




CONCEPT PAPER

Strategies for recruiting underrepresented in medicine and sexual and gender minority students to emergency medicine

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Abstract

Background: Despite having well-described benefits, diversifying the physician workforce has been an ongoing challenge. Within emergency medicine (EM), multiple professional organizations have identified expanding diversity and inclusion as top priorities. The following is a description of an interactive session held at the SAEM annual meeting addressing recruitment strategies for underrepresented in medicine (URiM) and sexual and gender minority (SGM) students into EM.

Methods: During the session, the authors provided an overview of the current state of diversity in EM. In the small-group portion of the session, a facilitator helped characterize the challenges programs face in recruiting URiM and SGM students. These challenges were described during three distinct phases of the recruitment process: (1) preinterview, (2) interview day, and (3) postinterview.

Results: Our facilitated small-group session allowed for discussing the challenges faced by various programs in recruiting a diverse group of trainees. Common challenges in the preinterview and interview day included messaging and visibility as well as funding and support. Postinterview challenges included communication and the ranking process. Through this exercise, we were able to collaboratively share ideas on tangible solutions that programs may use to overcome their specific challenges.

Conclusions: Given the importance of intentionality in diversifying the physician workforce, the authors describe successful strategies implemented within one residency program and those shared by session participants to overcome recruitment challenges.

INTRODUCTION

Diversity in the physician workforce has well-documented benefits for patients, which include improving access to care and increasing patient satisfaction.^{1,2} In addition, students from diverse

backgrounds can enhance the learning environment and educational experience for all their colleagues.³ Despite these benefits, there continues to be inadequate representation in the physician workforce, including within the field of emergency medicine (EM).⁴

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Multiple professional organizations within EM, including the Association of American Medical Colleges (AAMC), Society for Academic Emergency Medicine (SAEM), American College of Emergency Physicians (ACEP), and Council of Residency Directors (CORD), have indicated that expanding diversity and inclusion efforts are top priorities within the field.⁵ Despite a 2008 CORD panel outlining recruitment initiatives, the percentage of underrepresented in medicine (URiM) students in EM has not changed significantly over the past 15 years.⁶ Per the current AAMC definition, URiM is defined as those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.⁷ URiM medical students are less likely to apply to EM,⁸ and EM programs are less representative of diversity when compared to other specialties.⁴ EM residencies further lack inclusiveness for sexual and gender minorities (SGM),⁹ a term that includes individuals who identify as lesbian, gay, bisexual, asexual, transgender, Two-Spirit, queer, and/or intersex.¹⁰ The process of selecting and recruiting the next generation of EM physicians needs to be equitable and welcoming to all.

Since the COVID-19 pandemic, the traditional recruitment process has been upended and increasingly become virtual, which has provided more accessibility to certain students. In rethinking residency recruitment, it may be helpful to examine three distinct phases of the process: (1) preinterview, (2) interview day, and (3) postinterview. This approach may help to identify challenges unique to each discrete period and allow for targeted solutions. In this article, the authors sought to describe an interactive session held at the 2022 Society for Academic Emergency Medicine Annual Meeting in New Orleans, Louisiana, that addressed recruitment strategies for URiM and SGM students.

METHODS

Predidactic

Two residents and seven faculty involved with recruiting URiM and SGM students to a public academic program collaborated to design an interactive session on best practices and strategies for addressing challenges with recruitment. We intentionally ensured the representation of URiM and SGM faculty and residents in this collaboration as well as individuals with various roles within our department. Our planning committee members were a diverse group of individuals that included URiM, SGM, women, and men representatives. Several members have educational leadership roles, including our director of undergraduate medical education, residency program director, two clerkship directors, and a chief resident. In addition, all members of the planning committee were leaders or members of the Academy for Diversity and Inclusion in Emergency Medicine (ADIEM) or the Academy for Women in Academic Emergency Medicine (AWAEM). The breakdown in terms of representation was the following: one ADIEM executive committee member, one AWAEM executive committee member, one ADIEM committee leader, four ADIEM members, and two AWAEM members. The ranges in career stages, personal experiences, professional roles, and national involvement ensured diverse and unique perspectives as we designed our session.

Before the live session at the 2022 SAEM annual meeting, six monthly virtual conference calls were held with all nine planning committee members to outline the session and reach consensus about content. For the format, we decided to use small- and large-group discussions to enhance participation. This format was chosen because small-group discussions promote participation and deep reflections,¹¹ especially for learners from different ethnic backgrounds.¹² Since the topic of recruiting URiM and SGM students is broad, we decided to focus on three distinct phases of the recruitment process: (1) preinterview, (2) interview day, and (3) postinterview. Although our goal was for each small group to discuss and come to consensus about key challenges and their potential solutions organically, we prepared discussion points based on the literature. The literature review included documenting the title, authors, article type, and main points. We then created a list of key discussion topics. Using an iterative, consensus-driven process or modified Delphi,¹³ we discussed each topic and voted for the top three challenges and solutions for each recruitment phase to highlight in our session. Finally, we collated the content created into a facilitator's guide and split our larger planning committee into three subgroups to lead the discussion for each of the small groups.

Didactic day

The live, in-person session was available to all attendees at the 2022 SAEM annual meeting. Advertisement for the session was mostly through social media and general announcements via emails from SAEM, ADIEM, and AWAEM. Apart from the nine planning committee members, there were 20 participants. The participants included students, residents, fellows, and faculty. Many had leadership roles in their departments and programs, including chief residents, program directors, and assistant program directors. Geographically, the participants represented the west, midwest, northeast, and southeast.

The session was divided into five timed parts: (1) introduction (5 min), (2) small-group discussion (20 min), (3) large-group debrief (15 min), (4) conclusion by lead facilitator (5 min), and (5) questions and answers (5 min). We began the session with an introductory lecture focused on defining key terms within diversity, equity, and inclusion (DEI) and evidence-based reasons for an inclusive-based approach to recruiting students to EM. We then divided participants into three small groups focusing on preinterview, interview day, and postinterview challenges and solutions. Using the facilitator's guide, we had two facilitators per group to lead the discussions.

A modified nominal group technique (NGT) was used to guide participants to consensus.¹⁴ The NGT process allows thoughts and opinions to be considered and consolidated in a nonoppressive manner. First, to start the discussion, participants were asked open-ended questions concerning recruitment challenges in their programs. Each challenge was written down by a facilitator on large super sticky notepads for the group to review. We asked group members to organize the challenges into themes and discuss solutions for each while encouraging participants to share novel approaches that their programs use. The organization and reorganization of themes was an iterative

process, based on open discussion. We then reconvened into a large group to share key learning points from each small group. The session ended with a closing presentation highlighting our program's best practices. To provide participants with a tangible "take-home," we created an infographic with our top 10 pearls for recruiting URiM and SGM students (Figure 1). Participants were encouraged to provide feedback via a quick response (QR) code to a Google Form.

Postdidactic

Following the didactic, we evaluated the success of the session through a post hoc discussion of ideas for improvement with the

planning committee. We intended to evaluate feedback via the Google Form provided; however, we did not receive enough responses. We summarized the process of developing the session for publication.

RESULTS

Based on the small-group discussions, challenges and solutions were identified in recruiting URiM and SGM students during the preinterview, interview day, and postinterview time periods. The major challenges and their proposed solutions determined by each small group are outlined below.



FIGURE 1 Ten strategies for recruiting URiM and SGM students to EM. SGM, sexual and gender minority; URiM, underrepresented in medicine.

Preinterview

Perceptions about the program are forged long before interview day and the months leading up to interview season pose specific challenges. The common challenges discussed in recruiting URiM and SGM students to EM in the preinterview stage fell into two categories: (1) messaging and visibility and (2) funding and support.

A program's messaging and visibility on websites and social media have become increasingly important as these are often the primary method of communicating a program's values, mission, and culture with candidates. The preinterview small group noted several challenges. Program representatives mentioned struggling to overcome regional or geographic reputations, often dissuading qualified candidates. Others noted challenges with messaging and inadvertent misrepresentation of the program's culture on websites and social media. Another challenge was communicating the invisible aspects of diversity, such as first-generation, faith-based, or economic diversity, that are difficult to portray on websites and social media. Finally, a common challenge noted was difficulty avoiding "tokenism" of the current URiM and SGM residents, faculty, or staff via the perceptions created through websites or social media.

The preinterview small-group discussed several options to address messaging and visibility concerns. To address challenges related to geographic assumptions, group members suggested that programs should focus on their hospital, health system, or institutional diversity, specifically emphasizing DEI broadly, beyond sex, gender, race, and ethnicity. The institution can leverage its social media account to showcase greater URiM and SGM representation across programs. To address challenges related to misrepresentation of a program's culture, small-group members suggested involving affinity groups such as Student National Medical Association (SNMA), Latino Medical Student Association (LMSA), and Medical Student Pride Alliance (MSPA). Affinity groups provide opportunities for direct messaging to URiM and SGM students. An added benefit of participation is interacting with URiM and SGM candidates to understand their needs and determine effective messaging. Without deliberate, ongoing engagement with candidates, programs will be unable to identify pain points and adapt to the evolving needs of URiM and SGM applicants. Participants also identified challenges related to the financial and time costs of engaging in DEI initiatives at the departmental and institutional levels. Limitations in funding and support can hinder overall recruitment efforts. The preinterview small-group members discussed several solutions related to funding. Programs can apply for grants while also lobbying departmental leadership to increase funding for DEI initiatives. Departments should adequately compensate faculty participating in DEI work with time, support, and resources. Programs can improve overall resident participation by encouraging the residents on "lighter" rotations to engage in recruitment efforts rather than targeting specific URiM or SGM individuals. Additionally, participants discussed offering scholarships

and funding opportunities to URiM students to alleviate the costs of completing visiting clerkships or second look opportunities. Group members also suggested continuation of a virtual interview option, even as in-person interviews return, to ease the financial burden of travel costs. Long term, programs can consider creating an endowment with alumni contributions, which would provide more sustainability for funding initiatives to recruit and retain URiM and SGM students. [Table 1](#) summarizes the discussed preinterview challenges and potential solutions.

Interview day

The interview day is perhaps the most important touchpoint with applicants throughout the recruitment process. Applicants may have preexisting perceptions about programs, often gleaned from limited data through the program website, internet presence, or word of mouth. The actual interview day offers an opportunity to alter or solidify that perception. In the during-interview small group, participants primarily focused on challenges and solutions related to messaging and visibility.

Since the COVID-19 pandemic, most programs have shifted the interview day to an entirely virtual format. Challenges can arise as applicants will undoubtedly have some perceptions of the geographic area and interviewing virtually does not allow applicants to experience the program's location physically. Like the preinterview small group, participants described challenges related to the program's geography and overcoming potential biases. Challenges were also noted among small group members attempting to increase diversity in programs with little to no representation from residents, faculty, and staff from URiM and SGM backgrounds. Another challenge identified was a program's approach to showcasing DEI broadly within a short time frame of the interview day. DEI encompasses differences beyond sex, gender, and ethnicity and includes dimension of diversity that are often invisible such as life experiences, economic backgrounds, ability, sexual orientation, and faith.

The interview-day small group discussed several solutions to the challenges identified. To overcome perceptions of a certain location, programs can showcase the diversity of the surrounding communities in terms of history and culture. Some programs have created living guides that describe distinct neighborhoods in the area, highlighting their unique aspects. Additionally, programs can highlight specific patient populations that may align with the interests of URiM and SGM candidates and underscore the importance of incorporating residents from these backgrounds into the program. Group members discussed a multimodal approach for challenges related to showcasing and defining DEI broadly on interview day. Participants suggested using traditional presentations that highlight specific faculty, resident, patient, and community demographic data and examples of DEI efforts. [Table 2](#) summarizes the interview-day small-group discussion of challenges and potential solutions.

TABLE 1 Preinterview overarching themes, challenges, and potential solutions for recruiting URiM and SGM students to emergency medicine.

Overarching theme	Challenge	Potential solution
Messaging and visibility	Overcoming regional/ geographic reputation	Focus on the hospital's, health system's, or overall institutional reputation and define DEI broadly Leverage institutional social media accounts to showcase greater URiM and SGM representation across programs
Messaging and visibility	Representation on social media <ul style="list-style-type: none"> Communicating nuanced aspects of DEI culture Identifying pain points 	Get Involved with affinity groups (SNMA/LMSA/MSPA) Create a "diversity spotlight" or informational brochures highlighting personal stories Create a DEI website highlighting educational initiatives, scholarly work, and community engagement Spotlight residents and faculty in leadership roles, especially if DEI related (i.e., DEI chief resident)
Messaging and visibility	Showcasing "unseen" aspects of diversity (e.g., first-generation, faith-based)	Engage in mentoring of URiM and SGM populations/affinity groups Advertise program at SNMA/LMSA Task social media committee with portraying "unseen" aspects of diversity
Messaging and visibility	Avoiding "tokenism" of URiM and SGM residents, faculty, and staff	Depict a diverse array of faculty and residents on websites and social media Engage a diverse group of faculty and residents in the recruitment process Send diverse representation to regional and national residency fairs
Funding and support	Obtaining DEI funding and support at the institutional level	Seek grant or external funding opportunities Lobby departmental leadership to allocate DEI-specific funding
Funding and support	Minority tax or burden for those taking on DEI efforts	Incorporate financial and/or promotion incentives to faculty for participating in DEI work Approach residents on "lighter" rotations first to help preinterview recruitment efforts rather than targeting specific URiM and SGM individuals
Funding and support	Cost constraints limiting URiM and SGM student participation in in-person recruitment events, visiting clerkships, and interview day	Offer scholarships to URiM and SGM visiting students Provide the option of virtual or in-person interviews Engage alumni in funding scholarship opportunities for URiM and SGM students

Abbreviations: DEI, diversity, equity, and inclusion; LMSA, Latino Medical Student Association; MSPA, Medical Student Pride Alliance; SGM, sexual and gender minority; SNMA, Student National Medical Association; URiM, underrepresented in medicine.

TABLE 2 During interview overarching themes, challenges, and potential solutions for recruiting URiM and SGM students to emergency medicine.

Overarching theme	Challenge	Potential solution
Messaging and visibility	Biases toward program location	Showcase diversity, culture, and history of surrounding communities Created living guides describing distinct or unique aspects of local neighborhoods Highlight patient populations that align with the interests of URiM and SGM candidates
Messaging and visibility	Showcasing DEI broadly within a short time frame	Incorporate presentations that highlight demographic data and examples of DEI efforts Include residents and faculty who are well versed in the program's DEI initiatives throughout the interview day, allowing informal Q&A
Messaging and visibility	Showcasing and supporting "invisible" elements of diversity	Ask faculty, residents, staff, and applicants to share background and life experiences at the start of the interview day Encourage the use of personal pronouns
Messaging and visibility	Avoiding the minority tax while incorporating diverse resident and faculty interviewers	Incorporate financial and/or tenure/promotion incentives for participation in DEI-related recruitment Approach all residents and faculty equally for interview day activities

Abbreviations: DEI, diversity, equity, and inclusion; SGM, sexual and gender minority; URiM, underrepresented in medicine.

Postinterview

The postinterview period is a crucial moment of reflection as candidates and programs prepare their rank lists. EM-bound medical students consider many aspects when evaluating programs. The postinterview small group discussed challenges and solutions in terms of three overarching themes: (1) communication, (2) ranking, and (3) pipeline building.

In terms of communication, participants agreed that postinterview communications might be beneficial in reminding interviewees of their programs' important aspects of DEI. Regarding ranking, group members mentioned challenges related to creating a rank list that is broadly inclusive and equitable. They also discussed involving diverse residents and faculty in the process while avoiding overburdening certain individuals or groups. For pipeline building, challenges included institutional buy-in and support. In this sense, some participants noted feeling disingenuous in recruiting URiMs and SGMs because while the department may value DEI, the larger institution may not place as much emphasis.

Solutions discussed relating to communication included sending a one-time neutral email or letter that summarizes the program's DEI initiatives and accomplishments. Programs should avoid direct messaging or contact and should consider a general email where applicants can send questions for residency leadership to answer. This approach also lessens the burden on any particular individual in fielding the questions. For solutions related to ranking, participants suggested creating a holistic review process and rubric that encompasses broad factors of inclusion and equity, such as life experiences, obstacles, financial hardship, and prior careers. Another solution is to include URiM and SGM residents in the ranking meetings.

Concerning institutional buy-in, one solution suggested by group members was to track data on recruitment efforts of URiM and SGM students, highlighting positive gains and impact. This data could be coupled with national calls for a more diverse and inclusive health care force to present to leadership. The idea is that the institutional culture will gradually shift as programs and departments lead by example. Programs could also consider engaging with alumni to share how training in a diverse, equitable, and inclusive environment impacted their personal and professional development (Table 3).

DISCUSSION

Preinterview

Challenges in messaging and visibility during the preinterview process are well characterized in the literature. The challenge of creating an inclusive environment that is likely to attract diverse candidates starts well before interview season. Institutions that include DEI as a priority in their mission and vision statements are better able to deploy resources, align efforts across departments, and convey a commitment to cultivating inclusive environments to prospective applicants, faculty, and staff.¹⁵ While mentioning a commitment to diversity in a mission statement may not alone increase diversity, omission of such values may inadvertently communicate a reluctance to embrace DEI fully.^{15,16} Prior to interview season, program leadership must first commit to championing departmental or institutional DEI missions. Programs should construct a comprehensive strategic plan for achieving their DEI recruitment efforts, which may require benchmarking against regional or national programs and allocating resources needed to support residents.¹⁵ Furthermore, this recruitment strategic plan should reinforce a commitment to increasing program diversity and to the identification of holistic review criteria to select interview candidates.

Virtual interviews can aid programs in attracting diverse candidates who were previously deterred due to financial constraints associated with travel. However, they can also limit an applicant's ability to assess institutional culture.^{17,18} Programs can leverage their online presence to overcome this challenge. The literature suggests using program websites and social media content to highlight mission, educational philosophy, and commitment to diversity.¹⁸ For example, a dedicated section for diversity and inclusion on a program's website can quickly direct applicants to DEI-related educational initiatives, scholarly work, and community projects. Featuring diverse residents and faculty in leadership roles (i.e., DEI chief resident) can further communicate a program's dedication to equity and inclusion. Programs can avoid tokenizing current URiM and SGM residents, faculty, or staff by depicting an array of individuals on websites and social media with different life experiences and backgrounds. Additionally, amplifying existing program initiatives such

TABLE 3 Postinterview overarching themes, challenges, and potential solutions for recruiting URiM and SGM students to emergency medicine.

Overarching theme	Challenge	Potential solution
Communication	Postinterview communications—program initiated	Provide a one-time neutral letter summarizing DEI initiatives
	Postinterview communications—applicant initiated	Provide a general email where questions can be sent
Ranking	Equitable evaluation of the candidate	Create a rubric that encompasses a holistic approach Involve URiM and SGM residents in ranking meetings
Pipeline	Institutional buy-in and support	Track and collect data on positive gains from DEI initiatives Engage alumni to share stories on how DEI impacts them and reasons it is important in their careers

Abbreviations: DEI, diversity, equity, and inclusion; SGM, sexual and gender minority; URiM, underrepresented in medicine.

as didactics, journal clubs, and small groups can decrease the burden associated with content creation for websites and social media. More importantly, highlighting the interactions of residents with each other and faculty during these activities can provide invaluable information to applicants such as camaraderie.

In terms of social media, platforms such as FaceBook, Instagram, and Twitter have become increasingly popular means of engaging with applicants, especially at the peak of the COVID-19 pandemic.¹⁹ These platforms allow for wide distribution of materials in different formats. The Emergency Medicine Residents' Association (EMRA) Match website is another platform frequently used by students, and programs should ensure their webpages and social media links are updated on their EMRA Match profile.¹⁸ Even as residency interviews transition back to in person, the online and social media impact have irrevocably altered the residency interview process. Programs should, therefore, engage in efforts to reallocate time and resources toward the creation of quality content that clearly communicates program culture.

Another strategy, as previously mentioned, includes the use of visiting clerkship and second-look opportunities, especially those targeted to URiM and SGM applicants. As mentioned in the small group, visiting clerkship and second-look opportunities allow programs to showcase unique aspects of their regional or geographic location. They can also help avoid inadvertent misrepresentation of a program's culture online and can allow a program to communicate invisible aspects of diversity that are not readily ascertained via an online format. However, one issue addressed in the literature is the financial cost of participating in visiting clerkship opportunities. With the average cost of a single rotation around \$1000 and the average number of rotations of roughly two, participation in such opportunities can pose a challenge for students from low-resource backgrounds.²⁰ This is particularly concerning given studies which have shown a higher educational and consumer debt levels among underrepresented racial and ethnic minorities.²¹ A 2020 AAMC report provides further evidence of the financial burden associated with pursuing medical education for URiM students.²² This report indicated that the median educational debt amount for graduates identifying as Black was \$230,000, the median educational debt for graduates identifying as American Indian and Alaska Native was \$212,375, and the median educational debt for graduates identifying as Hispanic was \$190,000. URiM visiting clerkship scholarships and funded second look opportunities have been shown to increase the racial and ethnic diversity of residents as they express an EM program's commitment to equity.^{23,24} However, it is important to note that in-person tours and second looks are currently limited, and they may not be allowed at some institutions.

More novel approaches to convey program identity and culture include connecting with URiM and SGM candidates directly. One study outlined an innovative collaboration between a medical school and SNMA to increase matriculation of URiM students.²⁵ One key component of this approach included targeted outreach from URiM medical students to prospective candidates throughout the interview season which allowed students of color to convey their unique

experiences as medical students. Another component included representation from a medical school's SNMA chapter at national conferences to further raise awareness. While this study detailed recruitment efforts at a medical school, the authors emphasized the importance of incorporating this approach into the residency recruitment process as well. The model described further suggests how medical student affinity groups, such as SNMA, LMSA, and MSPA, can serve as successful means of recruiting students from URiM and SGM backgrounds.

More recent studies have further underscored the need for partnerships with SNMA, LMSA, MSPA, and other affinity groups to increase physician workforce diversity.²⁶ Studies have also provided evidence for using outreach as a means of elucidating hurdles, including social determinants, which URiM and SGM students encounter in their pursuit of medicine.²⁷ Additionally, Cerasani et al.²⁸ have provided an innovative training tool for increasing awareness and understanding of basic needs insecurity among medical students via MedEdPortal, which can be further applied to URiM and SGM applicants. Implementing such approaches can allow programs to identify and adapt to the ever-evolving needs of URiM and SGM applicants. Formalized or broader based efforts for incorporating medical student affinity groups in the residency recruitment process, especially within EM, is an area that warrants further study.

Challenges in funding and support may be more difficult to navigate as they require a more institutional and programmatic approach. In general, programs should actively foster greater support for residents, faculty, and staff who are at risk of the "minority tax."²⁹⁻³² Early on in their training, during a period characterized by rigorous educational demands and mental stress, URiM physicians may encounter additional burdens in being tasked with serving as an ambassador for their race or ethnicity. They are assumed to be an expert on race and ethnicity issues, or they may be expected to carry the weight of caring for minority patients.²⁹ For example, URiM residents have described the challenge of being tasked with creating and promoting diversity initiatives in institutions that have provided insufficient resources and few sustainable solutions to promote longevity of DEI efforts. However, the authors recognize that resident involvement in the recruitment process is an important strategy. One study suggests that program directors reported greater satisfaction with match results when programs engage residents in the virtual interview process, allowing for nuanced understanding of residency culture.³³ Regardless, we caution against the overreliance on residents, particularly those of URiM and SGM backgrounds, to create and sustain recruitment efforts as these experiences may limit educational opportunities and contribute to burnout.^{29,34}

From a faculty perspective, the minority tax manifests as tasking URiM faculty to engage in diversity efforts when traditional metrics of academic success do not value such activities in determining promotion or tenure.³⁵ One suggested model approaches the minority tax reform from two main realms: (1) those that suggest modifications to human behaviors and (2) those which increase incentives for DEI related work, such as recruiting and supporting URiM and SGM candidates. Human behavior modifications

include decreasing URiM participation in administrative activities, deferring engagement in diversity initiatives until participation will pose less limitations to career progression, and encouraging White-identifying faculty to drive diversity initiatives. Methods to incentivize DEI-related work include applying participation in URiM and SGM recruitment efforts toward promotion and tenure or financial or administrative stipends for faculty engaged in DEI efforts. Novel initiatives such as these deserve further investigation as they can assist in addressing the minority tax and promote professional career satisfaction.

Finally, and perhaps most importantly, the role of institutional, departmental, and program leadership in larger DEI initiatives cannot be underscored. The literature supports the importance of institutional leadership and strategic plan for successful integration of DEI into the overall mission and culture of the organization. One review suggested that accreditation processes may be useful for enabling schools to analyze and describe their DEI efforts and to engage in continuous quality improvement.³⁶ Such an approach can support allocation of staff and resources toward DEI efforts. It ensures a larger institutional culture that embraces solutions to recruitment challenges and allows diversity efforts to be spread across departments, instead of allowing advancements to be forged in isolation.¹⁵

Interview day

Common challenges and solutions related to messaging and visibility on interview day are also well characterized in the literature. Best practices in communicating elements of program diversity as outlined by CORD include an acknowledgement of program DEI mission statements and measures taken to promote diversity initiatives.³⁷ Even as programs work to overcome limitations in diversity, a DEI mission statement can remain aspirational in nature, setting a vision for the overall direction of funding, programmatic, and personnel resources.¹⁵ Programs with little to no diversity should verbally recognize recruiting challenges on interview day, underscore a commitment to recruiting URiM and SGM candidates, and reinforce steps taken to recruit applicants from these backgrounds.³⁸ Omission of such elements can signal that a program has not fully committed to addressing these challenges.^{15,39} Finally, the literature highlights the importance of allowing URiM and SGM candidates to meet with faculty and residents of similar backgrounds while carefully weighing any additional minority tax placed upon those individuals.³⁸ Such interactions can be provided throughout the interview day in meals or breaks or via social events.

To overcome negative perceptions of geographic location, programs can showcase the diversity of the surrounding communities in terms of history and culture. As participants in the interview-day small group mentioned, some programs have created living guides that describe distinct neighborhoods in the area, highlighting their unique aspects. Studies have shown that physicians from URiM

backgrounds are more likely to work with historically marginalized and underresourced populations.^{15,16} As such, programs can highlight specific patient populations that may align with the interests of URiM and SGM candidates and underscore the importance of incorporating residents from these backgrounds into the program to promote congruency between providers and existing patient populations.¹⁴

An additional challenge related to virtual interviews that was not mentioned in the small groups, but is heavily referenced in the literature, is the introduction of new biases or amplification of existing ones in the candidate selection process.^{40,41} A technology bias, or bias toward candidates who may seem less fluent in technology or those with poor internet or audio quality, can impact candidate ranking even when scorers are instructed to ignore technology differences. Such a phenomenon can manifest in marginalized communities as existing socioeconomic and racial disparities impact broadband availability, thereby transitioning physical redlining into the digital age.⁴² Furthermore, researchers pose an additional technology bias whereby machine learning coded into video technology is designed to recognize human faces based on nondiverse data sets.⁴⁰ Cameras that are calibrated to recognize white skin pose an additional challenge for darker skinned individuals due to the need to acquire additional corrective lighting for the virtual interview process.^{40,43}

Finally, the literature supports how an increase in cognitive load attributed to the use of video conferencing can result in a greater reliance on implicit assumptions to process information, ultimately leading to more implicit bias in the scoring of candidates.⁴⁰ As cultural nuances and nonverbal communication cues become harder to discern or are misinterpreted via a virtual format, interviewers default to implicit associations and can unconsciously resort to social stereotypes.^{17,40} Other sources of implicit bias that can influence applicant scoring include applicant environmental cues, accent bias, and leniency bias. Furthermore, relying on social stereotypes or engaging in affinity bias by emphasizing superficial factors can further distort perceptions of candidates.⁴⁰ Best practices identified to mitigate these biases include the use of standardized interview questions and educating interviewers about inequities introduced by technology and the impact of cognitive load on implicit bias. Additional strategies can be found in the AAMC virtual interview guides for program directors and interviewers.^{44,45}

Postinterview

The literature provides several strategies to approach challenges related to candidate communication, ranking, and pipeline building in the postinterview period. First, while postinterview communications might be beneficial in reminding interviewees of a program's important aspects of DEI, they should be approached cautiously to avoid bias or perceived coercion per the National Resident Matching Program.¹⁷ Programs should clearly communicate expectations for postinterview communications with candidates to avoid

mischaracterization of interest.³⁷ A one-time neutral email summarizing the program's DEI initiatives and accomplishments may be a beneficial approach. Other considerations include hosting resident-led, virtual "hangouts" to allow candidates to ask last minute questions that arise during interview season.¹⁸

Broadly inclusive and equitable ranking strategies are a critical step in the recruitment process. The AAMC has created several resources for navigating challenges that arise during the candidate ranking process, including a primer to determine criteria to prioritize candidates and methods to assess the ranking process.⁴⁶ CORD has also released a series of evidence-based best practice reviews including a model for increasing DEI in EM programs that details recommendations for assessing URiM applicants and implementing holistic reviews.³⁷ Other strategies suggested include blinding interviewers to standardized test scores, eliminating filters based on standardized test scores, and using scoring rubrics that incorporate broad factors of DEI. These DEI factors include life experiences, prior careers, obstacles, financial hardship, or specific interests which align with a program's mission.⁴⁷ Including URiM and SGM faculty and residents in ranking meetings as well as introducing training in bias mitigation for faculty and residents are other effective methods. Training modalities to address bias in candidate selection have been discussed in the literature.³⁷ Notably, Nakae et al.⁴⁸ developed a 90-min interactive training module available via MedEdPortal to enhance bias recognition in the residency selection process and provide specific bias mitigation strategies. This tool was shown to create ideal learning environments to investigate bias and provide mitigation skills among faculty engaged in the MD, MD/PhD, and residency program selection processes.

Undoubtedly, correcting disparities in the physician workforce is a task that will not be easily overcome. The Academy of Medicine has recently begun to acknowledge the systematic disenfranchisement of Black, Latino, and women physicians resulting from the Flexner Report.⁴⁹ Work is still needed to address the barriers to professional advancement for URiM and SGM physicians. Even with these challenges, programs should remain committed to DEI efforts. Programs with a paucity of representation of URiM and SGM residents or who struggle with garnering institutional support for its DEI efforts should apply the critical mass theory as described by Vick et al.¹⁵ This theory posits that even a small group of like-minded individuals can provoke large-scale change. If approximately 10% of a group strongly champions a minority opinion, by distributing those advocates throughout an organization and actively engaging the majority, the minority opinion can gradually prevail. Thus, support for DEI initiatives could gradually become embedded into the institutional framework. Recruitment data and other program highlights can be bolstered by national calls for a more representative physician workforce and presented as evidence to institutional leaders. With time, a program can cultivate an environment which attracts URiM and SGM candidates. After successfully matching such candidates, programs can then implement early interventions which assure the

success of URiM and SGM residents.³⁸ With greater intentionality, programs can create a thriving pipeline for diverse candidates.

LIMITATIONS

Our findings must be considered in the context of several limitations. First, consensus building occurred within a small group of participants who decided to attend the conference session and had the time and resources to attend in person. This convenience sample likely included participants with vested interest in diversifying the EM workforce, but may not have the background necessary to understand some of the most impenetrable and enduring barriers to recruiting diverse applicants. We encourage educators who utilize these strategies to continue including key stakeholders from diverse backgrounds and positions to ensure that all viewpoints are brought forward.

At the conclusion of the session, we sought to poll participants by utilizing a QR code to gather information on strengths and weaknesses with our consensus-building techniques. Unfortunately, we were unable to get the substantial responses necessary to draw meaningful conclusions on our efforts. Finally, our discussion section aims to connect strategies identified during our consensus-building activity with the broader literature outside of EM recruitment to highlight areas where other specialties have been innovative and successful. We must acknowledge that our literature search was not a systematic review, and some publications may be missed.

CONCLUSIONS

The process for recruiting underrepresented in medicine and sexual and gender minority candidates to emergency medicine residency has many areas that need improvement. To our knowledge, little attention has been directed toward the impact of websites and social media in the recruitment process at both the undergraduate and graduate medical education levels, including those that impact candidate experiences of the residency interview process. Given that virtual interviewing will likely remain a mainstay in the residency interview process, more attention should be focused on methods of mitigating bias associated with this process. Stronger partnerships with affinity groups and wider implementation of underrepresented in medicine and sexual and gender minority visiting clerkship scholarships and funded second-look opportunities are an additional method to increase the racial and ethnic diversity within emergency medicine. Finally, there is a dearth of research relating to the recruitment and overall experience of sexual and gender minority candidates in medical school and residency and throughout the career course of sexual and gender minority individuals. Special consideration should also be focused on how sexual and gender minority individuals are impacted by minority tax in residency training and through the course of their career.

Along with the strategies mentioned, future directions for recruiting the next generation of emergency medicine physicians should include institutional efforts to bolster the overall pipeline into medicine for underrepresented in medicine and sexual and gender minority students. For example, our program participates in a community outreach program that increases exposure to medicine among high school students. We also recommend connecting with undergraduate students from underrepresented in medicine and sexual and gender minority backgrounds and providing shadowing experiences and mentorship as they apply to medical school. Among medical students, we recommend early engagement with first- or second-year students to increase exposure. We also recommend focusing outreach efforts with students attending historically Black colleges and universities, Hispanic-serving institutions, and medical schools without home emergency medicine programs.

Being intentional in improving diversity in emergency medicine is critical, as underrepresented in medicine and sexual and gender minority applicants are more likely to consider diversity when choosing a specialty and residency program, and they are more likely to consider programs perceived as diverse.⁵⁰ For female applicants, selection of a program may be influenced by the gender composition of the residents, gender of program directors and assistant program directors, gender of attending physicians, ethnic diversity of coresidents, and patient demographics.⁵¹ Diversifying the physician workforce is a challenge that will not be easily overcome. However, programs can navigate obstacles in the preinterview, interview day, and postinterview stages with greater intentionality to efforts, which can increase recruitment of underrepresented in medicine and sexual and gender minority students. Addressing challenges unique to each stage will help programs rethink residency recruitment and increase equity for the next generation of emergency medicine physicians.

AUTHOR CONTRIBUTIONS

Lauren T. Wilson: concept and design, drafting of manuscript, critical revision of the manuscript for important intellectual content. Benjamin Weigel: concept and design, drafting of manuscript, critical revision of the manuscript for important intellectual content. Edgardo Ordonez: concept and design, drafting of manuscript, critical revision of the manuscript for important intellectual content. Navdeep Sekhon: concept and design, drafting of manuscript, critical revision of the manuscript for important intellectual content. Adedoyin Adesina: concept and design, drafting of manuscript, critical revision of the manuscript for important intellectual content. Anisha Turner: concept and design, drafting of manuscript, critical revision of the manuscript for important intellectual content. Aleksandr M. Tichter: concept and design, drafting of manuscript, critical revision of the manuscript for important intellectual content. Sarah Bezek: concept and design, drafting of manuscript, critical revision of the manuscript for important intellectual content. Ynhi Thomas: concept and design, drafting of manuscript, critical revision of the manuscript for important intellectual content.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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