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BRIEF REPORT

Changing Missions of Medical Schools and Trends in Medical Student Diversity

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ABSTRACT

Background and Objectives: Improving diversity in the physician workforce continues to be a challenge and a priority for medical schools. Establishing a school-wide mission statement that addresses diversity, equity, and inclusion can help support efforts to increase the number of underrepresented in medicine (URM) graduates.

Methods: In this study, we analyzed changes in medical school mission statements between 2013 and 2021 and correlated changes in mission statements with trends in URM student representation. We performed a web search of 136 medical schools' mission statements and categorized them based on whether they changed their mission statement to add diversity or equity language. We then obtained demographic data of enrolled students at each school and identified the percentage of students identifying as URM in each academic year. We used mixed-effects regression and pair fixed effects linear regression to examine trends in URM student representation and the association between URM student representation and whether a school added diversity and equity content to its mission statement.

Results: We found that URM student representation increased by 0.4% per year at schools that added diversity and equity content to their mission statements.

Conclusions: Changing medical schools' mission statements to reflect values of diversity, equity, and inclusion was associated with an increase of less than a 1% per year in URM representation. More research is needed to explore relationships between URM representation and medical school mission statements.

INTRODUCTION

The Association of American Medical Colleges (AAMC) and many medical schools have voiced their commitment to improving physician workforce diversity.[1,2] Nevertheless, growth in the numbers of medical students from underrepresented in medicine (URM) backgrounds (including African American or Black, Latinx, and Native American) has been slow and has not reached parity with the US population.[3,4]

Setting a school-wide mission statement to address the lack of diversity in medicine can help direct attention, resources, and support toward initiatives to increase the number of URM matriculants,[5–9] and schools that have done so have greater representation of URM physicians among their graduates.[8,10] Currently, this proposition is based on cross-sectional comparisons; outcomes of actual changes in school mission statements have not yet been examined. In this study, we analyzed changes in medical school mission statements between 2013 and 2021 and correlated changes in mission statements with trends in URM student representation. We hypothesized that the proportion of enrolled URM students increased faster among medical schools that added diversity or equity content to their mission statements.

METHODS

We selected schools for analysis that had been included in a previous study wherein mission statements from 136 US MD-granting medical schools were rated on social mission content (SMC) by a panel of 37 raters.[10] In April 2021, we reviewed and classified those schools' current mission statements into three mutually exclusive categories: (1) schools that changed their mission statement, adding diversity or equity language; (2) schools that changed their mission statement, but did not add diversity and equity language; and (3) schools that had no change or no substantive change to their mission statement (eg, the only change was the name of the school; Table 1). Disagreements were resolved through discussion with a third author. Schools for which a current mission statement could not be located were excluded from the analysis. We then obtained data from AAMC on the percentage of enrolled medical students identifying as URM in each academic year from 2013 to 2021.

TABLE 1. Examples of Medical School Mission Statements

School category	2013 mission statement	2021 mission statement
Added diversity and equity content to mission statement	The mission of the [medical school] is to develop knowledge, skills and attitudes that promote professionalism, teamwork, life-long learning, empathy, scholarship, cultural sensitivity, and leadership, with the goal of providing excellence in education, health care and research within the [state] and beyond.	The mission of the [medical school] is to promote a **diverse and inclusive environment** that provides excellence in education, equitable health care and transformative research to improve the health and wellness of [residents of the state] and beyond.
Made other changes to mission statement	The primary purpose of the [medical school] is to educate physicians and other health professionals and to enhance the quality of life in [the state]. Other purposes include the discovery of knowledge that benefits the people of this state and enhances the quality of their lives.	The primary purpose of the [medical school] is to educate physicians and other health professionals **for subsequent service in [the state]** and to enhance the quality of life in [the state]. Other purposes include the discovery of knowledge that benefits the people of this state and enhances the quality of their lives.
Made no change to mission statement	The mission of the [medical school] is to assist the people of [the state] in meeting their health care needs through education, patient care, research and service to the community.	(no change)

Note: Statements with significant changes are shown in bold font.

For each school category, we summarized URM student representation using medians with interquartile ranges and compared them using Kruskal-Wallis tests. We used mixed-effects regression to estimate the trend in URM student representation (ie, the change with each additional year), differences in URM student representation by category of mission statement change, and interaction of these two terms (to determine how the trend in URM student representation was associated with changes in each school's mission statement over the study period). In this model, we controlled for each school's baseline SMC rating and baseline (2013) enrollment. We used school-level random intercepts and cluster-robust standard errors to account for nonindependence of repeated observations of the same school.

We used matching to further isolate how adding diversity and equity content to each school's mission statement was associated with the trend in URM student representation. Specifically, for each school that added diversity or equity content, we identified the most similar school in the "no change" group based on the 2013 SMC rating, using 1:1 nearest-neighbor matching without replacement. In the matched sample, we modeled the proportion of URM students in each academic year using pair fixed effects regression, which included a calendar year covariate and an interaction between that covariate and whether the school added diversity and equity content to its mission statement. We completed data analysis in Stata/SE 16.1 (StataCorp, LP), and considered $P<.05$ statistically significant.

This study was deemed exempt from approval by the Institutional Review Board at East Carolina University.

RESULTS

Bivariate analysis of medical schools classified by a change in mission statement revealed no differences in URM student representation from the 2013 to 2021 academic years (Table 2). Multivariable analysis of the entire sample found that at schools that added diversity and equity content to their mission statement, URM student representation increased by 0.4% per year. No such trend was observed among schools that did not change their mission statement or changed their mission statement without adding diversity and equity content (Table 3). After using 2013 SMC scores to match each of the 30 schools that added diversity and equity content to its mission statement with a similar school that made no changes to its mission statement, we used fixed-effects regression to confirm that representation of URM students increased among schools that added diversity and equity content to their mission statement (at a rate of 0.4%/year, 95% confidence interval [CI]: +0.1%, +0.6%; $P=.010$), but did not increase among the matched control schools that did not change their mission statement (-0.1%/year; 95% CI: -0.4%, +0.2%; $P=.506$).

DISCUSSION

Given the link between diversity-minded mission statements and representation of URM students,[8] changes in the mission statements of academic medical centers made to reflect priorities of diversity, equity, and inclusion should undergo further study to determine how they can be used to impact the experiences and recruitment of URM students.[6] Examining trends in URM student representation, we found a pattern of increase among schools that added diversity and equity content to their mission statements but not among schools making other changes (or those making no changes). Based on our study, changing mission statements to reflect priorities of diversity, equity, and inclusion may be associated with a small impact on trends of URM student representation. One possibility is that schools that were more concerned with increasing diversity, equity, and inclusion increased the URM enrollment as well as changed their mission statements.These results underscore the need for ongoing work to increase numbers of URM learners in medical school; changing mission

TABLE 2. Bivariate Comparison of Study Variables (Medians With Interquartile Ranges) by Change in Medical School Mission Statements

Variable	Added diversity and equity content to mission statement (n=30)	Other changes to mission statement (n=31)	No change/ no substantive change to mission statement (n=72)	*P* value
Enrollment in 2013	718 (536, 823)	547 (391, 767)	610 (422, 751)	.268
Enrollment in 2020	750 (521, 840)	624 (415, 815)	646 (497, 764)	.181
Percent URM students in 2013	12.4 (9.7, 18.7)	13.2 (9.7, 17.6)	15.1 (10.0, 19.3)	.510
Percent URM students in 2020	12.8 (8.7, 16.6)	12.7 (6.8, 15.7)	12.1 (8.6, 15.4)	.781
SMC rating in 2013	2.1 (1.9, 3.0)	2.2 (1.9, 2.6)	2.2 (1.9, 2.9)	.737

Notes: N=133 medical schools. The initial data set included the 136 schools queried in 2013. We excluded three schools whose mission statements could not be found in 2021.
Abbreviations: SMC, social mission content (higher ratings indicate clearer commitment to a social mission); URM, underrepresented minority.

TABLE 3. Multivariable Mixed-Effects Regression of Underrepresented Minority Student Representation

Variable	Predicted change in % URM student representation	95% CI	*P* value
Difference in % URM student representation based on mission statement content			
Added diversity and equity content vs no change	+2.7	−5.0, +10.6	.484
Added diversity and equity content vs other change	+6.4	−1.4, +14.2	.108
Other change vs no change	−3.6	−7.1, −0.1	.043
Annual trend in % URM student representation			
Among schools adding diversity and equity content	+0.4	+0.1, +0.6	.004
Among schools making other changes	+0.1	−0.1, +0.4	.179
Among schools with no change to mission statement	−0.1	−0.2, +0.1	.567
Difference in % URM student representation for each point increase in SMC rating of mission statement as of 2013	+5.1	+0.6, +9.6	.027
Difference in % URM student representation for each additional 100 students enrolled as of 2013	−0.8	−1.9, +0.1	.106

Note: N=133 medical schools and 1,064 years.
Abbreviations: CI, confidence interval; SMC, social mission content; URM, underrepresented minority

statements may be of only limited help.

Our study is not without limitations. First, we used a selected group of medical schools determined from previous work.[10] We did not explore why missions were changed or what specific elements of diversity, equity, and inclusion were addressed in the new mission statements. Because our study looked only at mission statements from 2013 to 2021 and at whether diversity content was added, we did not determine how long a changed mission statement had been in effect and what that may have meant for trends in URM representation. Differences in duration of a changed statement may have led to different outcomes in our study. Another important limitation and impact on our data could be the events of our nation during the time of our study period. We did not consider the political environment, effects of the coronavirus pandemic, or murders of Black men by police (the most notable being the murder of George Floyd in May of 2020) that happened during our study period. All of these elements could have potentially impacted the results of our study and served as confounders. In addition, schools may have had written and unwritten policies and procedures that attracted URM students.

While more research is needed to further characterize the impact of mission statements on the presence of URM learners in academic medicine, diversifying the health care workforce remains a prominent and urgent goal as long as the proportion of URM students enrolled in medical schools remains inconsistent with the population proportion of these groups.[11] Mission statements should undergo further study to determine their usefulness in increasing numbers of URM students in academic medicine.

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