

Cross-sectional Survey-based Study of Underrepresented Minorities in Urology Academic Leadership Roles



Harold C. Hamann, Jordan Levine, Shervin Badkhshan, and Teresa L. Danforth

OBJECTIVE	To define the current proportion of underrepresented minority (URM) academic urologists in leadership positions.
METHODS	A cross-sectional observational study of leadership positions in active United States Urology Residency Programs in 2020 was conducted. Academic urologists in leadership positions were electronically mailed a survey asking about personal and professional demographics. Self-reported variables including administrative position, race, and ethnicity were collected and analyzed.
RESULTS	Over the study period, 133 urologists completed the survey out of a possible 320 academic urologists for a response rate of 41.6%. Overall, African-Americans represented 9.0%, Hispanics represented 3.8%, and American Indians/Alaska Natives made up 0.8% of leadership roles in the study sample. African-Americans comprised 8.5% (4 of 47) and Hispanics comprised 2.1% (1 of 47) of department chairs. African-Americans made up 7.4% (4 of 54) and Hispanics made up 1.9% (1 of 54) of program directors. The highest proportion of African-Americans in leadership positions was seen in oncology (18.2%), minimally invasive surgery (18.2%), and general urology (10%). The only subspecialties with Hispanics in leadership positions were in andrology/sexual medicine (16.7%) and female urology (15.4%). There were no reported URMs in leadership positions in endourology, neurourology, pediatrics, and reconstructive urology.
CONCLUSIONS	To our knowledge, this study is the first to quantify the representation of URM urologists in academic leadership. There are multiple subspecialties without URMs in leadership positions. This information is vital to understanding the presence and lack of racial representation of the leadership of our field. UROLOGY 162: 144–150, 2022. © 2021 Elsevier Inc.

Science and engineering continue to have a paucity of underrepresented minorities (URMs), defined as “Blacks or African Americans, Hispanics or Latinos, and American Indians or Alaska Natives” by a 2019 National Science Foundation Special Report¹. Though URMs make up approximately 28% of the United States (US) population and will account for 56% of the US population by 2060¹, they only make up 10.5% of US medical faculty²; this trend also extends to academic surgery and surgical subspecialties. Butler et al. demonstrated only 2.9% of academic surgeons were African American and 3.6% of academic surgeons were Latino in 2006.³ These statistics remain equally as stark in urology, where, according to the 2019 American Urological Association (AUA) Census, 2.0% of practicing urologists are African-American and 3.9% are Hispanic.⁴ Furthermore, 2.0% of academic urologists are Black and 3.0% are

Hispanic, with no current data available on URMs in leadership positions.⁵

Studies have shown ethnic and racial diversity in academic medical faculty can foster culturally and structurally competent physicians and lead to an increase in novel ideas.⁶ Concordance—defined as a shared identity based on age, sex, or race—between trainees and faculty members may enhance mentorship, which can in turn lead to greater career satisfaction and support.^{7,8} Concordance can also bolster patient relationships. Studies indicate URM patients seek out URM physicians, thus improving shared decision-making.⁸⁻¹² Unfortunately, URM urologists are most often racially discordant with the patients whom they serve⁷, highlighting the need for greater representation of URMs in urology. It has been suggested that in order to advocate for diversity in medicine and its multitude of benefits, a group of academic faculty and leadership need to champion this cause as gatekeepers of power in the academic hierarchy.¹³

With the recent upsurge in calls to action for racial diversity in academic medicine, it is critical to develop a starting point to track progress in improving diversity at urology's highest echelons.^{8,14,15} From observation alone, there is a clear lack of URM representation in urologic academic

Declarations of conflict: none.

From the Department of Urology, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, Buffalo, NY

Address correspondence to: Harold C. Hamann, M.D., Department of Urology, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, 100 High Street, B280, Buffalo, NY 14203. E-mail: hhamann@buffalo.edu

leadership, specifically in department chair and program director roles. Similarly, the 2019 American Association of Medical Colleges' Faculty Data reports only 4.6%-9.2% of department chairs in ophthalmology, orthopaedic surgery, otolaryngology, and surgery are URMs,² with no mention of urology department chairs. Prior studies examining urologic leadership demographics have only focused on institution of origin¹⁶ and gender¹⁷. To date, there are no studies to quantify URM representation in urologic leadership. Herein, we seek to characterize the current proportion of URM urologists in academic leadership roles. We hypothesize that the proportion of URMs in academic urologic leadership roles are lower than those in practicing and academic urology.

MATERIAL AND METHODS

A cross-sectional observational study identifying residency-based programs using the American Medical Association's 2019-2020 Fellowship and Residency Electronic Interactive Database was performed. Military programs were included. The study was reviewed and approved by the State University of New York University at Buffalo Institutional Review Board Non-Committee Review. Using publically accessible information, department chairs, program directors, vice chairs, assistant and associate program directors, fellowship directors, medical student clerkship directors, and program coordinators were identified. Interim positions were included. In a first wave, an anonymous survey was directly electronically mailed to department chairs and program directors. In a second wave, the survey was electronically mailed to vice chairs, assistant and associate program directors, fellowship directors, and medical student clerkship directors. Program coordinators were carbon-copied on these emails and also asked to disseminate the survey to additional department leadership as applicable. An additional, third follow up email to all was sent. The above invitations not including 9 "bounce back" emails amounted to a total of 320 invitations. Responses were tabulated from June 6, 2020 to August 7, 2020. Urologic leadership was asked to participate in this survey voluntarily and there was no collection of any personal identifying information.

The survey was composed of the following self-reported variables: administrative position, race, age, ethnicity, subspecialty, gender, years in practice, and AUA region. Instrument survey was worded in line with the 2019 AUA Census, which is a specialty-wide survey distributed to US urologists. The survey specifically asked: (1) What is your administrative position? (2) Primary Specialty, (3) Years in Practice, (4) Gender Identity (Male, Female, Other), (5) What race do you identify as? (White, African American/Black, Asian, American Indian or Alaska Native, Other Race), (6) Hispanic ethnicity (Hispanic or non-Hispanic), (7) Age Range, and (8) What AUA Section do you belong to?

With regard to the respondents, the sample size was the same in all analyses. As race and Hispanic ethnicity were separate questions, they were analyzed and presented separately. An average margin of error was calculated. Summary statistics were used for demographics from survey questions.

RESULTS

One hundred and forty-five US-based urology residency-based programs were identified using the American Medical

Association's 2019-2020 Fellowship and Residency Electronic Interactive Database. A total of 320 academic urologists in leadership positions were identified to participate. Two hundred and forty-three urology department chairs and program directors were invited of whom 25 served as both chair and program director. In total, 133 urologists completed the survey with a response rate of 41.6%. Using an estimated total of 350 faculty members with administrative leadership positions and our sample size, the average margin of error was calculated to be 5.4%.

106 academic urologists in leadership positions were men (79.7%) and 27 were women (20.3%). In terms of race, a majority of these urologists were White (67.7%), followed by Asian (18%), Black or African-American (9.0%), Other (4.5%), and American Indian or Alaska Native (0.8%). With regard to ethnicity, respondents were majority Non-Hispanic (96.2%) versus Hispanic (3.8%) (Table 1, Fig. 1). Of female respondents, 2 of 27 (7.4%) were African-American and 2 of 27 (7.4%) were Hispanic. Of male respondents, 10 of 106 (9.4%) were African-American, 2 of 106 were Hispanic (2.8%), and 1 of 106 (1%) was American Indian.

Most respondents were program directors (40.6%), followed by chairs (35.3%) and vice chairs (16.5%) with associate program directors, fellowship directors, and medical student clerkship directors making up the remaining percentage of administrative positions. Twenty-three respondents had more than 1 administrative role, 8 were department chairs with at least 1 additional leadership role, 20 were program directors with at least 1 additional role, and 6 were both department chairs and program directors. Of URM respondents, 2 of 13 (15.4%) had more than 1 administrative role, while 22 of 120 (18.3%) non-URM respondents had more than 1 administrative role. Respondents' years in practice were evenly distributed with a majority practicing for more than 25 years (24.8%) followed by 5-10 years (18%). Moreover, most urologists were 45-54 years old (36.1%) followed by 35-44 years old (30.1%). The highest number of respondents was from the Western section (20.3%) with the fewest respondents from the Northeastern (7.5%) and New York sections (7.5%) (Table 1).

Of urology departmental chairs or division directors ($n = 47$), 4 respondents were Black or African-American (8.5%), 1 was American Indian or Alaska Native (2.1%), and 1 was Hispanic (2.1%). Of program directors ($n = 54$), 4 were Black or African-American (7.4%) and 1 was Hispanic (1.9%) (Figure 2).

With regard to subspecialty, 34 respondents practiced in oncology (25.6%) followed by 18 practicing general urology (13.5%). The highest proportion of African-Americans in leadership positions was seen in oncology (18.2%), MIS (18.2%), and general urology (10%). The only subspecialties with Hispanics in leadership positions were in andrology/sexual medicine (16.7%) and female urology (15.4%). There were no reported URMs in leadership positions practicing in endourology, neuro-urology, pediatric urology, and reconstructive urology (Figure 3).

DISCUSSION

While previous studies have shown a lack of URM urologists in general practice and in academic urology, this study is the first to quantify the shortage of URM urologists in academic leadership positions.^{5,7}

According to our sample size of 133 urologic leaders, African-Americans represent 9.0%, Hispanics comprise 3.8%, and American Indians/Alaska Natives make up 0.8% of urologists in leadership positions. A deficiency of

Table 1. Characteristics of urologists in leadership positions

	N	%
Administrative Position		
Chair/Division Director	47	35.3%
Vice Chair	22	16.5%
Program Director (PD)	54	40.6%
Associate/Assistant PD	16	12.0%
Fellowship Director	9	6.8%
Medical Student Director	16	12.0%
Primary Specialty		
MIS/Robotics	12	9.0%
Oncology	34	25.6%
Female Urology	14	10.5%
Andrology/Infertility/Sexual Medicine	13	9.8%
General Urology	18	13.5%
Endourology	15	11.3%
Neurourology	5	3.8%
Pediatrics	7	5.3%
Reconstruction	14	10.5%
Transplant	1	0.8%
Years in Practice		
<5	15	11.3%
5-10	24	18.0%
11-15	20	15.0%
16-20	22	16.5%
21-24	19	14.3%
>25	33	24.8%
Age Range		
<35	1	0.8%
35-44	40	30.1%
45-54	48	36.1%
55-65	33	24.8%
>65	11	8.3%
AUA Section		
Northeastern	10	7.5%
New England	14	10.5%
New York	12	9.0%
Mid-Atlantic	10	7.5%
Western	27	20.3%
North Central	21	15.8%
South Central	14	10.5%
Southeastern	25	18.8%
Gender		
Male	106	79.7%
Female	27	20.3%
Race		
White	90	67.7%
Black/African American	12	9.0%
American Indian/Alaska Native	1	0.8%
Asian	24	18.0%
Other	6	4.5%
Ethnicity		
Non-Hispanic	128	96.2%
Hispanic	5	3.8%

URM faculty in academic surgery has been demonstrated with 2.9% of academic surgeons and 2% of academic urologists identifying as African American and 3.6% of academic surgeons and 3% of academic urologists identifying as Latino.^{3,5} This trend is also consistent when examining our study's 2 largest respondent groups (department chairs and program directors) with Hispanic urologists being more underrepresented than their African-American counterparts. Interestingly, when analyzing urology

department chairs in terms of absolute numbers, there were only 4 African-American chairs and 1 Hispanic chair, though they made up 8.5% and 2.1% of department chairs ($n = 47$), respectively. The only American Indian/Alaska Native URM also identified as Hispanic.

When compared to known data from surgical subspecialties such as ophthalmology, orthopaedic surgery, and otolaryngology, African-Americans represented 1.2%-3.8% of department chairs, while Hispanics represented 2.5%-5.5% of department chairs, indicating a more global phenomenon of under-representation. There was 1 American Indian/Alaska Native department chair in our study, but this group was not represented at all in the aforementioned surgical subspecialties.² Intriguingly, African-Americans and Hispanics each represented less than 5 individuals in each of these surgical subspecialties, which resemble our results. While the total proportion of URM leadership within our field is higher than previously reported for academic urologists, it is important to consider absolute numbers rather than proportion within such a small sample size. Incidentally, there were no URM urologists in leadership positions who specialize in endourology, neurourology, pediatric urology, and reconstructive urology.

While this study primarily focuses on race and ethnicity, women also constitute an underrepresented group in urology. According to the 2019 AUA Census, only 9.9% of practicing urologists identify as female.⁴ Moreover, promotion disparities have been identified with respect to gender (rather than race/ethnicity) in academic urology⁵ with women representing 3.3% of chairs and 8.1% of program directors in 2017.¹⁷ While likely an overestimate given our sample size, 5 of 47 chairs (10.6%) were women while 9 of 54 program directors (16.7%) were women, consistent with previously reported trends. Gender bias could be a potential explanation as a barrier to women advancing into leadership. Increased numbers of women in urology, like URM, will inherently contribute to urology's diversity and represents an intersecting area for further study.

There are many possible explanations for the scarcity of URM urologists in leadership positions, the most crucial of which stem from systemic racism. URM admission to medical school has unfortunately only been the norm for the past few decades, as it has been noted that admission "is rooted in a history of segregated and unequal medical education."¹⁹ Presently, the prevalence of all URM students in medical school is 14%,¹⁸ despite representing more than a quarter of the US population.¹ A narrative review by Orom et al. pointed to URM students experiencing a less positive social and learning environment, which the authors suggest may decrease attractiveness of careers in medicine, impair academic performance, and increase attrition.¹⁹ This subset of future URM physicians' distribution amongst specialties, practice location, and patterns, leave the pool of URM urologists who could potentially assume leadership positions very small. Even today, we see URM representation in urology trainees at 30.8% lagging behind other fields like surgery at 33.6% and all fields at 42.3%.²⁰ Decreased compensation of academicians and other financial pressures

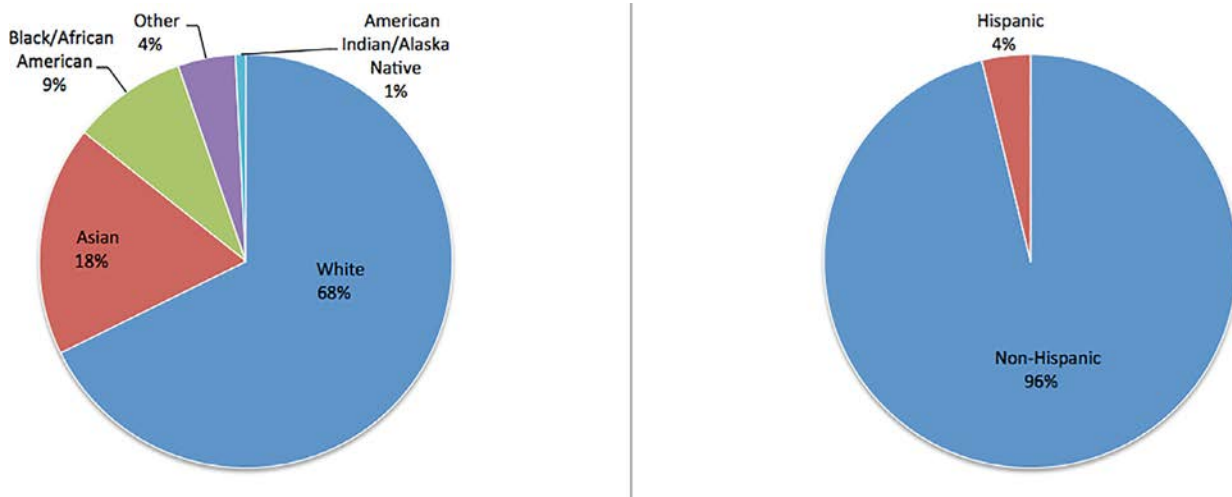


Figure 1. Proportion of academic urologic leadership by race and ethnicity. (Color version available online.)

may also drive otherwise “academic-bound” URM urologists towards private practice. Alternatively, URM urologists assume multiple administrative roles and join recruitment committee roles in an effort to both address their underrepresentation and be representatives of “diversity.” This is a subsection of the phenomenon known as the “minority tax.” Clinically, this can lead to heavier patient loads serving more disadvantaged or at-risk patient populations and disproportionate assumptions that URM urologists will be more available to mentor URM students and residents.²¹ Ultimately, the “minority tax” limits the number of URM urologists in leadership positions and can negatively impact recruitment and retention.

The presence of URM leaders within our field has the potential to change not only the career trajectories of trainees, but also the care our patients receive. Yehia et al.

showed that mentorship, most often done by those in leadership, is improved by concordance and gives a trainee the opportunity to see physicians like themselves in positions of leadership.⁹ Specifically, URM trainees described actively seeking out mentors of the same race/ethnicity and gender, but could often not find such mentors. With regard to patient care, racial concordance can enhance patient-physician relationships and increase patient-physician satisfaction.^{3,10-12} On examining racial discordance between URM urologists and URM patient populations, Washington et al. found URM urologists in all AUA sections did not proportionally represent URM patients⁷. With URM patients often seeking out URM physicians, we have the opportunity to help recruit racially diverse faculty that could ultimately deliver care to a group of patients that would not have sought out urological care otherwise.

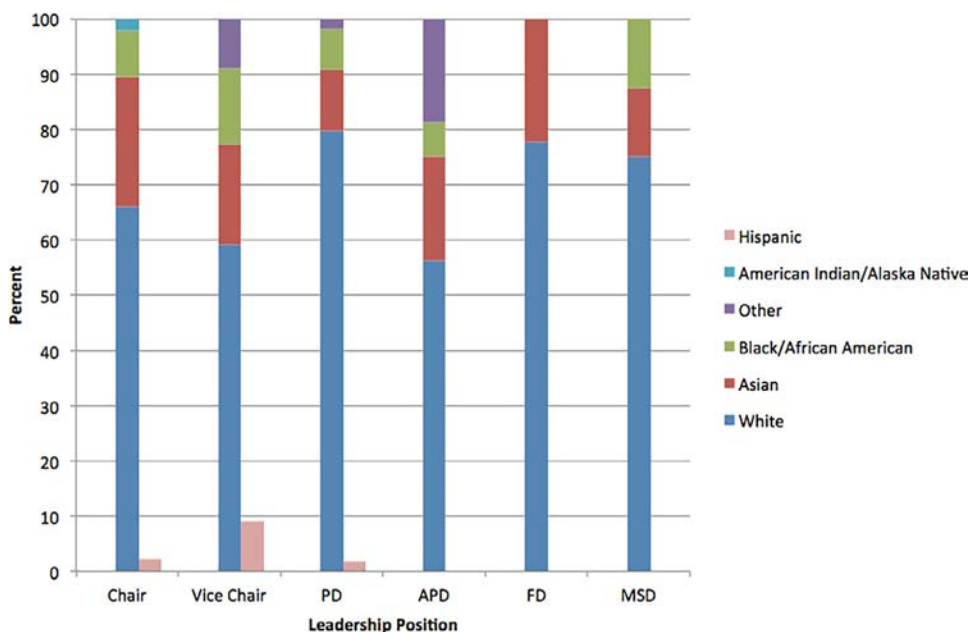


Figure 2. Underrepresented minority representation stratified by leadership role. (Color version available online.)

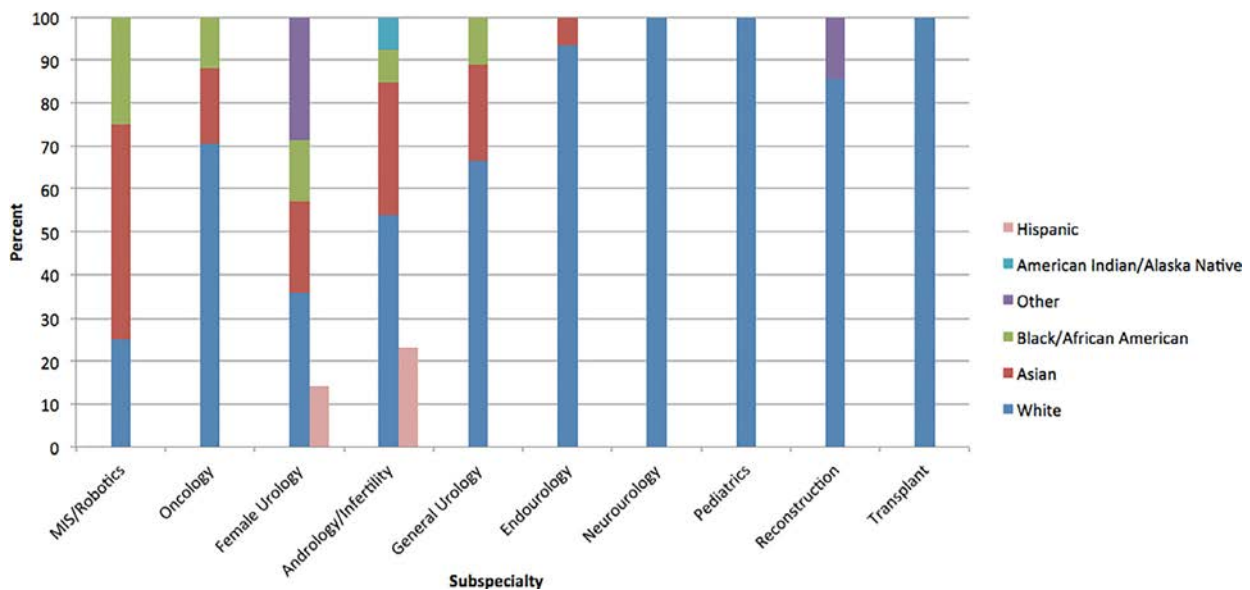


Figure 3. Academic urologists in leadership positions by subspecialty. (Color version available online.)

The question naturally becomes, why do we need URM leadership, specifically, to increase field diversity? In general, URM faculty bring diverse knowledge and experiences from different backgrounds to their institutions. A study by Pololi et al. surveyed 2,381 faculty—of which 23% were URM faculty—from 26 representative US medical schools. The researchers found that compared with non-URM faculty, URM faculty had higher leadership aspirations, reported lower feelings of inclusion, gave their institutions lower scores on URM equity and program efforts to improve diversity, and more frequently conducted disparities research. Strikingly, 22% of URM faculty had experienced racial/ethnic discrimination.²² This study highlights that URM faculty have experienced academia differently compared to their non-URM counterparts, making them exquisitely poised, as leaders, to recognize barriers to diversity and act as advocates for all faculty and trainees alike.

A pivotal 2004 publication by The Sullivan Commission on Diversity in the Healthcare Workforce entitled *Missing Persons: Minorities in the Health Professions*, points to how we can ultimately improve diversity in medicine. It implies that the administrative leadership and faculty of a medical institution or department are ultimately stewards of its mission, which typically includes a pledge to racial and ethnic diversity¹⁵. Thus, we can deduce that one of the most critical elements of increasing diversity is through diversifying a field's leadership. Increasing URM urologists in leadership roles can have a remarkable top-down increase in mentorship, improved retention of URM faculty, attraction of URM students to our specialty, and fostering of a psychologically safe workplace where diversity is embraced. This diversification in urology will ultimately lead to narrowing known urologist-patient racial discordance⁷ and move us towards our ultimate goal: equitable patient care.

This study is not without its limitations, chief among them being the number of survey respondents. Though we achieved a 41.6% response rate, it is very difficult to encompass all academic urologists in leadership positions given (1) the small cohort of academic urologists in these roles and (2) the voluntary nature of the study. Furthermore, given the sociopolitical timing of this study there may be a sampling bias present with a higher preponderance for URMs or lower proportion of non-URM urologists to respond to the survey. Also, we caution to make sweeping conclusions when stratifying race and ethnicity by administrative role and subspecialty, in addition to cross-tab sub-analyses, as the sample size becomes even smaller. The denominator continues to become smaller as 23 faculty members occupied more than 1 major administrative role. Moreover, the delineation between race and ethnicity in many demographics study tools, including ours, can allow for overestimation of URMs as an individual can be both an URM race and URM ethnicity. Lastly, administrative positions can be codified differently based on institution. Though our reported proportions of URM urologists are higher than previously published numbers on practicing and academic urologists, we postulate that we would see an even lower proportion of URM-urologists in leadership positions with a higher response rate. Nonetheless, this study provides a tangible number with respect to leadership in urology for tracking our progress and for other studies to build on.

While beyond the scope of this paper, it is important to begin the discussion on how to become decisively and consciously competent when discussing race in urology. While there is no one definitive fraction of URM urologists in leadership positions that we need to reach, urologists must recognize that more are needed, their shortage is rooted in systemic racism, and attracting URMs to our leadership can diversify the field as a whole and improve

patient outcomes. A recent JAMA Editorial by urologist Dr. Randy Vince points to 5 key points to dismantling racial injustice that can be used to open discussions on why URM representation in leadership roles is lagging. They are as follows: (1) reviewing and understanding the history of race and racism within this country, (2) mandating antiracism training, (3) dissecting the incorporation of race in medical practice, (4) developing longitudinal pipelines nationwide, and (5) implementing widespread culturally aware mentorship training.¹⁴ After defining this subversive systemic inhibition, it can be further combatted through foundational improvements by introducing bias training and workshops, defining sustainable funding for URM faculty recruitment and retention, and continuous quality improvement initiatives²¹.

Though many strategies to increase URM faculty and leadership in urology are being implemented, we have defined a numerical starting point for URMs in academic urologic leadership positions. We reiterate that the active recruitment of URM residents and faculty, whom will eventually become the fields' leaders, is of the utmost importance. We are at a crossroads and the urologic community should take the steps to make our leadership more reflective of the physicians and patients they serve.

CONCLUSION

To our knowledge, this study is the first to quantify the representation of URM urologists in academic leadership. There are multiple subspecialties without URMs in leadership positions. This information is vital to understanding the presence and lack of racial representation of the leadership of our field.

Acknowledgments. None

References

1. National Science Foundation, National Center for Science and Engineering Statistics. *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2019*. Special Report NSF 19-304. Available at: <https://nces.nsf.gov/pubs/nsf19304/digest/introduction>. Accessed July 26, 2020.
2. AAMC US Medical School Faculty Data. 2019. Available at: <https://www.aamc.org/data-reports/faculty-institutions/interactive-data/2019-us-medical-school-faculty>. Accessed July 26, 2020.
3. Butler PD, Longaker MT, Britt LD. Major deficit in the number of underrepresented minority academic surgeons persists. *Ann Surg*. 2008;248:704–711.
4. *The State of Urology Workforce and Practice in the United States*. 2019. <https://www.AUAnet.org/common/pdf/research/census/State-Urology-Workforce-Practice-US.pdf>. Accessed July 1, 2020.
5. Breyer BN, Butler C, Fang R, et al. Promotion disparities in academic urology. *Urology*. 2020;138:16–23.
6. Kaplan SE, Raj A, Carr PL, Terrin N, Breeze JL, Freund KM. Race/ethnicity and success in academic medicine: findings from a longitudinal multi-institutional study. *Acad Med*. 2018;93:616–622.
7. Washington SL, Baradaran N, Gaither TW, et al. Racial distribution of urology workforce in United States in comparison to general population. *Transl Androl Urol*. 2018;7:526–534.
8. Black lives in urology: addressing the bias and redressing the balance. *Nat Rev Urol*. 2020;17:423.

9. Yehia BR, Cronholm PF, Wilson N, et al. Mentorship and pursuit of academic medicine careers: a mixed methods study of residents from diverse backgrounds. *BMC Med Educ*. 2014;14:26.
10. Saha S, Komaromy M, Koepsell TD, Bindman AB. Patient-physician racial concordance and the perceived quality and use of health care. *Arch Intern Med*. 1999;159:997–1004.
11. Laveist TA, Nuru-Jeter A. Is doctor-patient race concordance associated with greater satisfaction with care? *J Health Soc Behav*. 2002;43:296.
12. Cooper-Patrick L, Gallo JJ, Gonzales JJ, et al. Race, gender, and partnership in the patient-physician relationship. *JAMA*. 1999;282:583–589.
13. Sullivan, Louis W. The Sullivan Commission on Diversity in the Healthcare Workforce. Duke University School of Medicine, Durham, NC. *Missing Persons: Minorities in the Health Professions (Commission Report)*. 2004. Available at: <https://www.aacnursing.org/Portals/42/Diversity/SullivanReport.pdf>. Accessed July 10, 2020.
14. Vince RA. Eradicating racial injustice in medicine-if not now, when? *JAMA*. 2020;324:451–452.
15. Grubbs V. Diversity, Equity, and Inclusion That Matter. *N Engl J Med*. 2020;383:e25.
16. Farber NJ, Friel BJ, Kwon YS, Cruz A, Elsamra SE. Chairmen in academic urologic practice: a descriptive analysis. *Urology*. 2017;104:31–35.
17. Han J, Stillings S, Hamann H, Terry R, Moy L. Gender and subspecialty of urology faculty in department-based leadership roles. *Urology*. 2017;110:36–39.
18. Association of American Medical Colleges. *FACTS: Enrollment, Graduates, and MD-PhD Data Table B4: Total U.S. medical school graduates by race/ethnicity and sex. 2019 and ethnicity*. Washington D.C. 2019. Available at: https://www.aamc.org/system/files/2019-11/2019_FACTS_Table_B-4.pdf. Accessed July 31, 2020.
19. Orom H, Semalulu T, Underwood W. The social and learning environments experienced by underrepresented minority medical students: a narrative review. *Acad Med*. 2013;88:1765–1777.
20. Shantharam G, Tran TY, Mcgee H, Thavaseelan S. Examining trends in underrepresented minorities in urology residency. *Urology*. 2019;127:36–41.
21. Campbell KM, Hudson BD, Tumin D. Releasing the net to promote minority faculty success in academic medicine. *J Racial Ethn Health Disparities*. 2020;7:202–206.
22. Pololi LH, Evans AT, Gibbs BK, Krupat E, Brennan RT, Civian JT. The experience of minority faculty who are underrepresented in medicine, at 26 representative U.S. medical schools. *Acad Med*. 2013;88:1308–1314.

EDITORIAL COMMENT



I would like to commend the authors for addressing this seminal issue in Urology. This manuscript is a critical starting point in understanding the lack of underrepresented minorities (URM) in the leadership positions within academic urology. Using Survey Data from 320 academic urologist with a response rate of 41.6%, the authors identify that 13.6% (18) of these respondents were URM are in leadership positions. In their discussion, the authors describe a top down approach in which more URM in leadership roles would provide “increase in mentorship, improved retention of URM faculty, attraction of URM students to our specialty, and fostering of a psychologically safe workplace where diversity is embraced”.

Although this concept is poignant, I would like to add that a bottom up approach is also needed. The lack of qualified URM's within the medical profession creates a bottle neck with fewer opportunities for hospital leaders to recruit and mentor URM

faculty. The 2019 AUA census identified only 3.6% of active practicing URM urologist, totaling 445 providers with 2.0% of these identified as African American/Black.¹ In addition to the fact that only 27.3% of practicing urologist are in an academic practice, there is a paucity of applicants in which to draw these leaders from. Reports from the AAMC indicate that for decades, the numbers of Black/African American, American Indian or Alaska Native medical school applicants have been stagnant with an alarming decrease in the number of Black/African American male medical candidates and matriculants since 1978.^{2,3} This bottle neck is the real life manifestation of systemic racism and the disenfranchisement of minority groups that exist in this country.

Urology in many respects is akin to plumbing. In this situation, there is a low flow of URM's in medicine which translates to reduced URM's in leadership positions within medicine and urology. To increase the flow rate, the bottleneck will need to be removed, therefore breaking the cycle of systemic racism for the next generation of students and then to increase the inflow of applicants interested in the medical profession. AAMC data from 2018-2019 indicate that Black/African American, Multiple Race, and Hispanic applicants represented 8.4%, 9.2%, and 6.2% of the applicant pool respectively.⁴ Increasing the number of applicants would likely involve community level mentorship programs targeting high school and undergraduate students, exposing them to the medical profession and helping them navigate through cultural and social barriers that may exist. For the field of urology, I can see no better individual to champion this effort than an underrepresented minority academic leader.

Humphrey O. Atiemo, Chief, Female Pelvic Medicine & Reconstructive Surgery, Program Director, Urology, Vattikuti Urology Institute, Detroit, MI, United States of America.

References

1. *The State of Urology Workforce and Practice in the United States*. 2019. <https://www.AUANet.org/common/pdf/research/census/State-Urology-Workforce-Practice-US.pdf>. Accessed January 10, 2021.
2. AAMC. *Altering the Course: Black Males in Medicine*. Washington, DC: AAMC; 2015.
3. *Reshaping the Journey: American Indians and Alaska Natives in Medicine*. Washington, DC: AAMCAAMC; 2018.
4. AAMC Diversity in Medicine: Facts and Figures 2019. <https://www.aamc.org/data-reports/workforce/interactive-data/figure-2-percent-age-applicants-us-medical-schools-race/ethnicity-alone-academic-year-2018-2019>. Accessed Jan 10, 2021.

<https://doi.org/10.1016/j.urology.2021.01.056>
UROLOGY 162: 149–150, 2022. © 2021 Elsevier Inc.

AUTHOR'S REPLY

The editors note there exists a bottleneck at the level of recruiting underrepresented minority (URM) students into medical school. We made reference to this phenomenon citing the prevalence of URM students in medical school in 2019 was 14%, with a similar lag in URM (including Asian trainees) representation in urology trainees at 17.7% (30.8%) behind surgery at 20.4% (33.6%) and all fields at 25.6% (42.3%). While this bottleneck is evident at the beginning of medical education, these

straggling numbers continue at every juncture of becoming a physician resulting in a further silo effect in competitive surgical subspecialties like urology.

We agree with the editors in advocating for a “bottom-up” approach in addition to promoting diversity in leadership. At the undergraduate level, there are active efforts to increase the numbers of URM's in careers in science, technology, engineering, and mathematics through targeted pipeline programs. Similarly, educational overhauls in medical education such as changing the United States Medical Licensing Exam (USMLE) Step 1 to pass/fail could be a significant factor towards diversifying medicine by “leveling the playing field.” Previous studies have demonstrated lower USMLE Step 1 scores in female, African-American, Hispanic, and Asian-American students citing prior academic performance as a possible explanation for demographic disparities in scores.¹ Youmans et al. astutely cites “disadvantageous early education in minority communities” as an important explanation for score discrepancies and promotes that success on this exam was rooted in privilege found in early education.² A recent 2020 retrospective cross-sectional study by Williams et al. highlighted higher step 1 scores in non-URM applicants compared to URM applicants illustrating a racial bias in using USMLE Step 1 scores as interview cutoffs.³ In a competitive specialty where numerical cutoffs are often employed, we may be limiting racial diversity in the urology resident pool from the get-go. How this one change in medical school examination scoring will influence diversity in our specialty is yet to be determined and eagerly awaited by the authors.

Ultimately, this analysis is fairly analogous to a numbers game. It makes sense that if we flood the system with more qualified URM's as medical students, we will have more to choose from when they ascend the ranks of leadership. However, with so many “leaks in the plumbing” in the path to becoming a urologist, it can feel overwhelming and daunting on where to start laying our solder.

Our study highlights that there is a paucity of URM leaders in urology, but comes short of identifying a solution to this multifaceted issue. This underscores that combatting systemic racism and disenfranchisement of minority groups will really come from an intentional URM recruitment at all levels. We believe this can be achieved by combining grassroots efforts aimed at reforming inequitable early education in addition to arming urologic leaders with knowledge specific to racial disparities in order to foster recruitment strategies at the senior level. A multifaceted issue of this magnitude begets a multifaceted solution if we are truly going to dismantle the bottleneck.

Harold C. Hamann, Teresa L. Danforth, Department of Urology, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, Buffalo, NY

References

1. Rubright JD, Jodoin M, Barone MA. Examining demographics, prior academic performance, and united states medical licensing examination scores. *Academic Medicine*. 2019;94:364–370.
2. Youmans QR, Essien UR, Capers Q. A test of diversity - what usmlc pass/fail scoring means for medicine. *N Engl J Med*. 2020;382:2393–2395.
3. Williams M, Kim EJ, Pappas K, et al. The impact of United States Medical Licensing Exam (usmlc) step 1 cutoff scores on recruitment of underrepresented minorities in medicine: A retrospective cross-sectional study. *Health Sci Rep*. 2020;3:e2161:1–8.

<https://doi.org/10.1016/j.urology.2021.01.057>
UROLOGY 162: 150, 2022. © 2021 Elsevier Inc.

