

Association for Surgical Education

A nonmetropolitan surgery clerkship increases interest in a surgical career



Mackenzie R. Cook, M.D.*, Moon Yoon, B.S., John Hunter, M.D.,
Karen Kwong, M.D., Laszlo Kiraly, M.D.

Department of Surgery, Oregon Health and Science University, Mail Code L611, 3181 Southwest Sam
Jackson Park Road, Portland, OR 97239, USA

KEYWORDS:

Rural surgery;
Medical student;
Surgical education

Abstract

BACKGROUND: The optimal way to recruit the best and brightest medical students to fill the impending shortfall of general surgeons is uncertain.

METHODS: Forty-three students were placed into nonmetropolitan sites for their basic surgical clerkship over 3 years. We surveyed students and compared match trends.

RESULTS: When students selected to participate in the nonmetropolitan clerkship were examined, only 22% of students reported interest in a surgical career before their clerkship. This interest in surgery increased to 63% after the nonmetropolitan clerkship, $P < .05$. When match numbers were examined, students who completed the nonmetropolitan clerkship were significantly more likely to match to a general surgical residency than students who completed the standard clerkship (17% vs 6%, $P < .02$).

CONCLUSIONS: These data challenge the perception that students should remain at a teaching university for their introductory clerkships. It may be that pairing students with individual faculty, or chief residents, could increase interest in a surgical career.

© 2015 Elsevier Inc. All rights reserved.

The projected shortfall in general surgeons remains significant, despite increasing interest in general surgery careers.^{1,2} This shortfall may preferentially affect nonmetropolitan hospitals as they have trouble competing against urban hospitals for surgeons.² Despite significant job opportunities in general surgery, most graduating residents elect to pursue subspecialty training, furthering the need for general surgeons.³ There is, as a result, an imperative

to recruit students into surgery and provide early exposure to nonmetropolitan general surgery practices.

Students have, traditionally, been placed at large academic hospitals for their clerkships, and many students and educators believe that this is advantageous to match in surgery. This curriculum model includes student clerks on resident-staffed services at major hospitals where residents are the primary clinical teachers and mentors.⁴⁻⁶ Although many residents are very invested in student education, they routinely underestimate their impact on students and have competing demands on their time. The service, learning, and multiple teaching demands on residents' time may interfere with the mentorship and operative experience students crave.⁷⁻¹¹ A nonmetropolitan model of medical student education based on apprenticeship principles may help light a fire of interest in some students. We hypothesized that the increased participation

The authors have no conflicts of interest to disclose.

This article was presented at the 2014 meeting of the Association for Surgical Education in Chicago, IL.

* Corresponding author. Tel.: 503-494-5335; fax: 503-494-6519.

E-mail address: cookmac@ohsu.edu

Manuscript received April 18, 2014; revised manuscript August 1, 2014

in cases and close mentorship inherent in these sites would increase interest in a surgical career.

Methods

The general surgery residency at Oregon Health and Science University (OHSU) has, for the past 10 years, had a nonmetropolitan year built into the residency curriculum.^{12,13} Building from this experience, 3 nonmetropolitan surgical sites were identified as sites for third-year surgical clerkships and students first rotated during the 2008 to 2009 academic year. These sites were chosen based on 3 factors: an interested and excited faculty mentor, sufficient clinical volume for a complete education, and the absence of traditionally structured resident-based teams. During each of the 5-week blocks devoted to the third-year surgical clerkship at OHSU, students were given a list of clerkship sites (metropolitan and nonmetropolitan), and they ranked these sites in order of preference. Approximately 5 students per rotation were then directly paired with an attending surgeon at one of the 3 nonmetropolitan sites, whereas 10 to 15 students remained at the 3 metropolitan sites. Nonmetropolitan students were housed locally, and housing costs were split between the clerkship site and the OHSU School of Medicine. There was no direct monetary compensation of the local preceptors.

In addition to the clinical experience at these sites, students participated in weekly didactic sessions through electronic link with students at the main university hospital and presented learning topics to their faculty mentors and peers in an interactive format. This one-on-one interaction between nonmetropolitan students and their faculty mentors focused on clinical decision making and was in addition to the streamed lectures from the university. The video teleconferencing allowed for interactive discussions between remote students, the remainder of the class, and faculty. Students additionally participated in the academic functions of their institution, which varied by setting. These activities included morbidity and mortality conference and grand rounds. All students had electronic access to the OHSU library's resources and a required online surgical curriculum through the Web Initiative for Surgical Education Modules.

The traditional metropolitan-based clerkship is also 5 weeks long with 8 to 10 students based at the university hospital, 2 to 3 students based at the affiliated Veterans Affairs hospital, and 2 to 3 at a private tertiary care hospital in metropolitan Portland. Students are placed onto resident-based teams, which include at least an intern and a senior-level resident and often include a midlevel resident and other health care professionals. Students are based on the same general surgery service for their entire clerkship. In addition to student didactics, they attend departmental grand rounds, divisional and departmental Morbidity and Mortality conferences, and any divisional conferences pertinent to their individual service. Although medical education entails continuous process improvement, there were no major changes to the structure of this traditional clerkship within

the study period. Students on metropolitan rotations also have electronic access to the OHSU library resources and Web Initiative for Surgical Education of Medical Doctors (WISE-MD).

To determine student response to and impact of this novel clerkship, we sent out 2 surveys. The initial survey was sent a single time during the 2010 to 2011 academic year to all medical students ([Supplementary Data 1](#)). The second survey was distributed from 2008 to 2012 to students on the nonmetropolitan clerkship ([Supplementary Data 2](#)). They completed the survey before leaving for their nonmetropolitan rotation and again after completing the clerkship. The questions of both surveys were focused on the student's interest in a nonmetropolitan career and their interest in a surgical career. We additionally reviewed OHSU National Residency Match Program (NRMP) data from 2010 to 2013. These years corresponded to the match years of students who went through the nonmetropolitan surgical clerkship.

Data were gathered anonymously, compiled in Microsoft Excel (Microsoft Corporation), and analyzed using SPSS, version 22 (IBM Corporation, Armonk, NY). Data were analyzed using Fisher exact or paired *t* test and a general linear regression model of probabilities with logit link function and quasibinomial error function to model the percent of students matching to a surgical residency by year. Significance was set as $P < .05$. Approval for this study was obtained from the Institutional Review Board at the OHSU.

Results

All OHSU students were surveyed regarding their interest in nonmetropolitan practice and interest in surgery. Our response rate to the first survey, sent to the entire medical school, was 37% (180 of 535) and divided relatively equally among classes with first-, second-, third-, and fourth-year students accounting for 22.7% (41 of 180), 38.3% (69 of 180), 18.9% (34 of 180), and 15.6% (28 of 180) of the respondents, respectively. There were 4.4% (8 of 180) of students who listed their class as "other" and represented dual degree students. Class size during the time period was between 113 and 138 students. Within the respondents, 65% (117 of 180) were interested in a nonmetropolitan clerkship. Interestingly, only 33.3% (60 of 180) were interested in a nonmetropolitan practice after training, only 32.2% (58 of 180) reported any interest in a surgical career, and just 10.0% (18 of 180) were interested in a surgical career at a nonmetropolitan hospital.

Students who completed the nonmetropolitan clerkship were surveyed, and 63% (27 of 43) had complete pre- and post-rotation survey data. Students did not report a significant change in their interest in a nonmetropolitan practice after their nonmetropolitan surgical clerkship ([Fig. 1](#)). There was, however, a significant increase in the number of students reporting an interest in a surgical career after the nonmetropolitan clerkship, 22.2% (6 of 27) to 62.9% (17 of 27), $P < .05$ ([Fig. 2](#)).

Download English Version:

<https://daneshyari.com/en/article/4278349>

Download Persian Version:

<https://daneshyari.com/article/4278349>

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