

Invited Commentary

Repaving the Pathway to Prevent the Loss of Students With Marginalized Identities—Medical Student Attrition

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In this issue of *JAMA Internal Medicine*, Nguyen et al¹ demonstrate differences in attrition from medical school among medical students from varying racial, ethnic, and socioeconomic backgrounds. These authors considered being un-

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derrepresented in medicine (URiM) as individuals who identified as Hispanic only, non-Hispanic American Indian/Alaska Native/Native Hawaiian/Pacific Islander only, or non-Hispanic Black/African American only. As an innovative contribution to the literature, they looked beyond race and ethnicity and examined socioeconomic status, specifically past and present household income as well as underresourced neighborhood status. They adjusted for Medical College Admissions Test results and found that gender, race, and ethnicity remained associated with attrition rates (overall attrition rate, 2.8%; identified as URiM, 5.6%; identified as low income, 4.2%; and from underresourced neighborhoods, 4.6%). Furthermore, they found that those with 1 or more marginalized identities were more than 40% more likely to experience attrition during medical school. It is important to emphasize that participants who identified as non-Hispanic American Indian/Alaska Native/Native Hawaiian/Pacific Islander only demonstrated a 10.3% attrition rate or were 300% more likely not to graduate from their doctor of medicine program. These findings add to the growing body of knowledge on how multiple marginalized identities intersect to affect medical school graduation.

While these results may not be surprising to some, they are disconcerting. Medical schools have made strides over the past 2 decades to improve the diversity of incoming medical students in the areas of race, ethnicity, and sex—with varied success. During this time, there has been a rise in early pathway programs, loan-forgiveness programs, and increased scholarship funding, all with the aim of increasing medical student diversity.² Nonetheless, for individuals from backgrounds historically underrepresented in medicine there are too many losses along the pathway from medical school admission to graduation.

Nguyen et al¹ fill an important gap in the understanding of medical school attrition. Their study describes the trajectory of a cohort of matriculants and illuminates how having 1 or more marginalized identities is associated with loss from medical school. Because much of the diversity data to date has been based on medical school admission cohorts, it is a welcome addition to have diversity data related to the graduating class.

The persistence of attrition disparities when controlling for performance on the Medical College Admissions Test makes it unlikely that the findings represent a lack of academic preparedness on the part of the medical students.¹ We (M.L.L. and P.Y.T.) have found that students who are URiM arrive at resi-

dency with the same level of clinical skills as their White counterparts.³ Therefore, we would like to offer a shift of focus from loss along the pathway to the repaving of the path itself—the learning environment. It is well documented that students who are URiM perceive the learning environment as less emotionally, academically, and socially supportive.⁴ Again, although admissions teams have increased access to medical school for many underrepresented groups by adopting holistic reviews, requiring implicit bias training, and expanding their committees to reflect greater diversity representation, it would seem that a similar effort is needed to ensure that the learning environment does not hinder marginalized students' success.⁴ Particular exploration is needed to understand the experiences of American Indian and Alaska Native students for their attrition after matriculation into medical school, which is a considerable loss to the entire patient and professional population given their near absence in medicine owing to structural racism and indigenous genocide.⁵

Improving the learning environment to optimize the success of marginalized students requires a comprehensive approach, with both structural and individual/interpersonal changes. These changes can be developed and implemented promptly after reflection, skill building, policy and procedural adaptations, removals, or enhancements, especially with strong support from institutional leadership.⁶ A few examples of positive structural level changes are using an appreciative inquiry paradigm (an asset-based approach that intentionally focuses on the positive aspects) for professional identity formation (the transformation from layperson to physician that requires the internalizing of medical professions' values and moral principles), eliminating the misrepresentation of racial stereotypes in curricula content, and providing safe spaces for students to self-report the source of their challenges.^{4,6}

While we collectively work to implement structural change, focus should be placed on individual/interpersonal behaviors that improve the learning environment. Such behaviors include focusing on students' positive attributes and assets to reinforce belonging, training faculty to address microaggressions and mistreatment, utilizing positive social construction tools to counter the passing down of negative biases, and using one's social capital and power of privilege (which is context dependent) to nudge others toward behaving in a way that optimizes the learning environment for all students.

Another potential avenue of inquiry is to explore different approaches to student attrition. For example, adopting an antifiducial lens would push institutions to invert their questions to better understand the underlying causes of the attrition among students from URiM, low-income backgrounds as well as underresourced neighborhoods. Instead of asking questions such as why there are so many fourth-year students from

these backgrounds who are not graduating, this framework challenges us to instead ask what these students are experiencing during medical school that is preventing them from graduating. This framework enables institutions to identify potential causes of attrition both within and outside of the institution and better understand how students from these backgrounds navigate and thrive in these environments.⁴

A diverse health care workforce has the potential to improve patient access to health care, reduce health care disparities, increase patient satisfaction, and benefit medical students.² A diverse workforce that reflects the patients it serves will improve health care quality, specifically for patients from underserved communities, as well as enhance their access to health care professionals in those settings.⁶ Research has shown that socially diverse teams are more innovative and better problem solvers than homogenous groups.⁷ What we understand to be true is that to achieve diverse health

care teams, physicians from diverse backgrounds must be available to populate them.

Indeed, the study by Nguyen et al¹ builds on what is known about the losses on the pathway; however, the authors admit that the cause of the attrition remains elusive. Further work is needed to understand what is occurring, especially as late as the fourth year of medical school (in the hazard analysis, attrition increases over time) to students with marginalized identities. This work should surely include changes to structural policies and accreditation mandates, as well as additional inquiry to identify and review the causes of attrition and eliminate discriminatory and exclusionary practices. This would also include formulating strategies that cultivate already established achievement and resilience skills among individuals from URiM and low-income backgrounds, as well as underresourced neighborhoods, so that the dream of becoming a physician is a reality for all students who enter the doors.

ARTICLE INFORMATION

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