

# Surveying Obstetrics and Gynecology Residents About Their Residency Applications, Interviews, and Ranking

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## ABSTRACT

**Background** Residency applications have increased in the last decade, creating growing challenges for applicants and programs.

**Objective** We evaluated factors associated with application and match into obstetrics and gynecology residency.

**Methods** During the annual in-training examination administered to all obstetrics and gynecology residents in the United States, residents were surveyed on the residency application process.

**Results** Ninety-five percent (5094 of 5347) residents responded to the survey. Thirty-six percent reported applying to 30 or fewer programs, 26.7% applied to more than 31 programs, and 37.1% opted not to answer this question. Forty-nine percent of residents received honors in their obstetrics and gynecology clerkship and 37.1% did not. The majority of residents (88.6%) reported scoring between 200 and 250 on USMLE Step 1. Eighty-six percent matched into one of their top 5 programs. The only factor associated with matching in residents' top 5 programs was receiving honors in their clerkship (OR 1.29; 95% CI 1.08–1.54;  $P < .005$ ). The only factor associated with matching below the top 5 programs was a couples match (OR 0.56; 95% CI 0.43–0.72;  $P < .001$ ). In choosing where to apply, residents identified program location and reputation as the most important factors, while for ranking, location and residency culture were the most important.

**Conclusions** Most obstetrics and gynecology residents reported matching into their top 5 choices. Receiving an honors grade in the clerkship was the only factor associated with matching in applicants' top 5 programs. Location was the most important factor for applying to and ranking of programs.

## Introduction

The number of US medical school graduates applying to residency programs in all specialties accredited by the Accreditation Council for Graduate Medical Education (ACGME) has steadily increased over time,<sup>1</sup> and this correlates with an increased average number of applications per applicant.<sup>2</sup> This increase in applications challenges an already problematic system for all stakeholders. Program directors are faced with reviewing more applications in a narrow time interval. Applicants to all specialties, regardless of the perceived competitiveness of that specialty,<sup>3</sup> feel pressured to apply to more programs and attend more interviews creating potential inequities for applicants with less resources.<sup>4,5</sup> Medical students and their advisors struggle with determining the right mix of programs and “safe” numbers of applications to submit and interview invitations to accept. For

applicants in the couples match, these concerns are amplified.

Residency programs strive to attract and recruit residents with genuine interest, who will thrive in their institutions and fit their programs' needs.<sup>4,5</sup> The Association of American Medical Colleges (AAMC) and National Resident Matching Program provide some data, but understanding what applicants are looking for in programs and the resources they use to inform application and rank list decisions can help programs improve the process. Thus, the 2018 Council on Resident Education in Obstetrics and Gynecology (CREOG) annual resident survey focused on the application process from the perspective of applicants who matched in our residency programs. The primary objective of this study was to determine if the number of applications submitted, the number of interviews attended, Step 1 scores, or honors in the obstetrics and gynecology clerkship were associated with matching higher on an applicant's list. The secondary goal was to determine the priorities of residents when applying to and ranking programs.

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*Editor's Note: The online version of this article contains the survey used in the study.*

## Methods

Volunteer leaders of the CREOG Council (including authors K.E.G., T.O., M.B.W., E.B.) developed a 22-item survey, using the Delphi method with initial group draft, several rounds of revision, and group consensus on the final survey.<sup>6</sup> The data were collected anonymously and voluntarily during the January 2018 annual in-training examination, administered to all residents in the United States. Participants were asked about their demographics and their residency applications: honors in their obstetrics and gynecology clerkship, United States Medical License Examination (USMLE) step 1 score, number of applications submitted, interview invitations received, interviews attended, and whether they matched in their top 5 or 10 choices. Finally, residents were asked about factors that they considered when applying to and ranking programs and the resources used to help them learn about each program (survey provided as online supplementary data).

Residents were asked to check a box acknowledging that the CREOG survey was voluntary and anonymous and consented to use their data for research purposes. Participants who did not check this box were excluded from the analysis. Those who did not answer an individual question were excluded from analysis of that question.

Data analysis was performed using Stata 14.2 (StataCorp LP, College Station, TX). All categorical survey data were presented as the number of subjects with percentages. Categorical and dichotomous variables were examined using the chi-square and Fisher exact tests as appropriate. Univariate logistic regression was performed to assess the association between individual covariates with matching in the respondents' top 5 programs (arbitrarily chosen to be the most desired outcome), receiving honors during the obstetrics and gynecology clerkship, and (USMLE) Step 1 score arbitrarily categorized as less than 200, 200–230, 231–250, and more than 250. Participants who answered “prefer not to answer” or “I don't know” to an individual question were excluded from analysis of that question. Odds ratios were reported with 95% confidence intervals.

Institutional review board exemption status was granted by the American College of Obstetricians and Gynecologists.

## Results

A total of 5347 examinees took the 2018 CREOG examination survey. One hundred ninety-seven respondents (3.7%) did not consent to participate and were excluded from analysis. Of the remaining 5150 survey respondents, 45 (0.9%) were not residents and

### Objectives

We sought to better understand the factors associated with the resident match in obstetrics and gynecology.

### Findings

Most residents in obstetrics and gynecology matched into 1 of their top 5 choices and cited location as the top reason for application to and ranking of programs.

### Limitations

This survey, given at the time of the in-training examination, included residents from one specialty who were matched into programs between 2014 and 2017.

### Bottom Line

Overapplication to residency programs for many students is likely unnecessary; an evidence-based approach to the match process is needed to improve the current system.

11 (0.2%) did not list their year of training so they were excluded from the analysis. Our results are based on 5094 respondents representing 95.3% of the returned surveys. The exception to this response rate was a question on the number of program applications made where the response rate was only 63%.

TABLE 1 shows the demographics of the survey respondents. Most respondents self-identified as female (79.3%, 4040), non-Hispanic (83.1%, 4235), and white (62.6%, 3190). Thirty-six percent (1847 of 5094) of respondents reported applying to 30 or fewer programs, and 26.7% (1358) applied to more than 31 programs; notably, 37.1% (1889) did not respond to this question. Over half (56.3%, 2866) of residents received more than 10 interview invitations, and only 11.9% (605) received less than 6. Most residents reported achieving a score between 200 and 250. Less than 3% (150 of 5094) of residents scored under 200 on Step 1, and less than 2% (90) of residents reported having to repeat Step 1. Forty-nine percent (2515 of 5094) of residents received honors in the clerkship, 37.1% (1889) did not, and 13.5% (690) declined to answer. When asked about the outcome of the match process, 12.1% (616 of 5094) declined to answer this question, 76.2% (3881 of 5094) of respondents reported matching into one of their top 5 choices, 8.9% (456 of 5094) matched into position 6 to 10 on their rank list, and only 2.8% (141) matched below their tenth choice.

The program characteristics that influenced resident decisions about application and rank list order are presented in TABLE 2. In choosing programs for application, residents considered location (75.2%, 3829 of 5094), reputation of the institution (61.8%, 3146), and proximity to family members (37.8%, 1925) most important. When ranking a program, location (75.7%, 3858 of 5094) was still the most important factor followed by perceived feeling of connection (72.6%, 3700) with the residents and program. TABLE 2 also shows that the most helpful

**TABLE 1**  
CREOG Survey Respondent Demographics of Resident Respondents Included in Data Analysis

Survey Responses	Resident Respondents (N = 5094), n (%)
Gender identification	
Male	803 (15.8)
Female	4040 (79.3)
Transgender/nonbinary/other	15 (0.3)
No response	236 (4.6)
Current year of residency	
PGY-1	1335 (26.2)
PGY-2	1306 (25.6)
PGY-3	1245 (24.4)
PGY-4	1208 (23.7)
Hispanic, Latino, or Spanish	
Yes	496 (9.7)
No	4235 (83.1)
Prefer not to answer	112 (2.2)
No response	251 (4.9)
Race	
American Indian/Alaska Native	14 (0.3)
Asian	670 (13.2)
Black or African American	374 (7.3)
Native Hawaiian/Pacific Islander	9 (0.2)
White	3190 (62.6)
Two or more races	225 (4.4)
Prefer not to answer	196 (3.8)
Not listed	169 (3.3)
No response	247 (4.8)
CREOG region	
Region 1 (CT, MA, ME, NH, NY, VY, Newfoundland, Nova Scotia, Quebec)	918 (18.0)
Region 2 (DE, IN, KY, MI, NJ, OH, PA, Ontario)	1207 (23.7)
Region 3 (DC, FL, GA, MD, NC, SC, VA, Puerto Rico)	771 (15.1)
Region 4 (AL, AR, IL, IA, KS, LA, MN, MS, MO, NE, OK, TX, WI, Saskatchewan, Manitoba)	1223 (24.0)
Region 5 (Armed Forces, AZ, CA, CO, HI, NV, NM, OR, UT, WA, Alberta, British Columbia)	716 (14.1)
No response	259 (5.1)
Residency program type	
University-based	2453 (48.2)
Community-based	1377 (27.0)
Military	123 (2.4)
Both university- and community-based	887 (17.4)
No response	254 (5.0)

**TABLE 1**  
CREOG Survey Respondent Demographics of Resident Respondents Included in Data Analysis (continued)

Survey Responses	Resident Respondents (N = 5094), n (%)
Number of programs applied to	
1–10	321 (6.3)
11–20	756 (14.8)
21–30	770 (15.1)
31–40	493 (9.7)
More than 40	865 (17.0)
No response	1889 (37.1)
Number of interview invitations received	
1–3	204 (4.0)
4–6	401 (7.9)
7–10	791 (15.5)
More than 10	2866 (56.3)
No response	832 (16.3)
Number of interviews attended	
1–3	248 (4.9)
4–6	509 (10.0)
7–10	1246 (24.5)
More than 10	2310 (45.4)
No response	781 (16.3)
USMLE Step 1 score	
Under 200	150 (2.9)
200–230	2241 (44.0)
231–250	1569 (30.8)
Over 250	340 (6.7)
Prefer not to answer	234 (4.6)
No response	560 (11.0)
Did you take USMLE Step 1 more than once?	
Yes	90 (1.8)
No	4379 (86.0)
Prefer not to answer	82 (1.6)
No response	543 (10.7)
Did you receive honors during your third-year OB-GYN rotation?	
Yes	2515 (49.4)
No	1889 (37.1)
Prefer not to answer	164 (3.2)
No response	526 (10.3)
Participated in couples match	
Yes	461 (9.1)
No	4333 (85.1)
Not applicable	52 (1.0)
No response	248 (4.9)

Abbreviations: CREOG, Council on Resident Education in Obstetrics and Gynecology; PGY, postgraduate year; USMLE, United States Medical Licensing Examination; OB-GYN, obstetrics and gynecology.

TABLE 2

Factors Respondents Considered Most Important When Applying to, Selecting, or Learning About Residency Programs

Applying to Programs	Respondents (N = 5094), n (%)	Learning About Programs	Respondents (N = 5094), n (%)	Selecting Programs	Respondents (N = 5094), n (%)
Location	3829 (75.2)	Interview day	4290 (84.2)	Location	3858 (75.7)
Reputation of the institution	3146 (61.8)	Meeting with residents	3846 (75.5)	Residency culture fit	3700 (72.6)
Proximity to family and/or significant others	1925 (37.8)	Meeting with faculty	2154 (42.3)	Gynecologic procedural experience	2570 (50.5)
Gynecologic procedural experience	1889 (37.1)	Program website	1876 (36.8)	Obstetrics procedural experience	1922 (37.7)
Academic rigor (ie, preparation for fellowship, publications, or academic position)	1400 (27.5)	Program social event	1804 (35.4)	Academic rigor (ie, preparation for fellowship, publications, or academic position)	1771 (34.8)
Obstetrics procedural experience	1363 (26.8)	Consulting with your peers	708 (13.9)	Global health opportunities	407 (8.0)
Presence of fellowship programs	970 (19.0)	APGO residency directory	648 (12.7)	Availability of elective rotations	259 (5.1)
Advice from faculty advisor	798 (15.7)	Consulting with your medical school advisor	508 (10.0)	Availability to complete a fourth-year medical rotation	168 (3.3)
Family friendly	543 (10.7)	ACGME website	280 (5.5)	...	...
Global health opportunities	403 (7.9)	ACOG career fair	35 (0.7)	...	...
Absence of fellowship programs	207 (4.1)	GME track website	30 (0.6)	...	...
Availability of elective rotations	175 (3.4)	...	...	...	...
Availability to complete a fourth-year medical rotation	146 (2.9)	...	...	...	...

Abbreviations: APGO, Association of Professors of Gynecology and Obstetrics; ACGME, Accreditation Council for Graduate Medical Education; ACOG, American College of Obstetricians and Gynecologists; GME, graduate medical education.

source(s) of information for applicants to learn about a program in order of preference were: the interview day (84.2%, 4290 of 5094), meeting the residents (75.5%, 3846), meeting the faculty (42.3%, 2154), the website (36.8%, 1876), and the social event (35.4%, 1804).

The association of individual applicant factors with reported match into top 5 program choices are listed in TABLE 3. Race, ethnicity, gender, and self-reported USMLE Step 1 scores were not associated with increased likelihood of matching into residents' top 5 programs. Respondents who received honors in their obstetrics and gynecology clerkship were 29% more likely than those who did not receive honors to match into their top 5 programs (OR 1.29; 95% CI 1.08–1.54;  $P = .005$ ). Participants who reported couples matching were 44% less likely to match into their top 5 choice programs relative to those who did not participate in the couples' match (OR 0.56; 95%

CI 0.43–0.72;  $P < .001$ ). Participants who applied to more than 30 programs were 27% less likely to match into their top 5 choice programs (OR 0.73; 95% CI 0.59–0.91;  $P = .004$ ). Respondents who were offered more than 10 interviews were 42% less likely to match into their top 5 programs (OR 0.58; 95% CI 0.47–0.72;  $P < .001$ ). Respondents who attended more than 10 interviews were 73% less likely to match into their top 5 programs (OR 0.27; 95% CI 0.18–0.41;  $P < .001$ ).

There were no significant associations between USMLE Step 1 scores less than 200 and number of applications sent or the position on their rank list applicants matched. Those who reported scores less than 200 were 85% (95% CI 0.10–0.22;  $P < .001$ ) less likely to receive more than 10 interview invitations and 62% (95% CI 0.26–0.57;  $P < .001$ ) less likely to attend more than 10 interviews compared to those who scored higher than 200. However, they were just

TABLE 3

Association Between Application Factors and Matching in Top 5 Choices for Residency Programs Analyzed Using Simple Logistic Regression

Covariates <sup>a</sup>	Matched Below Top 5 Programs (N = 597), n (%)	Matched in Top 5 Programs (N = 3881), n (%)	OR (95% CI)	P Value
Received honors during third-year obstetrics and gynecology clerkship	302 (51.8)	2147 (58.1)	1.29 (1.08–1.54)	.005
Couples matched	86 (14.6)	335 (8.7)	0.56 (0.43–0.72)	< .001
Number of applications sent				
1–30	194 (50.3)	1543 (58.0)	REF	.004
More than 30	192 (49.7)	1116 (42.0)	0.73 (0.59–0.91)	
Number of interview invites received				
1–10	118 (22.4)	1184 (33.3)	REF	< .001
More than 10	408 (77.6)	2376 (66.7)	0.58 (0.47–0.72)	
Number of interviews attended				
1–10	27 (14.8)	667 (39.0)	REF	< .001
More than 10	156 (85.3)	1044 (61.0)	0.27 (0.18–0.41)	

Note: Values reported as N (% of respondents to an individual survey item). Odds ratios refer to the likelihood of a resident respondent reporting to have matched in their top 5 choice programs.

<sup>a</sup> The association between race/ethnicity, gender, and Step 1 scores and matching in the applicant's top 5 choices for residency programs was analyzed and were found to be nonsignificant.

as likely to match in their top 5 programs compared to those who scored higher than 200 (87.3% vs 86.1%; OR 0.90; 95% CI 0.54–1.49;  $P = .68$ ). Residents who scored between 200 and 230 on USMLE Step 1 did not apply to significantly more programs than those who scored between 231 and 250 (OR 0.89; 95% CI 0.76–1.05;  $P = .16$ ; TABLE 4). Those who scored between 231 and 250 were significantly more likely to receive more than 10 interview invitations (OR 2.21; 95% CI 1.89–2.58;  $P < .001$ ) and attend more than 10 interviews (OR 1.56; 95% CI 1.24–1.97;  $P < .001$ ). However, residents who scored between 200 and 230 on Step 1 were just as likely to match in their top 5 programs as those who scored between 231 and 250 (OR 1.16; 95% CI 0.96–1.40;  $P = .13$ ).

TABLE 5 shows the association of application factors and having received honors during the obstetrics and gynecology clerkship. Relative to White respondents, minority applicants were less likely to report clerkship honors: Black respondents (OR 0.49; 95% CI 0.39–0.61;  $P < .001$ ), non-White respondents (OR 0.59; 95% CI 0.52–0.68;  $P < .001$ ), and Hispanic respondents (OR 0.78; 95% CI 0.64–0.95;  $P = .012$ ). Women were more likely to report receiving honors than men (OR 1.69; 95% CI 1.43–1.98;  $P < .001$ ). Those who did not report honors were more likely to submit more than 30 applications relative to those who reported honors (OR 0.79; 95% CI 0.68–0.91;  $P = .002$ ). Although those who reported honors were more likely to receive more than 10 interview invitations, compared to those who did not report

receiving honors (OR 1.71; 95% CI 1.50–1.95;  $P < .001$ ), there was no significant association between receiving honors and the number of interviews ultimately attended (OR 1.19; 95% CI 0.99–1.44;  $P = .07$ ). Those who did not receive honors during their clerkship were less likely to match into their top 5 choices (OR 0.78; 95% CI 0.65–0.92;  $P = .005$ ).

## Discussion

Over three-quarters of residents in obstetrics and gynecology reported matching into one of their top 5 choices. Despite this, students and their advisors often struggle to determine the number of residency programs needed to match successfully and may overapply out of fear of not matching.<sup>5</sup> This problem is not unique to obstetrics and gynecology; other specialties seek to discourage overapplication to allow for a more in-depth review of applications.<sup>3,7</sup> The AAMC publishes the number of programs needed to apply to successfully match.<sup>8</sup> The “point of diminishing returns” (PDR) varies by specialty, type of medical school, and Step 1 score. In allopathic US medical school graduates with a score between 214 and 229, the PDR for obstetrics and gynecology was 21 programs (95% CI 19–23), with an 82% likelihood of matching.<sup>8</sup> Our study showed that almost half of obstetrics and gynecology resident respondents reported applying to more than 20 programs. This disconnect highlights the need for a new process in the transition from undergraduate to graduate medical education.



TABLE 4

Association Between Individual Covariates and Scoring Between 200–230 vs 231–250 on the USMLE Step 1 Examination<sup>a</sup>

Covariates	Scored 200–230 (N = 2241), n (%)	Scored 231–250 (N = 1569), n (%)	OR (95% CI)	P Value
Race/Ethnicity				
White	1367 (85.2)	1107 (93.5)	REF	< .001
Black	237 (14.8)	77 (6.5)	0.40 (0.31–0.53)	
White	1367 (80.5)	1107 (83.4)	REF	.035
Asian	332 (19.5)	220 (16.6)	0.82 (0.68–0.99)	
White	1367 (66.0)	1107 (75.2)	REF	< .001
Non-White	705 (34.0)	366 (24.9)	0.64 (0.55–0.74)	
Non-Hispanic or Latino	1915 (87.1)	1413 (91.9)	REF	< .001
Hispanic or Latino	283 (12.9)	125 (8.1)	0.60 (0.48–0.75)	
Gender				
Male	381 (17.2)	223 (14.3)	REF	.019
Female	1841 (82.9)	1334 (85.7)	1.24 (1.03–1.48)	
Received honors during third-year OB-GYN clerkship	1054 (48.7)	992 (65.0)	1.95 (1.71–2.24)	< .001
Couples matched	180 (8.1)	177 (11.4)	1.45 (1.16–1.80)	< .001
Number of applications sent				
1–30	821 (53.7)	610 (56.5)	REF	.16
More than 30	708 (46.3)	470 (43.5)	0.89 (0.76–1.05)	
Number of interview invites received				
1–10	754 (37.0)	304 (21.0)	REF	< .001
More than 10	1285 (63.0)	1146 (79.0)	2.21 (1.89–2.58)	
Number of interviews attended				
1–10	390 (37.0)	141 (27.3)	REF	< .001
More than 10	665 (63.0)	376 (72.7)	1.56 (1.24–1.97)	
Matching choice				
Matched in my top 5 choices	1895 (87.2)	1313 (85.5)	REF	.13
Matched below my top 5 choices	278 (12.8)	223 (14.5)	1.16 (0.96–1.40)	
Matched in my top 10 choices	2116 (97.4)	1473 (95.9)	REF	.042
Matched below my top 10 choices	57 (2.6)	63 (4.1)	1.59 (1.10–2.29)	

Abbreviations: USMLE, United States Medical Licensing Examination; OB-GYN, obstetrics and gynecology.

Note: Values reported as N (% of respondents to an individual survey item). Odds ratios refer to the likelihood of a resident respondent reporting to have scored between 231–250 on the USMLE Step 1.

<sup>a</sup> This analysis includes only the 3810 respondents who answered this particular survey question and excludes the 1284 respondents who did not answer the question regarding USMLE Step 1 scores.

Nearly half (45.3%, 2310 of 5094) attended more than 10 interviews, but 39% (2003) attended less than 10, supporting the notion that attending fewer interviews may be sufficient for most candidates. Interestingly, applicants who attended more than 10 interviews were significantly less likely to match in their top 5 programs compared to those who attended less than 10 interviews. While we could not identify possible explanations for this, it may reflect that less competitive applicants are encouraged to apply to more programs. However, there was no significant difference in the number of applications submitted by residents scoring between 200 and 230 and those

scoring higher than 230 on Step 1. The authors cannot explain this or find an explanation in the literature but speculate that applicants who were less discriminate about their application choices were perhaps perceived as less interested when interviewed, potentially affecting how they were ranked. Other possible reasons might include professionalism issues, personality differences, communication styles, or unconscious bias. More focused application choices and working with a specialty-specific advisor to identify appropriate programs for each applicant might improve the process for both applicants and programs.<sup>9</sup>

TABLE 5

Association Between Individual Covariates and Self-Reported Honors During Third-Year Obstetrics and Gynecology Clerkship

Covariates	Did Not Receive Honors (N = 1889), n (%)	Received Honors (N = 2515), n (%)	OR (95% CI)	P Value
Race/Ethnicity				
White	1137 (85.6)	1786 (92.4)	REF	< .001
Black	191 (14.4)	146 (7.6)	0.49 (0.39–0.61)	
White	1137 (65.1)	1786 (75.9)	REF	< .001
Non-White	610 (34.9)	568 (24.1)	0.59 (0.52–0.68)	
Non-Hispanic or Latino	1632 (88.1)	2221 (90.5)	REF	.012
Hispanic or Latino	221 (11.9)	234 (9.5)	0.78 (0.64–0.95)	
Gender				
Male	378 (20.2)	326 (13.1)	REF	< .001
Female	1492 (79.8)	2171 (86.9)	1.69 (1.43–1.98)	
Couples matched	139 (7.4)	285 (11.5)	1.61 (1.30–1.99)	< .001
Number of applications sent				
1–30	699 (54.0)	1034 (59.7)	REF	.002
More than 30	596 (46.0)	697 (40.3)	0.79 (0.68–0.91)	
Number of interview invites received				
1–10	665 (38.7)	626 (27.0)	REF	< .001
More than 10	1052 (61.3)	1693 (73.0)	1.71 (1.50–1.95)	
Number of interviews attended				
1–10	347 (38.6)	335 (34.5)	REF	.07
More than 10	553 (61.4)	636 (65.5)	1.19 (0.99–1.44)	
Matching choice				
Matched in my top 5 choices	1550 (84.7)	2148 (87.7)	REF	.005
Matched below my top 5 choices	281 (15.4)	302 (12.3)	0.78 (0.65–0.92)	
Matched in my top 10 choices	1771 (96.7)	2371 (96.8)	REF	.77
Matched below my top 10 choices	60 (3.3)	79 (3.2)	0.95 (0.67–1.34)	

Note: Values reported as N (% of respondents to an individual survey item). Odds ratios refer to the likelihood of a resident respondent reporting to have received honors during their third-year obstetrics and gynecology clerkship.

A survey of obstetrics and gynecology program directors found that USMLE Step 1 score was the most common factor used to screen applicants for possible interviews, with 94% citing its importance.<sup>10</sup> However, our data suggest that the Step 1 score did not determine the likelihood of an applicant matching in their top 5 programs. This is helpful as we embark on an era when the USMLE Step 1 will be pass/fail.<sup>11</sup>

Our data suggest earning honors in the obstetrics and gynecology clerkship was the only application factor associated with the likelihood of more interview offers and matching in their top 5 programs. Not all medical schools have honors designations, and this may affect students from these schools. It is concerning that minority and male residents were less likely to have received honors in their clerkship, highlighting the need for more research on grading disparities in all specialties as training programs seek to improve gender and racial diversity.

Our findings that the most important factors influencing where applicants chose to apply were location, “reputation” of the institution, proximity to family members, followed by gynecologic procedural experience, academic rigor, and obstetric procedural experience align with a larger study on applicant priorities.<sup>12</sup> Knowledge of these may help programs to highlight information about their community and region. Our data support the literature that interviews were an important source of information about a program, and that especially with current travel restrictions, programs might optimize their websites and social media platforms with the most helpful information to applicants such as rotation schedules, research opportunities, curriculum, and culture.<sup>13</sup>

Our study has limitations. The major limitation is that 37% of residents did not disclose the number of applications submitted, creating the potential for results to be skewed either direction. Further, some

of the significant findings were modest. Only matched residents were surveyed, potentially creating a selection bias. However, the percentage of unmatched US medical students in obstetrics and gynecology programs was low at 7.1%, 8.6%, 6.4%, and 8.1% in 2014, 2015, 2016, and 2017, respectively.<sup>14–17</sup> Another limitation was that the survey administration prior to an in-service examination (a stressful event for many residents) potentially affected responses. Further, criteria for honors vary among medical schools, and medical school accomplishments were self-reported, potentially limiting respondents' recall of the details of their process, especially those more remote from the process. Despite potential recall bias, these factors tend to be meaningful to applicants, and therefore likely important enough for them to accurately remember. Finally, this survey represents match experiences that occurred between 2014 and 2017 in one specialty, perhaps limiting generalizability, and the trend of virtual interviewing in 2020 may permanently change the process.

Further research and efforts should strive for a more effective, equitable, less costly matching process. Other specialties may consider a similar survey as part of their in-training examination to better understand application, interview, and ranking decisions by students. In obstetrics and gynecology, stakeholders across the undergraduate and graduate medical education continuum have joined forces to make these improvements. The Right Resident, Right Program, Ready Day One initiative is a joint effort by CREOG and the Association of Professors of Gynecology and Obstetrics to optimize the process.<sup>18</sup>

## Conclusions

The majority of obstetrics and gynecology residents match into their top 5 programs, and the only factor favorably associated with matching in the top 5 programs was receiving honors in the clerkship. Program location was the most important factor for application and rank list decisions.

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