

Commentary

What are the most important factors that determine the overall quality of dermatology residency training: A resident survey

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Abstract

Currently no broadly accepted and standardized objective ranking system for dermatology residency programs exist. A new ranking system was recently developed in an attempt to address this issue. However, it remains unclear if the algorithm employed is based on factors that have a tangible impact on the quality of training provided by dermatology residency programs [1]. Our authors surveyed all current dermatology residents in order to investigate the factors that they feel are most important in determining the strength of training provided by a residency program.

Keywords: ranking systems, residency ranking, resident survey, graduate medical education, dermatology residency programs

Commentary

Although residency programs in various specialties are ranked on an annual basis by organizations such as *US News & World Report*, dermatology residency programs have historically been excluded from any sort of standardized ranking process [2]. In 2007, Wu et al. attempted to develop the first algorithm to objectively rank dermatology programs based on scholarly achievement [3]. More recently Aquino et al. attempted to refine this algorithm by developing a ranking system based on scores in four different categories: annual amount of National Institutes of Health and Dermatology Foundation funding received, number of publications from full-time faculty members, number of faculty lectures given at 5 annual society meetings, and number of full-time faculty members on editorial boards of the 6 dermatology journals having the highest impact factors [1]. Whereas this ranking system was a valid attempt to objectively rank dermatology residency programs, it remains unclear whether the factors that were selected accurately reflect the quality of resident training provided.

Our authors investigated the factors that current dermatology residents felt were most important in determining the quality of training provided by their program by distributing an online survey to residents at each of the 117 U.S. training programs. The

survey asked a single question: “In order from most important to least important, what do you feel are the three most significant factors that determine the quality of training provided by a dermatology residency program?” Respondents were then asked to choose from a drop down menu of provided answers and encouraged to write in their own response.

The study was approved for exempt status by the Wake Forest University School of Medicine Institutional Review Board. Responses to the survey were voluntary and anonymous. However demographic information about program size, geographic region, and level of training were gathered. Of the 49 responses we received, 71.4% (95% Confidence Interval [CI]: 58.8 -84.1) cited quality of clinical training provided as the most important factor determining the quality of overall training they received. Other factors residents rated as “most important” included happiness of current residents (12.2%, 95% CI: 3.0-21.4), camaraderie of current residents (8.2%, 95% CI: 0.5-15.9), number of patients seen, diversity of patients seen, and faculty invested in training competent future physicians (2% each, 95% CI: 0-6.0). A composite of the responses including factors rated as “less” and “least” important can be examined in Table I. Variances in responses from residents having different program sizes, level of training, and geographic regions were not statistically significant.

The results of our survey, limited by response rate and response bias, call into question how little previous ranking systems considered quality of clinical training in their algorithms. None of the survey respondents selected any of the criteria used in past algorithms as “most important” in determining the quality of training provided by their residency program. NIH funded faculty members and number of faculty members on the editorial boards of peer-reviewed journals each earned only a single “least important” designation. Another limitation is the definition of quality of clinical training in general because this encompasses a broad array of different aspects of graduate medical education. Future studies are needed to determine what factors best define this. Our authors plan to use the results of this survey to guide the development of a more comprehensive dermatology residency program ranking system.

Table I. Compiled survey response data.

Factor	Most Important			Less Important			Least Important		
	Responses	CI	Percentage	Responses	CI	Percentage	Responses	CI	Percentage
Quality of clinical training	35	58.8-84.1	71.4	5	1.7-18.7	10.2	1	0-6.0	2
Happiness of current residents	6	3.1-21.4	12.2	8	6.0-26.7	16.3	8	6.0-26.7	16.3
Camaraderie of current residents	4	0.5-15.8	8.2	7	4.5-24.1	14.3	7	4.5-24.1	14.3
Number of patients seen	1	0-6.0	2	0		0	0		0
Diversity of patients	1	0-6.0	2	0		0	2	0-9.6	4
Faculty invested in training competent future physicians in their field	1	0-6.1	2	0		0	0		0
Perceived "fit" during an away rotation	1	0-6.2	2	1	0-6.0	2	4	0.5-15.8	8.2
Quality of research training provided by the program	0		0	4	0.5-15.8	8.2	5	1.7-18.7	10.2
Good "fit" with the program during your interview day	0		0	4	0.5-15.8	8.2	2	0-9.6	4.1
Access to a VA hospital	0		0	3	0-12.8	6.1	1	0-6.0	2
Number of faculty members	0		0	3	0-12.8	6.1	4	0.5-15.8	8.2
Geographic location	0		0	2	0-9.6	4.1	0		0
Time spent working with faculty	0		0	2	0-9.6	4.1	1	0-6.0	2
Amount of academic time available for residents	0		0	1	0-6.0	2	3	0-12.8	6.1
Exposure to faculty in a specific subspecialty	0		0	1	0-6.0	2	0		0
Number of NIH grants	0		0	1	0-6.0	2	2	0-9.6	4.1
Openness to resident-conducted research	0		0	1	0-6.0	2	1	0-6.0	2
Number of fellowships associated with the program	0		0	1	0-6.0	2	0		0
Percentage of past residents who pursued fellowships	0		0	1	0-6.0	2	0		0
Independent treatment of patients	0		0	1	0-6.0	2	0		0
Varied clinical settings	0		0	1	0-6.0	2	0		0
Hands on experience in complex medical dermatology, surgery, and cosmetics	0		0	1	0-6.0	2	0		0
Enthusiasm of faculty to teach	0		0	1	0-6.0	2	0		0
Good benefits package	0		0	0		0	2	0-9.6	4
Number of NIH funded investigators	0		0	0		0	1	0-6.0	2
Number of full-time faculty who sit on editorial boards of peer-reviewed journals	0		0	0		0	1	0-6.0	2
Positive feedback from a friend or mentor with positive experience with a program	0		0	0		0	1	0-6.0	2
Aesthetic appearance of hospital / facilities	0		0	0		0	1	0-6.0	2
Proximity to family	0		0	0		0	2		4

References

1. Aquino LL, Wen G, Wu JJ. US dermatology residency program rankings. *Cutis*. 2014 Oct;94(4):189-94. [PMID: 25372254]
2. Residentphysician.com: NIH awards for 2005: dermatology departments.
3. Wu JJ, Ramirez CC, Alonso CA, Berman B, Tying SK. Ranking the dermatology programs based on measurements of academic achievement. *Dermatol Online J*. 2007 Jul 13;13(3):3. [PMID: 18328197]

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