

The Minority Student Voice at One Medical School: Lessons for All?

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Abstract

Purpose

Although the minority population of the United States is projected to increase, the number of minority students in medical schools remains stagnant. The University of Chicago Pritzker School of Medicine (PSOM) matriculates students underrepresented in medicine (URM) above the national average. To identify potential strategies through which medical schools can support the success of URM medical students, interviews with URM students/graduates were conducted.

Method

Students/recent graduates (within six years) who participated in this study self-identified as URMs in medicine and were

selected for participation using random quota sampling. Participants completed a semistructured, qualitative interview in 2009–2010 about their experiences at PSOM. Key themes were identified and independently analyzed by investigators to ensure intercoder agreement.

Results

Participants identified five facets of their medical school experiences that either facilitated or hindered their academic success. Facilitators of support clustered in three categories: the collaborative learning climate at PSOM, the required health care disparities course, and student body diversity. Inhibitors of support clustered in two categories:

insufficiently diverse faculty; and expectations—from self and others—to fulfill additional responsibilities, or carry a disproportionate burden.

Conclusions

Intentional cultivation of a collaborative learning climate, formal inclusion of health care disparities curriculum, and commitment to fostering student body diversity are three routes by which PSOM has supported URM students. Additionally, recognizing the importance of building a diverse faculty and extending efforts to decrease the disproportionate burden and stereotype threat felt by URM students are institutional imperatives.

Concerns about the lack of diversity in the physician workforce are longstanding.¹ Population predictions project an increase in national representation of minority groups,² yet African American/black, Mexican American/Chicano, Native American (American Indian, Alaska Native, and Native Hawaiian), and mainland Puerto Rican³ individuals remain disproportionately underrepresented as medical students and medical professionals.¹ These trends

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of underrepresentation hold major implications for physician workforce size, diversity, and, ultimately, the health of the nation. Not only are minority students entering medical school at disproportionately lower rates, but nonwhite students are faring statistically lower on academic outcomes than their white counterparts. Specifically, nonwhite race/ethnicity is associated with greater likelihood of academic withdrawal or dismissal and with graduation without first-attempt passing scores on the United States Medical Licensing Examination Step 1 and/or Step 2 exams.⁴ These trends are perplexing, raising questions about the medical school experience for underrepresented minority (URM) students: What has been deterring equal progress, and what can be done to promote success?

The Liaison Committee on Medical Education has explicitly set forth diversity standards, recognizing that “future physicians will be best prepared for medical practice in a diverse society if they learn in an environment characterized by, and supportive of, diversity and inclusion.”⁵ Furthermore, the Association of American Medical Colleges (AAMC)

continues to emphasize the imperative to increase the number of URMs in medical education, encouraging academic health centers not only to “redouble their efforts” to numerically increase student diversity⁶ but also to consider what factors support or impede the success of URM students. Yet, a limited number of studies have explored these factors, giving little voice to the URM student experience.

The University of Chicago Pritzker School of Medicine (PSOM) matriculates and graduates students underrepresented in medicine above national averages.⁷ Further, URM and non-URM PSOM students graduate at the same rate and have an equal average time to graduation (approximately 4.5 years). Therefore, the experiences of our students may offer valuable lessons to other institutions. This study explored which components of medical education participants personally perceived as helpful or supportive, and which aspects were stressful or harmful to their success, with the goal of using these data to inform potential strategies through which medical schools can better promote the support systems and success of URM medical students. We looked at structural obstacles that might perpetuate

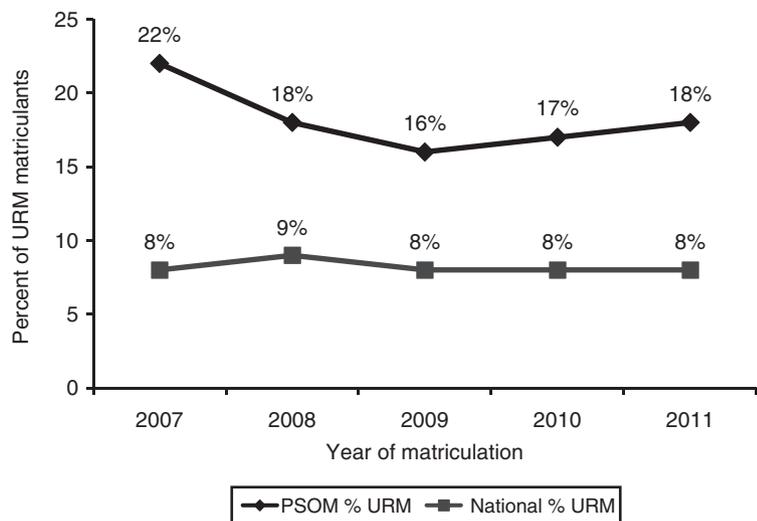


Figure 1 Percentages of underrepresented minority medical (URM) matriculants at the University of Chicago Pritzker School of Medicine (PSOM) and at schools nationally, 2007–2010. *Source:* Association of American Medical Colleges. Table 9: Matriculants to US medical schools by race, selected combinations within Hispanic or Latino ethnicity, and sex, 2007–2010. <https://www.aamc.org/download/161180/data/table9.pdf>. Accessed September 27, 2012.

disproportionate feelings of stress that were found in previous studies,^{8–10} and we also looked into the role of institutional strengths that current and former URM students have identified as helpful.

Method

Setting and population

The University of Chicago PSOM is a private institution located on the south side of Chicago which matriculates URM students at a rate higher than the national average (Figure 1). Further, there is no difference in graduation rate or time to graduation between URM and non-URM students. We selected 18 current medical students or recent graduates (within six years) for participation, using random quota sampling. All participants self-identified as African American/black,

Mexican American, Native American/Pacific Islanders, and/or Puerto Rican. All participants completed a semistructured, qualitative interview—either in-person or via telephone—about their experiences as URM students at PSOM. More specifically, we asked participants about their perceptions of support available while at the institution. In this report, we detail findings generated from the interview questions regarding participants' experiences of institutional support.

Design

The intent of our study was to qualitatively elicit firsthand perspectives about institutional characteristics and potential strategies through which medical schools can support the success of URM medical students. One study team member (K.D.) identified a random quota sample of 24

students/recent graduates, stratified by race/ethnicity, gender, and year in school. We invited participants across 10 different classes to participate in order to include perspectives from individuals occupying different positions in their medical careers. Students/recent graduates were invited to participate via e-mail. Because of a greater-than-expected interest in participation, nonresponders were not recontacted. We conducted an ongoing literature review and data analysis from August 2009 to January 2011; interviews were conducted from November 2009 to January 2010. Ten interviews were conducted in person on the University of Chicago campus, and eight interviews were conducted via telephone.

The interviewers (S.S., K.D.) and data analyzers (H.H., S.S., K.D.) were blinded to group membership. We developed all interview questions (List 1) after a thorough literature review exploring the URM medical student experience. The first two semistructured, in-person interviews exploring URM students' perceptions of support were piloted (S.S.), and further interviews were conducted in successive order (K.D.) until no new themes of support were generated. Interviews ranged in length from approximately 30 to 60 minutes, with an average length of 45 minutes. Interviews were digitally audiorecorded, transcribed by an external resource, deidentified, and thematically analyzed, using the process described below. This study was approved by the University of Chicago institutional review board (IRB), and all procedures were executed in accordance with the standards set forth by the IRB.

Data analysis

Employing qualitative techniques, one study team member (K.D.) independently analyzed interviews, by reading the transcripts and identifying key themes, with respect to grounded theory techniques.^{11,12} Category titles and working definitions shifted throughout this iterative process. When thematic category saturation was accomplished, the first coder consulted with the second and third coders (H.H., S.S.) to explicate the coding scheme and ensure study reliability. The second coder is a physician and expert in medical education; the third coder is an experienced researcher. Minor discrepancies regarding definitions and categories were negotiated and resolved. The final coding scheme was

List 1

Interview Questions for Underrepresented Minority Medical Students and Graduates, From a Qualitative Study of Factors Supporting Students' Success, University of Chicago Pritzker School of Medicine, 2009–2010

- I'd like to take you back to your first days and weeks at Pritzker. Can you remember anything in particular that made you feel personally welcome here? Can you remember anything that was not so positive?
- As your program went on, what were the things that made you feel that Pritzker, and the University of Chicago, were supportive of you in your academic and professional efforts?
- When you think about the support that was available to you, were there any gaps that you were aware of? (If yes, could you tell me about them? Do you have suggestions for how these could be remedied?)
- In general, how was your experience as a medical student at the University of Chicago?
- Is there anything else about your Pritzker experience—as a member of a minority group—that you'd like to tell me about?

then used by study team members (H.H., S.S.) to code a random sample of 25% of the transcripts. The first coder (K.D.) then verified code–recode agreement by recoding 25% of the transcripts. Inter-coder agreement was 0.94. All data were analyzed using NVivo qualitative analysis software (Version 8, QSR International, Victoria, Australia).

Results

Of the 18 participants in this study, 10 identified as female and 8 identified as male. Nine (approximately 50%) identified as African American/black, 6 (33%) identified as Mexican American, 2 (11%) identified as Native American/Pacific Islander, and 1 (5%) identified as Puerto Rican. Three (16%) were first-year students, 5 (28%) were second-year students, 3 (16%) were third-year students, 3 (16%) were fourth-year students, and 4 (22%) were recent graduates (within six years). From our analysis of participant responses, five key themes emerged (Table 1). Three themes illuminated components of support: collaborative learning climate, the health care disparities (HCD) course, and student body diversity. Two themes elucidated factors which undermined success: inadequate faculty diversity and the experience of disproportionate burden.

Facilitators of success

Collaborative learning climate. During all 18 interviews, the importance of the learning environment arose. Sixteen of the 18 interviewees (88%) strongly articulated the importance of the collaborative learning climate present at the school, stating that cooperative relationships—or “the support system within your class itself”—created a feeling of comfort within the learning space; the remaining 2 participants (12%) offered critiques but also spoke of the value of the collegiality felt by the majority of their classmates. This collegiality led participants to feel that they were part of a noncompetitive community, which facilitated class cohesiveness. The camaraderie and sense of trust amongst peers was perceived as “the intangible benefit of a sense of community” that dissolved “any residual desire for competitiveness.”

Collaborative learning climate and the pass/fail evaluation system. In response to an open-ended question concerning

general support, one student (5%) noted the use of a pass/fail evaluation system as an essential component of cultivating a collaborative learning climate, which helped one “feel collegial and [create] a really good network with your peers so you don’t feel really competitive ... you don’t feel stressed that everybody is fighting to be the best.”

HCD course. Another distinct component of the learning environment, which was noted by six of the participants (33%), is the HCD course. Introduced as an elective in 2006, this HCD course became required for all first-year students in 2008 as a summer quarter course. HCD provides an experiential curriculum to further students’ understanding of the disparities which exist within health care. The course includes didactic lectures as well as visits to local free clinics, community centers, emergency rooms, and public hospitals. The goal of the HCD course is to inform students of the magnitude of health disparities nationally and locally, prepare them to communicate across cultures, and foster their commitment to reduce these disparities in their future practice. Although not all participants experienced the HCD course, among those who did, the HCD course served as a venue for sharing ideas and raising students’ awareness of the prevalence and manifestations of health care disparities within America. The HCD classroom became a place where students could “listen to people of different backgrounds talk about their personal experience” and “could hear the opinions of some of our classmates on various issues,” also contributing to the creation of a collegial atmosphere.

Student diversity. Twelve of the respondents (67%) offered comments on the import of student body diversity. Students felt that through learning alongside diverse peers, they were able to reap the “intrinsic educational benefit of being with people who are different.” For some participants, this student body diversity enhanced their comfort level within the educational setting: “There are so many of us here—minorities. I think it makes class really diverse. I feel really comfortable being myself.” Diversity among peers provided ongoing educational opportunities as students felt able to “learn about other identities of minorities.”

Inhibitors of success

Faculty diversity. Nine of the 18 PSOM students/graduates (50%) spoke about the dearth of minority faculty at PSOM, where less than 5% of faculty are from URM groups. These statements echoed the national concerns over the small number of minority medical school faculty.¹³ Participants reported feeling discouraged by this paucity in faculty diversity: “I think the hardest thing was just having very few [minority] faculty members.” Students would value the presence of more URM faculty to serve as mentors, advisors, and instructors, to “see more people that look like you, or may share the same opinions as you, or come from the same sort of experience as you, teaching classes.”

The disproportionate burden. Seven participants (39%) identified academic and extracurricular demands that they felt were disproportionately—and often inadvertently—imposed on them. These stressors led to feeling a “heavy obligation” or a “burden [on top] of what you already have to do.” For example, students expressed feeling obligated by opportunities that were only offered to minority students, such as becoming mentors or guides for other students, or serving on leadership committees. One recent graduate spoke specifically about these obligations geared toward URM students. There is “clinic that we can do, and then there’s Physicians for Social Responsibility, and then [the] HIV education and prevention program, then there was the substance abuse education program. You get e-mails, ‘there’s going to be this ... lecture coming up,’ and then, ‘there’s going to be a recruitment dinner,’ and then, ‘you can you host an applicant.’” Other participants reported feeling that these additional time demands constitute a burden that many non-URM students may not necessarily experience with as much volume or frequency, that tends to result in URM students “compromis[ing] a little of the academic excellence in order to be able to do all of these other things.”

The disproportionate burden and stereotype threat. Associated with feeling a disproportionate burden, participants offered insight into how it feels to be an ability-stereotyped student. According to these 7 (39%) participant responses regarding a disproportionate

Table 1

Definitions and Examples of Support and Strain Among Underrepresented Minority (URM) Medical Students and Graduates, From a Qualitative Study of Factors Supporting Students' Success, University of Chicago Pritzker School of Medicine, 2009–2010

Theme	Definition	Illustrative transcript excerpts
Collaborative learning climate	A safe educational context in which relationships among learners and faculty are characterized by positive, noncompetitive, collegial, and caring dynamics; classroom climate is nonintimidating and facilitates a sense of belonging. ^{13–16}	<ul style="list-style-type: none"> • “Students in the class would e-mail out notes or comments ... or questions they had to the whole room, so you really felt like it was an open, noncompetitive community.... That made me feel welcome and made me feel like it was an environment that would promote my professional growth, because everyone was working together.”
Pass/fail evaluation system		<ul style="list-style-type: none"> • “I think the pass/fail system really helps and makes you feel collegial and [creates] a really good network with your peers so you don't feel really competitive ... you don't feel stressed that everybody is fighting to be the best.”
Health care disparities curriculum	A required course for first-year medical students, designed to “examine and understand attitudes ... that practitioners and/or patients may bring to the clinical encounter; gain knowledge of the existence and magnitude of health disparities; and acquire the skills to effectively communicate and negotiate across cultures.” ^{26,27}	<ul style="list-style-type: none"> • “I think our class was unique in that we began our education with the health care disparities course.... I think that being part of the course was a good way to get everyone on the same page. Obviously, during the course, we were able to speak about different minorities across America.... To me that was important, because being myself an underrepresented minority, I realized that this school is ... open to everybody.”
Student body diversity	The perceived representation of individuals from racial/ethnic backgrounds that are underrepresented in medicine: African American; Mexican American; Native American/Pacific Islander; Puerto Rican. ⁴	<ul style="list-style-type: none"> • “I really appreciate the school. I love the fact that ... there are so many of us here—minorities. I think it makes class really diverse. I feel really comfortable being myself. I love my classes. I like the fact that they really try to make the class as diverse as possible. I feel like that has added a lot to my education. Just being able to feel comfortable here.” • “Something that I really like about the minority student population at Pritzker is that, even within that group there is a lot of diversity. There are people that are from the Islands, and people like myself that are mixed ... among the group there is kind of this level of understanding, and similar experiences, from being a minority, but I also feel I get to learn about other identities of minorities.”
Faculty diversity		<ul style="list-style-type: none"> • “[People] gravitate towards people who are like you ... in a system where ... most of the faculty is different than you.... It's hard for you to try to connect with them and try to seek them as your mentors or as your advisors.” • “It would be nice to have more faculty, minority faculty. Just to see more people that look like you, or may share the same opinions as you, or come from the same sort of experience as you, teaching classes.”
Disproportionate burden	Feeling a greater sense of duty to fulfill educational and/or professional obligations due to one's URM background, in comparison to non-URM individuals. ^{8–10}	<ul style="list-style-type: none"> • “You may have another student who is not of a minority background really just dealing with the demands of the first and second year medical school itself, of which there are many. I think that sometimes black students tend to compromise a little of the academic excellence in order to be able to do all of these other things ... it's sort of a heavy obligation sometimes.” • “Sometimes I think there's a lot of events or opportunities or e-mails that go out to us because we're minorities, and they don't go out to the whole class.” • “Sometimes I'm a little confused, because certain things they will ask of the minority students only ... they might ask just the minority students to apply for this program ... even though it may be a program that everyone can apply to.”
Stereotype threat	The belief that one's actions are being judged in accordance with a negative stereotype about a particular group of which one is a member. This belief often causes significant concern of the one threatened that he or she might confirm this stereotype. ¹⁹	<ul style="list-style-type: none"> • “I don't know that I ever really felt like I was ever really up to par.... It's a unique experience when you're sort of like a mediocre person of color in medicine—if your skills are kind of average ... it's hard because people already don't think that you are smart, so then, when they don't think you're smart, it helps to be excellent—it helps to be superior in your skills.... Sometimes you can kind of feel like you're a little bit, sort of inferior to people.... I think it sort of becomes a self-fulfilling prophecy.” • “You don't want to make a bad impression on people because it seems like everybody else is okay. You don't want to be that one person who can't handle it, so you kind of just keep things like that to yourself.”

burden, a principal obstacle to using supports was a fear of confirming negative stereotypes about URMs. In other words, students indicated feeling apprehensive about seeking assistance in an academic setting, fearing that it would result in negative views of themselves as representatives of a specific race or ethnicity. Participants disclosed their feelings on how race/ethnicity might affect others' perceptions of their capabilities and how this influenced their comfort with using academic supports. Students reported believing that "maybe I'm not good enough" and constantly asking, "Am I smart enough?" One participant spoke of the awareness of the availability of support systems, yet reported how she felt that seeking assistance while "falling behind" might negatively influence others' opinions of her abilities. Another student reported that she did not "want to be that one person who can't handle it" in the eyes of faculty, staff, and other students.

Discussion

We suggest that considering the themes of support and strain gleaned from these interviews would be a productive step toward fostering institutional climates which enhance successful outcomes for URM medical students. Participants shed light onto the components of their educational experiences that supported them and encouraged their growth: the camaraderie felt with their peers attributed to the collaborative learning environment (which may in part be facilitated through a noncompetitive pass/fail evaluation system), formal curricular opportunities and learning spaces to engage with concepts of health inequality, and opportunities to interact with a diverse class of students, offering both comfort through perceived similarities and opportunities to learn from differences. Furthermore, participants directly spoke of the hardships that caused them to struggle, including a lack of faculty diversity and, therefore, a paucity of mentors or role models who were perceived to share similar backgrounds and experiences. Finally, participants identified feeling a disproportionate burden, or a sense that, because of their URM status, they were held to a different standard, which also contributed to feelings of stereotype threat. Each theme offered by these participant's voices

may help schools modify their learning environments to improve medical education experiences for both current and future URM students.

Collaborative learning climate

The learning environment—or institutional climate—has a profound impact on learners' academic and professional success.¹⁴ It is therefore essential that medical schools actively attempt to create "an inclusive and welcoming climate for students of all backgrounds."¹⁵ Often, acts of discrimination transpire in subtle ways, occurring through "seemingly innocuous acts,"^{13(p48)} "mundane daily practices which intentionally or unintentionally convey disregard, disrespect or marginality,"^{16(p852)} which alienate students and reproduce hierarchies.¹⁷ Educators must be cognizant of how learning environments are shaping the next generation of medical leaders.

Collaborative learning climate and the pass/fail evaluation system

The type of evaluation system that medical schools employ may promote anxiety and peer competition¹⁸ or, conversely, may increase collectivity, student comfort, and satisfaction. Pass/fail systems implemented in medical schools have been shown to lead to less perceived stress and greater group cohesion¹⁹; improved psychological well-being, satisfaction, and the promotion of cooperative learning²⁰; and eased anxiety and reduced competition.²¹ Comments in the category of cooperative learning climate indicated that this system of evaluation may be a key component of creating a noncompetitive, collegial atmosphere.

Health care disparities

The Society of General Internal Medicine Health Disparities Task Force has put forth recommendations for guidelines in training medical students, residents, and practitioners in ways in which they can eliminate health care disparities. Specifically, the task force has suggested three curricular guidelines:

- 1) examine and understand attitudes, such as mistrust, subconscious bias and stereotyping, that practitioners and/or patients may bring to the clinical encounter; 2) gain knowledge of the existence and magnitude of health

disparities, including multi-factorial etiologies of health disparities and the multiple solutions required to eliminate them; and 3) acquire the skills to effectively communicate and negotiate across cultures, including trust building and the use of key tools to improve communication, such as culturally appropriate language services.²²

Not only is the HCD training of students and practitioners essential to addressing the health care needs of an increasingly diverse population, but HCD curricula may also serve to facilitate the matriculation and success of URM students in medical schools. A curricular emphasis on eliminating inequities in health care has been shown to attract a diverse student body, and it also contributes positively to URM students' experiences.²²⁻²⁵ URM students who matriculated at PSOM were significantly more likely than non-URM students to report that this class was positively influential in their decision to attend PSOM²⁶ and that the existence of this course demonstrated the institution's commitment to addressing health care disparities and social justice issues.^{26,27}

Student body diversity

At PSOM, a significant percentage of each medical school class are of African American/black, Mexican American, Native American, and/or Puerto Rican racial/ethnic backgrounds (Figure 1).^{7,28} Students reported feeling that the presence of a diverse student body is essential to enriching their learning experiences in multiple ways. Participants commented on feeling comfortable being their authentic selves among diverse peers, and fortunate to learn from the identities of other minority students.

Faculty diversity

The paucity of diversity among academic physicians is an ongoing and intractable problem nationwide. Although diversity among medical students does not mirror the diversity of the American population, the lack of diversity in medical school faculties is even more extreme.²⁹ Ethnic minority faculty and academic leaders serve as role models,^{30,31} and students benefit greatly from their mentorship,^{31,32} which ultimately shapes students' educational experiences. Underrepresented students may feel connected to URM faculty because of a perceived similarity in experiences³³ and,

therefore, place particular value on their presence within the school as academic instructors and mentors. Institutions should consider best practices for supporting non-URM faculty in becoming effective mentors for URM students³⁴ as well as ongoing efforts for enhanced racial/ethnic representation among medical school faculty.

The disproportionate burden

Although medical school is a challenging time for all students, URM medical students are more likely to experience negative stereotypes about ability, or what is termed “stereotype threat.”³⁵ At all levels of medical education, URM students have reported that their race causes them to feel that they have to be twice as good to be treated as equal to other students,⁸ feel stress to represent their entire race,⁹ and believe that they must perform at a higher level in comparison with their non-URM colleagues.¹⁰ Perceptions of racial/ethnic tension, prejudice, or discrimination contribute to the climate within an institutional context.³⁶ This heavy obligation was often deleterious to PSOM participants achieving academic excellence, as students reported compromising their academic work to fulfill additional obligations. The notion of disproportionate burden may shed light onto the disparities in academic outcomes⁴ for URM and non-URMs and their differing medical school experiences.^{8–10}

The disproportionate burden and stereotype threat

The presence of stereotype threat, or the threat that “others’ judgments of their own actions will negatively stereotype them,”^{37(p613)} was reported through participants’ concerns about making a bad impression on others. Because minority students often feel increased stress to “represent their entire race, culture, or community in the classroom,” additional pressure to perform outstandingly⁹ may be an ongoing impediment to using available supports. Becoming cognizant of the additional obstacles that URM students must overcome will hopefully lead to the cultivation of a supportive learning climate.

Considering the findings

Limitations and alternative explanations. This study is limited in that it includes the voices of students and

recent graduates from one institution only. However, PSOM’s higher-than-typical URM representation may offer medical schools valuable lessons, and the insights of this single group may shed light onto how to successfully matriculate, support, and graduate more URM students at other institutions.

Guidance for future studies. Recently, the AAMC undertook a working group study that explored “whether educational cost and debt have a differential impact on majority and minority students.” The AAMC suggested that “the demographics of the medical student population have changed significantly,” creating a “broad[er] range of financial challenges in paying for their medical education.”^{38(p4)} Perhaps because URM students are “more likely than non-URM students to come from low-income families”³⁹ and have “economic resources [that] are, on average, more limited compared to their majority counterparts,”^{36(p88)} an additional layer of burden exists. In fact, in one assessment, cost was the top factor deterring qualified URM students from applying to medical school.⁴⁰ Therefore, it was surprising to us that after presenting a general question about institutional support, no participants spoke of financial assistance. Perhaps this is due to the education provided on debt management or to the amount of financial assistance offered at PSOM. Future research should assess the role of financial assistance in supporting URM students.

These results, in aggregate, have important implications for PSOM as well as for all medical schools committed to supporting URM medical student success. Schools might prioritize the formal cultivation of a collective learning environment—and the strategies by which this can be accomplished—for instance, through evaluation-based changes such as a pass/fail grading system. Curriculum-based changes might also be considered, such as the formal inclusion of a health care disparities course, which ideally would enhance student awareness, understanding, and satisfaction while improving the health of the nation.

Although we recognize that there are systematic barriers to achieving an ideally diverse faculty, researchers and faculties might continue to

innovate ways to guarantee diversity in the medical education faculties, recognizing the connection to this outcome and the success of URM medical students. Moreover, medical schools might remain cognizant of and consciously work toward decreasing disproportionate burden and stereotype threat in the classrooms and all other interactions, considering the implications of unsaid expectations for URM students.

Through careful consideration of the identified domains of success facilitation and inhibition, medical schools may develop strategies that will contribute to the success of URM students and ultimately, greater diversity in the profession of medicine.

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