

A Review of OB/GYN, Internal Medicine, Family Medicine, and Pediatrics Residency Program Websites for Diversity, Equity, and Inclusion Elements

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ABSTRACT

Background Residency program websites have become a central source of information for applicants due to a shift toward virtual interviewing. Applicants, particularly those from diverse backgrounds, place strong value on programs that present commitments to diversity, equity, and inclusion (DEI). The DEI content of residency program websites for primary care specialties has been largely unexplored.

Objective The objective of this study is to review, in an exploratory manner, family medicine, internal medicine, obstetrics and gynecology, and pediatrics residency program websites for number of DEI elements present. By identifying lacking DEI content, we hope to give residency programs that are seeking to increase diversity among applicants some direction for improving their websites.

Methods We reviewed all available residency program websites (1814) in the Fellowship and Residency Electronic Interactive Database (FREIDA) from August to December 2021. Each website was evaluated for the presence of 10 DEI elements chosen from previously published website reviews and informal applicant surveys. Some elements included the presence of resident and faculty photos/biographies, patient population descriptions, and dedicated DEI curricula. Program demographic information was collected, and summative statistics were performed.

Results The average number of DEI elements displayed per program ranged from 3.5 (internal medicine) to 4.9 (pediatrics). The most common elements were resident and faculty photographs/biographies. Internal medicine programs displayed significantly fewer elements than the other 3 specialties. This difference remained significant after controlling for program size, location, and type.

Conclusions This study highlights a lack of DEI elements available for residency program website visitors to review.

Introduction

Diverse health care teams are known to improve patient care quality and financial performance,^{1,2} yet diversity among professionals is highly variable across medical specialties. Among surgical specialties in the United States between 2010 and 2018, limited racial diversity of applicants and matriculants has been highlighted, but more notable was the lack of an increase in diversity over this same period.³ Even within surgical specialties like obstetrics and gynecology (OB/GYN), which had the highest average percentage of underrepresented in medicine (UIM) applicants and matriculants in a review spanning 2010 to 2018 (20.2% and 19.0%, respectively, compared to 15.3% and 17.5% overall), the level of

diversity compared to the US population remains low.³

Residency programs in the United States have an increasing interest in attracting physicians of diverse backgrounds to better match and serve the diversity among their patient populations. The Accreditation Council for Graduate Medical Education (ACGME) has mandated that training programs engage in practices that focus on recruiting and retaining a diverse workforce and that residents demonstrate competence in the treatment of diverse patient populations.⁴ The ACGME Common Program Requirements for all medical specialties require programs to focus on this recruitment and on cultivating an environment free from discrimination and harassment. One important step toward meeting these requirements is a systematic and intentional effort

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to recruit and retain residency applicants who are among underrepresented groups in medicine.

Applicants rely on their own data gathering from published online material, the interview day experience, audition rotations, and word-of-mouth from mentors and co-applicants to help decide which residency program may be the right fit for them. Restrictions for travel and in-person meetings brought on by the COVID-19 pandemic caused residency programs to refrain from in-person interviewing, facility tours, and audition rotation opportunities. While these limits may have increased equity in the residency application process in some ways (eg, greatly decreased cost associated with in-person interviews and reduction of geographic-specific barriers for interviewees), they have reduced applicants' ability to assess program fit and climate regarding diversity, equity, and inclusion (DEI), which is an important part of the residency search process. Specifically, the ACGME has published a set of suggestions for programs to mitigate these effects.⁵

Programs mentioning DEI on their websites have been shown to have a significantly higher proportion of female residents compared to those that did not.⁶ A prior study found that UIM students applying to residency ranked patient population, revisit opportunities, gender diversity, and ethnic diversity significantly higher in importance than non-UIM students.⁷ The recent changes made in the residency application and interview processes may or may not remain permanent; however, the information on program website profiles will continue if not increase in importance for applicants' decisions regardless of in-person or virtual interviewing.

Each residency program in the United States will need to implement a multifactorial approach for attracting applicants from diverse groups in order to meet the ACGME requirements. Presenting DEI information on program websites will likely help applicants in their evaluation of fit and climate for DEI. Previously conducted reviews of website DEI content are limited by the number of medical specialties included in the review (ie, general surgery, integrated thoracic surgery, integrated vascular surgery, and plastic surgery programs), and have focused on a limited number of DEI elements.⁸⁻¹⁰

This study aims to, in an exploratory manner, review family medicine (FM), internal medicine (IM), OB/GYN, and pediatrics (Peds) residency program websites for number of DEI elements present, extending the medical specialties covered by previously performed program website reviews. These 4 primary care specialties were chosen because they represent a large proportion of total residents and have not been the focus of previous reviews.⁸⁻¹⁰

Objectives

The objective of this study is to review, in an exploratory manner, family medicine, internal medicine, obstetrics and gynecology, and pediatrics residency program websites for number of diversity, equity, and inclusion (DEI) elements present.

Findings

This study highlights an overall lack of DEI elements available for residency program website visitors to review.

Limitations

The study is limited in that it neither directly connects DEI elements available for review on program websites to applicant perception of websites, nor does it compare program websites to the actual learning environment for residents.

Bottom Line

Given the ongoing reliance on virtual information gathering among residency program applicants, residency program websites should accurately reflect DEI programming and initiatives to attract applicants passionate about DEI principles.

Methods

The American Medical Association's Fellowship and Residency Electronic Interactive Database (FREIDA) was used to identify residency program websites for the medical specialties of interest—OB/GYN, FM, IM, and Peds. Program websites were evaluated for 10 DEI elements from August to December 2021 by 7 of the study authors. We developed the analysis tool by reviewing DEI elements of previously published website reviews. We also considered elements deemed important to applicants based on anecdotal evidence gained from informal surveys completed by 2020-2021 residency applicants. The final 10 elements chosen were based on existing validity evidence as well as a desire to keep the survey to a reasonable length in order to encourage completion.⁸⁻¹⁰ The following DEI elements were evaluated:

- *Resident photos/biographies*: Presence or absence of photos and/or biographies for some or all residents. After each website was reviewed, categories were collapsed into "all or some photos" vs "no photos" and "all or some biographies" vs "no biographies."
- *Faculty photos/biographies*: Presence of individual photos and biographies for current faculty. The same categories were created and collapsed as previously mentioned.
- *Mission statement*: Presence of diversity, equity, and/or inclusion in the program's mission statement. Reviews were recorded as "yes," "no," or "no mission statement identified."
- *DEI statements*: Presence of a stand-alone commitment to DEI. Reviews were recorded as "yes, but only in the form of a commitment to

TABLE

Diversity, Equity, and Inclusion Elements Present by Specialty

DEI Element	Internal Medicine (n=594), n (%)	OB/GYN (n=292), n (%)	Family Medicine (n=712), n (%)	Pediatrics (n=212), n (%)	P value
Diversity statement	177 (30)	108 (37)	169 (24)	92 (43)	<.001
Mission statement including DEI	114 (19)	60 (21)	107 (15)	79 (37)	<.001
Patient population description	110 (19)	115 (39)	269 (38)	50 (24)	<.001
Resident photos	402 (68)	224 (77)	584 (82)	152 (72)	<.001
Resident biographies	166 (28)	192 (66)	457 (64)	146 (69)	<.001
Faculty photos	428 (72)	210 (72)	593 (83)	147 (69)	<.001
Faculty biographies	320 (54)	185 (63)	519 (73)	149 (70)	<.001
DEI curriculum	59 (10)	24 (8)	59 (8)	39 (18)	<.001
DEI webpage	123 (21)	122 (42)	152 (21)	87 (41)	<.001
Specific opportunities for applicants underrepresented in medicine	50 (8)	18 (6)	16 (2)	18 (8)	<.001

Abbreviations: DEI, diversity, equity, and inclusion; OB/GYN, obstetrics and gynecology.

DEI statement,” “yes, but only in the form of an affirmative action statement,” “yes both an affirmative action statement and commitment to DEI statement,” or “neither.”

- *Patient population:* Presence of descriptions of the demographics of the patient populations that the residency programs (and affiliated health centers) serve. Reviews were recorded as “yes” or “no.”
- *DEI webpages:* Presence of a dedicated webpage with information and resources specific to DEI initiatives. Reviews were recorded as “yes” or “no.”
- *DEI curricula:* Reference of or presence of dedicated DEI curricula. Reviews were recorded as “yes” or “no.”
- *UIM trainee and applicant support:* Presence of specific support for UIM trainees and applicants. Examples of such support included information about diversity supporting scholarships for visiting students, support groups, and community resources. Reviews were recorded as “yes” or “no.”

The training process for reviewers included a review of the REDCap form used to collect information, definitions of the DEI elements to be reviewed, and instructions regarding where to find the information. Each reviewer independently reviewed websites, and each website was reviewed by a single reviewer.

Program demographic information from FREIDA profiles including geographical region, size, program type (university, community, combined university/community, and military), and a link to the program website were collected. The geographical regions used

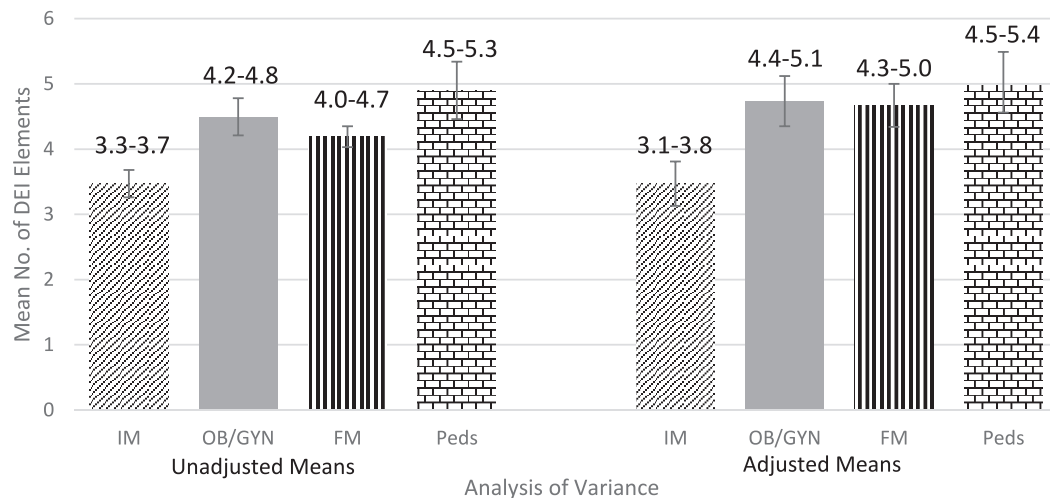
by FREIDA are New England, Mid-Atlantic, East North Central, West North Central, and South Atlantic. For cases where the FREIDA residency profiles did not include a link, we used the Google search engine to find the residency program’s website. Data were recorded in REDCap.¹¹

Data were analyzed using Microsoft Excel and IBM SPSS Statistics 27. The average number of DEI elements for each specialty and cumulative number of programs displaying each element by specialty were reported. An analysis of variance (ANOVA) with Tukey post-hoc testing was performed to detect statistically significant differences in the average number of DEI elements between specialties. Follow-up analysis using ANOVA was performed to control for the influence of program size, program location, and program type. Per our institutional policy, as this study did not include human subjects or identifiable private information, Institutional Review Board approval was not required.

Results

There were 1825 residency program websites eligible for review. Programs with accessible websites were included in this review (292 of 296 OB/GYN programs, 594 of 597 IM programs, 716 of 720 FM programs, and 212 of 212 Peds programs; total n=1814).

The TABLE shows the breakdown for each DEI element by specialty. The most common elements featured on program websites were photographs of residents and faculty. In our data set, FM programs were most likely to include photographs of residents (82%, 584 of 712) and faculty (83%, 593 of 712), with IM programs being least likely to include photographs of residents (68%, 402 of 594) and

**FIGURE****Unadjusted and Adjusted Mean Number of DEI Elements by Specialty**

Abbreviations: DEI, diversity, equity, and inclusion; IM, internal medicine; OB/GYN, obstetrics and gynecology; FM, family medicine; Peds, pediatrics.

Peds programs being least likely to include photographs of faculty (69%, 147 of 212; overall $P<.001$). Very few program websites mentioned specific training opportunities for UIM applicants, although FM programs were the least likely to mention them (2%, 16 of 712).

There was a significantly lower number of DEI elements included on websites for IM programs compared to all other programs (IM=3.5 [3.3-3.7], OB/GYN=4.5 [4.2-4.8], FM=4.2 [4.0-4.4], and Peds=4.9 [4.5-5.3], $P<.001$); Peds programs had significantly higher number of DEI elements than IM and FM ($P<.001$; FIGURE). The difference for IM programs did not resolve after controlling for program size, program location, or program type (IM vs all other programs, $P<.001$; FIGURE), although the difference for Peds programs compared to FM programs was no longer significant ($P=.30$).

Discussion

This study highlights that OB/GYN, IM, FM, and Peds residency programs varied greatly on the cumulative number of DEI elements and the types for DEI elements included on their websites. These programs lacked at least 50% of potential DEI elements, which could negatively impact the programs' ability to attract a diverse applicant pool, leaving applicants with little information about the programs' offerings for DEI. We found that IM residency programs had a lower number of DEI elements on their program websites than other primary care specialties, and this difference remained after controlling for program size, program location, and program type.

Our results are consistent with the literature examining surgery program websites, in that resident and faculty photos and biographies are the most common DEI elements reported, and that few websites included additional diversity information such as DEI commitment statements.⁹ Our study adds to the literature by providing a review for 4 primary care specialties and extends the types of DEI elements with a more comprehensive list including elements residents have noted to be important for their information gathering.

This study has several limitations. First, we assume the 10 DEI elements we used are ones that applicants consider relevant, important, and reflective of a residency program's commitment to DEI. We attempted to minimize this limitation by including DEI elements reported by residency applicants collected from informal surveys to ensure that the elements we examined were important to applicants. Secondly, due to the extremely large number of websites reviewed, each website was also reviewed only a single time. With 7 different reviewers reviewing websites, there is limited ability to analyze for interobserver variability. This study is also limited in that it assumes that program websites are the primary location where applicants would search for DEI information. Residency applicants are likely to search institution websites, follow programs on social media, seek information from colleagues or through networking, or participate in away rotations. This study included multiple comparisons, which increases the likelihood of Type 1 error; however, we used Tukey post-hoc tests to minimize the impact of the multiple comparisons.

Residency program applicants are likely to increase the importance of information presented on program websites, particularly after recent changes restricting in-person rotations and interviews. This website review reveals that these specialties have taken steps to portray their commitment to DEI on their websites, but there is more work to be done to include additional types of DEI information on websites and, where lacking, to potentially add more DEI opportunities within programs. Amid ongoing discussions on ways to make an impact on issues related to DEI, residency programs spending the time, effort, and money to update their websites is a straightforward, simple, and low-resource way to move the needle on these critically important topics. However, programs must exercise caution to not simply present a virtual appearance of DEI commitments without follow-through and ongoing evidence throughout other phases of the application process (interviews, facility tours, etc) of their commitments. This study extended the types of DEI elements that can be presented on websites by including ones that residency applicants identified as important, and giving residency programs that are seeking to increase diversity among applicants some direction for improving their websites.

It remains unclear why IM programs were significantly lower than other specialties regarding the presentation of their DEI commitments on their residency program websites. While possibly not reflective of a lack of commitment to DEI concepts, it may be more reflective of the sudden change from in-person opportunities to virtual representations of their programs in the midst of other technology challenges related to the COVID-19 pandemic that may have uniquely impacted this specialty.

Conclusions

This review of OB/GYN, IM, FM, and Peds residency program websites draws critical attention to a lack of key elements representing the commitment that primary care residency programs have to DEI.

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