
How well do urology residency program webpages recruit underrepresented minorities?

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Introduction: Historically, the field of medicine has suffered from a lack of diversity. This project examines if urology residency program websites were actively attempting to recruit underrepresented minority applicants with the hypothesis that while some programs would attempt to attract such applicants on their website, the majority would not.

Materials and methods: A cross-sectional analysis of program webpages for information regarding underrepresented minorities was performed. Electronic Residency Application Service residency database was used to identify 130 urology residency programs. Three were no longer accepting residents and were not included. The publicly available webpages of 137 urology residency training programs identified were reviewed.

Results: Only 26.3% (36) of programs included any information regarding diversity or inclusion on their webpage. The most common references to diversity were a link to a Department of Diversity and Inclusion (28, 20.4%) and information regarding a “commitment to diversity” (28, 20.4%). Only two programs included all seven categories searched for.

Conclusions: Residency program websites may be an important tool to recruit underrepresented minorities and currently there is significant room for improvement. Given that urology is already behind other fields in terms of representation, it is especially important to make an active, visible attempt to recruit underrepresented minorities.

Key Words: urology, underrepresented minorities, diversity, online recruitment, program webpage, residency

Introduction

Historically, the field of medicine has been largely homogenous and predominated by white males from high socioeconomic backgrounds.¹ While the American patient population has become increasingly diverse, the American physician workforce has not kept pace. In

some areas, such as gender, there have been significant improvements. According to Association of American Medical Colleges (AAMC) data, 2017 was the first year in which female medical school matriculants outnumbered their male counterparts.² In contrast, the AAMC reports that there were more black male matriculants to medical school in 1978 than in 2014.³ Race continues to be an area where American physicians do not represent the patient population they treat.

It has been hypothesized that increasing physician diversity may decrease health disparities by improving communication and cultural competency, increasing the number of physicians who choose to practice in underserved communities, and diversifying medical education for all trainees.⁴ A study by Alsan et al showed

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that black men with black providers had improved compliance with preventative health screening and improved physician- patient communication.⁵ This suggests that concordance of physician and patient race or ethnicity may improve patient outcomes. Komaromy et al showed that black physicians practiced in areas where the percentage of black residents on average was higher than where other physicians practiced, and a similar trend was seen in the areas where Hispanic physicians practiced.⁶ Underrepresented minorities (URM) providers may be uniquely posed to care for underserved communities.

Actively attempting to recruit URM has been shown to increase representation within residency programs. Wusu et al attempted to increase the percentage of matched URMs in a family medicine program by increasing outreach to URM applicants and ensuring bias was minimized in the interview process. They saw a significant increase in the number of URM applicants, as well as an increase in the number of URM applicants matched.⁷ In order to increase diversity in the field of urology, residency programs should be actively recruiting URM applicants.

Program websites are an important recruiting tool. In a 2015 survey of general surgery applicants, the applicants reported that residency program websites were their main source of information about the program.⁸ Given the lack of in-person interviews during the 2020-2021 residency application cycle due to COVID-19, program websites may be playing a larger role than ever. We examined urology residency program websites to determine if they are actively attempting to recruit URM applicants. Based on the low proportion of URM trainees in urology, we hypothesized that while some programs would make attempts to attract URM applicants, the majority of programs would not clearly demonstrate attempts via their website.

Materials and methods

Institutional review board approval was not necessary given that the data were all publicly available. The online webpage of each of the 137 urology residency training programs identified were reviewed. The list of programs was obtained from the Electronic Residency Application Service (ERAS) residency database, which consisted of a total of 140 programs. Three programs were no longer accepting future urology residents and were not included.

There were seven features that were specifically searched for on each webpage. These features were: (1) A urology department specific webpage for diversity, or inclusion of URM, (2) Any information regarding

the programs' commitment to diversity, (3) URM related opportunities for early exposure to urology for high school, undergrad, medical students, (including scholarships, funding, shadowing, clerkships), (4) A link to a Department of Diversity and Inclusion, (5) Information addressing bias, (6) Information about URM faculty specific to the urology department, and (7) Information about URM rotations. While there are no validated criteria for this topic, similar studies have been carried out in other specialties including physical medicine and rehabilitation, orthopedics, and general surgery.⁹⁻¹² The criteria included in this paper are based off the criteria used in previous research in addition to the personal experiences of medical students, residents, and faculty from a variety of backgrounds who were involved in the project.

Additional information about each program was collected, including location of training, number of resident positions per year, and whether the program was a university program, university-affiliated, or a community-based program. Descriptive statistics were performed using Google Sheets and Microsoft Excel.

Results

As shown in Table 1, of the 137 programs included the average size was 2.6 residents per year with a range of 1 to 5 residents per year. The majority were university (72.26%) or university-affiliated (20.44%) programs with community programs making up the last 7.30%.

Of the 137 program websites reviewed, 36 (26.3%) met at least 1 of the 7 criteria regarding URM or diversity. As shown in Figure 1, 9 of the 137 programs (6.6%) had a department specific webpage to address diversity within their program, while 28 (20.4%) had a link to a Department of Diversity and Inclusion, not specific to urology. Twenty-eight (20.4%) programs' websites included information regarding a "commitment to diversity," however only 7 (5.1%) had a URM/diversity related opportunity for early exposure to urology, 5 (3.6%) included information addressing implicit bias, 5 (3.6%) included information regarding URM/

TABLE 1. Program demographics

Average program size	2.6 [range 1-5]	
Affiliation	n = 137	
University	99	72.26%
University-affiliated	28	20.44%
Community	10	7.30%

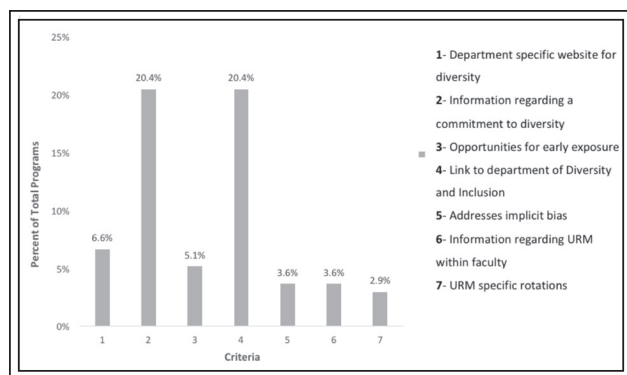


Figure 1. Breakdown of underrepresented minorities (URM) specific features.

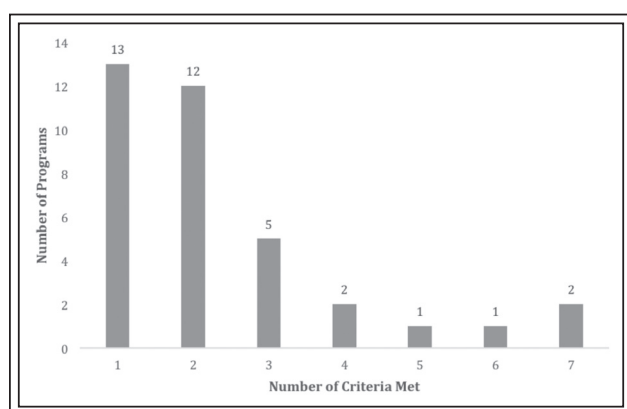


Figure 2. Number of underrepresented minorities (URM) criteria met per program.

diversity within their faculty and 3 (2.9%) offered information regarding URM specific rotations.

Of the 36 programs whose websites included information regarding URM or diversity, 27 (75%) were university programs and 7 (19.4%) were university-affiliated. The average size of the programs with URM information on their website was 2.9 residents.

Only two programs included all seven criteria searched for. As shown in Figure 2, the majority of programs whose websites included information regarding URM included just one or two of the criteria (69.44%).

Discussion

This study sought to evaluate urology residency programs' commitment to actively recruiting URM trainees using their webpages. Only 26.3% (36) of programs included any information regarding diversity or inclusion on their webpage. The most common

references to diversity were a link to a Department of Diversity and Inclusion (28, 20.4%) and information regarding a "commitment to diversity" (28, 20.4%). Only two programs included all seven categories searched for.

Underrepresentation of minorities is an issue that can be seen in many surgical subspecialties, but data suggests that urology may be lagging even more so. A study by Shantharam et al used Accreditation Council for Graduate Medical Education (ACGME) data from 2012 to 2017 to compare the percentage of URM trainees in urology versus other subspecialties, defined as trainees who identified as Asian or Pacific Islander, Hispanic, Black, Native American/Alaskan and Other. The percentage of urology trainees who identified as URM (30.8%) was significantly lower than those in surgery (33.6%) and in all specialties (42.3%).¹³ Ozambella et al also found less diversity among urology trainees compared to other specialties in looking at data from 1995 to 2013 gathered from the *Journal of the American Medical Association*.¹⁴

An area where the field of urology has made significant improvements is increasing the representation of female trainees. In 1973, there was one board-certified female urologist while as of 2019, 9.2% of the practicing urology workforce was female.¹⁵ It is unclear what has led to this shift; there does not appear to have been an active attempt to recruit more women into urology. This may partly be due to a generalized increase in female physicians. According to AAMC data, the number of practicing female physicians increased from 28.3% in 2007 to 36.3% in 2019.¹⁶ The improved representation of women in medicine can also be seen in medical school; 2019 was the first year where the majority of US medical students were female (50.5%).¹⁶ While encouraging, the increase in women in urology appears to be largely unintentional and as such does not provide a good roadmap for recruitment and retention of URM urologists.

Several strategies to recruit URM trainees have been successful in other specialties. Mason et al evaluated an orthopedic summer internship program consisting of an 8-week clinical and research program from 2005-2012. URM who completed the internship program had significantly increased odds of applying to an orthopedic residency program.¹⁷ In a similar vein to the pipeline initiative seen in orthopedics, Denver Health Emergency Medicine utilized a three-pronged approach to increase URM representation: scholarships for medical student externships, a funded second look, and increased involvement of URM faculty in interview and recruitment. One year after implementation, the percentage of URM applicants among all applicants invited to interview at the program doubled.¹⁸ In the

field of otolaryngology (ENT), Nellis et al attempted to describe how mentored clerkships could improve URM interest in ENT. The outreach initiative consisted of either a 3-month research clerkship or a 1-month clinical rotation, and included financial assistance and faculty mentorship. Follow up surveys showed that students were highly satisfied with their experience, and the clerkship favorably impacted their decision to apply for ENT residency.¹⁹ These are examples of strategies that have proved to be successful in the recruitment of URM applicants in other specialties and could be adopted by urology programs. Additionally, urology residency programs should advertise their recruitment efforts on their webpages to increase awareness.

While we attempted to perform a multifaceted assessment of how well program websites demonstrated an active commitment to diversity, there are some limitations to this study. The seven criteria were chosen in an attempt to capture all the ways in which a program may attempt to recruit URM trainees. However, these criteria are not equal in their degree of commitment (for example, offering a URM specific scholarship likely states more about a program's commitment to diversity than providing a link to a Department of Diversity and Inclusion). The variation in the criteria examined was not taken into account in our analysis. Programs may also differ in their definitions of diversity and URM. For example, there are programs that consider both women and racial minorities to be underrepresented, although they may differ in their degree of underrepresentation. Additionally, while this study examined online recruitment of URM trainees, it did not demonstrate if online recruitment truly results in increased program diversity, and this is an area that could use further research. For example, it would be interesting to investigate if the programs whose websites had a stronger dedication to diversity on their websites also had more a more diverse body of residents and faculty. However, since program websites are a major source of information especially in the COVID-19 era, there is inherent value to how well residency program websites communicate their dedication to diversity.

Conclusion

Urology residency program websites may be an important recruiting tool for URM trainees, particularly in the wake of COVID-19. Only 26.3% of 137 urology residency programs included any information regarding URM or diversity on their webpage. Given that urology already lags behind other fields regarding URM representation, it is especially important to make an active, visible attempt to recruit URM trainees. □

References

1. Diversity in Medicine: Facts and figures 2019 AAMC2019 [cited 2019 7/11/21].
2. AAMC. 2019 Fall applicant, matriculant, and enrollment data <https://www.aamc.org/system/files/2019-12>.
3. Altering the course: black males in medicine 2015. <https://store.aamc.org/altering-the-course-black-males-in-medicine.html>.
4. Smedley BD, Stith AY, Colburn L, Evans CH; Institute of Medicine (US). The Right Thing to Do, The Smart Thing to Do: Enhancing Diversity in the Health Professions: Summary of the Symposium on Diversity in Health Professions in Honor of Herbert W. Nickens, M.D. Washington (DC): National Academies Press (US); 2001.
5. Alsan M, Garrick O, Graziani G. Does diversity matter for health? Experimental evidence from Oakland. *American Economic Review* 2019;109(12):4071-111.
6. Komaromy M, Grumbach K, Drake M et al. The role of black and Hispanic physicians in providing health care for underserved populations. *N Engl J Med* 1996;334(20):1305-1310.
7. Wusu MH, Tepperberg S, Weinberg JM, Saper RB. Matching our mission: a strategic plan to create a diverse family medicine residency. *Fam Med* 2019;51(1):31-36.
8. Jarman BT, Joshi AR, Trickey AW, Dort JM, Kallies KJ, Sidwell RA. Factors and influences that determine the choices of surgery residency applicants. *J Surg Educ* 2015;72(6):e163-171.
9. Sanchez AN, Martinez CI, Lara AM, Washington M, Escalon MX, Verduzco-Gutierrez M. Evaluation of diversity and inclusion presence among US Physical Medicine and Rehabilitation Residency Program websites. *Am J Phys Med Rehabil* 2021;100(12):1196-1201.
10. Cohen SA, Xiao M, Zhuang T et al. How do orthopaedic surgery residency program websites feature diversity? An analysis of 187 orthopaedic surgery programs in the United States. *Current Orthopaedic Practice* 9000.
11. Driesen A, Romero Arenas MA, Arora TK et al. Do general surgery residency program websites feature diversity? *J Surg Educ* 2020;77(6):e110-e115.
12. Mortman R, Frazier HA, 2nd, Haywood YC. Diversity and inclusion on general surgery, integrated thoracic surgery, and integrated vascular surgery residency program websites. *J Grad Med Educ* 2021;13(3):345-348.
13. Shantharam G, Tran TY, McGee H, Thavaseelan S. Examining trends in underrepresented minorities in urology residency. *Urology* 2019;127:36-41.
14. Ozambella M, Zavaski M, Hanna N et al. The evolution of racial and ethnic diversity in U.S. urology residency programs. 2016 *NEAUA* 2016.
15. Dai JC, Agochukwu-Mmonu N, Hittelman AB. Strategies for attracting women and underrepresented minorities in urology. *Curr Urol Rep* 2019;20(10):61.
16. Boyle P. Nation's physician workforce evolves: more women, a bit older, and toward different specialties AAMC2021 [cited 2021 7/11]. Available from: <https://www.aamc.org/news-insights/nation-s-physician-workforce-evolves-more-women-bit-older-and-toward-different-specialties>.
17. Mason BS, Ross W, Ortega G, Chambers MC, Parks ML. Can a strategic pipeline initiative increase the number of women and underrepresented minorities in orthopaedic surgery? *Clin Orthop Relat Res* 2016;474(9):1979-1985.
18. Tunson J, Boatright D, Oberfoell S et al. Increasing resident diversity in an emergency medicine residency program: a pilot intervention with three principal strategies. *Acad Med* 2016; 91(7):958-961.
19. Nellis JC, Eisele DW, Francis HW, Hillel AT, Lin SY. Impact of a mentored student clerkship on underrepresented minority diversity in otolaryngology-head and neck surgery. *Laryngoscope* 2016;126(12):2684-2688.