

Online Presence of Academic Internal Medicine Residency Programs: A Comprehensive Analysis

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Introduction Results Summary/Conclusion

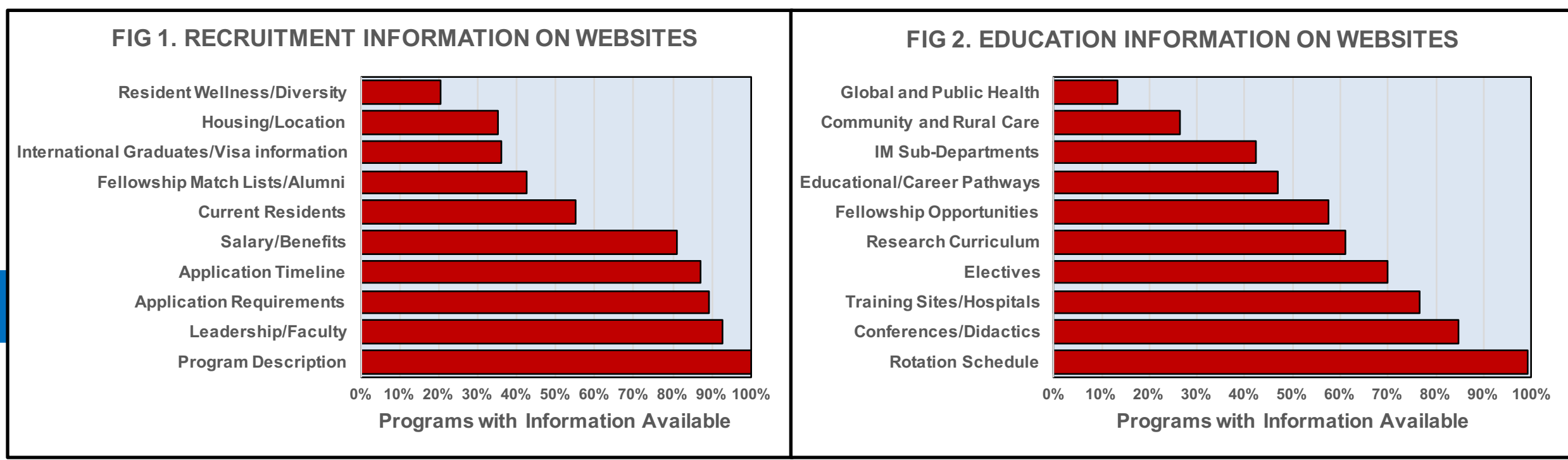
Online resources (databases, application services, rankings, websites) are integral for medical students applying to residency.

Internal Medicine (IM) is the largest and most popular medical specialty. Large variability in program characteristics necessitates clear and accurate online information about programs.

Prior studies have not investigated the quality and quantity of information that IM programs provide online.

235 of 439 programs (53.5%) met inclusion criteria (academic IM program in the U.S.)

Average IMRW scores:
Recruitment: 6.4 (range: 3-10) (Figure 1)
Education: 6.7 (range: 5-10) (Figure 2)
Overall Website Score: 6.5 ± 1.5 → on average, programs provided only 65% of the desired information.



- Main Findings:**
- Online information availability is highly variable among academic Internal Medicine residency programs.
 - IM programs lack online information in several key characteristics: resident wellness, diversity, housing location, global health, and community/rural health opportunities.
 - Programs are more likely to have comprehensive online presence if they are highly-ranked or exist in a large metropolitan area.

- Recommendations:**
- Increasing comprehensiveness of online information may attract more candidates to a program.
 - Most IM programs lack social media presence. Programs may benefit from increased activity on social platforms (i.e. Twitter) advertising their programs.
 - Useful and unique online information that programs may include: podcasts, news bulletins or newsletters, frequently-asked-questions section, virtual tour of hospital, simulations, instant message program with current residents or faculty members.

- Limitations:**
- Only able to assess the presence of variables, and unable to assess quality and appearance
 - Did not assess the informational needs of potential applicants.
 - Ordinal data (1-10 score) was converted to continuous value for ease of comparison

- Future studies:**
- Assess community IM program websites
 - Assess quality of information, appearance, and formatting of website
 - Questionnaire-based design to assess informational needs of applicants
 - Prospective studies to assess impact of social media activity and increased website comprehensiveness on web traffic and applicant quality.

Methodology

Primary Aim: cross-sectional design to identify the availability and accessibility of program information on IM residency websites (IMRW)

- Inclusion Criteria:**
- Accredited categorical IM program in the U.S.
 - Allopathic (M.D.)
 - Must be academic program (university-affiliated)
 - Participating in the Fall 2019 application cycle

- Exclusion Criteria**
- Community programs
 - Osteopathic programs (D.O.)
 - Military programs
 - Preliminary (one-year) IM programs
 - Affiliation with a Caribbean university

- Variables were collected regarding:**
1. Program Characteristics
 2. Recruitment Information on IMRW
 3. Education Information on IMRW

Websites were evaluated for the presence of a certain variable (YES vs. NO). Websites not assessed on quality. Two authors collected data, any areas of ambiguity were discussed together to reach consensus.

IMRWs assigned score in Recruitment and Education (1-10) based on # of 10 variables present on IMRW.

Programs were compared utilizing general characteristics and Recruitment and Education scores.

Internal Medicine Board Examination Passage Rate: 45.1% (n = 106) provided data on board examination passing rate.

Contact Information: 83.8% of IMRWs displayed contact information for both program director and coordinator.

Social Media Presence:
 20.4% (n = 48) had a dedicated program **Twitter account**
 8.5% (n = 20) had a dedicated program **Instagram account**
 Average # Twitter followers: 110 followers / program
 Only 11.5% (n = 27) had Twitter or Instagram account activity in the past thirty days

Mobile Website: 60.4% (n = 142) had a dedicated mobile website format

Table 1. Bivariate Comparison of Overall Website Score Utilizing Program Ranking Tools

Program Ranking Tool	Number of Programs % (n)	Overall Website Score	p value	
Program Size (# resident spots per class)	>20	58.3% (137)	6.7	< 0.05
	<20	41.7% (98)		
Top 50 Metropolitan Area	YES	63.8% (150)	6.9	< 0.05
	NO	36.2% (85)		
Doximity Program Ranking	Top 100	35.3% (83)	6.9	< 0.05
	Non-Top 100	64.7% (152)		

Table 2. Positive Predictors of Overall Website Score ≥ 7 on Multivariate Analysis

Program Characteristic	OR (95% CI)	p value
Top 100 IM Program Rank	2.04 (1.32 – 2.76)	0.0301
East Coast Location	1.62 (1.41 – 1.83)	0.0421
West Coast Location	1.50 (1.08 – 1.92)	0.0398
Top 50 Metropolitan Area	1.42 (1.31 – 1.53)	0.0323
Active Twitter Account	1.34 (1.12 – 1.56)	0.0452
Large Program Size (> 30 resident slots per year)	1.23 (1.04 – 1.42)	0.0290

Top 100 programs were more likely to include information on research curriculum, fellowship opportunities, global health electives, housing/location, resident wellness, IMG applications/visas, and alumni (all p < 0.05)

References

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