

# Disparities across the CREOG Districts —Variations of Wellness and Inclusivity Efforts in Obstetrics & Gynecology Residency Websites between Two Consecutive Years

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## Abstract

**Background:** Few studies have focused on the geographic and chronologic assessment of inclusivity and wellness in Obstetrics and Gynecology residency websites across the US. **Objective:** To identify variations in wellness and inclusivity website depictions across CREOG districts over the past two years. **Methods:** This is a cross-sectional analysis of the websites of ACGME-accredited OB/GYN residency programs across the United States between April 2022 and April 2023. The assessment was based on a compilation of 22 attributes devised and piloted by 49 medical students. A racially, geographically, and gender-diverse cohort of 11 students performed data collection. **Results:** A total of 560 websites were analyzed over two years. Wellness efforts remained unchanged in both years (website content, dedicated support personnel, and group activities). In 2023, a reduction in referencing of wellness (22%) and inclusivity (30%) occurred in leadership messaging. However, a 7% increase in the use of inclusive pronouns was noted. A reduction in gender diversity was identified (9% in faculty, 5% in residents), with programs favoring female-only teams. Similarly, a 7% reduction in the number of underrepresented in medicine faculty and residents was noted. A 15% reduction was noted in curricula referencing inclusivity in their mission statement and inclusivity focused research. **Conclusions:** This study suggests the variations across websites relative to inclusivity and wellness over the past two years. Updated websites may provide an accurate reflection of the offerings of programs and their investment in wellness and inclusivity across the nation.

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## Keywords

Diversity, Gynecology, Inclusion, Obstetrics, Residency

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## 1. Introduction

The promotion of resident well-being and inclusivity has gained recognition as a pivotal aspect of medical education [1]. Over the past few years, the Council on Resident Education in Obstetrics and Gynecology (CREOG) has emphasized improving residents' well-being, mitigating physician burnout, and supporting efforts toward inclusivity [2]. The recent emphasis on wellness and inclusivity partly stems from the concern for burnout and higher attrition rates among Underrepresented in Medicine (URiM) learners. A study in 2022 found that students who identified as URiM had approximately twice the attrition rate as non-Hispanic white students [3]. The omnipresence of physician burnout and its detrimental impact on patient care underscores the need for comprehensive and proactive wellness [4]. Additionally, cultivating an inclusive learning environment that values diversity and equity is essential for fostering a future generation of health care professionals adept at addressing patients' diverse needs [5].

With virtual interviews becoming the new standard, the significance of program websites as primary sources of information has increased [6]. Residency candidates now rely heavily on these platforms to gauge a program's commitment to wellness and inclusivity and their alignment with their personal and professional aspirations [7] [8]. Despite the vital role of residency program websites, there has been a limited assessment of the importance of updating and aligning these platforms from a medical student need aspect on a national level.

Our study seeks to bridge this knowledge gap by objectively benchmarking the wellness and inclusivity attributes portrayed on OB/GYN residency websites across CREOG districts over the past two years. Understanding the annual variations in how Diversity, Equity, and Inclusion (DEI) and wellness initiatives are depicted on these websites can provide insights for medical students during their quest for programs that align with their personal needs.

## 2. Methods

### 2.1. Study Design

This study employed a quality-improvement cross-sectional descriptive approach to examine the ACGME-approved Obstetrics & Gynecology (OB/GYN) residency program websites across the United States. The cross-sectional design was selected due to its ability to provide a snapshot of the current state of the residency program website at a specific point in time. The assessment was conducted March/April 2022 and March/April 2023 due to the proximity to the Match date for each of those years. The study focused exclusively on OB/GYN residency programs. The website assessment was built on a compilation of 22

attributes and categorized into three themes. These criteria were devised by two focus groups and two data collection cohorts. The first focus group comprised nine medical students who established assessment criteria based on published content with the second focus group comprising 40-voluntarily recruited students from a large Midwestern medical school who piloted and refined the assessment questions using the modified Delphi technique. The two data collection cohorts, comprised of 10 students, focused on the website analysis over two years during the months specified, one cohort from a large Midwestern medical school and the second from a large Southern medical school.

Before data collection, inter- and intra-observer variability within the data collection group was assessed to enhance data accuracy and reliability. To mitigate bias, investigators were strictly instructed to focus solely on the survey items during the website assessment to minimize the impact of potential bias brought on by other content on the website. Each focus group and data collection cohort comprised racially, ethnically, and gender-diverse participants with at least 50% of the investigators represented being URiM and female. Investigators divided a shared spreadsheet of the ACGME accredited programs to ensure accuracy of the data collection.

This study adopted the initial (2003) AAMC delineation for Underrepresented in Medicine (URiM) to assess racial diversity [9]. Medical student researchers relied on publicly accessible website photographic representations to report the self-perceived identification of at least one African-American, Hispanic/Latino, American Indian/Alaska Native, or Native Hawaiian/Pacific Islander faculty member and resident among their colleagues. Although photographic evidence may not be the most reliable method for racial attribution, it was adopted because of the lack of reported and up-to-date residency data per program and specialty [10].

Similarly, diversity of gender expression was evaluated based on the photographic identification of at least one member of a different gender compared to the majority (a minimum of female and/or one male) within the faculty members and resident class. This study also considered LGBTQIA references to be an essential component of inclusivity assessment and assessed for pronoun presence as well as supportive or representative pictorial depictions.

The distribution as devised by CREOG includes five districts. These include District 1 (Connecticut, Maine, Massachusetts, Newfoundland, New Hampshire, New York, Nova Scotia, Quebec, Rhode Island, Vermont), District 2 (Delaware, Indiana, Kentucky, Michigan, New Jersey, Ohio, Ontario, Pennsylvania), District 3 (District of Columbia, Florida, Georgia, Maryland, North Carolina, Puerto Rico, South Carolina, Virginia, West Virginia), District 4 (Alabama, Arkansas, Illinois, Iowa, Kansas, Louisiana, Manitoba, Minnesota, Mississippi, Missouri, Nebraska, Oklahoma, Tennessee, Texas, Wisconsin), and District 5 (Alberta, Arizona, Armed Forces District, British Columbia, California, Colorado, Hawaii, Nevada, New Mexico, Oregon, Utah, Washington) [11].

## 2.2. Data Source

A comprehensive list of accredited OB/GYN (OG) programs was procured from the ACGME website [12]. Inclusion in the assessment required programs to fulfill specific criteria, including being listed in the active ACGME listings, having an identifiable online program under the same name as in the list with the referenced ACGME program number, and maintaining an accessible website with online content during the study period. Websites were thoroughly evaluated, and exclusions occurred if names correlated with multiple programs, lacked matriculation data for all residency classes or were inaccessible. JMP software (Version 16, SAS Institute Inc., Cary NC, 1989-2021) was used for calculations and reporting.

## 2.3. Data Analysis

The data collected from the survey were tabulated according to the respective DEI or wellness categories (Table 1). Diversity and wellness data were analyzed using descriptive statistics. This was primarily a descriptive study. Data was presented as % (n) or n (%) for categorical outcomes and mean (SD) or median for continuous variables. JMP v15.0 was used to perform all analyses. Given the nature of this study as a quality improvement project, it was exempted from review by the IRB. However, ethical principles were strictly adhered to throughout the research process.

**Table 1.** Variations of inclusivity efforts between two consecutive academic years

Presence of Inclusivity Characteristics on Program Websites	2022	2023	Annual Variation
Developed DEI Component of Website	23%	25%	2%
Lack of DEI in the PD or Chairman's Message	83%	64%	-19%
Dedicated DEI Officer or Resident	16%	13%	-3%
Lack of LGBTQIA—supportive pictures or verbiage	79%	79%	0%
Usage of Inclusive Pronouns	4%	21%	17%
Picture-based Gender Diversity of Faculty/Instructors	85%	76%	-9%
Picture-based Gender Diversity of Residents	77%	71%	-6%
Picture-based URiM Focused Diversity in Faculty/Instructors	65%	60%	-6%
Picture-based URiM Focused Diversity in Residents	62%	62%	0%
DEI Verbiage Included in Mission Statement/Program Goals	35%	20%	-15%
Explicit Incorporation of DEI in Curriculum/Curriculum Objectives	17%	12%	-5%
DEI Focused Research Initiatives/Projects Based on Website Research	22%	17%	-5%
Explicit Mention of Holistic Application Review Process	19%	12%	-7%
Explicit Mention of Microaggression/Implicit Bias Training for Residents	11%	10%	-1%
Explicit Mention of Microaggression/Implicit Bias Training for Faculty/Staff	10%	11%	1%

### 3. Results

In total, 560 websites were analyzed over the two-years following the Match process. Inclusivity sections of websites showed minimal change over the two years; however, there was a noticeable reduction in leadership referencing inclusivity (by 30%) and wellness (by 22%) in 2023 compared to 2022 (**Table 1**).

Wellness efforts remained unchanged in both years from the standpoint of website pages, referencing dedicated support personnel, or group activity exhibitions (**Table 2**). Wellness support was persistently the highest in District 5, with overall wellness efforts appearing unchanged between the two years across the districts.

Similarly, District 5 had the highest DEI referencing with dedicated staff and webpage provisions across both years. In 2023, references to holistic reviews were less common (by 7%), and curricula and mission statements addressed DEI less frequently (by 15%). Similarly, a 14% reduction in DEI-focused research was noted on websites, with an 8% reduction in resident testimonies.

Whereas District I showed the highest incorporation (32%) and increase (by 7%) in inclusive pronoun usage between the two years, District 5 showed the highest increase in supplementary supportive LGBTQI verbiage (by 8%). An overall 17% increase in the use of inclusive pronouns was identified across districts, while a reduction was noted in diversity in gender expression (up to 9% in faculty and 5% in residents). Similarly, a 6% - 7% reduction in the number of both URiM faculty members and residents was noted.

Regarding racial representation, District 4 had the highest loss of resident body diversity (by 21%), whereas District 3 had the highest loss of faculty diversity (by 22%). Regarding gender expression diversity, District 1 was impacted by a 30% decline in gender diversity, followed by District 3 by up to 23%

### 4. Discussion

Our research examined ACGME-approved program websites within the CREOG districts to explore the annual fluctuations in wellness and inclusivity initiatives within Obstetrics & Gynecology residency programs. Our findings uncovered substantial discrepancies in the representation of wellness and inclusivity elements on these sites, with noteworthy changes observed between the two years.

The inclusivity sections exhibited minimal variation over the two years, suggesting loss of traction towards improving diversity and inclusion. A reduction

**Table 2.** Variations of wellness efforts between two consecutive academic years

Presence of Wellness Characteristics on Program Websites	2022	2023	Annual Variation
Lack of Wellness Mentioned in the PD or Chairman's Message	84%	77%	-7%
Presence of a Wellness Page or Focus in the Website	60%	56%	-4%
Presence of a Dedicated Wellness Officer (Faculty/Resident)	22%	18%	-4%
Incorporation of Group Wellness Activities for the Residents	53%	53%	0%

in leadership referencing inclusivity and wellness in 2023 also suggests a potential decrease in the emphasis on these crucial aspects of residency programs. A 2023 review of all US OB/GYN residency program websites found that only 37% of websites had a program-specific diversity statement which was 6% less compared to Pediatric residency program websites [13].

District I showed the highest level of incorporation and an increase in inclusive pronoun usage, indicating a positive step towards inclusivity. District 5 exhibited an augmented use of LGBTQI-related language on its website. However, certain districts have experienced a decline in gender and racial diversity among faculty members and residents, underscoring the need for ongoing efforts to support underrepresented individuals. A 2003 study compared the patient satisfaction of race-concordant to race-discordant patient/physician relationships. This study found that patients with race-coordinate visits reported an overall increase in visit satisfaction, a higher physician positive rating, and a higher probability of agreeing with the physician's plan. The study concluded that, "increasing ethnic diversity among physicians may be the most direct strategy to improve health care experiences for members of ethnic minority groups [14]."

The unequal representation of racial groups in District 4 and the lack of diversity among faculty members in District 3 require special attention to promote greater diversity in these areas. A study in 2021 found that incorporation of a mission-based filter on top of baseline screening, increased the proportions of URiM applicants selected for review by 32.1% in Internal Medicine and by 37.9% in Pediatrics [15]. Additionally, the decrease in gender diversity in Districts 1 and 3 necessitates an investigation of the contributing factors that have led to this decline. A 2006 study found that between the years of 1998 to 2003, the proportion of graduating Ob/Gyn residents in New York (District 1) who were male decreased from 46.2% to 22.9% compared to a decrease of 64.0% to 59.7% in all specialties [16].

Our study underscores the need for continued efforts to advance wellness and inclusivity in Obstetrics & Gynecology residency programs across the CREOG districts. The identified disparities and variations in efforts call for targeted interventions to address these shortcomings and foster a more inclusive and supportive environment for residents and faculty members. By prioritizing DEI initiatives, enhancing holistic reviews, and increasing the representation of underrepresented groups, residency programs can create a more equitable and diverse landscape that benefits trainees, faculty, and patient care [17]. This also helps improve the recruitment of residents who align in their values with those of the program, resulting in better retention and satisfaction. Collaboration among institutions and further research is crucial for driving progress and achieving a more inclusive and representative future for residency programs and, ultimately medical student matching success.

## 5. Limitations

This study has several limitations. The researchers' reliance on personal percep-

tions of race is a limitation as race is a social construction that cannot definitively be visually confirmed [18]. Although elucidating this information from photographs is highly problematic, no alternative resource currently supplements race- or gender expression-specific inquiries about each program. Thus, pictures become the primary resource that reflects what student applicants perceive as representations in programs of interest [19]. Therefore, our study's use and correlation of such attributes aligns with what matters from an applicant's standpoint: their perception of representation.

Furthermore, our study's approach of considering one person per group on a website as an adequate representation of gender or racial diversity introduces some inherent limitations. Absent a predefined identifier of what constitutes sufficient representation, we based our selection on the consideration of good intention and investment by programs in recruiting at least one provider to initiate positive change towards diversity and representation. Additionally, the accuracy of websites as sources of institutional information is subject to certain limitations. Outdated or limited content may misrepresent a program's current efforts and diversity initiatives [20]. Furthermore, program leadership may have little control over website content, contributing to a potential increase in discrepancies. While we recognize these limitations, our study highlights the aspects of residency programs that require increased focus and effort. Further studies are necessary to evaluate self-identified race and gender among faculty and residents. Moreover, exploring other social media platforms utilized by programs such as Instagram™ may provide valuable insights and expand program involvement in DEI and wellness initiatives [21].

## 6. Conclusion

This study suggests variations in wellness and inclusivity efforts among obstetrics and gynecology residency programs across CREOG districts. The reduction in leadership referencing inclusivity and wellness, and the variations in DEI initiatives and diversity representation call for concerted efforts to address these findings. Programs should improve their websites to accurately reflect investments in wellness and equity efforts across all districts.

## Presentations

The findings of our quality improvement study were accepted for a poster presentation in October 2023 at the Central Association of Obstetrics and Gynecology (CAOG) 2023 annual meeting in Nashville, TN.

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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