Strategies to Enhance Diversity in Emergency Medicine: Finding Actionable Solutions

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For decades the medical profession has struggled to increase sex, racial, and ethnic diversity in the physician workforce. Although there have been some gains—for example, in the number of women entering careers in medicine overall—there are many other areas in which progress has been halting at best.[1] In particular, certain specialties in medicine still have lower-than-desired proportions of women or individuals from groups underrepresented in medicine, in some cases despite many well-intentioned efforts. To guide these efforts, many educators have sought to identify key predictors of specialty choice, which through appropriate intervention could be key in increasing this diversity. In a recent evidence-based systematic review of factors influencing career choice, 5 categories were identified: structure of the medical school curricular experiences; student personal characteristics such as age; student values; career needs to be satisfied, such as expected income; and perception of the specialty characteristics.[2] Lists of categories such as this suggest a complex and nuanced set of influences across the experience of medical students that ultimately shape an individual's choice of specialty, and this will almost certainly defy any convenient or simple set of solutions, especially in seeking to enhance diversity.

In understanding specialty choice, it is vitally important to identify predictors that are actionable; that is, is it feasible for a medical school to augment the experience of students in such a way as to significantly alter the specialty choice trajectory? For example, although expected earning potential as a factor influencing career choice is an interesting finding, nothing short of a physician payment reform on a monumental scale is likely to influence this causal pathway. According to national data, the average salary for an emergency physician is $350,000 per year, whereas it is $230,000 for internal medicine and $212,000 for pediatrics.[3] On the other hand, the positive influence of role models and creating experiences that can give students early in training who have not yet formed their specialty preference a realistic portrayal of lifestyle, rather than a hypothetical perception, are both examples of actionable specialty choice influencers.

Burkhardt et al[4] conducted an elegant analysis of available data, presented in this issue of *Annals*, to make an important contribution to the conversation in regard to factors influencing specialty choice in emergency medicine.[4] By partnering with the Association of American Medical Colleges, the National Residency Matching Program, and the National Board of Medical Examiners to acquire and link national databases, these investigators were able to assemble a data set with which to seek to identify predictors of interest in emergency medicine at graduation. With this multivariate model, they found that women and graduates underrepresented in medicine had significantly lower likelihood of interest in emergency medicine. They also identified many other associations that align well with previous models, such as increasing debt and the high importance of work-life balance being positively associated with increased interest in emergency medicine. The findings shed new light on the characteristics, perceptions, and values that may yield differential interest in emergency medicine as a specialty.

Unfortunately, despite the strengths of this study, there is not much in the findings that is actionable. By "actionable," I mean findings that could readily be translated into interventions that would be expected to positively affect interest in emergency medicine as a specialty. For example, the primary outcome variable, interest in emergency medicine at graduation, represents a rather late point in the causal chain. The Graduation Questionnaire is typically administered to graduating seniors in medical school, almost all of whom have already chosen and matched into the residency specialty of their choice. Although the associations found are informative and certainly plausible, given the extant literature, the fact that these associations are made after students have already made career specialty commitments limits what we can assert about their causal

importance. More important, findings such as this offer more questions than answers. For example, what is the intersection, if any, between sex and race/ethnicity and other factors? Is a student who is underrepresented in medicine and who may be statistically more likely to have come from a socioeconomically disadvantaged background more sensitive to the influence of debt? How do family expectations interact with socioeconomic or educational disadvantage? Are female students and those from backgrounds underrepresented in medicine more or less affected by availability of advice from mentors, given the relative paucity of women and mentors underrepresented in medicine?

There are certainly some actionable findings in this study. For example, the trend of increasing number of medical schools having a required clinical rotation in emergency medicine will increase the opportunity for students to have detailed experiences in emergency medicine. The percentage of medical schools with required emergency medicine clerkships increased from 43% in 2010 to 56% in 2016, and is still increasing.[5] These rotations enable students to form a more balanced and realistic view of the specialty practice than they could ever get from merely visiting the emergency department to admit a patient. At least one study found a positive relationship between presence of required third-year clerkships in emergency medicine and increasing likelihood of application to emergency medicine residency.[6] This relationship suggests that some findings in the article by Burkhardt et al might prove to be actionable. For example, students elected to Alpha Omega Alpha honor society or with research experiences, variables associated with decreased interest in emergency medicine, might be influenced by early exposure to academic emergency medicine faculty, with substantive involvement in research or medical education. These and other findings should be explored further for how they can best be translated to meaningful interventions.

In the end, specialty selection is a very personal, individualized decision. Factors such as those found in this study should be viewed as informative, not as definitive, and rather as suggestive of the need for more detailed, qualitative inquiry. Studies are needed that capture the narrative experience of the individual and thus begin to shed light on the ways—the actionable ways—in which the experience of medical students can be shaped to mitigate barriers and increase facilitators to achieving equity and diversity in these fields. For example, in a study seeking to identify factors to foster humanism in medical trainees, Moyer et al[7] used the PRECEDE/PROCEED (Predisposing, Reinforcing, and Enabling Constructs in Educational Diagnosis and Evaluation/Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development) framework, an approach from sociology that seeks to understand the confluence of personal experience, expectations, and community influences to structure focus groups with trainees. This approach enabled them to develop an explanatory framework that could serve as the beginning of interventions in the curriculum and the learning environment that would foster humanism.

Like many specialties, emergency medicine finds itself still behind where it wants to be in terms of diversity. Studies such as that of Burkhardt et al contribute to our understanding of the challenges in this work, and if coupled with creative and rigorous qualitative studies, hold great promise in ultimately finding actionable approaches that can help achieve positive progress in the path toward diversity.

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