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Chapman Wei

Simone A Bernstein

Alex Gu

Aadit Mehta

Dhruv Sharma

*See next page for additional authors*

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**Authors**

Chapman Wei, Simone A Bernstein, Alex Gu, Aadit Mehta, Dhruv Sharma, Ryan Mortman, Monica Verduzco-Gutierrez, and Katherine C Chretien

# Evaluating Diversity and Inclusion Content on Graduate Medical Education Websites



Chapman Wei, MD<sup>1</sup>, Simone A. Bernstein, MD<sup>2</sup> , Alex Gu, MD<sup>3</sup>, Aadit Mehta, BS<sup>4</sup>, Dhruv Sharma, BA<sup>4</sup>, Ryan Mortman, BS<sup>5</sup>, Monica Verduzco-Gutierrez, MD<sup>6</sup>, and Katherine C. Chretien, MD<sup>7</sup>

<sup>1</sup>Department of Medicine, Staten Island University Hospital and Northwell Health, 475 Seaview Ave, Staten Island, NY, USA; <sup>2</sup>Department of Psychiatry, Washington University School of Medicine and Barnes-Jewish Hospital, 660 S. Euclid Ave, Campus Box 8509, St. Louis, MO, USA; <sup>3</sup>Department of Orthopaedic Surgery, George Washington University School of Medicine and Health Sciences, 2300 M St, Washington, DC, USA; <sup>4</sup>George Washington University School of Medicine and Health Sciences, 2300 M St, Washington, DC, USA; <sup>5</sup>George Washington University School of Medicine and Health Sciences, 2300 M St, Washington, DC, USA; <sup>6</sup>Department of Rehabilitation Medicine, Long School of Medicine, University of Texas Health Science Center San Antonio, 7703 Floyd Curl Drive, San Antonio, TX, USA; <sup>7</sup>Department of Medicine, Johns Hopkins University School of Medicine, 1600 McElderry Street, Suite 230, Baltimore, MD, USA.

**ABSTRACT:** Websites are important tools for programs to provide future residency applicants with freely accessible information regarding their program, including diversity, equity, and inclusion (DEI) initiatives.

**OBJECTIVE:** To describe the variability of DEI content in residency programs and compare DEI website content by specialty.

**METHODS:** Using the 2021 Accreditation Council for Graduate Medical Education (ACGME) list of residency programs, residency training websites were identified and evaluated. Information was extracted from program websites as indicators of DEI content. Chi-square analysis and one-way ANOVA were chosen to assess for statistical differences.

**RESULTS:** In total, 4644 program websites representing 26 specialties were assessed. Among all the programs, the average DEI completeness of a program website was 6.1 ± 14.6% (range 0–100%). While 6.2% of all programs had a diversity webpage, only 13.3% included a commitment to DEI, and few programs (2.7%) provided information about underrepresented in medicine (URiM) faculty.

**CONCLUSIONS:** Graduate medical education programs can enhance information for current and prospective applicants about DEI initiatives on their websites. Including DEI initiatives on residency websites may improve diversity recruitment efforts.

**KEY WORDS:** Diversity; Inclusion; Residency; Medical education; Websites.

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## INTRODUCTION

Diversity, equity, and inclusion (DEI) in the physician workforce, including in graduate medical education, remains a critical issue, with widespread efforts by multiple medical associations to increase the representation of those underrepresented in medicine (URiM) at all levels.<sup>1–4</sup> Improving DEI in this sector is vital in promoting higher quality and culturally responsive care.<sup>1</sup> The Accreditation Council for Graduate Medical Education (ACGME) has proposed new standards to systematically and intentionally increase a diverse workforce.<sup>1</sup> Previous survey studies show that URiM applicants rank a program more favorably if the residency program has URiM initiatives, faculty, leadership, and residents.<sup>5,6</sup> This information was most frequently obtained from in-person experiences, such as during interviews.<sup>7</sup>

Because of the COVID-19 pandemic, many traditional recruitment methods changed, leaving applicants to seek residency program information through the internet as their primary resource.<sup>8</sup> While many programs have implemented social media recruitment strategies, including virtual fairs and social media accounts, program websites have continued to be essential for applicant recruitment and program information.<sup>8,9</sup> Gaeta et al. found that 78% of applicants reported that program websites influenced their decision to apply to a particular program during the application cycle.<sup>10</sup> Additionally, Steele et al. conducted a survey that showed residency applicants still predominantly use program websites to access information relative to other digital platforms.<sup>9</sup> Thus, websites can be essential for programs to provide future residency applicants with freely accessible information regarding their program, including DEI initiatives. DEI information within residency program websites may reflect a program's overall commitment to DEI, as well as a commitment to share information transparently.

Our study aimed to determine and assess the variability of DEI content among residency program websites and compare them by specialty.

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## METHODS

A complete list of residency programs in all specialties was gathered from the ACGME Directory in March 2021.<sup>11</sup> Residency program demographics included location. Three authors (AM, DS, RM) independently collected variables pairwise from program websites and discussed any discrepancies. Discrepancies were resolved when a consensus was reached between the three authors collecting the data.

Based on previous research and conference consensus statements, the following seven variables were extracted from program websites as indicators of DEI content: webpage(s) dedicated to diversity, a DEI commitment statement, diversity initiatives (e.g., summer research for medical students, lectures, mentorship), a link to the institutional DEI page, information about bias training, URiM faculty, and fourth-year rotations for URiM applicants.<sup>1,2,5,6,12–15</sup> While there is no gold standard for evaluating DEI content on websites, two variables were chosen (webpage dedicated to diversity and DEI commitment statement) because they were analyzed in previous studies.<sup>12–14</sup> Based on the framework provided by Gonzaga et al., DEI initiative information at a program, department, and institution level was important in demonstrating sincere DEI commitment. Thus, we included five departmental-level variables (diversity initiatives, link to institutional DEI page, bias training, URiM faculty, and fourth-year rotations). Biographical information, such as photos, was assessed in previous literature but was not included in our current study since only some websites provide explicit information that residents or faculty members are URiM.<sup>12,14</sup> Completeness, which combined all variables to determine the percentage present for each program website, was analyzed to determine the differences in DEI content among specialties and reported as an average percentage with a standard deviation. Completeness was calculated as follows: (Sum of the presence of variables / 7) × 100%.

To compare diversity completeness by specialty, we used chi-square analyses, a non-parametric analysis tool, to compare the presence of each website variable among all specialties. One-way ANOVA tests were used to assess completeness (Statistical Package for the Social Sciences 25; Armonk, NY). A  $p < 0.05$  was considered statistically significant. A one-way ANOVA test was chosen to compare completeness between specialties because this data had a normal distribution (skewness statistic:  $2.8 \pm 0.04$ ; kurtosis statistic:  $8.4 \pm 0.08$ ).

The study did not meet criteria for human subject research as defined by the Department of Health and Human Services and thus did not require Institutional Review Board review.

## RESULTS

In total, 4644 programs were assessed representing 26 specialties. 6.2% of all programs had a dedicated diversity webpage, with Child Neurology websites having the most DEI webpages (18.7%). Although 13.3% of programs

included a commitment to DEI, Thoracic Surgery program websites contained the most explicit commitments to DEI (41.4%).

Few programs (2.7%) provided information about URiM faculty. A notable exception was Neurosurgery, where 58.1% of websites contained this information. Few program websites (0.8%) provided information regarding URiM-tailored visiting student rotations.

Regarding links to the program institution's office of diversity, 14.1% were found on program webpages. Thoracic Surgery program websites most frequently included a link to the institutional office of diversity. Few programs (1.2%) discussed bias training. Among all programs, the average DEI completeness of a program website was  $6.1 \pm 14.6\%$  (range 0–100%).

Table 1 outlines website completeness by specialty. For the two specialties with the largest number of programs, family medicine (679 programs) and internal medicine (575 programs), there was lack of completeness in the diversity information on the websites ( $2.3 \pm 10.2\%$  and  $2.8 \pm 10.9\%$ , respectively). Of the 4644 programs, only seven were assessed to have 100% completeness: two programs in dermatology, one program in neurosurgery, two programs in otolaryngology, and two programs in urology. Overall, 80.2% of total programs had a completeness of 0%, with the lowest percentages in Neurosurgery (33.3), Thoracic Surgery (58.6), and Child Neurology (58.7).

## DISCUSSION

This study assessed the DEI-related content of residency program websites and found many areas where DEI content could be enhanced.

It is well documented that many racial and ethnic disparities exist within the US healthcare system.<sup>14</sup> One of the mechanisms to alleviate such disparities is having a more diverse workforce. Diversity in graduate medical education is important as physicians from URiM groups are more likely to care for patients of the same background.<sup>16</sup> Furthermore, diversity in training helps provide different perspectives and increased awareness of social determinants of populations, thus lending itself to optimal outcomes<sup>17</sup>. Outlining diversity initiatives and describing a commitment to DEI help showcase a welcoming residency space.<sup>12</sup>

When deciding where to apply, the 2017 National Resident Matching Program Applicant Survey revealed that approximately 37% of applicants viewed an institution's cultural, racial-ethnic, and gender diversity as a factor when selecting programs.<sup>18</sup> Therefore, a website dedicated to DEI, where programs can describe their initiatives in one central location, can be an asset for recruitment of a diverse residency class. Another way to enhance program websites is to include information about URiM faculty, something known to be appreciated by applicants but uncommonly found.<sup>19</sup> Similarly, having

Table 1 Completeness of Diversity, Equity, and Inclusion Website Variables by Specialty

Specialty	Total (N)	Most complete program website, % (N)	Least complete program website, % (N)	Percent of programs with completeness of 0 (%)	Average completeness of websites (mean % ± SD)
Overall	4644	100 (7)	0 (3726)	80.2	6.1±14.6
Anesthesiology	150	71.4 (1)	0 (109)	72.7	8.2±16.0
Child neurology	75	57.1 (1)	0 (44)	58.7	11.6±16.7
Dermatology	140	100.0 (2)	0 (102)	72.9	9.3±19.5
Diagnostic radiology	183	57.1 (3)	0 (142)	77.6	5.3±12.0
Emergency medicine	263	71.4 (1)	0 (224)	85.2	4.8±12.9
Family medicine	679	85.7 (2)	0 (633)	93.2	2.3±10.2
General surgery	330	71.4 (5)	0 (280)	84.8	4.6±13.2
Internal medicine	565	85.7 (1)	0 (519)	91.9	2.8±10.9
Neurology	157	57.1 (2)	0 (114)	72.6	8.9±15.3
Neurosurgery	117	100.0 (1)	0 (39)	33.3	16.7±19.0
Nuclear medicine	30	57.1 (2)	0 (18)	60.0	13.8±18.6
Obstetrics and gynecology	279	71.4 (1)	0 (225)	80.6	5.8±13.5
Ophthalmology	123	85.7 (1)	0 (88)	71.5	8.9±17.4
Orthopaedics	192	71.4 (1)	0 (162)	84.4	3.9±10.9
Otolaryngology	118	100 (2)	0 (81)	68.6	11.3±22.1
Pathology	138	57.1 (2)	0 (112)	81.2	4.6±11.2
Pediatrics	201	71.4 (2)	0 (158)	78.6	7.5±16.1
Physical medicine and rehabilitation	97	71.4 (2)	0 (69)	71.1	9.3±18.6
Plastic surgery (integrated)	82	71.4 (2)	0 (55)	67.1	11.3±19.7
Preventative medicine	61	57.1 (2)	0 (41)	67.2	10.1±15.5
Psychiatry	257	71.4 (1)	0 (217)	84.4	4.6±12.0
Radiation oncology	89	71.4 (2)	0 (68)	76.4	7.5±16.3
Radiology (interventional)	89	71.4 (1)	0 (63)	70.8	8.8±17.2
Thoracic surgery (integrated)	29	42.9 (2)	0 (17)	58.6	12.8±15.9
Urology	137	100.0 (2)	0 (101)	73.7	8.9±19.1
Vascular surgery	63	57.1 (3)	0 (45)	71.4	8.4±15.7

support from an established office of DEI is important for recruiting URiM applicants since these offices can help coordinate recruitment efforts and events for the residency program.<sup>4</sup> A framework to address the ACGME standard on creating a diverse and inclusive workforce outlines five key steps: setting diversity as a priority; seeking out candidates; implementing inclusive recruitment practices; investing in trainee success; and building the pipeline. Having diversity listed as a priority on a program website is a simple way to fulfill the first step of this framework and communicate this priority.<sup>20</sup> Other institutions have enacted similar strategies for improving diversity and inclusion.<sup>21,22</sup> During the COVID-19 pandemic, Hoff et al. implemented virtual recruitment initiatives, including having a dedicated DEI website outlining their goals and achievements, and increased URiM resident recruitment by 21%.<sup>21</sup>

Two critical factors in retaining and recruiting URiM physicians in the workforce are information related to URiM faculty and DEI-related opportunities.<sup>5,7</sup> Our findings also showcase multiple ways for residency programs to enhance diversity initiatives based on information located on websites. These include research grants for URiM medical students, URiM mentorship, and scholarly lectures. Scholarships that support visiting student rotations or research can attract candidates from all socioeconomic backgrounds, as the cost can be the main deterrent for students in performing an away

rotation.<sup>23</sup> Despite the importance of website information and the relatively low barriers to adding content to program websites, our study found that most program websites did not contain any of the assessed variables.

This study has limitations. Program websites may not reflect actual DEI initiatives. This paper reviews the outward and public display of DEI but recognizes there may be programming and priorities that are not mentioned on program websites. Also, DEI website content may have been missed and not located or assessed, although there were multiple independent website reviewers. It is not known whether there was an increase in the number of URiMs being interviewed or matching in specialties at programs with a greater number of DEI initiatives shared on program websites. This study is also cross-sectional, and findings may change over time. Furthermore, while a public commitment to diversity is important, measuring the impact of initiatives will be essential as next research steps.

## CONCLUSION

Graduate medical education programs can enhance the DEI content provided to current and prospective applicants on their websites to reflect their commitment to DEI. Internal Medicine programs' websites, in particular, scored lower in DEI content

than other specialties, suggesting opportunities for improvement. Ensuring DEI website content reflects actual initiatives and commitment may help programs diversify their workforce.

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**Corresponding Author:** Simone A. Bernstein, MD; Department of Psychiatry, Washington University School of Medicine and Barnes-Jewish Hospital, 660 S. Euclid Ave, Campus Box 8509, St. Louis, MO 63110, USA (e-mail: simone.bernstein@wustl.edu).

**Declarations:**

**Conflict of interest:** The authors declare that they do not have a conflict of interest.

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