

Predicting Success of Preliminary Surgical Residents: A Multi-Institutional Study

Mohammed J. Al Fayyadh, MD,* Stephanie F. Heller, MD,[†] Taufiek Konrad Rajab, MD,[‡] Aimee K. Gardner, PhD,[§] Jordan P. Bloom, MD,^{||} Jeremy A. Rawlings, BS,* John T. Mullen, MD,[¶] Douglas S. Smink, MD,[‡] David R. Farley, MD,[†] Ross E. Willis, PhD,* and Daniel L. Dent, MD*

*Department of Surgery, School of Medicine, University of Texas Health Science Center at San Antonio, San Antonio, Texas; [†]Department of Surgery, Mayo Clinic, Rochester, Minnesota; [‡]Department of Surgery, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts; [§]Department of Surgery, University of Texas Southwestern, Dallas, Texas; and ^{||}Department of Surgery, Massachusetts General Hospital and Harvard Medical School, Boston, Massachusetts

OBJECTIVE: A nondesignated preliminary surgery (NDPS) position encompasses 1 year of training provided by many general surgery residencies. Our aim was to assess factors predicting success and provide evidence for program directors to support career guidance to preliminary residents.

METHODS: Retrospective cohort study of 221 NDPS residents who entered 5 university-based institutions were identified from 2009 to 2013. Records for trainees were reviewed. We defined primary success as obtaining a categorical position in the specialty of choice and secondary success as obtaining a categorical position in any specialty immediately after finishing their NDPS training. Statistical evaluation was performed using chi-square analysis, independent *t*-test and logistic regression using $\alpha < 0.05$.

RESULTS: Of the 221 NDPS residents, 217 (98%) completed postgraduate year (PGY)-1 and 65 (29%) completed PGY-2. Totally, 90 (41%) obtained categorical general surgery positions, 89 (40%) obtained categorical positions in other specialties, and 42 (19%) failed to obtain a categorical position immediately after their NDPS years. Ultimately, 139 (63%) of residents achieved primary success and 40 (18%) additional residents obtained categorical positions in specialties other than their first choice, resulting in a total of 179 (81%) of residents obtaining categorical positions. Mean United States Medical Licensing Examination step 1 and step 2 scores for those who obtained secondary success were 227 and 234 vs. 214 and 219, respectively, for those who failed to secure a categorical position ($p < 0.01$). United States Medical Licensing

Examination step 2 score was a significant predictor of primary ($p < 0.03$) and secondary success ($p < 0.02$). Of 65 PGY-2 NDPS residents, 32 (49%) achieved primary success, and 11 (17%) others achieved secondary success for a total of 43 (66%). For PGY-2 NDPS, American Board of Surgery In-Training Examination was the only significant predictor of primary and secondary success ($p < 0.02$ and $p < 0.05$).

CONCLUSIONS: NDPS training provides a viable and successful opportunity for at least 81% of young physicians to pursue their career goals even after an unsuccessful first match. (J Surg Ed ■■■■-■■■. © 2016 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

KEY WORDS: preliminary residents, general surgery residency, resident, success, surgical education

COMPETENCIES: Systems-Based Practice, Professionalism, Interpersonal and Communication Skills

INTRODUCTION

The Accreditation Council of Graduate Medical Education categorizes general surgery residents as either categorical or preliminary.¹ As part of their requirements, categorical residents are expected to complete the residency program, assuming that their performance is satisfactory.¹ Furthermore, in each of the first 4 years of training, "... the number of categorical residents must not exceed the number of approved chief residency positions."¹ In comparison, preliminary residents are trained for either 1 or 2 years before continuing their education. In the postgraduate year (PGY)-1 and PGY-2, "the number of preliminary positions

Correspondence: Inquiries to Mohammed Al Fayyadh, MD, Department of Surgery, University of Texas Health Science Center at San Antonio, Mail Code 7737, 7703 Floyd Curl Dr. San Antonio, TX 78229-3900; fax: (210) 567-2347; E-mail: Mj.alfayyadh@gmail.com, alfayyadh@uthscsa.edu

combined must not exceed 300% of the number of approved categorical chief resident positions.”¹ Preliminary residents are further categorized into either designated preliminary surgery (DPS) or nondesignated preliminary surgery (NDPS) residents. DPS are those who have already secured a position for advanced training in another specialty after the end of 1 or 2 required preliminary years (e.g., urology). NDPS residents complete 1 or 2 years of training with no guarantee for further residency training. Program directors are required to “counsel and assist preliminary residents in obtaining future positions.”¹

NDPS positions are offered by many general surgery residency programs across the United States to medical school graduates; however, there exists debate regarding the value of those training positions. Some have criticized these positions as nothing more than “indentured servitude” whereas others have suggested the training year is a “golden opportunity.”²⁻⁸ NDPS positions are generally considered to be less desirable by applicants and their mentors as they represent an uncertain future for the resident who would require guidance and mentorship through another round of the match.² However, it has been previously reported that there is some benefit to general surgery residency programs in having these NDPS positions, including providing additional manpower and readily available replacement residents for vacancies caused by attrition.²⁻⁸ In addition, benefits to applicants include having “a foot in the door” and a good educational opportunity regardless of ultimate specialty.^{2,3}

Although, some benefits of filling those positions have been previously reported,²⁻⁸ there has been no study to examine match rates and factors predicting success across multiple institutions. In 2015, there were 1224 categorical general surgery positions that had a match rate close to 100%. In contrast, there were 1296 preliminary positions, 475 (36%) of which went unfilled.⁹ Our aim was to examine outcomes of those who entered nondesignated preliminary general surgery training and assess factors predicting success in obtaining future categorical training positions with the ultimate goal of providing program directors with evidence to support guidance of preliminary residents in career development. Our hypothesis was that the NDPS training provides a valuable opportunity for medical school graduates to further their career goals. Furthermore, we postulate that the likelihood of achieving successful placement into a categorical residency position would be dependent on United States Medical Licensing Examination (USMLE) scores for PGY-1 NDPS residents and American Board of Surgery In-Training Examination (ABSITE) scores for PGY-2 NDPS residents.

MATERIAL AND METHODS

After obtaining institutional review board approval, the records of NDPS residents were compiled from

5 university-based general surgery residency programs in the United States: the University of Texas Health Science Center at San Antonio (San Antonio, TX), Mayo Clinic (Rochester, MN), Brigham and Women’s Hospital (Boston, MA), University of Texas Southwestern (Dallas, TX), and Massachusetts General Hospital (Boston, MA). These programs were chosen as the senior author suspected they would have large and robust numbers of NDPS residents to allow for meaningful analysis. Each program submitted deidentified data from their NDPS residents from 2009 to 2013. These 5 years were chosen to allow the most recent examination scores and NDPS residents’ data available to be obtained and enough numbers of residents to allow for meaningful analysis. Only NDPS residents starting their first NDPS year were included. DPS and categorical general surgery residents were excluded.

Individual data were collected regarding each NDPS resident’s medical school of origin, years past graduation from medical school, postgraduate degrees held, any productive research experience including publications, prior residency or fellowship training, prematch career goals, USMLE scores, presence or absence of USMLE failures, ABSITE percentile scores, number of cases logged, presence or absence of clinical performance issues, specialty goal during NDPS year, number of NDPS years completed, ultimate placement, and whether placed into parent program if matching into general surgery.

Prematch goals and goals established during the preliminary year were defined and collected based on what was available in the resident records or from their program directors’ recollection based on their prior conversations with NDPS residents. Ultimate placement was defined as their immediate placement at the end of the NDPS year. We defined primary success as obtaining a categorical position in the specialty of choice based on a resident’s prematch goal and goal established during the NDPS year. Secondary success was defined as obtaining a categorical position in any graduate medical education (GME) specialty immediately after finishing their NDPS training regardless of their prematch goals and whether they finished 1 or 2 years of NDPS training. Statistical evaluation was performed using SPSS version 23 statistical software (IBM Corporation, New York, USA) using chi-square, independent *t*-test, and logistic regression using $\alpha < 0.05$.

RESULTS

Demographics

Of the 221 NDPS residents (Fig. 1), 152 (69%) completed 1 NDPS year only, 65 (29%) completed 2 NDPS years and 4 (2%) did not complete the NDPS year. For medical school of origin (Fig. 2), 57 (26%) were graduates of allopathic US medical schools (US-MD), 6 (3%) were graduates of US osteopathic medical schools (US-DO), 53

Download English Version:

<https://daneshyari.com/en/article/8835082>

Download Persian Version:

<https://daneshyari.com/article/8835082>

[Daneshyari.com](https://daneshyari.com)