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Proceedings of the Diversity and Inclusion Innovation Forum: Unconscious Bias in Academic Medicine

How the Prejudices We Don't Know We Have Affect Medical Education, Medical Careers, and Patient Health

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Proceedings of the Diversity and Inclusion Innovation Forum: Unconscious Bias in Academic Medicine

How the Prejudices We Don't Know We Have Affect Medical Education, Medical Careers, and Patient Health

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Founded in 1876 and based in Washington, D.C., the Association of American Medical Colleges is a not-for-profit association dedicated to transforming health care through innovative medical education, cutting-edge patient care, and groundbreaking medical research. Its members comprise all 147 accredited U.S. and 17 accredited Canadian medical schools; nearly 400 major teaching hospitals and health systems, including 51 Department of Veterans Affairs medical centers; and more than 80 academic societies. Through these institutions and organizations, the AAMC serves the leaders of America's medical schools and teaching hospitals and their nearly 160,000 faculty members, 83,000 medical students, and 115,000 resident physicians.

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The Kirwan Institute's research is designed to be actively used to solve problems in society. Research and staff expertise are shared through an extensive network of colleagues and partners, ranging from other researchers, grassroots social justice advocates, policymakers, and community leaders nationally and globally, who can quickly put ideas into action.

This meeting proceedings was produced by the Association of American Medical Colleges and The Kirwan Institute for the Study of Race and Ethnicity. It reflects the opinions of the attendees of the AAMC Diversity and Inclusion Innovation Forum and does not reflect the official policy of the AAMC unless clearly specified.

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Foreword

The academic medicine community is rich with examples of how diversity is critical to the health of our nation:

- Diverse student populations have been shown to improve our learners' satisfaction with their educational experience.[1–3]
- Diverse teams have been shown to be more capable of solving complex problems than homogenous teams.[4–6]
- Health care is moving toward a more team-based, interprofessional model that values the contributions of a range of provider perspectives in improving patient outcomes.
- In the biomedical research enterprise, we see that investigators ask different research questions based on their own background and experiences. This implies that finding solutions to diseases that affect specific populations will require a diverse pool of biomedical researchers.

Despite these and many other examples of how diversity enriches the quality of health care and health research, there is still much work to be done to address the human biases that impede our ability to benefit from diversity in medicine. While academic medicine has made progress toward addressing overt discrimination, unconscious bias (also known as implicit bias) represents another threat to achieving these goals. Unconscious bias describes the prejudices we do not know we have. While unconscious biases vary from person to person, we all possess them. The existence of unconscious bias in academic medicine, while uncomfortable and unsettling, is a reality that we must address. To help our institutions do this, the AAMC partnered with Cook Ross to develop an unconscious bias learning lab for the health professions and produced an oft-cited video about addressing unconscious bias in the faculty advancement, promotion, and tenure process.[7,8]

To allow the greater academic medicine community to benefit from the knowledge of experts and best practices of peer institutions, the AAMC and The Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University convened the 2014 Diversity and Inclusion Innovation Forum. Invitees were unconscious bias researchers and people who have been developing unconscious bias interventions at their academic medicine institutions. The conversations from this forum and the interventions identified there are described in this publication; the views and opinions expressed here are those of the authors and Forum attendees. The report represents a great step forward in understanding the impact of unconscious bias in academic medicine. We reference many resources, publications, and tools that can help readers gain an understanding of unconscious bias. In addition to reading this publication, seeking out the resources will increase your knowledge of unconscious bias and help you develop interventions for addressing it.

Wherever you are on your journey of understanding unconscious bias in academic medicine, this publication is for you. It can help you understand how unconscious bias is impeding your ability to recruit the most talented students. If you are a program director, it can help you build a diverse resident pool. If you are a member of your institution's leadership, it can help you make your institution one to which faculty are attracted and where faculty of all backgrounds feel valued and thrive. Ultimately, it is about all of these factors coming together to help our institutions attain excellence and meet our collective mission: to improve the health of all.

It is our hope that you will find this resource useful and be inspired to discuss it with a colleague; use it for student, staff, or faculty development; and lead change efforts at your institution.

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Preface

Now that the most egregious and overtly harmful forms of conscious bias against entire population groups have been rendered illegal and socially unacceptable, it may be tempting to believe that equity has been achieved, both within academic medicine and society as a whole. However, compassionate and concerned administrators, deans, faculty, learners, and physicians all know that more remains to be done in academic medicine. But what, exactly?

Accepting and understanding the existence of unconscious bias is a vital next step, as AAMC President and CEO Darrell G. Kirch, MD, made clear at the AAMC's 2014 Learn Serve Lead meeting in Chicago. "Physicians and medical school faculty members are committed to treating all patients equally, yet research shows that everyone has unconscious biases that can affect how we interact with people from different experiences and backgrounds," he said. "We must provide new resources to help train our member institutions to overcome these blind spots and deliver high-quality training and care to all learners, employees, and patients."

Unconscious, or implicit, bias affects all aspects of academic medicine and contributes to the underrepresentation of racial and ethnic minorities at every level of the medical profession. On the patient-care front, racial and ethnic minorities continue to experience persistent and, at times, worsening health and health care disparities, including unmet needs, poorer quality of care, greater disease burden, and even untimely deaths.

As a national leader in championing inclusion in academic medicine, the AAMC holds a Diversity and Inclusion Forum each year with invited thought leaders from throughout academic medicine. The 2014 Forum focused on the pressing issue of unconscious bias: its causes, implications, and possible solutions. Recognizing that unconscious bias is both ubiquitous and responsive to "retraining," the AAMC, in partnership with The Kirwan Institute for the Study of Race and Ethnicity, devoted the third annual Diversity and Inclusion Forum to exploring the impact of unconscious bias on various facets of academic medicine.

In June 2014, a diverse group of national experts representing key stakeholders participated in day-long roundtable discussions on how unconscious bias affects these key areas of academic medicine:

- Medical school admissions
- Undergraduate medical education
- Resident recruitment
- Faculty recruitment
- Faculty mentoring
- Faculty advancement, promotion, and tenure
- Patient care

The results of those roundtables are before you. *Proceedings of the Diversity and Inclusion Innovation Forum: Unconscious Bias in Academic Medicine* includes chapters based on each of the Forum's roundtable discussions, followed by a chapter summarizing interventions recommended by Forum attendees.

As academic health center leaders who have dedicated our careers to caring for and educating others, the assertion that we harbor bias stands in contradiction to our identity as healers and educators and our professional codes of ethics. Yet, as you will see in the coming chapters, there are indisputable data—both qualitative and quantitative—showing that health care providers, educators, and leaders can unconsciously favor certain groups over others. We can make different clinical decisions based on gender, race and ethnicity, and social class. We promote faculty with equal training, education, and qualifications differently based on gender, race, and ethnicity. We treat learners and trainees differently based on their backgrounds. Self-awareness and deliberate action can lead to personal and institutional change.

Proceedings of the Diversity and Inclusion Innovation Forum: Unconscious Bias in Academic Medicine is a must-read for colleagues at all levels of academic medicine because it deals with the critical issue of how to educate the best doctors, provide the most effective health care, and build the most effective health care systems.

As a Forum attendee, I believe that the compelling evidence review and frank testimonies discussed in this publication will allow readers to help mitigate the impact of unconscious bias on medical education as we all strive to achieve new excellence in academic medicine.

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We are also grateful to Emily Paulsen and Darcy Lewis for their excellent editorial contributions to this publication. We would also like to thank all of the Forum attendees, listed in Appendix C, who gifted us with their extensive research and applied knowledge on this topic so we could share this meeting proceeding with the academic medicine—and broader health professional—community.

We are grateful to all of these people as well as to all who supported the work of this project as a whole.

Executive Summary

While academic medicine has made progress against overt discrimination, there is another threat to achieving a more diverse and egalitarian health care system: unconscious bias, or, in other words, the prejudices we don't know we have, yet all of us do.

Unconscious bias, also known as *implicit bias*, refers to attitudes or stereotypes that are outside our awareness and affect our understanding, our interactions, and our decisions. Researchers have found that we all harbor unconscious associations—both positive and negative—about other people based on characteristics such as race, ethnicity, gender, age, social class, and appearance. These associations may influence our feelings and attitudes and result in involuntary discriminatory practices, especially under demanding circumstances.

Health care is one of those demanding circumstances. There is ample evidence that unconscious bias in medicine can have life-altering consequences. It can affect the type and quality of care certain patients receive, as well as the training and career opportunities available to people identified with certain ethnic, cultural, and other underrepresented groups.

Given the widespread effects of unconscious biases in medicine, the Association of American Medical Colleges (AAMC) collaborated with The Ohio State University's Kirwan Institute for the Study of Race and Ethnicity to convene the 2014 Diversity and Inclusion Innovation Forum to explore how this phenomenon affects academic medicine and to identify interventions to mitigate the resulting harms. Invited attendees included national experts on bias, diversity, medical education, and health care disparities and represented medical institutions and health care organizations from across the country. Forum attendees generously and candidly shared their anecdotal insights and experiences in small group discussions during a day-long meeting at AAMC headquarters in Washington, D.C.

The Forum covered seven topics vital to academic medicine:

- Medical school admissions
- Undergraduate medical education
- Resident recruitment
- Faculty recruitment
- Faculty mentoring
- Faculty advancement, promotion, and tenure
- Patient care

The material captured from those conversations and presented in this publication will be of interest to clinicians, academicians, administrators, learners, and others concerned about the multifaceted dynamics of unconscious bias in the field of academic medicine and may point the way to proposed measures that minimize its effects. Table ES.1 summarizes the major themes that emerged from the Forum. This publication offers a starting place for discussions, assessments, and interventions about the role of unconscious bias at all levels of academic medicine.

Table ES.1. Major Chapter Themes from Participants at the Forum

Introduction	• To manage the overwhelming number of stimuli received each second, our brains use "shortcuts" to simplify and understand our surroundings more quickly. While these automatic, or unconscious, responses enable us to make faster decisions, they can also prompt us to jump to unwarranted conclusions. • The term "underrepresented in medicine" refers not only to racial and ethnic groups but to any group whose representation in the medical community or in an academic health center is smaller than in the general population. • Some "minority" populations are actually well represented among medical students and physicians, including people of Asian descent and women. However, these populations are underrepresented among faculty and in other leadership roles. • There is ample evidence that implicit attitudes respond to interventions and can be attenuated and even reversed.
Chapter 1: Medical School Admissions	• The multiple decision points in the admissions process present opportunities for unconscious bias to influence the selection of new students. • Admissions committee members may sometimes unconsciously create different sets of criteria for students based on their backgrounds or experiences. • The interview process, in particular, can introduce opportunities for bias.
Chapter 2: Undergraduate Medical Education	• Undergraduate medical education (UME) has historically been a white, male, heteronormative space; diversity initiatives are key to creating a climate of inclusive excellence. • Students can be affected by the unconscious biases of their peers and teachers, which can have lasting effects on their academic experience. • Students must be educated to examine their own biases during UME, the time when their professional identity as physicians begins to develop.
Chapter 3: Resident Recruitment and Selection	• Much like medical school admissions, residency selection can be influenced by the unconscious biases of program directors, current residents and house staff, and the applicants themselves. • Criteria used for admission to residency programs can introduce bias, including exam metrics, curriculum vitae, letters of recommendation, and the interview process. • While the effects of bias can affect decision making on the part of program directors, students who illuminate the biases of others may find themselves penalized during the residency-application process.

Chapter 4: Faculty Recruitment, Selection, and Hiring	• Unconscious bias can affect the faculty recruitment process even before positions are advertised. • The composition of selection committees and the criteria used to evaluate candidates influence the effects of unconscious bias on the hiring process. • The way institutions extend offers to candidates or introduce them to the local community may signal an unconscious undervaluing of diversity.
Chapter 5: Faculty Mentoring	• Mentoring is essential to navigating the political environment at an institution and can affect one's academic productivity and advancement. • Unconscious biases arising from differences in backgrounds among mentors and mentees—whether based on gender, race, or generation—may have the potential to permeate and challenge the mentoring relationship. • Effective mentoring involves mentors and mentees taking steps to move beyond the biases that can negatively affect their relationships.
Chapters 6: Faculty Advancement, Promotion, and Tenure	• Institutional climates that unconsciously signal an undervaluing of diversity may deter minority faculty from applying for advanced positions. • Unconscious biases may affect decision making about the selection of people for leadership roles given differences in career opportunities among candidates from majority and minority groups. • Mentoring, coaching, and sponsorship are especially vital for members of minority groups who are seeking advancement. • Selection committees that lack diversity can introduce opportunities for unconscious bias in decision making.
Chapter 7: Patient Care	• Unconscious bias can undermine the doctor-patient relationship and quality of care, resulting in poorer health outcomes for patients. • Patient care can improve when physicians explore their own biases and how they affect the care they provide. • Faculty physicians have the opportunity to teach residents how their unconscious biases can affect patient care and how awareness of this issue can positively affect the residents' future practices.
Chapter 8: Interventions Recommended by Forum Attendees	• A commitment from institutional leadership is essential to identify and mitigate unconscious bias. Leaders can engage students, faculty, and staff at all levels to create an inclusive climate that acknowledges bias and the effect it can have on the institutional climate, policies, and decision making. • Bias can be mitigated through educating and training individuals and teams. Examining implicit biases through the Implicit Association Test, role-playing, and blinded studies can help individuals recognize their own biases. • Teams and committees involved in high-stakes decision making, such as admissions and appointment, promotion, and tenure (APT), should be diverse in composition and identify clear requirements and interview questions before beginning the selection process.

Introduction

Unconscious Bias in Academic Medicine: Peeling Back the Layers

Over the past few decades, people have made major strides in elevating national awareness about the need to eliminate health care disparities and the need for diversity within the health and research workforce. Vaccination rates among minority children now approach those of white children, and the Affordable Care Act has helped close the insurance gap between whites and minorities.[1–3] Furthermore, women now make up nearly half of all medical school graduates and more than a third of medical school faculty.[4]

Despite these advances, health care disparities persist and have even widened, and the health care workforce still does not reflect the society it serves. For example, African Americans made up more than 13 percent of the U.S. population in 2013, but barely more than 4 percent of physicians in the country were African American.[5,6]

While academic medicine has made progress against overt discrimination, unconscious bias—or, in other words, the prejudices we don't know we have yet all of us possess—poses additional barriers to achieving a diverse and egalitarian health care system.[7–9]

Unconscious bias, also known as implicit bias, refers to attitudes or stereotypes that are outside our awareness but nonetheless affect our understanding, our interactions, and our decisions. Researchers have found that we all harbor automatic associations—both positive and negative—about other people based on characteristics such as race, ethnicity, gender, age, ability/disability, social class, and appearance. These unconscious associations may influence our feelings and attitudes and result in involuntary discriminatory practices, especially under demanding circumstances.[7–9]

Unconscious biases are different from—and more difficult to address than—known or explicit biases individuals may choose to conceal for social or political purposes. Our implicit biases may not align with our declared beliefs or reflect stances we would explicitly endorse, and these biases may even cause us to discriminate against others without fully realizing what we are doing.[7]

Unconscious bias has been detected and documented in education, criminal justice, and employment practices.[9] There is evidence that bias permeates academic medicine and patient care as well. A wide body of literature illuminates previously unexplained disparities in many aspects of medical education—from who seeks and gains admission to medical school to the promotion rate among faculty and which researchers get federal funding.[10–12] Moreover, health care providers are subject to the influence of unconscious stereotypes, especially when making time-sensitive, high-stakes decisions in diagnosis and treatment.[13] Differences in clinical decisions based on patient race have been clearly documented in the medical literature, including for joint replacement, limb-saving procedures, cardiovascular interventions, and management of chronic and acute pain.[14–21]

The role of unconscious bias in persistent health inequities has been documented by landmark fact-finding initiatives:

- The 2003 Institute of Medicine report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* suggests that "bias, stereotyping, prejudice, and clinical uncertainty on the part of health care providers may contribute to racial and ethnic disparities in health care."[22]
- The 2004 Institute of Medicine report *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce* found that "the admissions process is inherently prone to bias that may disfavor disadvantaged and minority students."[23]
- The 2004 report *Missing Persons: Minorities in the Health Professions* stated that "nurses, physicians, dentists, and other health care professionals are not immune from the societal and cultural biases and attitudes of our larger society. At the personally mediated level, racism in health care can operate in the personalized form of prejudice, stereotype, or bias and can result in discriminatory actions (or inactions)."[24]

2014 Diversity and Inclusion Innovation Forum

Given the widespread effects of unconscious biases in medicine, the Association of American Medical Colleges (AAMC) collaborated with The Ohio State University's Kirwan Institute for the Study of Race and Ethnicity to convene the 2014 Diversity and Inclusion Innovation Forum. Its purpose was to explore how unconscious bias affects academic medicine and to identify interventions to mitigate the resulting harms.

After an extensive literature search and conversations with experts in the field, the AAMC and The Kirwan Institute identified and invited to the day-long Forum people from medical institutions and health care organizations from across the country who have expertise in unconscious bias, diversity and inclusion, medical education, and health care disparities. Invitees included nationally recognized social science and medical education researchers on unconscious bias and physicians and medical school administrators. Forum attendees were assigned, based on their expertise, to one of seven topic areas vital to academic medicine: medical school admissions; undergraduate medical education; resident recruitment; faculty recruitment; faculty advancement, promotion, and tenure; faculty mentoring; and patient care. (The list of the 37 Forum attendees is in Appendix C.)

An expert moderator from the AAMC or The Kirwan Institute led each of the seven discussion groups. A note taker was assigned to each group. All moderators and note takers participated in a training to ensure that communication strategies and discussion questions were developed for

each of the seven group topics. Discussion-question scripts were divided into two sections: questions about the impact of unconscious bias on the particular topic area under discussion and questions about existing interventions and resources that address unconscious bias in each area. All discussion group conversations were audio recorded and transcribed.

The Kirwan Institute then summarized the themes that emerged during these conversations. Kirwan Institute staff used this material to create the core of this publication. The AAMC then identified additional AAMC staff and experts from the academic medicine community with real-life experiences and research backgrounds in these issues to review the material and add context and rigor by describing the current state of peer-reviewed scholarly research on unconscious bias in each topic area.

Some of the real-world examples shared by Forum attendees and presented in the chapters arguably illustrate not just implicit bias but also explicit bias. Attendees detailed various instances in which explicit bias negatively affected patient health outcomes and impeded the academic and career opportunities of their fellow practitioners. Thus, while this publication focuses on implicit bias, the presence and prevalence of explicit biases remain a concern that merits continued attention.

The material captured and analyzed in this publication will be of interest to clinicians, academicians, administrators, researchers, and others concerned with the multifaceted dynamics of unconscious bias in academic medicine and may point the direction to proposed measures to minimize its effects.

Brief Background on Unconscious Bias

Neuroscientists estimate that the human brain can process nearly 11 million pieces of data in a second; however, most individuals are only consciously aware of about 40 pieces of information at any given moment.[25] To manage this overwhelming number of stimuli, our brains use "shortcuts" to simplify and understand our social surroundings more quickly. These shortcuts lead to the formation of links between environmental triggers and categorized data. They are more likely to be activated in stressful circumstances (such as during health care delivery) than in relaxing ones.[9,19] While these automatic responses enable us to make faster decisions, they can also prompt us to jump to unwarranted conclusions.

Unlike explicit biases—where the intention of an individual is to differentiate treatment toward another person based on perceived characteristics—an individual exhibiting implicit bias may have no intention to harm someone else or to be discriminatory. However, the results of those biases can be damaging no matter the intent. Unintentional bias toward an individual or group does not diminish the effect of that bias.

Because unconscious bias by definition takes place without our awareness or control, it is impossible to modify behaviors emerging from bias without the will to reflect on, examine, and amend our behavior. Fortunately, we know that unconscious associations are malleable in the face of appropriate interventions, and scientists have developed tools and techniques to bring our hidden biases to our awareness.

One of the best of these tools is the series of tests developed by researchers at Harvard University to reveal hidden biases. Debuted by Anthony Greenwald and colleagues in 1998, the Implicit Association Test (IAT) is a response-latency assessment that measures the relative strength of associations between pairs of concepts by asking individuals to sort them. This matching exercise relies on the notion that when two concepts are highly associated, the sorting task will be easier and therefore require less time than it will when the two concepts are not as highly associated. The IAT has been rigorously tested for reliability, validity, and predictive validity and has been shown to be a methodologically sound instrument for measuring unconscious associations.[9,26]

Tools such as the IAT can play an important role in addressing bias in academic medicine and patient care. Once we understand that unconscious bias affects our interactions with other people, we can put in place interventions to help mitigate the potential impact.

UNDERREPRESENTED IN MEDICINE: AN EVOLVING CONCEPT

This publication uses the phrase *underrepresented in medicine* rather than the more familiar *underrepresented minority.* Although these two phrases share the same acronym (URM) they have different meanings. According to the Association of American Medical Colleges, *underrepresented in medicine* refers to *racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.* Adopted by the AAMC board of directors on June 26, 2003, the definition helps medical schools accomplish three important objectives:

1. A shift in focus from a fixed aggregation of four racial and ethnic groups to a continuously evolving underlying reality. The definition accommodates including and removing underrepresented groups on the basis of changing demographics of society and the profession.
2. An exploration of a regional or local perspective on underrepresentation.
3. Stimulation of data collection and reporting on the broad range of racial and ethnic self-descriptions.[1]

This descriptor is different from the perhaps more widely referenced *underrepresented minority* notation. *Underrepresented in medicine* refers to categories of individuals who make up a larger share of the U.S. population than of the academic medicine population. Its meaning has also expanded recently to include not only racial and ethnic groups, but any group whose representation in the medical community as a whole or in a certain aspect of academic medicine is smaller than it is in the general population. Examples provided at the 2014 Diversity and Inclusion Innovation Forum included individuals from disadvantaged socioeconomic backgrounds, LGBTQ+ populations, and women, as well as blacks or African Americans, Hispanics or Latinos, American Indians or Alaskan Natives, and Pacific Islanders.

There are large variations in representation of these populations at different levels of academic medicine and at different institutions. Some "minority" populations are actually quite well represented among medical students and/or physicians, including people of Asian descent (who make up 20 percent of medical students and 12 percent of physicians) and women (who make up about 44 percent of medical students and 34 percent of physicians).[2,3] However, these populations are underrepresented at higher levels of academic medicine. Medical schools at historically black colleges and universities have higher percentages of African American students and faculty but lower percentages of other minority groups. Furthermore, the percentages of minority students can change from year to year and from department to department at the same institution.

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Unconscious Bias in Medicine

There is ample evidence that unconscious bias in medicine can have life-altering consequences; it can affect the type and quality of care certain patients receive, as well as the training and career opportunities available to people identified with some ethnic, cultural, or other underrepresented groups.[23,27,28] A groundbreaking study conducted by Schulman et al. examined racial variations in medical treatment using videos of actors portraying patients reporting chest pain. The patients were similar across several characteristics (e.g., socioeconomic status, type of insurance plan, and type and severity of disease), but they varied by race and sex. Results indicated that health care professionals were less likely to refer women and black patients for cardiac catheterization than white, male patients.[27,28]

Since that 1999 study, additional research has confirmed that health care providers deliver different diagnostic procedures and clinical management to patients from racial and ethnic minorities, affecting both quality of life and life-saving potential.[12,23,26,29–37] Results from health care providers and medical students who have taken the Implicit Association Test (IAT) show that both groups demonstrate implicit bias related to race, social class, and body weight.[23,28,38–45] Implicit bias is associated with perceptions and beliefs about patients, patient-physician communications, and even clinical decisions contributing to health disparities.[40,46,47] More specifically, studies have illustrated that some black patients' perceptions of bias from white physicians associate the white physicians' communication style with verbal dominance, reduced emotional empathy, and less patient-centered care.[38,48,49] In one study, providers who received negative evaluations from black patients rated their own performance with whites and blacks similarly, indicating a lack of awareness of their communication patterns and, in this case, unconscious bias.[38]

A 2009 study measured the implicit and explicit racial biases of 404,277 participants with a subsample of 2,535 medical doctors.[40] The study measured both explicit and implicit attitudes toward patients of different backgrounds by provider race, ethnicity, and gender. The study yielded three notable conclusions:

1. The doctors' implicit and explicit attitudes about race largely aligned with an implicit preference for whites, which is also found in the general population.

2. On average, African American doctors did not display unconscious racial preferences for whites or blacks.

3. Female doctors tended to hold fewer unconscious racial biases.

Other studies have found only a weak correlation between the providers' explicit and implicit attitudes, demonstrating that most were unaware of their implicit attitudes.[44,45] Despite our best intentions to remain egalitarian, all of us, including health care professionals, are susceptible to implicit biases that may influence our behavior and judgments.[50] In fact, health care providers identified as having implicit bias often maintain explicit egalitarian principles and a commitment to providing equitable care.[20,40]

Researchers van Ryn and Saha suggest that this apparent contradiction may lead to cognitive dissonance and discomfort.[48] This, in turn, may contribute to denial and even justification of bias.[51] To some, *diversity* is viewed as a code word for suboptimal performance, and calls for more diversity among health professionals may be associated with "lowering the bar," or settling for less-qualified candidates. Poorer health outcomes among a racially diverse population are often attributed to poor patient compliance, in what becomes almost a "blame the victim" mentality.[51]

Interventions

If unconscious bias happens without our knowledge and beyond our control, do we throw up our hands and resign ourselves to the futility of our vision of an equitable health care system? Fortunately, there is ample evidence that implicit attitudes respond to interventions and can be attenuated and even reversed.[29,52,53] Indeed, several studies have shown that when clinicians have sufficient cognitive resources, time, data, and determination, they can manage or address unconscious bias.[29,52] The first steps are increased awareness and acceptance of unconscious bias as a human trait and the willingness to engage in reflection and deliberation.

While the envisioned result may be high-quality health care and comparable health outcomes for all regardless of race, gender, ethnicity, or other characteristics, the quest starts with each individual and each institution involved in the selection, training, and advancement of health

care professionals. This publication offers a starting place for discussions, assessments, and interventions about the role of unconscious bias at all levels of academic medicine.

Forum Discussion Themes

Several discussion themes permeated Forum conversations. These themes are summarized in Table 1.

Table 1. Forum Discussion Themes

Discussion Theme	Description
Nebulous notion of "fit"	The notion of "fit" implies preferences for individuals like one's self, or "in-group preferences" (i.e., preferences for members of the group one identifies with most closely). Fit is therefore an embodiment of both implicit and explicit bias. By assessing whether an individual will fit into the climate of the institution, institutional gatekeepers can unconsciously create advantages for some individuals and disadvantages for others. This can lead to inequitable recruitment and admissions processes and may result in a lack of institutional diversity among students, faculty, and staff.
Confirmation bias	This refers to the tendency for people to unconsciously seek out evidence that supports their assumptions about an individual, thereby implicitly confirming their biases.[50] For example, confirmation bias can contribute to individuals reflexively seeking out candidates from particular universities and elevating those successful applicants while failing to objectively assess candidates from other universities. When an individual automatically focuses on data that align with his or her biases, candidates who do not fit this alignment can be disadvantaged.
Unconscious bias as a two-way dynamic	Because all individuals are susceptible to bias, two-way interactions between individuals—regardless of power dynamics—can bring unconscious biases from one or both parties to the surface. For example, Forum attendees discussed the significance of negative biases that some patients have toward female physicians and physicians of color. Health care quality can be affected not just by physicians' unconscious biases but also by those of patients.
Lack of diversity in academic medicine[11]	Medical schools may unintentionally communicate messages about who or what is valued through a persistent lack of diversity among top leadership positions; institutional grant and funding awardees; success stories featured in school magazines; names of centers, departments, and buildings; and even the portraits adorning the walls. As one attendee stated, "I would describe [medical school] as an institutionally white space. It's white in its creation, its comportment, the way that we educate our students; every aspect of it is painted by and explicitly for white students." These subtle messages may cause people of color to feel unwelcomed and undervalued in academic medicine, Forum attendees said.

(continued)

Unconscious "othering" of minorities	This can be observed in the articulation of diversity issues and initiatives as being *only* for minorities rather than in seeing all individuals as interconnected to advancing diversity. It minimizes the experiences of minorities and women when the injustices and difficulties they face at an institution are viewed as "minority issues" as opposed to institution-wide issues in need of widespread resolution. This "us versus them" dichotomy may cause some individuals to feel undervalued and unsupported within an institution, especially when they believe that resolving the institutional issues contributing to their disenfranchisement would strengthen the culture of the organization and lead to a more inclusive environment for all members of the community.
Unconscious undervaluing of diversity	Attendees shared that while many institutions may put diversity-related policies and programs in place, the underfunding (and even defunding in times of financial stress) of these initiatives can undermine an institution's ability to truly embrace diversity. Furthermore, Forum attendees mentioned several times the related tendency in academic medicine and other contexts to perceive diversity as something that comes at the expense of merit. Unconscious bias may compromise the degree to which institutions fully embrace diversity if diversity is not valued as a key component of institutional excellence, attendees said.
Undervaluing and overburdening minority faculty	Attendees shared their impressions that faculty from minority backgrounds are often pigeonholed at their institutions as the ambassadors for diversity-related issues. They perceive that their colleagues seek their input mainly in connection with diversity issues while ignoring their views about other academic affairs. While often asked to participate in diversity forums and community work disproportionally, minority faculty may not be viewed as serious contenders for high-level faculty appointments—often due to their inability to make time for research as a result of their placement on diversity forums and councils, attendees said. This phenomenon is also apparent in the national discourse about the case for diversity. By contrast, in the business world, diversity is associated with increased creativity and problem solving for all;[53] in medicine, the typical argument for diversity's benefits is still anchored in public service and minority health research.[24,54,55]

Collectively, the prevalence of these biases often results in an altered experience for students, faculty, and staff of diverse backgrounds within academic medicine, as well as for patients and communities.[11,21,56] Subsequent chapters will elaborate on these themes and provide examples and analysis of others unique to each topic area. Chapters 1–7 provide insights into the role of unconscious bias in the seven areas explored during the 2014 Forum:

- Medical school admissions
- Undergraduate medical education
- Resident recruitment and selection
- Faculty recruitment, selection, and hiring
- Faculty mentoring
- Faculty advancement, promotion, and tenure
- Patient care

Chapter 8 provides Forum attendees' recommendations for strategies to mitigate the effects of unconscious bias at the individual and institutional levels.

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Chapter 1
Medical School Admissions

Chapter at a Glance:

- The multiple decision points in the admissions process present opportunities for unconscious bias to influence the selection of new students.
- Admissions committee members may sometimes unconsciously create different sets of criteria for students based on the students' backgrounds or experiences.
- The interview process, in particular, can introduce opportunities for bias.

At the 2014 Diversity and Inclusion Innovation Forum, a group of attendees representing different perspectives on the medical school admissions process discussed the role unconscious bias can play in it. Medical school admissions is a time- and data-intensive process that schools must undertake with limited resources. The sheer volume of applications received and the amount and complexity of each application's data contribute to the magnitude of the task. Though some parts of the application are more easily quantified (e.g., academic metrics, applicant volunteer hours), much of the information is in narrative form. Because it is unrealistic to expect every decision maker to review and discuss every applicant, the application process places additional importance on how and by whom applicant information is communicated, shared, and evaluated at each stage. It also emphasizes the need for reviewers to have shared definitions for the academic metrics, attributes, and experiences the school seeks in candidates.

The multiple decision points involved in an admissions process present opportunities for unconscious biases to influence evaluations and communication about applicants. Forum attendees stated that reviewers bring their own preconceived ideas about who will make good medical students and future physicians and what characteristics they should possess. Reviewers are also influenced by their own experiences and assumptions, attendees said, as well as the norms and expectations of their disciplines. Attendees said that unconscious biases are pervasive in any admissions process. Embedded in and reinforced by institutional structures, policies, and practices, these biases can create advantages for some applicants above others.

The first step toward increasing diversity in the physician workforce starts at the medical school admissions process by encouraging a larger and more diverse applicant pool. Medical school enrollment data released by the Association of American Medical Colleges (AAMC) in October 2014 revealed steady increases in the overall applicant pool (up 5.6 percent), as well as within certain key populations, including African Americans, Latinos, and American Indians and Alaska Natives.[1] For example, the

number of Latino applicants increased by 9.7 percent in 2014, and the number of enrollees from these groups grew by 1.8 percent. There was also a rise in African American applicants and matriculants, with most of the increase coming from a 3.1 percent boost in the number of African American men, who are still outnumbered by African American women in medical school. The number of American Indian and Alaskan Native applicants increased almost 17 percent from 2013.[1]

Forum attendees said that while the applicant pool is increasing in diversity, opportunity is unevenly distributed in society, giving certain groups of people special privileges while disadvantaging others. Some applicants, including those from higher socioeconomic backgrounds, have greater access to opportunity and networks that can put them at an advantage, while other applicants face barriers to opportunity, attendees said. While these structural inequities of our society are not the subject of this publication, it is clear that the biases created by these inequities can follow students through the admissions process.

Medical school admissions is also affected by legal and policy developments at the national and state levels. The U.S. Supreme Court's 2003 *Grutter v. Bollinger* and 2013 *Fisher v. University of Texas* decisions affirmed the educational benefits of diversity as a "compelling interest" while defining principles for how race and ethnicity can be considered in decision making. Recognizing the need to increase the diversity of medical school student bodies, the AAMC has launched a number of interventions through the years, including Project 3000 by 2000 (an initiative launched in 1991 to enroll 3,000 underrepresented minority students in medical school by the year 2000) and the more recent Advancing Holistic Review Initiative. That initiative provides frameworks and resources to assist admissions committees in evaluating applicants' experiences, attributes, and academic metrics. The initiative also guides admissions committees in considering how an applicant might contribute value as a learner and physician in educationally sound and legally viable ways.

No research has been published on unconscious bias in medical school admissions. However, seminal reports in the health care field could also apply to medical school admissions. These works include the Sullivan Report (*Missing Persons: Minorities in the Health Professions*)[2] and the Institute of Medicine study *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care,*[3] as well as ongoing research on disparities affecting diversity among groups in all other aspects of academic medicine, from residency to patient care.

Because admissions is the formal entry point into medicine, more data specific to unconscious bias in the admissions process would be helpful to the medical profession as a whole. Forum attendees suggested that AAMC member institutions could consider pursuing collaborative, multi-institutional research in this area. The remainder of this chapter

QUICK FACT

A 2013 AAMC survey showed which factors admissions officers considered most important when determining which applicants receive the all-important interview invitations in each admissions cycle. The admissions officers were more likely to rank academic metrics (GPA, MCAT scores, etc.) and experience (health care, community service, leadership, and challenges) above demographic and other data about the applicant. Forum attendees noted that admissions committees should consider how their unconscious biases might affect their decision making about applicants and how they are able to meet the criteria the committee deems to be the most important.

Source: Association of American Medical Colleges. *Using MCAT Data in Medical Student Selection.* Washington, DC: AAMC; 2013.

provides evidence of how bias can be introduced into the admissions process. Please see Chapter 8 for tools and resources to help mitigate the impact of unconscious bias at your institution.

Academic Metrics

The admissions process depends on the use of established metrics and professional guidelines to rank and compare applicants. From MCAT® scores to GPAs to class rank, these measures can all be affected by bias. Forum attendees mentioned several ways that unconscious bias can be observed in these metrics. Attendees agreed that while scholarship has been developed about the predictive ability of GPAs and MCAT scores on USMLE scores, test scores alone cannot predict the quality of a physician. As one Forum attendee stated, "There's bias in every metric that we use. The privilege of some folks [comes at] the detriment of others because of the way that opportunity is or isn't distributed in our society." This bias can be demonstrated in myriad ways: how the health care experience is defined or perceived, how different educational pathways are or are not valued, and how life experiences and "distance traveled" (that is, the challenges or hardships a person must overcome to attain a certain goal) are categorized and mapped to desired applicant attributes and metrics.[4–6]

Health Care Experience

Most medical schools highly recommend or require that applicants acquire some type of health care experience. Forum attendees said that admissions committees may unconsciously place emphasis on the applicants' experience "shadowing" health care professionals as part of their path to medical education, as opposed to other health care experience. Spending time in the health care environment and observing how physicians interact with patients and other health care professionals can play an important role in demonstrating the applicants' motivation, intellectual curiosity, and social skills. As a result, said a Forum attendee reflecting on their past experiences, "many admissions committee members would want to give somebody a negative evaluation if they hadn't been shadowing or hadn't done enough shadowing." However, this emphasis may particularly disadvantage underrepresented minorities and low-income students who may not have had access to a network of medical professionals whom they could have shadowed or the discretionary time to pursue those experiences. As one attendee noted:

> *I think that one of the predominant biases that's not by design is the socioeconomic one. Fundamentally, we are admitting students who come from greater resources, and it's not by design, but because of how we run our process and how we . . . count shadowing in the ways that we do. We clearly bias against people with fewer resources.*

Shifting the discourse away from shadowing can be difficult. Even if committee members broaden the metric to the applicant's health care–related experiences in general rather than shadowing specifically, "it's a

QUICK FACT

A study published in the AAMC's peer-reviewed journal, *Academic Medicine*, found that 28 percent of applicants matriculating into medical school in 2012 had community college experience.

Source: Talamantes E, Mangione CM, Gonzalez K, Jimenez A, Gonzalez F, Moreno G. Community college pathways: improving the U.S. physician workforce pipeline. *Acad Med.* 2014;89(12):1649-1656.

challenge to get people to think about health care–related experiences as more than just shadowing," an attendee said. This same point about implicitly favoring applicants from higher socioeconomic levels could be made about many different experiences that may be inaccessible to students with financial barriers or who are less well networked, Forum attendees said. These experiences include having multiple volunteer activities, research experience, and participation in a study abroad program.

Educational Pathways

Forum attendees agreed that the educational trajectory of a student can also influence admissions decisions. Admissions committee members who took traditional paths to medicine (e.g., top performance in a college pre-med program and high MCAT scores leading directly to application to medical school) may find it difficult to appreciate the value of a nontraditional medical career path, attendees said. This effect can be magnified if all committee members have followed the traditional path. They may unconsciously favor the traditional path and make assumptions about those whose paths differ from theirs. This may also be true at schools that have small populations of nontraditional students, where admissions committee members may have less experience working with students who took different educational pathways and who succeed in medical school and as physicians.

Although applicants may have many different and valid reasons for going a different route, attendees said, there are often labels and stereotypes associated with applicants who do not follow the traditional academic path. For example, applicants who graduate from postbaccalaureate programs are often assumed to be academically weak, regardless of their actual performance, one Forum attendee said. Attendees emphasized that the unconscious biases and negative connotations accompanying these postbaccalaureate program graduates can affect admissions decisions, even when the applicants are well qualified.

Life Experiences

Forum attendees noted that an applicant's personal attributes and experiences can also activate unconscious biases in the admissions committee. Race, gender, socioeconomic background, and age are just a few of the many characteristics that might affect how an applicant is perceived and evaluated throughout the admissions process.

Bias stemming from different assumptions, expectations, and associations may accompany members of some racial and ethnic minority groups as they go through the admissions process. Attendees said that candidates who are members of minority groups may experience an increased level of scrutiny or variations in how their experiences, attributes, and likelihood of success are perceived or evaluated. For instance, if a committee member unconsciously perceives Hispanics as less competent, then that member

QUICK FACT

While the median age for students at matriculation is 23 years, according to the 2014 Matriculating Student Questionnaire, 6.2 percent of students were over the age of 28 at matriculation.

Source: Association of American Medical Colleges. Matriculating Student Questionnaire, 2014 ed. https://www.aamc.org/download/419782/data/msq2014report.pdf. Accessed September 30, 2015.

may implicitly focus on experiences that call a Hispanic candidate's abilities into question. A Forum attendee noted: "If a white student gave this response, I might see it one way; if a Hispanic student gave [the same] response, I might see it as, oh, this didn't quite cut it." Confirmation bias—the tendency for individuals to seek evidence supporting their unconscious assumptions of others—may be contributing to these dynamics.

Placing expectations on applicants based on their race and ethnicity puts applicants who don't conform to those expectations at a disadvantage, Forum attendees said. For example, admissions committee members may assume that applicants of color will go into community-based clinical practice and provide care for underserved communities. Those assumptions become a lens through which these applicants are evaluated regardless of their true career goals. For example, as one Forum attendee noted, Latino applicants who don't speak Spanish may be evaluated less favorably in the application process because they do not meet the implicit expectation that they will "go to the barrio to care for migrant workers and poor Hispanics." Tying applicants' worthiness to a single dimension of their identities (i.e., the ability to speak a second language) may lead committee members to overlook other aspects of a candidate's profile, and it discounts the benefits the entire student body receives from increasing cultural diversity at the institution.

Committee members may also associate academic weaknesses with applicants from lower socioeconomic backgrounds: "It's as if they have academic deficiencies by virtue of being in that group, when, in fact, they may become the best student in the cohort," said one Forum attendee. While admissions committees want diverse applicants, attendees said, committee members may question the school's ability to support them. One attendee said, "There's bias against the most disadvantaged students, because the assumption of many of the committee members is that they bring so much baggage, how are they going to be able to transition successfully into medical school?"

Forum attendees noted that admissions committee members sometimes unconsciously create a different set of criteria for students based on their situations or backgrounds, which can lead to preferential treatment or unfair judgment. In some cases, candidates may actually benefit from unconscious biases when committee members assume that a disadvantaged student had to overcome more obstacles to get to the stage of applying to medical school. The concept of "distance traveled" might lead committees to give extra consideration to those candidates—as long as they have followed the expected, traditional path.
One attendee put it this way:

> *It's the distance that someone from a low-income background travels along the specific path that they're expected to travel. And so in that way, then, they have to be that much better than the other folks who travel that path, right?*

Conversely, children of physicians are often expected to excel academically and, therefore, may be unconsciously held to a higher standard than other applicants, a Forum attendee said. If their MCAT scores and other metrics are not highly competitive, they can be disadvantaged in the admissions process, even though candidates with similar qualifications but different backgrounds would be considered:

> *I can remember hearing our admissions committee . . . [saying,] "Her dad's a neurosurgeon. Why did she get 26 on the MCAT?" Well, that's not fair. Does she have to get a high MCAT just because her dad is a neurosurgeon? So that's a group, children of physicians, that many would think, this person should have it all together. And if they don't, that really is sometimes seen as a negative for them.*

In this example, admissions personnel had a different set of criteria for these students, thereby, presumably, disadvantaging them relative to other candidates.

The applicant's age can also play a role in admissions decisions, Forum attendees said. There may be a perception that older students do not learn as readily as younger ones. As a Forum attendee recounted: "We've had some students who were 35, 40, and [the admissions committee members] felt like they were unteachable . . . like these [older students] are not willing to learn from another person." If admissions committee members have an unconscious perception that older applicants are less worthy of institutional investment, this could impede students' posteducation career opportunities.

An applicant's family situation can also activate unconscious biases, Forum attendees said. Women who have children may be especially vulnerable to this, observed an attendee who mentioned a common question at their school: "'What will be her method of taking care of the child when she's in medical school? How will she get a baby sitter?' . . . [This] is a comment [that] shouldn't be made. It has no bearing on why we accept that individual." Similar concerns arise if an applicant has other dependents, such as parents or other family members, especially if the applicant would have to move away to attend medical school. "You occasionally hear, 'Well, what's going to happen to her mom? Is she just going to abandon her mom?'" one Forum attendee said. "And we have to say [to the admissions committee member], 'You shouldn't even be talking about that.'" While perhaps well meaning, an attendee said, these types of questions and hesitations can help create subtle disadvantages for otherwise highly qualified candidates.

UNCONSCIOUS BIAS TESTING IN MEDICAL SCHOOL ADMISSIONS

An Institutional Profile from The Ohio State University College of Medicine

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Unconscious bias has been associated with discriminatory behavior in the criminal justice, education, and health care systems, but little is known about the presence or impact of such biases in the medical school admissions process. If operational in medical school admissions, these biases could contribute to health care disparities by impeding the entry of underrepresented minorities (URM) into the medical profession. Awareness is the first step to addressing and reducing unconscious biases. Recognizing this, in 2012, each member of The Ohio State University College of Medicine admissions committee took the Implicit Association Test (IAT). The group specifically sought to assess for "implicit white preference," defined as the unconscious association of a white face with positive words and feelings and a black face with negative words and feelings. Aggregate findings were then shared with the committee along with a presentation on implicit bias and bias reduction strategies.

Following the implicit bias exercise and the subsequent admissions cycle, nearly half of the committee members reported agreement with the statement "when I interview candidates, I have my individual IAT results in mind," and nearly a quarter reported that their knowledge of their individual IAT scores had an impact on their evaluation of candidates. While a causal relationship cannot be proven, in the admissions cycle immediately following the implicit bias exercise, the committee selected the most diverse class in the college's history.

Thus, taking the IAT can be an important exercise in self-awareness for medical school admissions committees.

QUICK FACT

In the AAMC's 2014 Matriculating Student Questionnaire, 8.8 percent of medical school matriculants reported being legally married, and 3.6 percent reported having dependents.

Source: Association of American Medical Colleges. Matriculating Student Questionnaire, 2014 ed. https://www.aamc.org/download/419782/data/msq2014report.pdf. Accessed September 30, 2015.

Interview Process

Admissions committees place enormous weight on the interview process, in part because they feel that interviews provide information about applicant characteristics that they find difficult to assess earlier in the process, Forum attendees said. This can lead to an advantage for students who have strong interpersonal skills while placing other applicants at a disadvantage, an attendee said. The majority of medical schools use a one-on-one interview process in which interviewers receive general guidance about interview content and/or use some type of standard rating process. However, there is still considerable variability, including in the:

- extent of consistency from interview to interview, including the uniformity of the questions asked
- diversity of the interviewer pool
- level of interviewer experience and training
- number of interviews per applicant (more experienced applicants may become more skilled interviewees)
- structure and nuance of the rating process

This variability, particularly when coupled with minimal structure, opens up possibilities for bias and subjective judgment, attendees said.

Many medical schools are leading the charge to address bias and reliability in the interview process by adopting a highly structured interview process. For example, more than 20 medical schools currently use the Multiple Mini Interview (MMI).[7,8] The MMI consists of several short, focused, often scenario-based questions, each asked by a different examiner or rater.[9] Having multiple interviews with different raters is intended to help mitigate the effect of interviewer bias.[10,11] However, it remains subject to unconscious bias. Because each interviewer has such a small amount of time in which to assess the candidate, automatic implicit associations may emerge. Researchers have found that bias is pervasive when people are under time constraints and/or a heavy cognitive load.[8]

Additionally, a 2012 study by a school using the MMI asked whether the relationship among applicant personalities, performance on the MMI, and acceptance to medical school might affect student personality diversity. The study found that extroversion was associated with better performance on the MMI and in interviews.[11]

Medical school admissions staff, committee members, and interviewers are not the only actors whose unconscious biases might affect the admissions process. Applicants bring their own biases to the admissions process, especially the interview. For most applicants, the medical school admissions process is an emotionally charged time, and research shows that emotions can play a role in the activation of unconscious biases.[12,13]

Forum attendees noted that applicants might not take into account how their own unconscious biases can influence how an interviewer perceives them. Unaware of their assumptions about interviewers or committee members, candidates may send nonverbal messages that contrast with their verbal messages—in effect undermining their own communication. One Forum attendee emphasized how important it is for interviewers and other admissions representatives to be aware of this dynamic and how the stress of the interview process increases the chance that bias may emerge.

> *Our training shouldn't just be about studying us and our biases. Our training should be about recognizing that the student has [unconscious biases], too. . . . The environment that we've constructed around them is going to bring those out more so.*

Forum attendees suggested that by recognizing the role unconscious bias can play in the admissions process, interviewers and admissions representatives can become more attuned to instances in their own interactions with applicants and can help create a welcoming and inclusive environment that minimizes the effects of those biases for applicants and committee members alike.

CALL TO ACTION Admissions Processes and Candidate Assessment Metrics

The AAMC's Advancing Holistic Review Initiative encourages member institutions to use a mission-based, strategic, and data-driven approach to admissions in which individualized consideration is given to a balance of experiences, attributes, and academic metrics and the contributions an applicant may make as both a learner and a future physician. The initiative's purpose has evolved to focus on the constellation of policies, processes, and practices associated with admitting and enhancing the education of a diverse student body. The AAMC has launched an initiative to encourage member institutions to move toward a more individualized approach to the admissions process. The goal of the Advancing Holistic Review Initiative is more equitable treatment of all medical school candidates, including those from groups currently underrepresented in medicine.

The standard medical school admissions process occurs in three stages: screening, interviewing, and selection. Decision points, such as the decision to interview and the decision to admit, typically occur during the screening and selection stages. In the screening stage, medical schools weight academic metrics more heavily than experiences and attributes. During the selection phase, schools give more balanced consideration to the three major factors for consideration: experiences, attributes, and academic metrics (EAMs).

Interviewing, the admission process's second stage, does not include formal decision points. Rather, the interview is used primarily to gather more data about each applicant's attributes and experiences.[1,2]

Every U.S. MD-granting medical school interviews applicants. If an applicant is not granted an interview, he or she is effectively taken out of the candidate pool in that admissions cycle. Because of this, the decision to interview is identified as a critical intervention point in holistic review, and the emerging trend is to consider all the attributes and experiences an applicant presents, not just the quantifiable academic ones.

The AAMC has identified four principles of a holistic admissions process:

1. Selection criteria are broad-based, clearly linked to school mission and goals, and promote diversity as a driver of institutional excellence.
2. A balance of experiences, attributes, and academic metrics (EAMs) is used to assess applicants at each stage (particularly in screening to create a more diverse interview pool), applied equitably across the entire candidate pool, and grounded in data.
3. Reviewers at every stage consider an applicant's value and potential contributions to the learning environment and practice of medicine, and they consider the range of criteria needed in a class to achieve educational goals.
4. Race and ethnicity may be considered as factors when making admission-related decisions only when such consideration is 1) narrowly tailored to achieve mission-related educational interests and goals associated with student diversity and 2) part of a broader mix of factors, which may include personal attributes, experiential factors, demographics, or other considerations under federal law and where permitted by state law.[3]

Establishing and widely communicating clear, well-defined criteria in the institutional mission and goals enables all reviewers to ground their assessment of applicants in a shared understanding of what the school is seeking. Having these written institutional aims also enables the admissions staff to create standardized tools and rubrics to reinforce and facilitate a more objective evaluation of these criteria, which should lessen individual members' subjective evaluations of these criteria.[4]

Competency-based admissions, still in its nascent stages in medical education, might also provide a mechanism for conducting holistic review. By shifting the emphasis away from the process by which an applicant acquired the desired knowledge, skills, abilities, and attitudes (KSAs) to how an applicant demonstrates the integration of those KSAs, competency-based admissions provides a framework that admissions committees can use to recognize multiple educational and experiential pathways to medical school.[5]

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Chapter 2
Undergraduate Medical Education

Chapter at a Glance:

- Forum attendees said that undergraduate medical education (UME) has historically been a white, male space, and diversity initiatives are key to creating a climate of inclusive excellence.
- Students can be affected by the unconscious biases of their peers and teachers, which can have lasting effects on their academic experience.
- Students should be educated to examine their own biases during UME, when their professional identity as physicians begins to develop, Forum attendees said.

Despite attempts to improve diversity, undergraduate medical institutions, like all organizations, can unintentionally send subtle messages to students, faculty, and staff about who is most valued within that environment. As the following examples will demonstrate, the image of medical schools as institutionally white, male, heteronormative spaces can create what amounts to a marginalizing experience for women and students of color, despite the institutions' stated intentions to the contrary. If asked, Forum attendees noted, administrators at these institutions would argue vigorously that they value all members of their communities equally, and they would be sincere in their protestations. Yet, as we discussed in the Introduction, unconscious bias has been shown in numerous well-crafted studies to exist in all people and institutions, regardless of their stated and sincere intentions and beliefs that they are bias free.

One attendee at the Forum described the subtle but consistent sense of feeling unwelcome in the undergraduate medical environment this way: "From the administrators that you see and interact with, the people that make decisions, the pictures on the walls, the names of the buildings, all of these ways communicate that you are an outsider and your perspective isn't valued here."

Attendees noted that institutions often acknowledge that bias exists but struggle to address it because of inadequate resources, processes, and systems to mitigate it. In addition, it can be difficult to get to the root of unconscious bias when it, by definition, happens unintentionally. Furthermore, the lack of awareness of unconscious bias, the reluctance to confront it, or the denial that it exists are barriers to mitigating its impact. One Forum attendee said, "I talk a lot about intention versus impact, that it might not have been your intention when you were crossing the road to step on my foot, but the impact of you stepping on my foot, it still remains." Reflecting on broader dynamics, the attendee also noted that the tendency to focus on isolated incidents of bias distracts from critically analyzing the pervasiveness of bias in larger systems.

QUICK FACT

In the 2016 AAMC Graduation Questionnaire, 83 percent of students agreed that their knowledge or opinions were influenced or changed by becoming more aware of the perspectives of individuals from different backgrounds, and 62 percent of students agreed that the diversity within their medical school class enhanced their training and skills for working with individuals from different backgrounds.

Source: Association of American Medical Colleges. Medical School Graduation Questionnaire, 2016 ed. https://www.aamc.org/download/464412/data/2016gqallschoolssummaryreport.pdf. Accessed December 19, 2016.

Unconscious Bias and Inclusive Excellence

Forum attendees talked extensively about the ways unconscious bias often derails medical schools' attempts at diversity and inclusion. In a painful irony, attendees believed that medical schools' best efforts at inclusion, their diversity initiatives, are especially vulnerable to implicit bias. One attendee detailed the dilemma institutions face as they seek to embrace diversity:

> *[In] the larger institution, there's a focus on talking about inclusive excellence. . . . One of the things that I've been talking about with my dean is that I think that people don't believe it deep down on the inside. Based on what society tells us and what society reinforces, [people really believe] diversity comes at the cost of excellence. And so I think there's a dissonance between what people feel is the company line—like where all of our inclusive excellence and the readings talked about image management. But if you really engaged people in a conversation and somehow they had a truth serum, I think that all people would be challenged by the concept of diversity and excellence. Diversity is such a racialized term in our country that for many, when they hear "diversity," they probably think black, maybe Latino, then others. And so what we see and what we know of blacks in the media, Latinos in the media, it's rarely ever about excellence.*

In many cases, according to some Forum attendees, institutions limit their ability to advance inclusive excellence when they associate diversity primarily with race and ethnicity. Instead, attendees said, diversity and inclusion should be more broadly conceptualized to include a variety of demographic characteristics, such as gender, sexual orientation, ability/disability, and socioeconomic status. Furthermore, recent research has shown that in terms of problem solving, groups with greater diversity outperform homogeneous ones.[1]

Striving for greater diversity, therefore, means striving for institutional excellence. The often racialized nature of the word "diversity" and the unconscious stereotypes associated with racial minorities can lead institutions to unconsciously undervalue diversity and inclusion and to fail to see its importance in the entire institution. This can be reflected in the allocation of resources toward diversity offices compared with other departments. As one Forum attendee stated, "We have whole departments, whole buildings [for] IT and one person for diversity. You can't tell me you're treating them at equal value."

Traditionally, institutions have made diversity initiatives the responsibility of a single individual or a particular office within the campus community. However, moving past bias—both implicit and explicit—requires an acknowledgment that institutional excellence occurs because of diversity and inclusiveness, not despite them, and must therefore involve collaboration with and input from stakeholders throughout an organization.[2]

Additionally, Forum attendees articulated their perception that diversity is largely communicated in terms of "otherness" and that those who are part of the majority often view themselves as disconnected from diversity initiatives. This unconscious association of members of minority groups and women as "the other" can have two results, both of which have harmful effects over time, attendees noted. Minorities and women may feel that by being separated from the majority into separate diversity initiatives, the emotional aspects of their experiences are being minimized. Conversely, diversity initiatives may also have the unintended effect of lumping together the minority, female, and majority groups rather than eliciting the benefits of different perspectives and creating a harmoniously diverse institutional community.

One Forum attendee shared how, at her institution, students who feel as though they have been discriminated against because of their race or ethnicity are always sent to the only African American administrator. To her, the implicit message is that when it comes to race or ethnicity, the black administrator is the only person who can assist students with matters involving discrimination. In this way, the attendee said, the association of minority students as "the other" hinders the ability of the institution as a whole to adequately respond to the needs of students who are underrepresented in medicine by seeing their problems as relevant to the institution itself, not just to a single administrator. As the attendee elaborated:

> *In terms of making institutional change and a paradigm shift, how do we get everyone to see themselves as an ally? Just because you're not female doesn't mean you can't empathize with a female student. And we understand that. But when it comes to race, again, it's sort of like, you're black, right? I'm not sure if this student's black, but they're not white, so can you speak with them? And I've often said, "Just because I'm black doesn't mean I understand all black people."*

Student Awareness of Bias

While much attention has been given to the existence of unconscious bias at the institutional level, it also operates at the individual level, affecting students, faculty, and staff in undergraduate medical education. In one example, a Forum attendee shared the hurtful associations that emerged in a small group discussion about cultural issues at her institution. Feeling that she was in a "safe space," the attendee opened up to her group about challenges related to her mixed race and mixed-religion upbringing, only to have another student reply, "I wish I were that exotic." Although this response was presumably meant to be empathetic, the second student failed to recognize the unconscious ideas guiding her "exotic" statement and the painful effect it had on the speaker. Researchers have documented the unconscious association among some people of some ethnic minorities as less than human.[3] The categorization of the Forum attendee as "exotic"

QUICK FACT

In the AAMC's 2014 Graduation Questionnaire, 7 percent of respondents said they were frequently, occasionally, or at one time subjected to racially or ethnically offensive remarks by faculty, nurses, residents, staff, or other students during their medical education.

Source: Association of American Medical Colleges. Medical School Graduation Questionnaire, 2014 ed. https://www.aamc.org/download/397432/data/2014gqallschoolssummaryreport.pdf. Accessed September 30, 2015.

aligns with these notions and may have created a dehumanizing experience for this student. The fact that the comment was made admiringly does not automatically lessen its negative impact on the recipient.

Institutional Climate

The institutional climate of some medical schools may be such that students of color and women feel unspoken pressure to alter themselves in an attempt to more closely conform to the status quo. For example, one Forum attendee said that some African American students are afraid to wear their hair in its natural texture: "They won't do it because they're perceived as being untidy. And so, there's this notion of what an image looks like—what a professional should be." On the surface, this dilemma may seem like a superficial inconvenience for those students; however, as the attendee added, "Students really feel like they're not being welcomed" in a fundamental, very personal way.

Bias in the institutional climate can also create a disadvantage for students of color and women who find themselves unable to adequately leverage the social networks that could be vital to their future career successes, Forum attendees said. Among white males in particular, according to one study, social interaction is generally used as a resource for social mobility, which is often vital to their career growth.[4] The unconscious in-group preference for white males to share professional contacts and make business decisions together is supported by years of research and analysis.[5] Even at diverse institutions where students of different backgrounds interact in the classroom or the clinic, cross-racial and cross-gender interactions may be limited. As one Forum attendee noted, "I think there's a lot of interaction in a very surface-level way, but when it comes to those social moments that give currency, that help to leverage and propel you on [a career path], I think it's so very segregated and very separated."

Medical students from lower socioeconomic backgrounds may also be affected by unconscious bias within the institutional climate. A Forum attendee shared a story of a low-income student attending an expensive private school on a scholarship who faced difficulty trying to fund a humanitarian trip abroad with her classmates. Unable to raise the $1,000 required for the trip, she approached the program coordinator, who replied, "Just ask your family." The assumption that all students could afford the trip, which would undoubtedly strengthen attendees' résumés, reinforced this student's perception of remaining an outsider within her own institution.

Another form of unconscious bias that can manifest itself in the institutional climate is *cultural taxation*, which is the unique burden placed on students and faculty who are underrepresented in a field.[6] This burden means that it is not enough for students from groups that are underrepresented in medicine to "just" be good students; they are also often expected to advocate and represent their ethnic group or the "minority perspective" on committees and in other school activities.

QUICK FACT

According to the AAMC's 2016 Debt Fact Card, 76 percent of students had some educational debt, with the median debt at $190,000.

Source: Association of American Medical Colleges. Medical Student Education: Debts, Costs, and Loan Repayment Fact Card, 2016 ed. http://members.aamc.org/eweb/upload/2016_Debt_Fact_Card.pdf. Accessed December 19, 2016.

Furthermore, Forum attendees said, these service activities are typically not rewarded and often place added pressure on these students. This pressure can be both self-imposed and subtly communicated by minority students' peers and even the institution's faculty and administration. One attendee stated, "It's disheartening and it almost feels disingenuous when I think about the contributions and the expectations for students of color being so unequal [to those of their nonminority peers] . . . because we expect all of our students of color to [perform additional service activities based on their 'minority perspective']. And they get pulled in a hundred different directions, plus they're under a microscope in the classroom."

Faculty comments, both formal and off-the-cuff, can carry great weight with students and can, unfortunately, dissuade students from pursuing career paths that could ultimately prove fulfilling, Forum attendees said. They can also, on a macro scale, ultimately increase gender and racial disparities in certain specialties. Faculty biases can also have an effect on students' evaluations and letters of recommendation, which are key to their residency acceptance. One attendee had the impression that she often received lower grades as an underrepresented minority than her white, male classmates. The attendee acknowledged this as anecdotal.

QUICK FACT

In the AAMC's 2014 Graduation Questionnaire, 13 percent of respondents said they were frequently, occasionally, or at one time subjected to offensive sexist remarks by faculty, nurses, residents, staff, or other students during their medical education.

Source: Association of American Medical Colleges. Medical School Graduation Questionnaire, 2014 ed. https://www.aamc.org/download/397432/data/2014gqallschoolssummaryreport.pdf. Accessed September 30, 2015.

A Forum attendee provided an example of unconscious gender bias in the writing of student recommendation letters. As a female student reviewed her letters of recommendation and compared notes with a peer male student, she discovered that "the words that were used to describe me were very nonspecific, very generous, but very general, and didn't talk about my attributes as a future physician, but as a good human being who will be a great doctor in this general way, whereas . . . the male letter . . . was very specific." This is not uncommon; researchers have demonstrated the prevalence of different language being used to describe individuals of different genders in letters of recommendation.[7–9] They have found that descriptions for males are generally more specific and representative of their professional attributes, whereas women are described in very general ways representative of their personalities.

Forum attendees acknowledged the importance of educating students about their own potential biases. Scholars in medical education describe how the formation of students' professional identity as physicians begins with their medical school experience.[10] One attendee said that students in medical school are often so focused on their studies that "there's not enough time for students to reflect and to solidify their own values." Another attendee said that it is often not until students "mature into this profession and have reflections with patients and other students [that] they [realize that they] haven't really thought about who they were, what their privileges have been." To address this, as will be discussed in later chapters, an attendee added that "identity development, [learning and discovering who they are] needs to be a targeted component [of medical education] and would really impact the kind of climate that we have in medical school."

CALL TO ACTION Assessment Tool to Help Meet Cultural Competency Goals

Table 2. Tool for Assessing Cultural Competence Training (TACCT) Domains

TACCT Domains		
Domain I	Rationale, Context, and Definition	A. Definition of cultural competence
		B. Definitions of race, ethnicity, and culture
		C. Clinicians' self assessment and reflection
Domain II	Key Aspects of Cultural Competence	A. Epidemiology of population health
		B. Patients' healing traditions and systems
		C. Institutional cultural issues
		D. History of the patient
Domain III	Understanding the Impact of Stereotyping on Medical Decision-Making	A. History of stereotyping
		B. Bias, discrimination, and racism
		C. Effects of stereotyping
Domain IV	Health Disparities and Factors Influencing Health	A. History of health-care discrimination
		B. Epidemiology of health-care disparities
		C. Factors underlying health-care disparities
		D. Demographic patterns of disparities
		E. Collaborating with communities
Domain V	Cross-Cultural Clinical Skills	A. Differing values, cultures, and beliefs
		B. Dealing with hostility/discomfort
		C. Eliciting a social and medical history
		D. Communication skills
		E. Working with interpreters
		F. Negotiating and problem-solving skills
		G. Diagnosis and patient-adherence skills

The AAMC has produced a variety of resources to help institutions integrate cultural competency education into undergraduate medical education. To help medical schools meet the cultural competency goals outlined by the Liaison Committee on Medical Education, the AAMC offers the Tool for Assessing Cultural Competence Training (TACCT) (Table 2). It is a self-administered assessment tool that can be used to identify areas in the curriculum that cover aspects of culturally competent care. Institutions can use this tool to identify gaps, inconsistencies, and redundancies in their curricula so they can make best use of resources. Table 2 outlines the domains included in the TACCT analysis.

Source: Association of American Medical Colleges. Tool for Assessing Cultural Competence Training. https://www.aamc.org/download/54344/data/tacct_pdf. Accessed September 30, 2015.

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Chapter 3
Resident Recruitment and Selection

Chapter at a Glance:

- Much like medical school admissions, residency selection can be influenced by the unconscious biases of program directors, faculty interviewers, residents and house staff, and the applicants themselves.
- Criteria for residency programs, including exam metrics, curriculum vitae, letters of recommendation, and the interview process, can introduce bias.
- While the effects of bias can affect decision making of program directors, students who illuminate the biases of others may find themselves penalized during the residency-application process.

Choosing a medical specialty is one of the most significant decisions young doctors can make. In addition to the great personal reflection needed to choose their path in medicine, students contribute significant time and financial resources to the residency-application process. The National Resident Matching Program (NRMP) reported that in 2013, the median number of applications submitted by U.S. seniors who were successfully matched was 29, and the median number of residency interviews was 15. In a biennial survey of program directors by the NRMP Match, the factors most commonly cited for selecting candidates to interview were United States Medical Licensing Examination (USMLE) Step 1 and Step 2 scores, letters of recommendation, the Medical School Performance Evaluations (MSPEs), the personal statement, and graduation from a U.S. medical school.[1,2] The most common factors cited for selecting applicants to match included interactions with faculty and house staff during the interview and visit, interpersonal skills, and feedback from current residents.

Forum attendees noted that unconscious biases can affect prospective residents at all steps of recruitment, from application evaluation to the interview and selection. Many factors influence the residency admissions process, but attendees at the AAMC's 2014 Diversity and Inclusion Innovation Forum chose to address the way assessment of an applicant's personal characteristics and attributes may disproportionately privilege majority groups while serving as a barrier to minority groups. Forum attendees said that by scrutinizing this process, much can be done to mitigate the impact of unconscious bias in resident recruitment.

Achievement and USMLE Scores

Certain metrics used by residency programs may facilitate biases in selection. For example, attendees pointed out that there is not always a correlation between USMLE board scores and the quality of the resident and their future success as a physician.[3] For reasons that are not entirely understood, candidates from certain minorities tend to score lower on the USMLE board exams than white or Asian candidates.[2,4] Alternative

measures for assessing clinical skills, such as the objective structured clinical exam, have shown no significant differences in overall mean scores between URM residents and all other residents.[4]

Even so, many residency programs—68 percent, according to the 2014 NRMP's Program Directors Survey—designate a certain USMLE 1 and 2 score as a cutoff for determining whom to interview.[2] The scoring requirements for some specialties may be higher than others, possibly placing minority students at additional disadvantage for entering that area of medicine.[5,6] This has implications not only for the candidate but also for the availability and diversity of practitioners in that specialty. Because candidates who are underrepresented in medicine are more likely to opt to practice in critical-access and safety-net-provider organizations, one attendee said, "They're [in effect] singling out those disciplines especially in shortage areas. Underserved communities need access to all those specialties."

Disclosing Diversity

Attendees noted that unconscious bias can also enter into the decision-making process when a candidate's curriculum vitae is being assessed. Even something as simple as the candidate's name can activate bias, they noted. Forum attendees said that names that seem "foreign" are often perceived as less favorable during the Supplemental Offer and Acceptance Program (SOAP) process, in which program directors quickly create preference lists of unmatched applicants for remaining positions. Even if a candidate completed their undergraduate medical education in the United States, attendees said, a foreign name may cause selection committees to mistakenly believe that the candidate had international training, which could activate relevant implicit associations.

Admissions committee members may also unconsciously value diversity-related accomplishments differently from other types of research or project work, Forum attendees said. For example, work to support the needs of minority students or work on other minority issues may be unconsciously viewed as "extracurricular," or being of lesser value, than other accomplishments, especially if the work does not lead to publications or grant funding for the institution. Forum attendees said that this bias is also prevalent among faculty (see Chapter 6).

Decision makers may make assumptions about the applicant based on the applicant's diversity efforts. One attendee related what happened to a highly accomplished applicant going into a surgical subspecialty. The candidate had written a book chapter on lesbian, gay, bisexual, and transgender (LGBT) health. "She was asked whether she was going into surgery so she could do 'sex reassignment surgery,'" the Forum attendee said. Assumptions behind a question like that can deter candidates from advocating for diversity for fear that accomplishments in that realm can box the candidates into a certain minority group or career path. Forum

attendees said that rather than make the assumption that all members of groups underrepresented in medicine want to work in underserved areas or go into primary care, everyone involved in the process should focus on individual residency candidates and help mentor and guide them to follow the career path they prefer to pursue.

While disclosing race/ethnicity on residency applications is an option, disclosing sexual orientation or gender identity is not. Although this omission is designed to protect LGBTQ+ residents from employment discrimination (which is legal in several states), it can affect these candidates in other ways. As the editor of this chapter, Kristen Eckstrand, MD, PhD, noted, "This can be a barrier for applicants because if they want to be 'out' on their applications, they have to find alternative means of disclosing their identity, such as their personal statement or during interviews." Finding alternative means of disclosure can detract from opportunities to discuss other qualifications, accomplishments, and future plans that could strengthen their applications, attendees said. The inability to disclose on the application can also perpetuate concern among applicants that their diversity may be discriminated against, rather than celebrated, during the selection process.

Career Paths and Specialties

Forum attendees also discussed how expected career paths may activate unconscious bias in residency selection committees. For example, physicians from ethnic or cultural groups that are underrepresented in medicine are statistically more likely to choose to practice medicine in underserved areas. During the residency-application process, candidates from these groups are, therefore, often channeled into community-based programs rather than academic centers, even if they would actually have preferred and excelled in another specialty. They are also frequently encouraged to pursue primary care as opposed to a specialty—a phenomenon that is supported by data.[7] This channeling can actually start long before the residency selection process, during medical school or even during medical school admissions, attendees said. Encouraged by medical school admissions officers, professors, mentors, and even family members to pursue careers focused on community health or primary care, students may feel pressure to follow that path even if it is not their own passion.

On the other hand, a candidate who veers away from the traditional path to primary care may have their motives questioned. For example, a minority candidate who has extensive research experience may be questioned about why he or she is applying to a primary care residency program. Committee members may unconsciously assume that the applicant is only using primary care as an avenue to eventually specialize in another field. One Forum attendee explained it this way:

QUICK FACT

In an AAMC study of students in medical school from 2005 to 2009, the proportion of graduates who maintained their intention to serve the underserved was higher for African American (75 percent) and Hispanic/Latino (70 percent) graduates than for Asian (53 percent) and white (58 percent) graduates. Minority students were more likely than white students to have maintained this intention to serve between matriculation and graduation.

Source: Grbic D, Slapar F. Changes in medical students' intentions to serve the underserved: matriculation to graduation. *Analysis in Brief.* 2010;(9)8: July. Washington, DC: Association of American Medical Colleges. https://www.aamc.org/download/137518/data/aib_vol9_no8.pdf. Accessed October 1, 2015.

> *As an African American applying for primary care, if I took . . . a year and I did extensive research and I have a lot of papers now applying to primary care, I'm going to be questioned. Because what they're going to say is, 'You're not going into primary care. Most likely you're going to go into a specialty . . . [such as] GI, you want to be competitive. . . .' [They assume] I'm using this as a stepping-stone.*

Committee members may believe these candidates are applying to primary care residency to cover their bases when they actually want a specialty residency. In short, as one Forum attendee said, "Anything that's out of step with the stereotype can hurt you."

Forum attendees pointed out that the candidate is not the only one who suffers in this situation: the institution also loses a highly motivated candidate who would bring dedication, intellectual curiosity, and a different perspective to the primary care residency program.

Institutional Prestige and Memory

Biases can also arise from associations—both implicit and explicit—people have with the candidate's school, Forum attendees noted. A school's reputation and perceived prestige or academic rigor—as well as previous experiences with other students from that school—can lead selection committees to reach certain conclusions about candidates. Forum attendees noted that candidates who "come from certain elite institutions" may receive preferential treatment regardless of other qualifications. Even though these elite programs may not be the best at producing "team players" or graduates with the skills desirable in residents, attendees said, the prestige associated with the medical school may "rub off" on the residency program, thereby strengthening its ranking and desirability for future applicants.

Prestige can also play a role in the weight given to recommendation letters for candidates. Letters from more prestigious authors may bestow more esteem on candidates than those composed by writers who are less well known.

Conversely, Forum attendees explained that although historically black colleges and universities (HBCUs) that have medical schools provide a strong medical education to students, the perception persists that these schools do not have the necessary resources to offer the opportunities available at predominantly white institutions. Unconscious bias may cause residency committee members to raise questions about the quality of education received by candidates from these medical schools and whether their graduates will match the caliber of candidates from other schools, attendees said.

In addition to the detrimental effects assumptions about the quality and prestige of certain schools can have on residency applicants, the effects

QUICK FACT

The 2014 NRMP Program Directors Survey revealed that 48 percent of respondents reported that the reputation of the students' medical school was an important factor in deciding which students to interview.

Source: National Resident Matching Program, Data Release and Research Committee. Results of the 2014 NRMP Program Director Survey. Washington, DC: NRMP. 2014. http://www.nrmp.org/wp-content/uploads/2014/09/PD-Survey-Report-2014.pdf. Accessed October 2, 2015.

of institutional memory can be enduring and detrimental to the residency match process, Forum attendees said. Just one negative experience with a candidate from a certain school can affect how subsequent candidates from that school are viewed, they noted, saying that these biases may be magnified when the negative experience involved a minority resident. One attendee said, "It is as if a negative experience with a prior white resident from a program is written in pencil, while the same experience with a nonwhite resident is written in permanent marker."

Attendees also noted that word travels across institutions in the medical community, which can create challenges for candidates from certain programs who need to escape bias and secure residency placements. Residency applications from graduates of a program that carries a negative association can be hindered by the program's reputation. This dynamic can be magnified for candidates who graduate from HBCU institutions, which, as noted above, may be subject to negative unconscious biases. Forum attendees said that candidates and residents from HBCU programs may be unconsciously regarded as representatives of their schools to a greater extent than residents from other institutions are. The positive or negative marks made by past and current residents from HBCUs might affect the residency candidacy of other applicants from those programs, attendees said.

This bias can be attributed to fundamental attribution error, or the tendency to explain a person's behavior based on internal characteristics—such as race, personality, or religion—rather than on external factors, such as the situation. This tendency also explains why minority candidates may be perceived as representing their entire group (e.g., a gay, male resident representing all LGBTQ+ individuals). This tendency can be amplified when a residency program or an institution has limited experience with members of a particular group.

Forum attendees explained that increased attention, scrutiny, or "hypervisibility" of these residents can facilitate the unconscious connection between their job performance and that of others in the same group. One attendee said that if there is only one person of color in the residency program and that resident performs poorly, then the evaluators might connect his or her poor performance with racial characteristics rather than the individual's situation or past experience. As a result of fundamental attribution error, attendees said, selection committee members may unconsciously assess current candidates based on the past successes or failures of other residents from the same minority group, as opposed to the current candidate's own accomplishments and potential.

Interview Experiences

The interview process may be especially ripe for unconscious bias. Attendees said that if a candidate has a heavy accent, for example, it may activate accent bias, which may lead the interviewer to wonder whether the candidate

will be able to "keep up" with everyone else, comprehend what is being communicated as quickly as others do, or be understood by other team members.[8] This can influence the content of the interview and distract from the candidate's qualifications.

Residency programs often ask students for feedback about their interview experiences. When minority students feel they have experienced bias or discrimination or have had an unpleasant interview, they are less likely to report their negative experience than are majority candidates, even after the candidates are matched to residency programs, Forum attendees said. Attendees suggested that candidates may fear their complaints will not be taken seriously or that speaking up may affect their future opportunities for fellowship or faculty positions. Even if feedback is received anonymously, applicants may worry that the comments may be traced back to them, since the pool of minority applicants is so small.

Goodness of Fit

According to the code of conduct for the NRMP, program directors must refrain from asking "illegal or coercive questions" about age, gender, religion, sexual orientation, and family status.[9] Instead, they "shall ensure that communication with applicants remains focused on the applicant's goodness of fit within their programs." While the purpose of this code is to prevent overt discrimination against residents based on the listed characteristics, Forum attendees said, the notion of "fit" can allow implicit bias to creep into resident recruitment.

Forum attendees mentioned that "goodness of fit"—whether a prospective residency candidate will get along and function well with current residents and faculty and within the institution as a whole—is often discussed during resident selection. Programs may often host social events or receptions for potential residents and current residents to meet each other. However, there is the potential that during these events current residents may informally assess potential residents based on nonstandard, subjective characteristics such as personality, appearance, and common interests. Even in the more formal context of a peer interview, attendees said, current residents may feel a connection with an applicant who shares certain traits or interests.

These informal assessments of "fit" tend to be highly subjective and open up the possibility of unconscious favoritism for some types of resident candidates over others, attendees said. For example, a resident may discover that an applicant also follows a specific sport or team, leading to an animated discussion of that, instead of sticking to a list of prescribed questions. As a result, the resident may recommend the applicant for acceptance based more on a common interest than the applicant's medical qualifications.

Of course, the concept of "fit" can also work against an applicant. Despite policies to eliminate discrimination in residency interviews, one study

reported that in questioning students who interviewed for residency positions, "nearly all students reported that they were asked at least one potentially discriminatory question."[10] As the study explains, this may include questions about marital status and children or where a candidate was born. If interviewers have preconceived notions about a program's cultural norms, they may negatively evaluate or even reject an applicant based on their own unconscious biases about whether or not applicants comply or fit with theses norms. In addition to the potential effects of the interviewer's bias, students' ranking of programs may be affected by their sensing bias in interview questions. This dynamic can result in a lack of diversity in residency programs.[11]

Forum attendees talked about the unconscious perception that some personality types, cultural backgrounds, and genders may be more desirable in certain specialties than others. For example, some people may favor the ability of potential surgical or primary care residents to maintain eye contact, attendees said. Conversely, introverts may be more sought after in pathology and radiology, where there is minimal patient contact. Candidates from cultures in which reserved behavior is a sign of respect or in which maintaining eye contact is disrespectful could then be at a disadvantage when applying to some surgery or internal medicine programs. Similarly, female candidates may be subject to additional scrutiny. One Forum attendee pointed to an example of a woman who applied for a fellowship in gastroenterology; an interviewer in the fellowship program questioned "whether or not she could hold the scope," based on the size of her hands.

Forum attendees also observed that women are sometimes not considered serious candidates for trauma or surgery programs because of a perception that they have less emotional strength than men and, therefore, could not handle these high-stress specialties as well. Attendees said that interviewers sometimes ask women who wear wedding bands about their plans to have children, which raises the concern that interviewers might view candidates' reproductive capacity as detracting from their commitment to the residency program.

Much like medical school admissions, assessment of candidates for residency needs to be holistic, attendees said. Scholars and organizations such as the AAMC and the American Council on Graduate Medical Education are advocating for this approach as a way to increase diversity in U.S. residency programs.[12,13]

QUICK FACT

The 2013 NRMP Applicant Survey found that the most important factors in determining U.S. fourth-year medical students' program rankings were the program's potential career paths, future fellowship training opportunities, house staff morale, and work-life balance. Furthermore, while only 22 percent of the respondents indicated that the diversity at an institution was a factor in their ranking decisions, these individuals rated this factor 4.6 out of 5, with 5 being "extremely important" to their decision making.

Source: National Resident Matching Program, Data Release and Research Committee. Results of the 2013 NRMP Applicant Survey by preferred specialty and applicant type. http://www.nrmp.org/wp-content/uploads/2013/08/applicantresultsbyspecialty2013.pdf. Accessed October 2, 2015.

CALL TO ACTION Help with Applications to Residency and Electives

Applicants and institutions can benefit from AAMC programs that support students with their applications to residency or to electives at other medical schools, such as Careers in Medicine (CiM) and Visiting Student Application Service (VSAS). CiM provides self-assessments, exercises, data, and advice to help students prepare for and apply to residencies. VSAS is a service that not only assists students who wish to complete clinical electives at other medical schools and teaching hospitals but also helps host institutions find prospective visiting students. Completing clinical electives at other institutions can provide students with an opportunity to consider new learning environments for their graduate medical education.

CiM resources can help students objectively measure their goodness of fit with a specialty or residency. Furthermore, CiM advises students to "carefully consider residency programs to find the ones that will best suit you. . . . As you speak with physicians, residents, and recent graduates, ask whether the program features the culture and community you prefer. While web sites are a great data source for programs, they often fail to convey a feel for the type of people in the program. You must interact with current residents and faculty to determine whether a program's atmosphere supports the values in medical care you believe in."[1]

Few formal studies have been done to find commonalities in the types of advice advisors give students as they prepare to apply to residencies. One study by Chretien et al. found that at least half of clerkship director respondents who recommended away rotations for fourth-year medical students said such rotations allow students to become more knowledgeable about the programs and cities they might consider for residency.[2]

Similarly, institutions can benefit from having students visit their site for away rotations. Institutions that use VSAS have cited that being part of a national application service has allowed them to increase the number and diversity of applicants in their programs. For example, a representative from one institution noted, "VSAS has drastically changed the face of our visiting students' application process, both for our student body and visiting student applicant pool." Another added that "due to VSAS, we are starting to receive applications from parts of the country where we haven't seen applicants [from] before."[3] Institutions seeking to increase the diversity of their residency applicants might consider hosting students in away rotations.

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Chapter 4
Faculty Recruitment, Selection, and Hiring

Chapter at a Glance:

- Unconscious bias can affect the faculty recruitment process even before positions are advertised.
- The composition of selection committees and the criteria used to evaluate candidates can influence the effects of unconscious bias on the process.
- The way institutions extend offers to candidates or introduce them to the local community may signal an unconscious undervaluing of diversity.

Like resident recruitment, faculty recruitment and selection can be highly subjective, which can allow unconscious bias to enter even well-intentioned hiring processes, Forum attendees said. Most notably, unconscious bias is prevalent when institutions are developing and selecting candidates from pre-existing networks and when search committees that are not diverse are assessing candidates.[1] The implicit messages conveyed by the institutional climate might signal a lack of commitment to diversity and inclusion.[1]

Attendees said that unconscious bias in recruitment, selection, and hiring practices could have long-term impacts on academic medicine. The composition of academic medicine faculty is far less diverse than that of medical school graduates. It will remain so until medical schools take action to address that lack of diversity, which unconscious bias contributes to, attendees said. For example, while the percentages of male and female medical school graduates are nearly the same, the majority (62 percent) of full-time medical school faculty members are men. The percentages of black and Latino faculty (2.9 percent and 4.3 percent) are lower than those of medical school graduates who identify in those groups (5.8 percent and 5.1 percent).[2] This suggests, among other things, that institutions need to support efforts to increase the diversity of candidates in the pipeline for academic medicine faculty positions.[3]

Andriole et al. explain that encouraging students from underrepresented groups to enter combined MD-PhD programs during medical school may promote their interest in pursuing careers in academic medicine.[4] These authors also suggest that research experiences during college might contribute to increasing the diversity of medical school faculty.

Forum attendees said that unconscious bias also has an impact on mid- and late-career recruitment and hiring of academic leaders. Recruitment for senior positions can be fraught with bias, they said. Data show that the populations of department chairs and deans are even less diverse than the pool of potentially qualified applicants.[5] By increasing the diversity of people serving in senior positions, institutions can increase their chances of attracting a diverse pool of faculty recruits at other levels as well, which

could benefit all faculty.[6] (Chapter 5 addresses faculty advancement, promotion, and tenure in greater detail.)

The recruitment, selection, and hiring processes medical schools use may be limiting opportunities to attract faculty with diverse perspectives and experiences. One attendee at the Forum said, "We're systematically doing things unconsciously that keep us from being diverse." This chapter will illustrate instances in which unconscious bias can enter decision making in faculty recruitment, selection, and hiring.

QUICK FACT

According to the AAMC's *State of Women in Academic Medicine* report, women made up only 15 percent of U.S. department chairs and 16 percent of U.S. medical school deans in 2013–2014.

Source: Lautenberger D, Dandar V, Raezer C. The State of Women in Academic Medicine: The Pipeline and Pathways to Leadership, 2013–2014. Association of American Medical Colleges website. https://www.aamc.org/members/gwims/statistics/. Accessed October 5, 2015.

Unconscious Bias in Candidate Identification and Recruitment

Forum attendees noted the significant pressures that chairs and deans face in having to identify high-quality candidates for positions vacated by faculty when they retire or move to another institution. The need to have potential applicants "on file" at any given time means that some candidates are identified through their relationships with senior faculty before the official recruitment process starts, one attendee said. While helpful for administrative purposes, this type of informal recruitment is susceptible to biases and preferences for certain types of candidates, attendees said.

As one Forum attendee remarked, "It's understandable that they're constantly scanning and developing relationships. And if they're doing that with a diverse pool of potential candidates, that could make this [process] healthier. But they tend to be looking at people like [themselves] to follow in their footsteps as opposed to really scanning broadly." Over time, this kind of subjective and narrow recruitment process may create a cycle of homogenous selections when paired with an unconscious preference for like individuals, attendees said. Researchers have documented the tendency for employers to select candidates of the same racial, age, and gender group as themselves.[7] Furthermore, in-group preferences, whether blatant or unconscious, can create significant barriers for individuals who do not fit the characteristics of the dominant culture within an institution.

Researchers have identified stereotypes about race and connected them with likely effects on recruitment.[8] One study cites a tendency toward an implicit belief that Asian Americans make passive and less-capable leaders.[9] A Forum attendee commented, "A third of our faculty is Asian, but they are not in positions of power. . . . People have already assigned some particular characteristics to them based on their own unconscious or conscious biases. They're not seen as being leaders, and so they do not get opportunities to get into leadership positions."

AAMC data and literature confirm that women also continue to be underrepresented in leadership positions.[10] An AAMC *Analysis in Brief* published in February 2015, *The Underrepresentation of Women in Leadership Positions at U.S. Medical Schools*, noted that "academic medicine has made substantial progress toward gender parity among faculty in medical schools and teaching hospitals over the past several

decades. Yet women remain underrepresented in leadership positions in academic medicine, particularly at the highest rungs. Disparity in leadership representation, which is incompletely understood, is a national issue because it has implications for talent entering the health care workforce and our ability to strengthen the broader health system."[11]

Unconscious bias may also be introduced in the grooming of certain individuals, such as postdoctoral fellows, for future positions, attendees said. Unlike the recruitment of faculty for leadership positions, there is often no formal process for bringing postdocs on board. Forum attendees noted that recruiting postdocs for faculty positions is often based on prior relationships and networks. One attendee commented, "It's very much of a 'who-knows-who,' when we should be thinking, 'those are the people who are the future of our faculty.'"

QUICK FACT

According to the AAMC StandPoint® Surveys (formerly Faculty Forward Engagement Survey), compared with their majority-race counterparts, a significantly smaller proportion of minority faculty agree that their department is successful in recruiting (58 percent vs. 63 percent) and retaining (55 percent vs. 62 percent) racially and ethnically diverse minority faculty.

Source: AAMC StandPoint Surveys.

Subtle messages from faculty members to postdoctoral researchers may encourage some candidates to stay within the institution and others to seek employment at other universities. Attendees noted that fellows encouraged to stay with the university may receive messages such as, "You should stick around" or "You remind me of me 30 years ago." Other postdoctoral students may not receive this encouragement. These messages reinforce implicit notions of who or what is valued at an institution, attendees said.

One Forum attendee mentioned that there is a noticeable contrast between those who are encouraged to apply for positions at his institution and those who are not. While the majority of his university's postdoctoral researchers join the faculty there, it is most often racial and ethnic minorities who are channeled into outside universities. A study by Peek et al. found that a potential strategy for increasing faculty diversity is to develop a student-to-faculty pipeline within the faculty and students' own institution.[12]

Unconscious Bias in the Candidate Selection Process

The composition of selection committees may bring an unintentional subjectivity to the selection process, Forum attendees said. While some institutions have formal requirements about who should be included on the search committee, including a diverse range of faculty or the use of equity advisors, others do not. Attendees shared their concerns about inconsistent approaches to committee staffing. "Whenever I walk into a room, I notice who's here and who's not here [on the selection committee]," said one attendee. Another warned: "There is risk to not having a lot of diversity [on the selection committee] consistently."

A Forum attendee also noted that even the most diverse committee is still vulnerable to bias and flawed processes: "There's also a risk to the assumption that just because you have women and minorities on the search committee that somehow it's going to be a fair process. Because,

as we know from the literature, we're all subject to unconscious biases." To counteract these assumptions, Forum attendees discussed the importance of cultural diversity training for all selection committee members, as well as a formalized process that includes certain checkpoints at all stages (e.g., "checking the pool of candidates to see if it is diverse" before starting the interview process).

Forum attendees also discussed ways the unconscious "othering" of diverse populations may undermine institutions' efforts to recruit faculty from groups that are underrepresented in medicine. One attendee recounted that each member of the search committee for the associate dean for diversity position at their university was a woman and/or a member of a minority group—except for one white male. Other search committees there did not have such deep minority representation, which may indicate the unconscious biases that only minority faculty and staff would be qualified to select or be interested in selecting a suitable candidate for a diversity position.

The ramifications of the search committee's composition should raise important questions for all members of the university community, the attendee pointed out. First, why did so few white men participate on the search committee? Did no others volunteer? Or were white, male volunteers met with indifference or even hostility? Either way, the unspoken message may be that white men at the institution do not see themselves as connected to diversity.

This implicit disassociation between diversity and "whiteness" is further exemplified by the common practice of scheduling minority candidates but not white candidates to speak with diversity personnel, attendees said. One disturbing presumption behind this practice is that white people are not interested in diversity. Another is that all minority candidates are automatically interested in participating in a university's diversity efforts because of a shared heritage.

Forum attendees provided several examples of how unconscious bias can introduce doubts and prompt questions unrelated to the candidate's actual credentials:

- Will the potential parental responsibilities of a female candidate hinder her productivity?
- How long will an older candidate really be able to serve the institution? Will other faculty accept an older colleague? Is the candidate too set in their ways?
- Will a female candidate focus more time on clinical service than research, and if so, should a male candidate be selected [for a research position]?

- Will students and patients be able to understand a candidate whose primary spoken language is not English?
- Do candidates from "first-tier" institutions add value in terms of their educational backgrounds and experiences?
- Must the institution accommodate Muslim candidates' need to pray a certain number of times per day or to wear a hijab?
- Can the school provide an attractive environment that accommodates cultural needs or perceived preferences of potential faculty members? One attendee recounted hearing this comment in a selection committee meeting: "We can put all these things into place, but the fact is that African Americans still don't want to live in a city with a historically small black population."

These kinds of questions reinforce stereotypes that can affect the decision making in candidate selection.

Perhaps the most concerning instances of unconscious bias were the conversations Forum attendees had witnessed in which selection committees questioned the cultural "fit" of candidates from diverse racial and ethnic backgrounds. Attendees recalled hearing statements such as, "There's a culture here, and we want the person to be successful in this culture," which may be a way of saying that they don't want to disrupt the status quo. Additional statements questioned the merits of minority candidates: "We don't want to set somebody up to fail" or "We need to make sure we don't lower our standards."

These comments align with research demonstrating the tendency for many Americans to unconsciously view racial minorities as less intelligent and less hardworking than white Americans.[13] As one Forum attendee stressed, these questions of "troubling fit" can become a veiled way of saying "you're not one of us" and are very much in opposition to the objective of diversity efforts: "The point of diversity is not that somebody fits into what we have. It's 'let's take advantage of what they bring that's going to enrich us because they're not just like everybody else.'"

Attendees said that there is also often an unconscious bias toward candidates that trained or worked at elite institutions: "There is sort of a cachet to getting people from other elite institutions," said one. Selection committees may prefer candidates from elite schools because they can be perceived as bringing social capital, or an "automatic currency," to the institution. Attendees suggested that a way to overcome these biases was by focusing more on candidates' experience, expertise, and potential for success than on where they trained or worked.

Furthermore, candidates who attended a historically black college or university (HBCU) or a Hispanic-serving university can also face unconscious biases related to the perception that those institutions offer

a lower quality of education, according to Forum attendees. Candidates may feel they need to prove themselves in order to be fully considered for positions. For example, an attendee stated, "If they come from an HBCU but they do their residency here [at a top-tier institution] and they're a superstar, then they can overcome that [perceived educational inequality]." This statement demonstrates the tendency for some people to unconsciously label candidates from HBCUs and Hispanic-serving institutions as members of the out-group and of a lower academic tier.

Unconscious Bias in Hiring and in Offer Acceptance

Unconscious biases may enter decisions about the resources and incentives offered to candidates and can affect how welcome candidates feel and whether they think they will be happy working in a particular institution. Forum attendees said that differences in factors such as salaries offered, lab space allocated, and soft money apportioned create situations where "you have inequality walking in the door." Equity studies conducted by institutions often confirm that salary and benefit packages differ among candidates by race and gender.[14] A transparent hiring process and clear institutional guidelines for salary and benefit packages can decrease or eliminate many misconceptions and misunderstandings and can simplify the decision-making process for candidates.

In assessing an institution's offer, candidates may reflect on their interview experience and their perceptions of the institutional climate. For example, one Forum attendee said the lack of partner benefits at her institution makes it difficult for it to recruit LGBTQ+ faculty because it sends these candidates the message that they are not welcome. Other attendees observed that many institutional mission statements do not reflect a commitment to diversity or to serving diverse populations. An attendee suggested that universities make sure that materials on their website, including the list of invited speakers and university events, reflect their commitment to diversity.

The institution itself is only one part of the decision of where to work, however. The surrounding community and its resources also play a role. Many institutions prepare packets of information about community resources for candidates. This intended welcome sends a different message if the packet includes only resources that cater to the dominant culture, a sign that the institution has made the assumption that these community resources should be suitable for people from all cultures. One Forum attendee relayed a conversation she had with an African American colleague who stated, "You have to think about what else you need to survive outside of the job. Where are you going to get your hair done? Where are you going to send your kids to school?" If institutions do not convey information about culturally relevant resources and necessities, candidates may conclude that that they do not belong at the institution or in the greater community.

Furthermore, Forum attendees said, the perception that an institution undervalues diversity may be reinforced when diversity initiatives receive inadequate financial resources. One attendee said that the lack of financial support hindered institutions' ability to cultivate a climate in which individuals from diverse populations perceive that they are welcomed and valued, stating, "Commitment without currency is counterfeit."

CALL TO ACTION MITIGATING EFFECTS OF UNCONSCIOUS BIAS IN EVALUATING CANDIDATES

Suggestions for mitigating the effects of unconscious bias in the evaluation of job candidates:

1. Leaders of the search process can remove subjectivity from interviewing by creating more objective, structured interviews. Search committees can commit to specific credentials before reviewing applications and review candidates on those credentials before making summary judgments (Uhlmann and Cohen 2005).
2. Interviewers may consider that cultural differences affect first impressions of candidates. For instance, the standard American interview uses the criteria of self-confidence, goal orientation, enthusiasm, and leadership, though these qualities may not be apparent in people of more reserved cultures (Mahoney 1992).
3. Ample time should be reserved for interviews and evaluations of candidates, because gender bias emerges more when evaluators are under time pressure (Martell 1991).
4. Training workshops with examples of hiring biases and potential solutions should be provided—for example, how to conduct structured interviews (Blair and Banaji 1996).
5. Evaluators should decide whom to include, not whom to exclude (Hugenberg et al. 2007), and avoid looking for excuses to eliminate candidates.
6. Evaluators should be aware that recommenders of applicants may hold unconscious biases and, therefore, may present skewed representations of applicants in their letters of recommendation (Trix and Psenka 2003).

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Chapter 5
Faculty Mentoring

Chapter at a Glance:

- Mentoring is essential to navigating the political environment at an institution and can have an impact on one's academic productivity and advancement.
- Unconscious biases arising from differences in backgrounds between mentors and mentees—whether based on gender, race, socioeconomic background, or generation—may have the potential to permeate and challenge the mentoring relationship.
- Effective mentoring involves mentors and mentees taking steps to move beyond the biases that can negatively affect their relationship.

Recent research findings from a study of 124 medical schools show that only 36 offered mentoring and career development programs for faculty who are underrepresented in medicine.[1] Researchers have also found that U.S. medical schools that offered longer, more comprehensive minority faculty development programs (i.e., five years or more) showed a greater increase in faculty diversity than schools that offered less comprehensive programs.[2–4] Despite research findings that faculty development programs and the development of peer support networks increase retention and advancement of minority and underrepresented faculty members, the vast majority of medical schools still do not have such programs.[2–5]

QUICK FACT

According to results from the AAMC StandPoint® Surveys (previously Faculty Forward Engagement Survey), more women than men (68 percent vs. 54 percent) and more minority than majority faculty (73 percent vs. 58 percent) agreed that having a formal mentor is important to career advancement.

Source: AAMC StandPoint Surveys, 2016.

Mentoring is a core strategy for successful faculty recruitment and retention in academic medicine, and it helps faculty thrive.[3,6,7] Scholars suggest that mentoring is more likely to occur and to be effective when it is:

- Guided by institutional policy
- Offered as a visible, institution-wide program that provides resources for unit-level programs
- Deemed by peers to be a valued activity [7]

The National Academy of Sciences suggests that all faculty should be trained and encouraged to become effective mentors.[6] Effective mentoring helps junior faculty as they navigate personal and professional changes at the start of their faculty careers. Some institutions pair junior faculty with a senior faculty member who is encouraged to provide guidance, career advice, and interventions to facilitate the development of the junior faculty member.[6] The institution's leadership plays a critical role in defining and facilitating mentorship because it contributes significantly to faculty advancement.[6,7] These relationships can be crucial for the career and professional development of junior faculty members.

Through mentoring, individuals may receive valuable data about the tenure and promotion process, developing their academic portfolios, making career decisions, and navigating the political environment that

influences academic productivity and professional satisfaction.[8] However, there is no standard definition of what a mentor-mentee relationship is or should be.[6] Mentors often provide opportunities and resources for mentees, but there is no standard formula, and mentoring may take different forms depending on the institution, department, and individuals involved. Unconscious biases between mentors and mentees have the potential to permeate and challenge this relationship. This chapter explores what Forum attendees said about the impact unconscious biases can have on establishing and sustaining mentoring relationships.

QUICK FACT

Successful mentoring is directly linked to a number of positive outcomes, including improved job satisfaction, greater faculty productivity, higher retention rates, and enhanced sense of personal fit.

Source: Fox S, Corrice A. Mentoring in Academic Medicine: The Current State of Practice and Evidence-based Alternatives. Faculty Forward: Ideas in Practice. Washington, DC: Association of American Medical Colleges. https://www.aamc.org/download/477040/data/mentoring_in_acadmed_current_state.pdf. Accessed October 8, 2015.

Unconscious Bias in Relationship Dynamics

The life experiences of mentors and mentees often differ considerably. While this dynamic can prove beneficial for the less-experienced mentees, it also makes these relationships especially vulnerable to unconscious bias, Forum attendees said. In particular, cross-gender and cross-racial mentoring relationships may not develop naturally and can be fragile.[7] For example, attendees noted that female mentees sometimes feel reluctant to discuss work-life-balance issues with their male mentors for fear of being judged.

Similarly, attendees said that some mentors may not have confidence in the professional abilities of minority mentees, perhaps as a result of an unconscious association between their background and a lower level of intelligence. As a result, the mentees may not be encouraged to be leaders or to exceed expectations. As one attendee noted, "Men are judged on their potential, and women are judged on their achievements." Similarly, female junior faculty members' commitment may be questioned if they have family obligations even though males who face similar obligations are not. This may put female faculty at a disadvantage if potential mentors feel less compelled to mentor them. One attendee noted that assumptions about the relationship between family status and professional commitment may also influence the types of opportunities female faculty with children are afforded:

> *We had a discussion in a faculty meeting recently about whether [a female junior faculty member] should go to a specific conference and present something. [One] faculty member said, "Well, I don't know if she should be asked to do that. She has a young child." . . . And somebody else chimed in and said, "You know, that should certainly be her own decision to make." And then someone said, "Yeah, well, we just don't want to put pressure on her to feel she has to do something like this."*

While the senior faculty in the above example may have had good intentions, the assumption that the junior faculty member would be unable to participate in the conference because of family obligations and the reluctance of the senior faculty member to ask her about going to the conference show how unconscious bias can influence a mentoring relationship.

Generational issues can affect the mentoring relationship as well. Bland et al. explain that generational characteristics are important because they shape how people "view the world, make choices, lead their lives, and interact with others. Generational differences are formed through experiences of family dynamics, societal norms, economics, and cultural trends."[7] One attendee stated: "Sometimes the expectations are so different between people who've grown up in one era, in one style of mentoring. We're seeing those [differences] now for minority and majority faculty and people of a different generation [younger faculty] who take [mentoring] as kind of 'advice' as opposed to, 'Please do this.'"

Another attendee said that "a gender dynamic [can also] combine with cultural dynamics [in mentors' expecting] women to act a certain way." An effective mentoring relationship involves an awareness of potential differences, including those that exist across generations, because they can lead to the development of new competencies for both the mentor and the mentee.[9]

Mentors often present opportunities for junior faculty to serve on committees or advise them on how committee work fits into their career plans. Research shows that racial and ethnic minorities in particular may experience disproportionate pressure to participate in diversity efforts, often referred to as the "cultural tax" or the "brown tax."[10] On the surface, engaging in diversity efforts may appear to be career-enhancing opportunities to increase faculty members' visibility and build their skills. However, this work may also take away time from other professional responsibilities, including clinical duties and research projects. Forum attendees said that unconscious biases may blur the lines between providing meaningful opportunities and unintentional tokenism, which can strain the mentoring relationship.

In addressing how mentees are considered for committee work, attendees discussed the harm that may be caused by reducing a mentee who is from a group underrepresented in medicine to a racial and gender identity or to multiple nonmajority identities rather than thinking about candidates for committee positions on a deeper level. One attendee suggested changing the emphasis from "we need more women" to a conversation about the expertise needed, followed by identifying women who fit the role.

Unconscious Biases Toward Mentors

It is important to note that mentees may be unaware of the biases they have toward mentors. For example, Forum attendees noted that some mentees may question the competency of minority senior faculty or assume that they do not have as deep a research background or publication experience as majority faculty. One attendee said, "These unconscious assumptions that minority senior faculty are less accomplished may tarnish the ability of the two faculty members to engage in a meaningful manner."

QUICK FACT

The AAMC suggests that the following evidence-based guidelines can assist in creating an effective faculty-mentoring program:

1. Set up the program for success with clear goals and institutional sponsorship
2. Establish ground rules for participation
3. Train and incent mentors
4. Conduct a careful matching process
5. Hold a mentor-mentee orientation session
6. Clarify the program's process steps and outcomes
7. Incorporate the program into existing human capital systems

Source: Fox S, Corrice A. Mentoring in Academic Medicine: The Current State of Practice and Evidence-based Alternatives. Faculty Forward: Ideas in Practice. Washington, DC: Association of American Medical Colleges. https://www.aamc.org/download/477040/data/mentoring_in_acadmed_current_state.pdf. Accessed October 8, 2015.

On the other hand, mentees from groups underrepresented in medicine may have in-group preferences that cause them to deliberately seek relationships with individuals who share their ascribed identities, potentially limiting their level of engagement with other senior faculty members. Attendees noted that this may be due to the mentees' desire to engage with a faculty member who understands the feelings of isolation or tokenism experienced by minorities in medicine. While this desire is understandable, Forum attendees stressed that successful mentor-mentee relationships rely on more than just specific personal characteristics.

Institutions Can Help Faculty Cope With Unconscious Bias

Although many mentoring relationships grow organically, institutions have some responsibility to ensure that these relationships have a strategic direction and include pedagogical training and an evaluation process.[6] Institutions can accomplish this by officially recognizing mentoring relationships and issuing sets of expectations or guidance on how to facilitate successful mentorship for both the mentor and mentee. This gives both mentors and mentees recourse when relationships sour or do not work out as expected.

One attendee relayed a situation that could have been improved by having institutional guidance in place. An older male mentor and a younger female mentee appeared to have different expectations and ideas about the mentoring relationship. The mentor completely stopped communicating with the mentee following a departmental conflict in which decisions were made that she felt placed her at a disadvantage as the only woman in the department. Although he was not part of the conflict, his behavior changed after the incident. The attendee surmised that it was perhaps because he "politically, in the scheme of things . . . didn't want to align himself with her." Instead of formally addressing the situation, he treated the mentee differently and did not offer an explanation to her or his fellow faculty: "As a mentor, he needed to have given her advice and be supportive rather than react that way. [Instead,] the mentee perceived that he made a decision to change the way he was working with her without explaining [that] to her." The attendee continued: "It was unfortunate overall because she's a minority, she's a woman in a male department." Scholars suggest that to circumvent misalignment of expectations in mentoring relationships, there should be an explicit "preparation phase" where the mentee and mentor learn about each other and prepare for their roles.[7]

Having a more formal mentorship program with articulated procedures and outside support for the mentorship relationship may minimize bias and can provide steps toward resolving difficult situations that arise between the mentor and mentee. A Forum attendee pointed out that conflict—or at least challenge and change—may be inevitable in mentoring relationships, which play out in an "intimate environment." Boundaries can be difficult to negotiate, and mentees may not know how to approach

the senior faculty member when conflict or misunderstanding occurs. The attendee continued, "There needs to be an [ongoing] conversation about the mentoring relationship between the protégée and the mentor as the mentoring work continues because the relationship is designed to change over time."

Research suggests that effective mentoring requires an appropriate interpersonal match and that mentors provide both professional and personal support.[11] Individual departments and institutions that implement successful mentoring practices and reward the work of mentorship can experience favorable outcomes in faculty recruitment and retention. For initial guidance on developing this relationship, please see the Five Tips for Successful Mentoring Relationships sidebar.

FIVE TIPS FOR SUCCESSFUL MENTORING RELATIONSHIPS

Scholars suggest that mentoring should be guided by principles of "managing upward," defined in academic medicine as a set of strategies that mentees can use to promote effective and successful mentoring by making a mentor's job easier.[1,2]

1. Junior faculty mentees can set themselves up for successful mentoring relationships by determining beforehand their specific professional and personal goals.[3] This process may include having them clarify their values and analyze their individual work style and habits. This information can form the basis for selecting a mentor who embodies or aligns with these factors.[1]
2. Once mentees reflect on their personal values and expectations of mentorship, they can take an active role in finding a mentor. Mentors can be identified by talking with colleagues or getting recommendations. Because personal chemistry plays a role and not all senior faculty will be a good match, junior faculty mentees must be persistent and identify multiple mentor possibilities at different stages of their careers.[1]
3. After potential mentors have been identified, the mentee should evaluate each one because certain qualities can foster a positive, productive relationship—or hinder it. The qualities to seek out include being accessible, being willing to provide career development opportunities, and having previous mentoring experience. Mentees should also look for mentors who encourage them to take risks and help them develop their own career plans.[1]
4. At their initial meeting, mentor and mentee should focus on sharing background, values, and needs. During this meeting, the mentee should explain how the mentor has already helped or inspired him or her. After this initial meeting, mentees should follow up with a thank you note. Future meetings should follow an agreed-upon structure. Mentees can take an active role in forming productive relationships by setting goals and expectations, being responsive and flexible, and directing the flow of data. By agreeing on a structure and a set of objectives up front, mentees can cultivate the relationship through:
   - Scheduling regular meetings
   - Planning and setting agendas
   - Asking questions
   - Listening actively
   - Following through on assigned tasks
   - Asking for feedback[1]
5. Over time, mentoring relationships evolve—and eventually end. Mentees should talk openly with their mentors about this process, discussing next steps and, if appropriate, even asking the current mentor to recommend future mentors.[1–4]

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Chapter 6

Faculty Advancement, Promotion, and Tenure

Chapter at a Glance:

- Institutional climates that unconsciously signal an undervaluing of diversity may deter minority faculty from applying for advanced positions.
- Unconscious biases may affect decision making in selection of people for leadership roles given differences in career opportunities between majority- and minority-group candidates.
- Mentoring, coaching, and sponsorship are especially vital for members of minority groups who are seeking advancement.
- Selection committees that lack diversity can introduce opportunities for unconscious bias in decision making.

Getting hired is just the first step in a fulfilling career as a faculty member in academic medicine. The next steps are advancement (which may include increasing job responsibilities and raises), promotion to positions at higher levels, and tenure, or permanent appointment as a teacher or professor. Successful grant applications and awards, as well as publication of research findings, play an important role in moving up in academia. Female faculty and those from underrepresented racial and ethnic minorities face numerous obstacles in each of these areas.[1–10]

Overall, women and underrepresented racial and ethnic minority faculty members wait longer for promotions, are less likely to attain full professorship, and, despite having similar scholarly aspirations, leave academic medicine at a higher rate than their peers.[3,10–12] Studies investigating the experiences of minorities in the academic process reveal that disparities in academic promotions between members of majority and minority groups persist even after controlling for factors that affect eligibility, such as research productivity, prior training, seniority, and career aspirations.[8]

Unconscious bias may be at the heart of this gap, Forum attendees suggested. The subjective nature of advancement, promotion, and tenure (APT) procedures at most institutions, the lack of diversity among senior-level faculty, and the sometimes-ambiguous promotion criteria create numerous opportunities for implicit biases. For example, scholars of color are disproportionately engaged in diversity and equity efforts, community work, and mentoring students who are the first generation in their families to attain higher education. Despite the value of this contribution, these faculty members often feel their efforts go unnoticed or feel undervalued by their peers and the system that governs and rewards academic merit.[11] Achieving equity in academic promotions is not only morally imperative, it is crucial to realizing a representative diversity in medical education, increasing creativity and rigor of medical research, and reducing health and health care disparities.[8]

The lack of minority representation at senior academic ranks is particularly concerning given the importance of professional networking in promotion decisions. Recognition of one's excellence as judged by peers, supervisors, supervisees, students, reviewing committees, and professionals outside one's department and institution are all key to building a professional reputation. Considering that unconscious bias favoring colleagues who are similar might be at play, minority representation at all levels of faculty may be essential to the promotion of minority candidates through the ranks.

QUICK FACT

According to a December 31, 2014, snapshot of the AAMC Faculty Roster, 79 percent of full-time full professors were white; 9 percent were Asian; 1 percent, black; 4 percent, Hispanic; 2 percent, multiple race non-Hispanic; 4 percent unknown race; and less than 1 percent, American Indian, Native Hawaiian/ Pacific Islander, and other races combined.

Source: Association of American Medical Colleges Faculty Roster. December 31, 2014. https://www.aamc.org/download/420612/data/14table3.pdf. Accessed October 4, 2015.

At the 2014 Diversity and Inclusion Innovation Forum, attendees at the roundtable on Faculty Advancement, Promotion, and Tenure (APT) discussed the roles that unconscious biases can play in academic promotions, from mentoring opportunities through the evaluation of faculty members in line for advancement.

Institutional Climate

Institutional climate and support for diversity can influence a candidate's decision to apply for advanced positions at their institution. Attendees noted that a climate that fosters success is important for preventing the loss of faculty members before they attain tenure. Studies exploring the experiences of minority faculty in academic medicine have found that many feel that social and professional isolation, difficulty in cross-cultural relationships, and a lack of mentoring, role models, and significant social capital hinder their academic success.[7,8,13–15]

Institutional climate—the system of shared assumptions, values, and beliefs that governs how people behave in organizations—can be difficult to change, but it is vital to establishing an environment in which qualified faculty from a variety of backgrounds can work together and encourage each other's success and advancement over the long haul. One Forum attendee referred to the institution's climate as the "soft stuff" that is difficult to talk about but important to address if an institution is to create an effective and egalitarian path to advancement for faculty members. "If the climate is not such that people want to be there or feel like they could be successful, you just get this revolving door. [Climate is] difficult to address, because it's really big. We can talk about it, but it requires a lot of courage to actually shift and go against the grain of the institution," the attendee said.

Faculty Advancement and Support Relationships

In terms of professional development, Forum attendees reflected on how different faculty members may receive different degrees of coaching and mentorship. As described in the previous chapter, effective mentoring relationships can be a challenge for minority-group faculty but are key to their success. In addition to mentors, coaches can be helpful in preparing lower-ranking faculty members for the promotion and tenure process by making them aware of the expectations for advancement, believing in

their ability to succeed, and working with them closely to prepare a robust academic dossier. Similarly, sponsors—people with power who advocate on behalf of those seeking advancement—are also vital to creating opportunities for more-junior colleagues. Whether suggesting junior faculty for committees, opportunities for national conference panels, or consideration for leadership positions, sponsors help secure career development opportunities that can enhance one's ability to advance.[16] Unconscious biases may affect which individuals receive mentorship, encouragement, and sponsorship, as well as the quality of interpersonal relationships and, thus, the professional trajectory of faculty members seeking advancement, promotion, and tenure.

Various studies suggest that even when these connections happen, minority faculty often continue to feel a lack of investment, encouragement, and commitment from academic leadership.[2,8,9] The literature also shows that minority faculty members may be susceptible to feelings of low self-worth and inadequacy and perceptions of being viewed as low achievers.[8,14,17] One of the Forum's attendees observed that sponsors' behaviors can vary from one sponsee to another:

> *It's differential treatment [by sponsors toward] . . . what you've done and what you haven't done. Are we setting some [minority junior faculty] up for failure, and now are you promoting certain other people, making them feel like they are going to succeed?*

These observations illustrate what researchers have named the Golem and Pygmalion effects, in which people labeled as marginal or poor performers will, in fact, underperform (Golem effect), while those groomed for success tend to excel (Pygmalion effect).[18,19]

Leadership Roles

Women and minority faculty members may struggle with the decision to put themselves forward for leadership roles at the department or institution level, according to Forum attendees. Attendees also pointed out that minority faculty are often expected or pressured to engage in community-based work, join diversity committees, or otherwise weigh in on topics related to minorities or diversity. Minority faculty members can feel self-imposed pressure to serve in these roles, too. However, these labor-intensive activities are typically not recognized at the same level as scientific publications or securing external funding in considerations for promotion or tenure, which puts these faculty members at a disadvantage, attendees said. Despite making significant contributions to the field, nontenured faculty members and faculty engaged in public service and policy development may feel as though their contributions are not equal to those of tenured faculty who have taken a more traditional path.

In addition, Forum attendees said, faculty members of color whose opinions may be sought out on diversity topics are often not included in

other discussions, leaving them feeling devalued and unappreciated as researchers. One Forum attendee of color put it this way: "There are very clear cues. [Majority faculty] shift their bodies toward you when discussing a student of color, then shift away when there's something else on the agenda. Others may not notice, but, to me, these things are not subtle."

This pigeonholing can make it difficult for minority faculty members to "find their voices" and speak up about broad issues and policies and for others to see them as leaders of the institution as a whole, rather than associated with issues pertaining to minority populations. One attendee noted that "the most recent thing [for me] is being able to make my voice known on broader policy issues that have nothing to do with minorities, per se, but to say, 'I have a lot to contribute, and I have a perspective on this as well.' . . . People [have to] get used to the idea that an idea might come from [me] that actually has nothing to do with minorities at all."

Obstacles to Advancement

Forum attendees pointed out that unconscious racial biases can lead APT committee members to quibble over small points on minority candidates' otherwise strong dossiers or question the integrity of minority candidates' materials. They noted that similar criticism and nitpicking can also emerge on grant review panels and protocol reviews, placing additional pressure on minority researchers to prove their research rigor beyond that usually expected from white peers. They also said that a heightened level of scrutiny of minority faculty may dissuade promising scholars from entering the academic process altogether.

One Forum attendee recounted how the APT committee treated the nomination of a minority candidate who met all the criteria for promotion, including publication in top journals and an excellent record. A committee member focused on a minor issue about how the candidate articulated an award for which they were being nominated. "The candidate described themselves as having been put up. They didn't say received . . . and hadn't gotten the award, [which] was a top award in the field. Everything else on the record was just a slam dunk. This case had to go all the way up [in our] university to be explained."

Unconscious biases about women faculty members lead some to question their competence, hindering their advancement. Forum attendees relayed stories of excellent women candidates being challenged on their credentials throughout the promotion and tenure process while less-qualified men sailed through with notably less scrutiny. These anecdotes generally resonate with research showing that male candidates are viewed as more competent even when female candidates possess identical qualifications.[20] Moreover, women who are mothers may face additional bias because motherhood can be implicitly associated with a lower commitment to profession or career.[21] Furthermore, attendees shared stories of how bias can "creep" into discussions of the relative merit of faculty members'

research projects. Forum attendees noted that certain research topics, particularly those related to inequities or minority health issues, may be devalued by promotion and tenure committees. This bias could disproportionately affect faculty members who conduct research on health disparities.

Letters of Recommendation

Forum attendees also highlighted how letters of recommendation in particular can activate biases that may subtly sway committees, an observation that aligns with broader unconscious bias research documenting differences in the language used for letters of recommendation for female vs. male candidates.[22] For example, the difference between being described as a "top neurosurgeon" and a top *female* neurosurgeon provoke questions about whether "female" is an additional descriptor or a qualifier that implies she is a good candidate "considering she is a woman." These language nuances can introduce doubt and activate unconscious gender associations that often more strongly connect men than women to professional careers.[23]

Gaining Tenure

Forum attendees mentioned other challenges to minority faculty gaining tenure. For example, some attendees talked about tenure "targets" that are similar to institutional quotas but on a departmental basis. Although all qualified faculty should theoretically eventually achieve tenured positions, in reality, there is a finite number of slots for senior-level faculty. Attendees explained that once the institution reaches its acceptable "target" for senior-level minority faculty, other fully qualified minority candidates may find that they must wait their turn before being considered for promotion.

One attendee related a story about how, after two nonwhite individuals achieved tenure in one department in consecutive years, a third minority candidate was discouraged from seeking tenure the next year. The unexplained intradepartmental pushback reinforced the unconscious biases about who "belongs" in academic medicine, the attendee said.

As these examples highlight, advancement, promotion, and tenure processes can be influenced by unconscious bias to the detriment of otherwise excellent candidates.

Another Forum attendee pointed out that the need for alternative paths to success in academic medicine is "highly relevant to diversity" given the experiences minority faculty often face, as described earlier in this chapter. The attendee told the story of a family medicine faculty member who "struggled to get promoted to associate professor because he didn't meet the normal criteria. And with advising, coaching, whatever, he was able to show them how much [value] he brought [to the department]. I don't think he's got a single published paper, but he has done so much in terms of educating the community, in terms of health processes and things like that,

QUICK FACT

According to the AAMC StandPoint® Surveys (previously Faculty Forward Engagement Survey), significantly fewer women than men agree that faculty are offered equal opportunities at their medical school regardless of gender (68 percent vs. 85 percent). Further, fewer women perceive that faculty have equal opportunities regardless of race/ethnicity or sexual orientation. Similarly, when compared with majority faculty, fewer minority faculty agree that equal opportunities are offered to faculty regardless of race/ethnicity (68 percent vs. 82 percent).

Source: AAMC StandPoint Surveys.

that it qualifies as scholarship. He was probably the flag bearer [that led to a] new teaching track. He would never have succeeded in years past, but he deserved to get promoted. He absolutely deserved it. And he did, finally."

Lack of Diversity on APT Committees

Attendees at the Forum talked about the lack of diversity on APT committees and its impact on decisions related to promotions. Conflicts of interest, tight professional networks, and a fiercely competitive academic climate create an environment that can put underrepresented minority faculty at a disadvantage when it comes to hiring and promotions, attendees said. The few minorities who find themselves "at the table" may struggle between an obligation to act as the institution's moral compass on diversity issues and keeping their own place at that table by fitting in and not "going against the grain."

On the other hand, as one attendee explained, minority faculty who actually get to the table often feel an obligation to hold their fellow committee members accountable for the fairness of the process: "My job is to hold some degree of accountability. I try to do it, I think I do it professionally and well, but I refuse to be silent. It's affirmation to the process. I may have to pay a price for it, but you have to care about other people."

Asked to comment on the demographic makeup of their institutional APT committees, attendees reported that they believed women and minorities were vastly underrepresented. Committee members must be senior-level faculty members, a group in which minority faculty are already underrepresented. In addition, they are elected to serve in this role and "name recognition" may be a factor in that process, which may favor established white faculty members. As one attendee pointed out, "The downside is that the composition [of our selection committee] is strictly regulated. Individuals must [be] elected. It's a problem because then it's a popularity contest. Right now, there are 15 people on the committee, and there are two women. Are there any minorities? No, I don't believe so. The [13] others are all white men."

Attendees also talked about group dynamics, leverage, and power in swaying the discussion and the impact of social pressure on the final vote. One attendee reported that on their selection committee, "biases come out and are not repressed in any way, shape, or form. They influence the rest of the committee. To me that is an enormous problem." The attendee went on to say that changing the process takes courage and determination. "It takes having had the experience of discrimination . . . people who have historically been discriminated against are the only ones who will raise their voice."

Even if an institution wants to assemble a diverse committee, the election process and available candidates for a selection committee can make that difficult. "Would we want to try to assemble a diverse committee? Yes. But because of the policies and the election [process], we have no way of doing that," said one Forum attendee.

CALL TO ACTION PATHWAYS TO ACHIEVING A DIVERSE LEADERSHIP TEAM

The diversity of the workforce in medical schools will continue to expand. U.S. census figures indicate that by 2050, one of every two U.S. workers will be a person of color: African American, Hispanic, Asian American, Pacific Islander, or Native American. Given this reality, Forum attendees said, medical school leaders should attend to ways to attract minorities and women in positions of leadership.

Work discussed by Mallon and Grigsby suggests that medical schools and teaching hospitals can:

- Make sure the search looks open rather than closed (Valian 2015). A personal phone call from the dean to potential women and minority candidates can send the message that the school is truly interested in having a broad search. Women and members of ethnic groups may express interest differently. Don't assume that a woman or minority would not consider moving to your location (because of geographic location, lack of peers or colleagues, etc.).
- Network. Attend sessions and social events at national conferences and specialty or disciplinary meetings to make personal contacts with promising women and minorities (Peek et al. 2013).
- Be cautious when evaluating the prestige of a candidate's degree institution and current institution (Valian 2015). Of all the factors that affect a faculty member's productivity, none is more powerful than institutional characteristics (Bland and Ruffin 1992). In other words, institutional location drives productivity more than productivity determines the prestige of one's institution. A good question to ask is, "Is the candidate more productive than one might expect from an academic at this or a similar institution?"
- Set the filters that determine who moves to the next stage of consideration explicitly and appropriately (Valian 2015). Do those filters disproportionately advantage white men? For example, will someone really make a better chair because he or she has 10 years of experience rather than 5 years? Be careful of shifting filters as the search progresses. One way to avoid this is to identify qualifications in advance.
- Create welcoming and informative interviews with every candidate. Set up interviews for the candidates with community members about the nature of the community. Make sure the whole search committee is aware of community resources.
- To the greatest degree possible, make sure the composition of the search committee is diverse and inclusive. Committees must be welcoming of *all* candidates, including those from different ethnic, racial, religious, and cultural backgrounds and sexual orientations and gender identities.
- Make sure committee members understand that candidates are interviewing the organization and its members as much as the committee is interviewing them. Interviews should offer candidates the opportunity to ask questions that may be considered challenging. And committees should be prepared to respond with candor—and discretion.

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Reprinted from: Mallon WT, Grigsby RK. *Recruiting: Proven Search and Hiring Practices for the Best Talent.* Washington, DC: Association of American Medical Colleges; 2017:33.

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Chapter 7
Patient Care

Chapter at a Glance:

- Unconscious bias can undermine the doctor-patient relationship and quality of care, resulting in poorer health outcomes for patients.
- Patient care can improve when physicians explore their own biases and how those biases affect the care they provide.
- Physicians have the opportunity to teach residents how their unconscious biases can affect patient care, raising awareness of this issue for their future practices.

Academic medicine resembles a microcosm of society, reflecting various structural, interpersonal, and systemic disparities and instances of incongruence that ultimately contribute to the quality and responsiveness of the U.S. health care system overall. As one Forum attendee noted, the persistent incongruence between the U.S. health care workforce and the diverse population it serves is linked to poor patient-provider communication and certain patient populations experiencing higher rates of "feeling excluded by a system that seems distant and uncaring." An underresourced, nondiverse, inadequately trained, and undersupported health professions workforce may perpetuate these experiences, according to some reports.[1,2]

Consequently, it is not surprising that addressing the health and health care challenges of a nation involves building a diverse and empowered health professions workforce, including faculty. In 2012, the Association of American Medical Colleges (AAMC) reported that 60 percent of all U.S. medical school faculty were white, and 13 percent were Asian. Hispanics or Latinos held 4 percent of all faculty positions, and blacks or African Americans, 3 percent. This disaggregation demonstrates the national challenge of diversifying the faculty.[1–4] For example, the Institute of Medicine proposed in 2003 that all health professionals should be effectively trained to ensure high-quality care for the entire population and that diversity is key to ensuring health care excellence and the health of all.[3] This implies that to meet this challenge, a truly diverse workforce is a necessity.

Considerable research has confirmed that unconscious bias in health care delivery has detrimental effects on patient health outcomes.[3] While the 2014 Diversity and Inclusion Innovation Forum focused on unconscious bias in academic medicine, a group of experts in patient care talked about how the climate at teaching hospitals can affect the care of patients.

Research suggests that the high-stress and fast-paced environments in which clinicians are often forced to operate can increase their reliance on instinctive responses to individuals and situations, which makes the situations particularly ripe for bias.[5] One Forum attendee said, "In the clinical environment, almost everybody is trying to triage their cognitive

energy and where they're going to spend it." The effects of unconscious bias can be seen in the dynamics of doctor-patient relationships, patients' perceptions of caregivers, and the differences in treatment and quality of care patients receive.

QUICK FACT

More than 25 million people in the United States speak English with limited proficiency, an increase of 80 percent between 1990 and 2010. More than 16 million of these U.S. residents speak Spanish as their first language. Other common first languages are Vietnamese, Korean, and Tagalog. In 2013, nearly 85 percent of the approximately 53,000 applicants who used the AAMC Electronic Residency Application Service® (ERAS®) reported knowledge of at least one language in addition to English. However, those languages did not reflect the top language needs of the general population.

Source: Diamond I, Grbic D, Genoff M, Gonzalez J, Sharaf R, Mikesell C, Gany F. Non-English-language proficiency of applicants to U.S. residency programs. *JAMA*. 2014;312(22):2405-2407. http://jama.jamanetwork.com/article.aspx?articleid=2020360. Accessed October 3, 2015.

The Effects of Unconscious Bias on Doctor-Patient Relationships

Forum attendees spoke about how reliance on unconscious categorizations of patients can damage doctor-patient relationships and trust. One attendee, a clinician, relayed an incident when they were mentally spent at the end of a shift and misjudged whether a patient was able to take part in a slit-lamp exam in which drops are placed in the eye so that clinicians can examine the internal eye structures with a special microscope. The exam requires the patient to stay still and calm while the eyes are examined.

> *I had just worked a night shift. Early in the morning, there was a woman with her daughter. Her daughter was maybe 25 years old, and I thought it was obvious that she had some kind of intellectual impairment. . . . The residents were trying to get this daughter to engage in a slit-lamp exam, and I happened to walk into the room right when they were just about to try to get the daughter to participate in that, and I said, "Guys, don't worry about trying to do that. She probably can't participate in that exam. We're not going to be able to do that." They left, and the mother looked at me and said, "Why did you do that?" And I said, "Well, your daughter can't do a slit-lamp exam." And she said, "Why do you think that?" So, obviously, at this point I was starting to think, "Ooh, I made a wrong decision here." So I said, "Okay. Well, let's see if she can do it."*

In this case, the physician's perceptions of the patient's ability level caused the physician to make unconscious assumptions about the limitations of the patient's abilities. Actions based on these assumptions can affect the quality of care a patient receives, as well as the patient's willingness to cooperate with the doctor's recommendations.

Unconscious bias and disparate treatment can also harm patient-doctor relations when the patient and physician speak different languages. One attendee said, "Our patients who don't speak English feel that their care has not been as good compared to those who do speak English." Part of the problem stems from how physicians communicate with nonnative English speakers by using interpreters.

According to Forum attendees, many physicians look at the interpreter instead of the patient and speak about the patient in the third person, saying "the patient's family" as opposed to "your family." Additionally, patients may experience substantial delays in care while waiting for appropriate translation services, resulting in frustration for both patients and providers. The logistical challenges involved in providing services to speakers of other languages can lead to a physician's

unconscious preference for patients who can communicate in the physician's language and can make it difficult for trust to form between patient and physician, ultimately compromising both quality of care and patient outcomes.

Biased Perceptions of Caregivers by Patients and Others

Forum attendees pointed out that patients also have biases that can harm doctor-patient interactions and quality of care. Research suggests that even racial minorities are susceptible to unconscious biases about members of their own racial or ethnic groups.[6] Forum attendees relayed several instances in which patients and community members questioned the credibility and competence of a physician because of the physician's race or gender—even when the patient shared that race or gender.

For example, a female physician at the Forum described the frequency with which her credentials are questioned by patients: "The number of times that people have questioned whether I'm actually the doctor—or the nurse, or the tech, or the this, or the that—it just gets to be routine." An African American physician recounted an incident of antiblack bias from a patient in her own racial group: "I've had black people who said, 'I didn't come to [this hospital] to get a black doctor. I don't want you to take care of me.'" In both of these examples, the patients' associations about race and gender caused them to question the expertise of the attending physician or even to request a different one.

Community members may also make assumptions based on a clinician's race or gender when faculty or staff members give presentations both inside and outside the institution. One Forum attendee relayed the story of an HIV advocate and physician and an HIV patient who gave a presentation to physicians on the need for physicians to accept HIV patients: "The HIV advocate was black. The patient who was HIV-positive was white. Everybody in the room assumed that the advocate was the patient. They were shocked when this well-dressed white lady got up and talked about her experience [with HIV]." The audience, composed entirely of physicians, made assumptions about the identity and status of the two individuals based on race.

Assumptions about identity and health status can have an impact on the perceived credibility of physicians of color, even within their areas of expertise. A Forum attendee relayed this story of speaking on a panel before state legislators:

> *I had been asked by a medical association to be a part of a panel talking about infant mortality. The other two physicians on the panel were a white family medicine doctor and an older pediatrician. Since the topic was infant mortality, specifically black infant mortality [which is my specialty], I did most of the presenting to legislators. After the presentation, one of the legislators pulled me aside and said,*

QUICK FACT

Working with interpreters and caring for patients who do not speak English proficiently requires special skills and practice. Health care professionals should be introduced to this early on in their education, Forum attendees said. Engaging experienced health care interpreters in instruction and using interactive role-playing and problem-solving scenarios allows caregivers to practice these skills and empowers them to examine their own behaviors when providing care to non–English-speaking patients.

Source: Diamond LC, Jacobs EA. Let's not contribute to disparities: the best methods for teaching clinicians how to overcome language barriers to health care. *J Gen Intern Med.* 2010;25(Suppl 2):189-93. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2847098/. Accessed October 3, 2015.

> *"You know, the next time you're on this kind of panel you need to let Dr. [redacted]—referring to one of my colleagues on the panel—do most of the presenting because I can't tell whether or not you as a black person are skewing the data or, you know, embellishing the circumstance."*

In this case, the legislator perceived the white doctors to be more credible than the African American doctor, despite the expert knowledge of the African American physician. This type of biased association can undermine women and minority clinicians. It can also affect patient outcomes because patients may be less willing to adhere to treatment recommendations from a physician they do not trust.

Disparate Care

Several examples of disparate care resulting from unconscious bias arose in the Forum's patient care roundtable conversation. One attendee, a physician, described the stark difference in care provided to a middle-aged woman wearing "extremely nice clothes" and a transgender woman; both patients came into the clinic at about the same time. Both had chest wounds requiring chest tubes on the left side. However, the well-dressed woman was treated differently: "I'm using her first name while talking to her," the physician remembered. "I'm ensuring that she's getting pain meds. And I have a social worker giving every-two-minute updates on what's going on with the daughter," who was also injured. Meanwhile, the transgender woman received much less attention. The physician explained that the care team was engaged in a disagreement about how to admit the individual, as either male or female, instead of being focused on the patient's care. The physician continued, "So that's the altercation we're literally having. [I said] Okay, guys, come on. We gotta get some pain meds. . . . But nobody was being nice to her, not like we were being nice to this other person. I don't know how you teach this," the physician admitted.

Another Forum attendee spoke about their observations of residents in the emergency room. They explained that if residents perceived that their patients did not expect very much, the residents were less likely to do very much. The attendee said that unconscious assumptions based on appearance can often have an impact on the care that's delivered, and provided an example of how this unconscious association could play out: "If I walk into a room and I think you're a judge, then I know I've got to explain everything to you. Because, you know, you're going to have questions. . . . But if I think you're the homeless person who lives on the street, [I assume] you don't expect anything from me, and I'm not giving [you anything] . . . because I'm busy." Attendees said that residents needed education about how their own assumptions can affect care.

Another example relayed by a Forum attendee involved a wealthy African American patient who was admitted into the hospital to receive treatment for a complex cancer. The patient spent two days in the hospital without being examined or treated by an attending physician. After his wife—

QUICK FACT

A study examining implicit race bias among physicians using the Implicit Association Test found that physicians presented with clinical scenarios showed implicit preferences in their treatment (with thrombolysis) of white patients who presented with chest pain compared with African American patients. They also tended to stereotype African Americans as less cooperative with treatment. The researchers noted: "As physicians' prowhite implicit bias increased, so did their likelihood of treating white patients and not treating black patients with thrombolysis."

Source: Green AR, Carney DR, Pallin DJ, Ngo LH, Raymond KL, Iezzoni LI, Banaji MR. Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. *J Gen Intern Med.* 2007;22(9):1231-1238. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2219763/. Accessed on October 3, 2015.

a judge—intervened, the attending physician finally examined and treated him. The attendee noted that this would be an atypical experience for white patients in their hospital. As this example suggests, racial bias can occur and result in disparate care regardless of socioeconomic status.

Insurance status can also activate unconscious bias and result in disparate care. Labels such as "privately insured," "Medicaid insured," or "uninsured" reinforce patients' class status and may influence clinicians' perceptions of individuals and, in turn, the care they provide. One Forum attendee relayed a story of giving an uninsured hospital patient thrombolytic medications. The patient's bedside nurse asked, "Isn't that a very expensive drug to give an uninsured person?"

Forum attendees discussed a similar situation involving the difference in care provided to Medicaid vs. privately insured patients undergoing surgery: the expert surgeon operates on privately insured patients, while the fellow (still in training) operates on the Medicaid patients. In this example, it appears that these physicians viewed the privately insured patients as more worthy of expert and high-quality care than the lower-income Medicaid patients.

These biases work to undermine physician-patient relationships, the quality of care patients receive, medical cooperativeness, and, ultimately, patient outcomes.[7] Furthermore, for many patients, the effects of unconscious bias operate "360 degrees around the patient," from providers and staff at all levels and in all departments of the institution. As one attendee stated, "The receptionist [who is often the first point of patient contact] can begin to set the stage at the start for the disparate care." According to Blair et al., new research must be done to determine the degree to which bias can affect different patient groups, the associations between bias and care outcomes, and the effectiveness of interventions.[7]

CALL TO ACTION HEALTH AND HEALTH CARE INEQUITIES

In addition to exploring their own potential implicit biases, physicians need to have more data about health and health care inequities, Forum attendees said. The AAMC convenes the Research on Care Community and its Health Equity subgroup (ROCChe) to collaborate, share, learn, and improve the design, conduct, and implementation of research that aims to close or minimize disparities in health and health care through a full spectrum of research, as represented in Figure 1.

Figure 1. Support the full spectrum of research to improve the health of all.

Source: Alberti PM. *AAMC Health Equity Research and Policy Overview.* Association of American Medical Colleges website. https://www.aamc.org/initiatives/research/healthequity/. Accessed October 8, 2015.

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Chapter 8
Interventions Recommended by Forum Attendees

Chapter at a Glance:

- A commitment from institutional leadership is essential to identifying and mitigating unconscious bias. Leaders can engage students, faculty, and staff at all levels to create a reflective climate that acknowledges bias and the effect it can play in the institutional climate, policies, and decision making.
- Bias can be mitigated through education and training of individuals and teams. Examining implicit biases through the Implicit Association Test, role-playing, and blinded studies can help individuals recognize their own biases.
- Forum attendees recommended that teams and committees involved in high-stakes decision making, such as admissions and appointment, promotion, and tenure (APT), should be diverse in composition and identify clear requirements and interview questions before beginning the selection process.

As the previous chapters have recounted, unconscious bias has pervasive effects across the seven domains of academic medicine discussed at the 2014 Diversity and Inclusion Innovation Forum. Attendees said that interventions and remedies to mitigate the effects of unconscious bias must include both individual- and institutional-level approaches, including honest reflection about the implications of individual behaviors, medical school policies and procedures, and institutional climate, with full awareness that emotional undertones have an impact on these factors. This means moving beyond critiques of clearly explicit individual discrimination toward systematic and institutional analyses of unintentional behaviors and messages and inadvertent injuries. Furthermore, attendees said, community members must develop a widespread recognition of the importance of unconscious bias, the ways it operates, and its effects.

Unconscious bias is an equal opportunity phenomenon that affects all of us. Fortunately, it is responsive to interventions, and addressing bias should help everyone—from the student who wants an equal shot at an excellent medical education, to the faculty member trying to build a career, to the patients who come to our health care system for fair and equitable treatment. During the Forum, attendees suggested several different interventions and approaches to minimizing the effects of unconscious bias. This chapter presents some highlights of those ideas.

Engaged Leadership Can Create a Culture of Safety and Inclusion

Leaders can help create an environment that recognizes the effects of unconscious bias on students, faculty, and staff. Therefore, efforts to address the harmful effects of bias ideally start with firm commitment

from institutional leadership. Attendees said that this commitment should be integrated holistically into all essential aspects of the institution, much like technology gets integrated into most institutional functions. Leadership should enlist the support of diversity advocates to create a climate in which addressing issues of unconscious bias becomes so integral to community life that all members deliberately examine their thought processes and inclinations. Creating a climate in which students, faculty, and staff regularly employ checks and balances to ensure awareness of how bias might affect the community will, in turn, make it easier to mitigate the effects of potential bias, attendees said.

Leaders increase their impact by modeling a willingness to explore and address their own biases. More concretely, leaders can provide incentives for achieving cultural competency milestones by creating rewards and recognition opportunities for departments and employees at all levels who take steps to address biases. Some examples of these assessments include employee- and customer-satisfaction surveys and pay-for-performance policies, in which employees or physicians are compensated based in part on patients' review of services. When this recognition comes from high-level leadership, it adds to the prestige of the accomplishment and the legitimacy of the endeavors. In particular, Forum attendees discussed the need for leaders to implement institution-wide training policies that address bias, identities, and other aspects of human interactions. The training would have an impact across medical school operations and performance in core activities, from medical school admissions to the delivery of patient care.

Institutions can reduce the perception of medical school as predominantly white and male by revising the general curriculum to include data about and examples from different cultures, backgrounds, and perspectives. Additionally, Forum attendees said, institutions should think about the images presented and whether the climate created by the institution supports diversity. Whose pictures hang in the hallway? Who teaches the cultural competency courses? Who sits in the C-suite, and does the composition of the leadership team reflect the diversity of the institution and the community it serves? Creating a transparent, yet safe and nonpenalizing, formal process for responding to instances of unconscious bias and discrimination when they arise will demonstrate the institution's commitment to diversity and foster a welcoming environment. Admissions leadership can ensure that their offices use meaningful, mission-based language and metrics to describe and highlight specific characteristics of entering classes. For example, rather than focusing primarily on the average MCAT® score or GPA, admissions officers could require that a certain percentage of the student body demonstrate a history of service, commitment to the underserved, research, or engagement in other activities that support the institution's mission.

To foster support and cultivate sustainable change, attendees said, leaders must tie the importance of unconscious bias to the components of academic medicine that are already regarded as central to individual and organizational excellence, such as leadership development, quality care, patient safety, and medical ethics. When medical students, physicians, and others in health care understand how best to interact with and meet the diverse needs of all patients, the result should be more enlightened leadership, better patient care, more relevant research, and a lower rate of situations that can lead to medical malpractice lawsuits. Similar gains should be achieved when hospitals, academic health centers, health professions schools, human resource departments, and academic search teams make real strides toward increasing diversity at all levels. Forum attendees advocated including social science content such as social cognition, identity formation, and communication sciences in academic medicine training and development programs.

Mitigate Bias Through Education and Training

Education and training about unconscious bias and cultural competency should be formalized in academic medicine and be a part of every aspect of the institution rather than isolated within the diversity function, attendees said. Attendees endorsed making the Implicit Association Test (IAT) mandatory for all students, faculty, and staff to increase their personal awareness of their own biases. The simple but important exercise of administering the IAT to a large group of community members has the potential to mitigate the effects of bias in all the academic medicine domains presented in this publication. It is critical, however, to be sure that community members understand that the IAT does not measure or label good or bad intent but, rather, that it measures exposure to and unconscious internalization of certain messages.

Attendees cautioned against sharing aggregated IAT results with test takers because this knowledge can cause increased feelings of discomfort among those who may be subject to negative biases. Instead, the IAT should be used to raise awareness and facilitate discussion about reactions to results and how those results can inform the test takers' future actions and thought processes, attendees said.

Unconscious bias training for all faculty, staff, and students—but especially for those serving on admissions, selection, and academic promotions committees—can be an important step toward improving the overall climate of the institution. Forum attendees recommended that this training include conversations about what may be regarded as "loaded" words that can elicit bias in certain contexts, such as *community college, postbaccalaureate program,* or *minority*. The following topics are also worthy of inclusion, attendees said:

- stereotype threat (a fear of being viewed through the lens of a negative stereotype, or the fear of inadvertently confirming an existing negative stereotype of a group with which one self-identifies),
- microinequities, also called microaggression behaviors (intended, or unintended, slights that make a person feel undervalued on an aspect of their identity), and
- cultural competency.

One useful training approach is to share anonymous stories about bias and its effects, revealing afterward that the stories came from within one's institution or specific department. These examples should include people of various gender and racial and ethnic backgrounds to illustrate that we are all susceptible to unconscious bias, attendees said. This technique will help elevate the importance of the topic and demonstrate its universal occurrence. Forum attendees recommended that these trainings be integrated into the medical school curriculum and residency programs, with periodic checkpoints and reinforcements. Some attendees suggested that these trainings should be required for medical licensure.

Individuals Can Take Steps to Mitigate Bias

Individuals can also take steps to mitigate their own unconscious biases by seeking out opportunities for contact with people from other diverse groups and with those who contradict widely held stereotypes (e.g., male nurses, wealthy African American and Hispanic patients, and female and minority physicians or executives). As scholars Dasgupta and Greenwald stated in their research into the influence of exposure to stereotype-defying individuals, "Creating environments that highlight admired and disliked members of various groups . . . may, over time, render these exemplars chronically accessible so that they can consistently and automatically override preexisting biases."[1]

Mitigate Bias in Admissions and Recruitment Strategies

By using data strategically, institutions can assess where unconscious bias may be occurring, mitigate its effects, and make the business case for why it matters, Forum attendees said. For instance, instead of assuming that the lack of minority representation in residency programs stems from a lack of qualified applicants from underrepresented groups, residency selection committees can use the Electronic Residency Application System (ERAS) to prescreen applicants. This method may increase the inclusion of applicants in the residency pool who meet the program's requirements, regardless of background, and ensure more equitable consideration of candidates. Forum attendees said that the institution should also conduct periodic reviews of hiring and promotion decisions, comparing the academic qualifications of successful and unsuccessful candidates.

Likewise, to assess the effect of unconscious bias among faculty members, administrators can compare the starting salaries and startup packages for faculty by gender, race, ethnicity, and sexuality. This will reveal inequities and should help ensure equitable pay and funding opportunities.

Whenever possible in admissions and recruitment procedures, nonessential identifying characteristics of applicants should be redacted from applications, Forum attendees said. For example, committees can conceal names (which can signal race and gender) on CVs and MCAT and board scores to avoid unwarranted doubts about candidates already deemed qualified earlier in the admissions process. A related intervention involves ensuring that the individuals who participate in the admissions screening process for candidates are not the same individuals conducting the interviews. This will maintain the confidentiality of the candidate's MCAT and board scores throughout the interview. Similarly, attendees said, in undergraduate medical education, unconscious bias can be reduced by ensuring that graders of students' essays do not know the authors' identities.

Although it is an important way to get to know and evaluate prospective students, residents, and faculty, the interview process affords widespread opportunities for unconscious bias, attendees said. One way to mitigate this is to standardize the process. This can include regulating how much time is allotted to each candidate, what questions candidates are asked, and what data are provided to candidates throughout the interview.

Another approach includes telling the candidates in advance what key questions will be asked so that they can prepare. This can help balance the impact of personality traits (such as extroversion/introversion), cultural mannerisms, and language difficulties (for those for whom English may be a second language).

Admissions and recruitment offices should send packets of data about the campus and local area to all candidates, Forum attendees said. These packets should contain data of interest to diverse populations (e.g., family-friendly attractions throughout campus and the city, ethnic and cultural attractions, child care options, and schools in the area). Providing this for all candidates (regardless of background) shows openness to a wide range of candidates and also alleviates the tendency for individuals to stereotype candidates (e.g., providing child care information to female candidates but not male ones). Housing information should be inclusive to avoid steering candidates to certain neighborhoods based on race/ethnicity, religious affiliation, or income, attendees said.

Personal networking plays an important role in faculty, residency, and student recruitment processes, but it is also vulnerable to unconscious bias. The following suggestions by Forum attendees may encourage the development of recruitment pipelines for candidates of different backgrounds and orientations:

- Cultivate relationships with organizations of people who are underrepresented in medicine. Go beyond merely advertising job openings on those groups' websites by making in-person or webinar-based presentations or attending meetings.
- Include a clear and unambiguous statement on all recruitment advertising that the university is actively seeking diverse candidates. In addition, place advertisements for faculty and staff positions in diversity-themed publications and on job boards for academic medicine or higher education.
- Require external searches for all positions—particularly postdoctoral positions—as opposed to relying on internal appointments or informal networks.

Mitigate Bias in Committee Structures and Operations

Forum attendees recommended that selection committees be diverse in terms of race, gender, age, and rank and include individuals who took nontraditional paths into medicine. Administrators should consider novel approaches in their recruitment of committee personnel to avoid an overreliance on the same individuals, attendees said. Attendees also suggested allowing junior faculty members to serve on advancement, promotion, and tenure (APT) committees as a way to enhance diversity on committees because women and racial and ethnic minorities are underrepresented among senior-level faculty members.

Before reviewing any applications, committee members may also benefit from generating a shared vision of ideal-candidate attributes that align with institutional and national guidelines. Doing so will create standardized criteria for candidates and also give committee members the opportunity to evaluate how closely these criteria align with the institution's mission and diversity statements. Discussing the mission statement can be a useful approach for addressing the notion of who does or does not "fit" in an institution.

In the words of one Forum attendee, "In a way, you're redefining who the excellent candidate is. You're redefining it away from the traditional metrics to reconnect it much more deliberately to the mission of the institution." Likewise, search committees should establish protocols for decision making that include checkpoints that encourage reflection and accountability, thereby helping to mitigate the influence of unconscious bias, attendees said.

In recognition that all individuals are likely to harbor unconscious bias, even against populations with which they identify, another possible intervention would be to place a trained equity advisor on each search committee as a nonvoting member, attendees said. The hiring and promotion deliberations should be transparent, with minutes and transcripts available for review. Advocates for diversity can be vital to identifying unconscious bias and related concerns during committee

discussions and should be seen as assets to the institution. Additionally, institutions can appoint an ombudsperson to help build trust and transparently handle situations in which students, faculty, or staff feel mistreated, attendees said.

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RESOURCES FOR UNDERSTANDING AND MITIGATING BIAS

- The AAMC's online training for search committees about unconscious bias is a useful and popular resource: What You Don't Know: The Science of Unconscious Bias and What To Do About It in the Search and Recruitment Process. https://www.aamc.org/members/leadership/catalog/178420/unconscious_bias.html.
- The Implicit Association Test (IAT): Debuted by Anthony G. Greenwald and colleagues in 1998, the IAT is a response-latency assessment that measures the relative strength of associations between pairs of concepts by asking individuals to sort them. This matching exercise relies on the notion that when two concepts are highly associated, the sorting task will be easier and therefore require less time than it will when the two concepts are not as highly associated. Rigorously tested for reliability, validity, and predictive validity, the IAT is a methodologically sound instrument for measuring unconscious associations. https://implicit.harvard.edu.
- *Ouch, That Stereotype Hurts*, is a video program that helps viewers understand the impact of bias and why they should speak up against bias and stereotypes. http://www.ouchthatstereotypehurts.com.
- *Medical Reader's Theater: A Guide and Scripts*, edited by Todd L. Savitt, contains scripts intended to be read by students, faculty, and staff in which they act out different medical scenarios—including instances of bias and related issues—and later facilitate a discussion with their audience about the topics the stories raise. (Savitt TL. *Medical Reader's Theater: A Guide and Scripts*. Iowa City, IA: University of Iowa Press; 2002.)
- *Blind Spot: Hidden Biases of Good People*, by Mahzarin R. Banaji and Anthony G. Greenwald, challenges readers to explore the portion of their mind that carries hidden biases from a lifetime of exposure to cultural attitudes about age, gender, race, ethnicity, religion, social class, sexuality, disability status, and nationality. (Banaji MR, Greenwald AG. *Blind Spot: Hidden Biases of Good People*. New York, NY: Delacorte Press; 2013.)
- *Everyday Bias: Identifying and Navigating Unconscious Judgments in Our Daily Lives*, a book by Howard J. Ross, examines how the unconscious biases inform every decision we make on a daily basis. Ross helps readers understand how to overcome and identify unconscious biases in their lives. (Ross HJ. *Everyday Bias: Identifying and Navigating Unconscious Judgments in Our Daily Lives*. Lanham, MD: Rowman & Littlefield Publishers; 2014.)
- The AAMC and Cook Ross Unconscious Bias Training Lab for the Health Professions, Every Day Bias Workshop, is an evidence-based, dynamic one-day workshop in which attendees explore how assumptions affect choices around communication, innovation, hiring, engagement, management, promotion, marketing, and building organizational culture. This unique professional development opportunity is aimed at diversity leaders in academic medicine and other professionals in health care and biomedical research. https://www.aamc.org/initiatives/diversity/322996/lablearningonunconsciousbias.html.

- C.A.S.T., an acting troupe based at George Washington University, may be a helpful resource for raising awareness about subtle yet pervasive unconscious bias. C.A.S.T. has put on a number of health-related performances that showcase patient and family health care experiences. Theatrical productions can be a unique approach to introducing these ideas to audiences. http://theatredance.columbian.gwu.edu.
- Critical Measures (CM) E-learning is a comprehensive health equity training resource that contains a variety of courses and webinars addressing unconscious bias. These courses include Valuing Diversity—Attitudes Towards Differences, the New Science of Unconscious Bias—Implications for Managers and Providers, Global Medicine—New Skills for the Clinically Competent Physician, and ViewPoints—Clinical Competence in a Globally Mobile World. http://www.cmelearning.com/classroom-training.
- A comprehensive continuing medical education (CME) course, Conscious and Unconscious Bias in Health Care: A Focus on Lupus, has been developed by the American College of Rheumatology. This course contains the following modules: 1) Epidemiology, Disparities, and Social Determinants of Lupus; 2) Defining Bias and Its Manifestations and Impact of Bias on Health and Health Care; 3) Even Well-Meaning People Have Bias; and 4) Well—What's a Well-Meaning Health Care Professional To Do? http://thelupusinitiative.org/cmece.
- NEW (Nutrition, Exercise, and Weight management) Lifestyle is a web-based teaching and learning program funded by grants from the National Cancer Institute to the Department of Family and Community Medicine at Wake Forest School of Medicine. Consisting of eight downloadable educational modules, the program is designed to help students, educators, and the public learn about weight-management issues as they relate to health and the compassionate delivery of health care. A unique aspect of the program is the emphasis on confronting antiobesity bias among health care providers and training medical students in culturally sensitive weight-management counseling. http://newlifestyle.org/module/educatorlist.
- Institution-developed curricula and publications available via the AAMC's MedEdPORTAL, including:
  - » The *Health Care Disparities* course is designed to increase awareness about racial and ethnic disparities across the spectrum of health care services and to examine the use of patient-centered communication skills to minimize these disparities. https://www.mededportal.org/publication/9675.
  - » The Best Intentions: Using the Implicit Associations Test to Promote Reflection About Personal Bias exercise is designed to cultivate awareness that bias is inherent to all humans and can have an impact on patient care. The Implicit Associations Test (IAT) is used as a trigger, and small-group discussions are used to create opportunities for reflection about personal biases and the effects of these biases on clinical decisions. The content is presented as a set of guidelines, including materials for training facilitators and conducting the discussion. Also included are evaluation tools, student surveys, and facilitator surveys. https://www.mededportal.org/publication/7792.
  - » To address cultural competence in psychiatry, the exercise Stereotypes and Bias at the Psychiatric Bedside—Cultural Competence in the Third Year Required Clerkships aims to build on the knowledge that students have gained in years 1 and 2 in an applied setting, refining their cultural competency skills as they practice at the bedside. https://www.mededportal.org/publication/1150.

Appendix A. Glossary

accent bias: the unconscious, or conscious, valuation of a person's intellect based on their speech. Accent bias can occur within groups of speakers from the same nation (e.g., Northern vs. Southern United States) or different nations (e.g., Italian vs. French).

climate: the system of shared assumptions, values, and beliefs that governs how people behave in organizations.

confirmation bias: the tendency for people to unconsciously seek out evidence that supports their assumptions about an individual, thereby implicitly confirming their biases.

cultural taxation: refers to a greater service workload or higher expectations experienced by individuals from minority groups compared with their majority counterparts.

distance traveled: refers to the challenges or hardships a person must overcome to attain a certain goal. People from low socioeconomic backgrounds or who experience discrimination effectively have to travel farther to reach the same point than those who don't face those challenges.

equity advisor: a staff or faculty member who ensures that diversity and equity are considered in strategic planning; admissions; faculty recruitment, advancement and retention; and institutional climate.

explicit bias: refers to the attitudes and beliefs we have about a person or group on a conscious level.

fundamental error attribution: the tendency of humans to explain a person's behavior based on internal characteristics—such as race, personality, or religion—rather than external factors, such as the situation.

Golem effect: a psychological phenomenon in which lowered expectations by superiors, mentors, and supervisors lead to underperformance.

heteronormative: a world view that promotes heterosexuality as the normal or preferred sexual orientation.

Implicit Association Test (IAT): an assessment that measures the relative strength of associations between pairs of concepts by asking individuals to sort them. This matching exercise relies on the notion that when two concepts are highly associated, the sorting task will be easier and therefore require less time than it will when the two concepts are not as highly associated. The IAT has been rigorously tested for reliability, validity, and predictive validity and has been determined to be a methodologically sound instrument for measuring unconscious associations.

implicit, or unconscious, bias: unconscious bias, also known as implicit bias, refers to attitudes or stereotypes that are outside our awareness but nonetheless affect our understanding, our interactions, and our decisions. Researchers have found that we all harbor automatic associations—both positive and negative—about other people based on characteristics such as race, ethnicity, gender, age, social class, and appearance. These unconscious associations

may influence our feelings and attitudes and result in involuntary discriminatory practices, especially under demanding circumstances.

microaggressions (microinequities): brief and commonplace daily verbal, behavioral, and environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial or sexist slights and insults to the target person or group.

microinequities: See "microaggressions."

othering: a process that identifies people who are thought to be different from oneself or the mainstream. This process can reinforce and reproduce positions of domination and subordination.

Pygmalion effect: a psychological phenomenon in which individuals perform better when higher expectations are placed on them.

racialize: to impose a racial interpretation on a situation or individual or to perceive an individual or situation in a racial context.

social capital: the value of relationships between individuals, through the exchange of resources such as obligations and expectations, information, and social norms.

stereotype threat: a self-confirming belief that one may be evaluated based on a negative stereotype.

unconscious bias: See "implicit, or unconscious, bias."

underrepresented in medicine (URM): racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population. African Americans, Hispanics, women, Native Americans, Native Hawaiians, Pacific Islanders, individuals from low socioeconomic backgrounds, and LGBTQ+ populations are generally considered underrepresented in medicine.

underrepresented minority: See "underrepresented in medicine (URM)."

Appendix B. Suggested Additional Reading

Chapter 1: Medical School Admissions

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Appendix C. Diversity and Inclusion Innovation Forum Meeting Attendee Roster

The information noted in this appendix reflects the participants' roles and affiliations at the time of the 2014 Diversity and Inclusion Innovation Forum.

Forum Facilitator:
Tiffani St.Cloud, CPC
Director of Educational Initiatives
Diversity Policy and Programs
Association of American Medical Colleges

MEDICAL SCHOOL ADMISSIONS DISCUSSION GROUP

Discussion Group Facilitator:
Amy Addams, MA
Director of Competency Based Admissions
Admissions Initiatives
Association of American Medical Colleges

Recorder:
Carlos La Torre
Association of American Medical Colleges

Discussion Group:

Quinn Capers IV, MD
Associate Dean of Admissions
Associate Professor of Medicine
(Cardiovascular Medicine)
The Ohio State University College of Medicine

Ronald D. Garcia, PhD
Program Director of the Center of Excellence
in Diversity in Medical Education
Assistant Dean for Minority Affairs
Associate Director of the Physician Assistant
Program/Family Medicine
Director of the Health Careers Opportunity Program
Stanford University School of Medicine

Brandon Hunter
Director of Admissions
Morehouse School of Medicine

Jeffrey Milem, PhD
Director of the Arizona Medical Education Research
Institute (AMERI)
Professor in the Center for the Study of Higher Education
Ernest W. McFarland Distinguished Professor in Leadership
for Education Policy and Reform in the College of
Education University of Arizona College of Medicine

Erik Porfeli, PhD
Assistant Dean for Community Engagement and
Admissions Associate Professor of Family and Community
MedicineGraduate Faculty Advising Status College of
Graduate Studies, Family & Community Medicine
Northeast Ohio Medical University

Mercedes Rivero, MS
Director of Admissions
Assistant Dean for Admissions
Rutgers New Jersey Medical School

UNDERGRADUATE MEDICAL EDUCATION DISCUSSION GROUP

Discussion Group Facilitator:
Taniecea Arceneaux Mallery, PhD
Director of Equity, Diversity and Community Engagement
Office for Campus Diversity
University of Louisiana at Lafayette

Recorder:
Valerie Pierre, MS2
Creighton University School of Medicine

Discussion Group:

Grace Henry, EdD
Director for Diversity and Inclusion
The George Washington University School of Medicine and Health Sciences

David McIntosh, PhD, MA
Associate Dean for Urban Health Innovation and Chief Diversity Officer
School of Medicine, University of Louisville

Sofia Noori, MS2
Program in Medical Education for the Urban Underserved
University of California, San Francisco, School of Medicine

Todd L. Savitt, PhD
Professor
Department of Bioethics and Interdisciplinary Studies
Brody School of Medicine at East Carolina University

Daniel H. Teraguchi, EdD
Assistant Dean for Student Affairs
Assistant Professor of Pediatrics
The Johns Hopkins University School of Medicine

RESIDENT RECRUITMENT DISCUSSION GROUP

Discussion Group Facilitator:
Sharon Davies, JD
Gregory H. Williams Chair in Civil Rights and Civil Liberties
Director of The Kirwan Institute for the Study of Race and Ethnicity
John C. Elam/Vorys Sater Designated Professor of Law
Ohio State University, Moritz College of Law

Recorder:
Cheryl Staats
Senior Researcher
Kirwan Institute for the Study of Race and Ethnicity

Discussion Group:

David A. Acosta, MD, FAAFP
Chief Diversity Officer
Associate Vice Chancellor of Diversity and Inclusion
UC Davis Health System
Senior Associate Dean for Equity, Diversity and Inclusion
Clinical Professor of the Health Sciences
University of California, Davis, School of Medicine

John Davis, MD, PhD
Assistant Professor, Internal Medicine
Associate Dean for Medical Education
The Ohio State University College of Medicine

Fritz Francois, MD, MS, FACG
Chief of Medicine at Tisch Hospital, NYU Langone Medical Center
Associate Professor, Department of Medicine
Medicine
New York University School of Medicine

Elena Olson, JD
Executive Director
Center for Diversity and Inclusion
Massachusetts General Hospital

Geoffrey Young, PhD
Senior Director of Student Affairs and Programs
Association of American Medical Colleges

FACULTY RECRUITMENT DISCUSSION GROUP

Facilitators:

Angela Moses
Diversity and Inclusion Senior Specialist
Group on Diversity and Inclusion
Association of American Medical Colleges

Irena Tartakovsky, MD
Government Relations and Public Policy Manager II
Science Policy, Group on Research and Deans
Association of American Medical Colleges

Recorder:
Renee King, MD, MPH
Assistant Professor of Emergency Medicine
University of Colorado, School of Medicine

Discussion Group Facilitator:

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Clinical Research Psychologist in the MIRECC Program
Associate Director of the MIRECC Neuroimaging Unit
Chair of the Psychiatry Department Chair's Advisory Committee on Diversity Issues and Chair of the UCSD School of Medicine's Standing and Promotions Committee
Associate Professor
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Marc A. Nivet, EdD, MBA
Former AAMC Chief Diversity Officer
Association of American Medical Colleges

Susan Pollart, MD, MS
Senior Associate Dean for Faculty Affairs and Faculty Development
University of Virginia School of Medicine

Judy Seidenstein
Chief Diversity Officer
Duke University School of Medicine

FACULTY ADVANCEMENT, PROMOTION, AND TENURE DISCUSSION GROUP

Discussion Group Facilitator:
Ilana S. Mittman, PhD, MS, CGC
Assistant Professor
Department of Epidemiology and Public Health
University of Maryland, Baltimore

Recorder:
Jalisa Whitley, MPP
Community Impact Manager
United Way of the National Capital Area

Discussion Group:

Sharon Fries-Brett, PhD
Professor of Counseling, Higher Education and Special Education
University of Maryland College of Education

Anna-Wirta Kosobuski, EdD
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Center of American Indian and Minority Health
University of Minnesota Medical School

Tom LaVeist PhD
Director, Hopkins Center for Health Disparities Solutions
William C. and Nancy F. Richardson Professor in Health Policy
The Johns Hopkins University, Bloomberg School of Public Health

Marcella Nunez-Smith, MD, MHS
Associate Professor of Medicine and of Epidemiology
Yale University School of Medicine
Deputy Director of Health Equity Research and Workforce Development
Yale Center for Clinical Investigation

Roberta Sonnino, MD, FACS, FAAP
Vice Dean of Faculty Affairs
Associate Provost for Medical Affairs
Wayne State University School of Medicine

Allen Tien, MD
President and Director of Applied Research
Medical Decision Logic, Inc.

Leslie Traub, MA
Chief Consulting Officer
Cook Ross, Inc.

FACULTY MENTORING DISCUSSION GROUP

Facilitators:

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Senior Director, Human Capital Portfolio
Diversity Policy and Programs
Association of American Medical Colleges

Lutheria Peters, MPH
Statistical Research Analysis Specialist III
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Association of American Medical Colleges

Recorder:
Christy Rogers, PhD
Director of Outreach
Kirwan Institute for the Study of Race and Ethnicity

Discussion Group:

Moon S. Chen, Jr., PhD, MPH
Associate Director
Population Research and Cancer Disparities, UC Davis Comprehensive Cancer Center
Professor in Residence/Professor
University of California, Davis, Cancer Center

Elizabeth Ozer, MD
Professor of Pediatrics
Co-Director, Fellows Research Training
Division of Adolescent Medicine
Director of Research and Evaluation
Office of Diversity and Outreach
University of California, San Francisco, School of Medicine

Joan Reede, MD, MPH, MS, MBA
Faculty Director of the Community Outreach Programs
Founder of the HMS Minority Faculty Development Program
Associate Professor of Medicine
Dean for Diversity and Community Partnership
Harvard Medical School

Valerie Romero Leggott, MD
Vice Chancellor for Diversity, UNM Health Sciences Center
Office for Diversity/Associate Dean
Professor of Family and Community Medicine
University of New Mexico School of Medicine

Rania Sanford, EdD
Assistant Vice Provost for Faculty Development and Diversity
Stanford University

Valerie Williams, PhD, MPA
Vice Provost for Academic Affairs and Faculty Development
Principal Investigator and Director for the Center for Learning and Leadership and University Center for Excellence in Developmental Disabilities Education, Research and Service
University of Oklahoma Health Science

HEALTH CARE DELIVERY DISCUSSION GROUP

Discussion Group Facilitator:
Laura Castillo-Page, PhD
Senior Director of Diversity Policy and Programs
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Diversity Policy and Programs
Association of American Medical Colleges

Recorder:
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Diversity Policy and Programs Intern 2014
Diversity Policy and Programs
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Discussion Group:

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Co-Director of the Ohio Better Birth Outcomes
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