In 2004 he was inducted into the Gold Humanism Honor Society.

Dr. Muller received his bachelor's degree from Johns Hopkins University and his medical degree from New York University School of Medicine. He completed his internship and residency in internal medicine at The Mount Sinai Medical Center, where he spent an additional year as chief resident.

Marc A. Nivet, EdD, MBA, has been a leading advocate for justice and fairness in academic medicine for the past 25 years and is one of the most effective voices in the industry on the need for greater diversity and inclusion in the medical workforce. His evidence-based approach provides authoritative guidance and support to policy makers and health care leaders as they develop programs and allocate resources. His research has also heightened awareness of both ongoing and emergent issues specific to underrepresented minorities in medicine.

Dr. Nivet is currently the executive vice president for institutional advancement at the University of Texas Southwestern Medical Center, where he leads the collaborative activities of development and alumni relations; technology

development and commercialization; communications, marketing, and public affairs; government affairs and policy; community and corporate relations; and institutional equity and access. The ongoing work of his extensive team is to elevate recognition, improve engagement, and build relationships to further the institution's mission.

Prior to this role, Dr. Nivet served as the chief diversity officer for the Association of American Medical Colleges, where he focused on advancing diversity, inclusion, and equity in health care in academic medicine. There he created the Diversity 3.0 framework, which moves diversity and inclusion from the periphery of an institution's drive for excellence to its core. He has consulted with more than 134 medical school deans, and he travels the country to work with other administrative leaders on request.

He also served as chief operating officer and treasurer for the Josiah Macy Jr. Foundation, which aligns workforce training with the dynamic needs of patients, and was special assistant to the senior vice president for health at New York University. Dr. Nivet is a fellow of the New York Academy of Medicine and former president of the National Association of Medical Minority Educators.

Dr. Nivet earned his doctorate in higher education management from the University of Pennsylvania and his MBA degree with a focus on health care management from George Washington University's School of Business.

Dale O. Okorodudu, MD, is assistant professor of medicine at the University of Texas (UT) Southwestern Medical Center and holds a clinical practice at the Dallas Veterans Affairs Medical Center. He is also founder of DiverseMedicine Inc. and the *Black Men in White Coats* video series. Dr. Okorodudu has a passion for addressing health care disparities, which he has done by promoting diversity in the medical workforce. He is also a best-selling author with multiple books focused on developing tomorrow's leaders in medicine.

Dr. Okorodudu completed both his bachelor's and medical degrees at the University of Missouri, then relocated to Durham, North Carolina, where he completed his internal medicine residency training at Duke University Medical Center. Following his time at Duke, Dr. Okorodudu returned to his home state of

Texas and completed his pulmonary and critical care fellowship at UT Southwestern Medical Center.

Margaret L. Plews-Ogan, MD, is the Brodie professor of medicine at the University of Virginia. She currently directs the university's Foundations in Clinical Medicine program and is founding director of Be Wise: A Program on Professionalism and Peer Support. She developed Stepping In: Creating a Culture of Respect and Inclusion. This comprehensive program addresses policy, processes, and education designed to help people step in and respond productively to situations of disrespect, bias, and bigotry in health care and includes a video-based intensive training workshop. In November 2019 she and colleagues held a national train-the-trainer conference and developed a multi-institutional collaborative to study the effectiveness of this training program.

Dr. Plews-Ogan began her health professions work as a nurse practitioner working with migrant farmworkers before completing her medical training, later returning to work with farmworkers as a physician. In 2000 she moved to the University of Virginia. She served as division chief of general medicine, geriatrics, and palliative medicine from 2004 to 2014 and started the hospitalist program and the Center for Appreciative Practice. Her research initially focused on patient safety and medical error and is now focused on wisdom. Her work included a large grant to study how people cope positively with adversity and how wisdom is developed out of adversity, including a study on how physicians cope with mistakes.

Dr. Plews-Ogan's work resulted in a full-length public television documentary (*Choosing Wisdom*), multiple book chapters (in *Applying Wisdom to Contemporary World Problems*, *Post-traumatic Growth to Psychological Well-being: Coping Wisely With Adversity*, and *Handbook of Heroism and Heroic Leadership*), three books (*Appreciative Inquiry in Health Care*, *Choosing Wisdom*, and *Wisdom Leadership in Academic Health Science Centers*). She served as sub-principal investigator on the Macy Foundation's multi-institutional faculty development program on humanism in medicine.

Dr. Plews-Ogan completed her medical degree at Harvard Medical School and her residency in internal medicine at the Brigham and Women's Hospital.

Wayne J. Riley, MD, MPH, MBA, MACP, is the 17th president of the State University of New York, Downstate Health Sciences University. A distinguished physician, academician, clinician-educator, and administrator, Dr. Riley was unanimously elected by the trustees of the SUNY system and began his tenure in April 2017. Downstate is the only academic medical center serving Brooklyn, one of the most diverse communities in the nation. Since his appointment, Dr. Riley has worked to achieve high levels of excellence across Downstate's multiple enterprises.

Immediately prior to joining Downstate, Dr. Riley served as a clinical professor of medicine and an adjunct professor of health care management and health policy at the Vanderbilt University School of Medicine. He was the 10th president and chief executive officer of Meharry Medical College from 2007 to 2013. He began his career at Baylor College of Medicine, where he rose to vice president and vice dean for health affairs and governmental relations. During that time, he also served as assistant chief of the medicine service at Ben Taub General Hospital, the safety-net teaching hospital serving the indigent and uninsured of Harris County and Houston, Texas. Prior to pursuing a career in medicine, he served in three capacities in the Office of the Mayor, City of New Orleans.

Dr. Riley is president emeritus and a master of the American College of Physicians and an elected member of the National Academy of Medicine, secretary and member of the board of directors of the Arnold P. Gold Foundation, secretary-treasurer of the Society of Medical Administrators, a member of the American Clinical and Climatological Association, and a fellow and member of the board of directors of the New York Academy of Medicine. He is the recipient of numerous awards and honors, including election to Alpha Omega Alpha Honor Medical Society, the Arnold P. Gold Medical Humanism Honor Society, and the Delta Omega Public Health Honor Society. He was awarded the SUNY Downstate Ailanthus Award for Outstanding Public Health Leadership and holds honorary degrees from SUNY Downstate, Tuskegee University, and Mount Saint Joseph University.

Dr. Riley earned his medical degree from the Morehouse School of Medicine. He also holds a bachelor's degree in anthropology with a concentration in medical anthropology from Yale University, an MPH degree in health systems management from Tulane University School of Public Health and Tropical Medicine, and an MBA from Rice University's Jesse H. Jones Graduate School of Business.

Fidencio Saldaña, MD, MPH, is dean for students at Harvard Medical School (HMS). He is also a clinical cardiologist at the Brigham and Women's Hospital, specializing in cardiovascular imaging. In his administrative role, he oversees the Office of Student Affairs, which collaborates with the Harvard Medical School academic societies to support and guide students in their individual and professional growth. He leads the new HMS Wellness and Mental Health Initiative, a student-faculty program whose mandate is to develop programs and initiatives that promote the health and wellness of students.

Dr. Saldaña has an abiding commitment to diversity in medicine. From 2010 to 2016 he served as faculty assistant dean for student affairs in the Office of Recruitment and Multicultural Affairs. During this time, he received the Excellence in Diversity and Inclusion Award from HMS, a Brigham and Women's Health Care Center for Faculty Development and Diversity Pillar Award, and an Excellence in Mentoring Award from the Latino Medical Student Association. In 2016 he received national recognition for advising with the Careers in Medicine Excellence in Medical Student Career Advising Advisor Award from the Association of American Medical Colleges. He is a devoted teacher as well as mentor and co-chairs the Practice of Medicine course for first-year students at HMS. He has received numerous awards recognizing his teaching and mentoring, including the Award for Excellence in Mentoring by a Junior Faculty Member and the Charles McCabe Faculty Prize for Excellence in Teaching at Harvard Medical School.

Dr. Saldaña received his bachelor's degree from Stanford University, his medical degree from Harvard Medical School, and his MPH degree from the Harvard TH Chan School of Public Health. He completed his internal medicine residency, chief residency, and cardiology fellowship at the Brigham and Women's Hospital.

Stephen C. Schoenbaum, MD, MPH, is special advisor to the president of the Josiah Macy Jr. Foundation, a role he has held since 2011.

From 2000 to 2010, Dr. Schoenbaum was executive vice president for programs at the Commonwealth Fund and executive director of its Commission on a High Performance Health System. The Fund is a national foundation devoted to improving coverage and access to health care and quality of care through its

support of health services research and health policy analysis. As executive vice president, Dr. Schoenbaum oversaw all of the grant-making programs of the Fund. The Commission on a High Performance Health System, from its inception in 2005, recommended policies that could improve the performance of the US health system with respect to coverage, access, quality, efficiency, and equity of care.

From 1993 to 1999, Dr. Schoenbaum was medical director and then president of Harvard Pilgrim Health Care of New England, a mixed-model HMO delivery system in Providence, Rhode Island. From 1981 to 1993, he was deputy medical director at Harvard Community Health Plan in the Boston area, where his roles included developing specialty services, disease management programs, and clinical guidelines and enhancing the plan's computerized clinical information systems. He was also a founder of what is today the Harvard Medical School Department of Population Medicine. Nationally, he played a significant role in the development of the Healthcare Effectiveness Data and Information Set. At Harvard Community Health Plan, he practiced general internal medicine.

Dr. Schoenbaum was vice-chairman of the board of the Picker Institute and president of the board of the American College of Physician Executives (now the American Association for Physician Leadership). For 22 years he was a member of the international academic review committee at the Joyce and Irving Goldman Medical School, Ben-Gurion University, in Beer Sheva, Israel. He is a fellow of the American College of Physicians and an honorary fellow of the Royal College of Physicians. He is the author of more than 180 publications.

Dr. Schoenbaum received his undergraduate degree from Swarthmore College in mathematics, philosophy, and psychology. He completed his medical degree at Harvard Medical School and later received his MPH from the Harvard TH Chan School of Public Health. In his early career, Dr. Schoenbaum trained as an epidemiologist at the Centers for Disease Control, became an infectious diseases specialist, was a member of the Department of Medicine at what is now Brigham and Women's Hospital, and became an associate professor of medicine at Harvard Medical School and later an associate professor of ambulatory care and prevention.

Mark A. Schuster, MD, PhD, became founding dean and CEO of the innovative Kaiser Permanente Bernard J. Tyson School of Medicine in October 2017. Prior to that, he served as the William Berenberg professor of pediatrics at Harvard Medical

School, as well as chief of general pediatrics and vice chair for health policy in the Department of Medicine at Boston Children's Hospital beginning in 2007.

Dr. Schuster is recognized as an international leader in research on child, adolescent, and family health, having received funding from the National Institutes of Health, the Centers for Disease Control and Prevention, and the Agency for Healthcare Research and Quality on topics such as quality of care, health disparities, family leave, HIV prevention, obesity prevention, and adolescent sexual health. He has also studied bullying and sexual and gender minority health. He previously served as a professor of pediatrics and health services at the University of California, Los Angeles schools of medicine and public health and as director of health promotion and disease prevention at the RAND Corporation, the Santa Monica think tank.

Dr. Schuster has coauthored over 250 journal articles and two books. He is an elected member of the National Academy of Medicine and has served as president of the Academic Pediatric Association. He is a recipient of the Richardson Award for lifetime achievement from the Society for Pediatric Research, the Barger Excellence in Mentoring Award from Harvard Medical School, and the Joseph St. Geme Jr Award for leadership in pediatrics from the Federation of Pediatric Organizations.

Dr. Schuster received his bachelor's degree summa cum laude from Yale University, his medical degree from Harvard Medical School, his MPP from the Harvard Kennedy School of Government, and his doctoral degree from the Pardee RAND Graduate School. He completed his pediatric residency at Boston Children's Hospital and his fellowship in the UCLA Robert Wood Johnson Clinical Scholars Program.

Kelly Stacy, MHSA, BSN, RN, is a PhD student and graduate assistant at the University of Cincinnati College of Nursing.

Ms. Stacy's doctoral research investigates the needs and concerns of family caregivers of people living with Lewy body dementia. With more than 20 years' experience as a nurse and health care consultant, Ms. Stacy combines clinical knowledge with process improvement skills to drive change in the health care industry.

Ms. Stacy currently serves as a nurse intervener with the Caregiver Self-Management Needs Through Skill-Building study funded by the National Institutes of Health, National Institute of Nursing Research.

Ms. Stacy holds a bachelor's degree in nursing from the University of Cincinnati and a master's degree in health services administration from Xavier University in Cincinnati, Ohio.

Monica Vela, MD, FACP, is professor of medicine and associate vice chair for diversity in The University of Chicago's Department of Medicine as well as associate dean for multicultural affairs at The University of Chicago Pritzker School of Medicine. She directs coursework designed to promote the advocacy efforts of medical students interested in ending health disparities and promoting health equity and to improve physician communication skills across cultures. Her course is the only one in the extant literature shown to improve the diversity of medical school applicants and improve the cultural climate among medical students. She has traveled across the country teaching educators to establish such coursework at medical schools and undergraduate campuses.

Dr. Vela's research spans medical education on health disparities and care of patients with limited English proficiency as well as diversity in the medical profession. She maintains a clinical practice in the primary care group, where she also precepts medical students and residents. She mentors junior faculty addressing disparities in health on the south side of Chicago. She has directed three pipeline programs targeting the promotion of minority students into scientific research and the health profession. She continues to direct two such programs at the Pritzker School of Medicine.

In 2016, Dr. Vela was appointed director of the Bowman Society. She has drawn medical students, house staff, and faculty from across the city to attend the inaugural Black Men in Medicine forums held in November 2016 and 2017 and the inaugural Black and Latina Women in Medicine forums in February 2017 and 2018. She has received national awards such as the American College of Physicians Award for Diversity and Access to Care, the Society of General Internal Medicine Herbert Nickens Award for Diversity and Minority Health, and the inaugural Alpha Omega Alpha Fellow in Leadership Award. Locally, she received the University of Chicago Distinguished Faculty Award for Community Service and the Senior Distinguished

Leader Award in Diversity and Inclusion in the Department of Medicine. In 2020, she was selected by medical students to receive the Pritzker School of Medicine's Gold Humanism Award. She serves as the chair of the Association of American Medical Colleges Nickens Medical Student Scholarship Selection Committee and is a member of the Latino Medical Student Association executive board. She has been selected by Pritzker students as Favorite Faculty seven times since 2010 for her teaching.

Dr. Vela received her undergraduate degree in psychology from the University of Illinois at Urbana-Champaign. She completed medical school at the Pritzker School of Medicine and completed her residency in internal medicine at The University of Chicago.

Donald E. Wesson, MD, MBA, FACP, FASN, is the former president of the Baylor Scott & White Health and Wellness Center at Juanita J. Craft Recreation Center and is currently professor of medicine at Texas A&M College of Medicine in Dallas. In this role, Dr. Wesson is an advocate for improving the health of communities through focused, data-driven population health initiatives.

Dr. Wesson is a thought leader in academic medicine and an internationally recognized researcher in kidney acidifying mechanisms. He has translated his basic science studies to clinical studies examining the role of nutrition in population health and the kidney-protective benefit of nutrition. He has authored more than 100 peer-reviewed scientific papers on kidney physiology, more than a dozen books on kidney disease and hypertension, and many other papers on cigarette smoking and its effects on the kidneys.

Dr. Wesson previously served as vice dean of Texas A&M College of Medicine in Temple. His academic career includes roles as the SC Arnett professor of medicine and chairman of the Department of Internal Medicine and Physiology at Texas Tech University Health Sciences Center, as well as associate professor of medicine at Baylor College of Medicine, where he was assistant chief of the nephrology section at the Houston Veterans Affairs Hospital. He received multiple teaching awards while at Baylor College of Medicine and Texas Tech University Health Sciences Center.

Dr. Wesson was elected secretary-treasurer of the American Society of Nephrology (ASN) in 2007 after serving on a number of ASN committees since 1996. He has served on the board of directors of the American Board of Internal Medicine (ABIM) and its foundation since 2001 and is past chair of the ABIM board (2007–2008) and the ABIM Foundation (2012–2014). He has also held multiple positions at the National Kidney Foundation.

Dr. Wesson received his undergraduate degree from the Massachusetts Institute of Technology. He attended Washington University School of Medicine and earned his medical degree from Baylor College of Medicine in Houston, completed his internal medicine residency and internship at Baylor College of Medicine, and completed his nephrology research fellowship at the University of Illinois at Chicago. He earned his MBA from the University of Texas at Austin.

David S. Wilkes, MD, joined the University of Virginia School of Medicine in 2015 as dean and James Carroll Flippin professor of medical science. He has served as researcher, teacher, administrator, mentor, and executive and is a leader in medical education.

Before arriving at the University of Virginia, Dr. Wilkes was executive associate dean for research affairs at the Indiana University School of Medicine and assistant vice president for research at Indiana University. He was also director of the Indiana University School of Medicine's Physician Scientist Initiative. He currently serves on the board of visitors of the Lewis Katz School of Medicine at Temple University and the Villanova University board of trustees.

Dr. Wilkes has coauthored more than 100 research papers and holds six US patents. He is founder and chief scientific officer of ImmuneWorks, Inc, a biotech company that develops novel treatments for immune-mediated lung disease. Dr. Wilkes was the recipient of Indiana University's President's Medal, the highest distinction given to a faculty member in recognition of accomplishments and service to the university. He is national director of the Harold Amos Medical Faculty Development Program for the Robert Wood Johnson Foundation and has served on several advisory boards and committees of the National Institutes of Health. A military veteran, Dr. Wilkes served three years as a major in the US Air Force Medical Corps, where he earned a commendation medal for service.

A specialist in pulmonary disease and critical care medicine, Dr. Wilkes obtained an undergraduate degree from Villanova University before receiving a medical degree from Temple University School of Medicine in 1982. He completed an internship and residency at Temple University Hospital and a pulmonary and critical care fellowship at the University of Texas Southwestern Medical Center.

Zaina Zayyad, BS, is a fifth-year MSTP student at The University of Chicago Pritzker School of Medicine, where she holds the MSTP's Naomi Ragins Goldsmith fellowship.

Ms. Zayyad is currently pursuing her PhD in computational neuroscience with Professors John Maunsell and Jason MacLean. At Pritzker, she served as chair of the dean's council, during which time she collaborated with the Pritzker dean's office to inaugurate the Identity and Inclusion (i2i) committee. Since then, Ms. Zayyad has worked energetically to foster inclusion in the learning community and in patient care at Pritzker. Through working on various initiatives with i2i, including all-school discussions, civil discourse events, arts events, and an annual climate survey administered to the Pritzker student body, Ms. Zayyad hopes to promote an inclusive learning environment that promotes excellent and inclusive care. In the future, she plans to pursue a career in academic medicine.

Prior to matriculating at Pritzker, Ms. Zayyad attended Yale University and received her bachelor's degree in intensive molecular, cellular, and developmental biology. While at Yale, she conducted research in the Blumenfeld lab in the Department of Neurobiology as a Mellon Mays/Edward A. Bouchet undergraduate research fellow.