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Educator and trainee perspectives on the need for a "Real World" curriculum in general surgery

Praveen Sridhar, MD,[a,*] *Sabrina E. Sanchez, MD, MPH,*[a] *Peter J. DiPasco, MD,*[b] *Lawrence Novak, MD,*[a] *Tracey Dechert, MD,*[a] *and Tejal S. Brahmbhatt, MD*[a]

[a] *Department of Surgery, Boston University School of Medicine, Boston, Massachusetts*
[b] *Department of Surgery, University of Kansas School of Medicine, Kansas City, Missouri*

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ABSTRACT

Background: The necessity of a nonclinical education for surgery residents is a topic of exploration. We examine chief resident (CR) and program director (PD) perspectives on the need for a standardized nonclinical curriculum.

Methods: PDs and CRs from accredited general surgery programs were solicited to partake in an anonymous survey. Data were analyzed using descriptive statistics.

Results: There were 42 PD and 68 CR responses. Half or more CRs lack confidence to independently determine their own worth, find a job, negotiate a contract, select disability insurance, and formulate retirement plans. PDs recognize that education in several nonclinical topics is essential for surgical residents. CRs and PDs agree on the necessity for formal education on all topics except "Burnout" ($P < 0.0001$).

Conclusions: CRs lack the confidence to navigate several nonclinical topics. PDs recognize that education in these topics is necessary. PDs and CRs agree on the need for a nonclinical education except for "Burnout", indicating a positive change in education over time, as most CRs feel they are educated adequately on this topic. Validation of a uniform curriculum is needed.

Introduction

Resident education during general surgery residency has evolved significantly over the past 2 decades.[1] This evolution includes the dedication of a portion of "in-hospital" resident working hours toward didactic, workshop, and simulation education. Furthermore, the advent of structured curricula, such as the Surgical Council on Resident Education (SCORE) curriculum, has standardized a foundation of clinical knowledge that residents should develop over the course of their surgical training.[1] While this progress has been critical to the advancement of surgical trainee education, residents, educators, and surgical graduates are now increasingly identifying gaps in nonclinical education and knowledge.

Several studies have explored deficiencies in nonclinical education, including practice management, health care policy, medical-legal issues, the business of medicine, personal financial management, contract negotiations, surgical ethics, and mentorship.[2-9] Further studies have revealed that providing didactic education in select nonclinical topics increases trainee confidence and performance as young attendings.[4,10] These results have prompted some residency programs to begin instituting nonclinical curricula, although these remain sparse and institution specific.[4,10,11] There are

* *Corresponding author*. Surgical Education Office, Boston Medical Center, 88 East Newton Street, C515, Boston, MA 02118. Tel. 617-638-8442; fax: 617-638-8409.
E-mail address: praveen.sridhar@bmc.org (P. Sridhar).
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several factors that may impact the integration of such curricula. Notably, a uniform and comprehensive lesson plan addressing all or most of the nonclinical topics studied remains elusive. The impact of program type, geographic location, and a priori trainee work experience on the willingness of educators and residents to adopt a nonclinical curriculum has not been explored. Furthermore, program director (PD) perspectives on the importance of a nonclinical education in residency remain unknown.

This study aims to assess the current landscape of nonclinical education in residency and evaluate the importance of nonclinical education during residency in the eyes of both PDs and chief residents (CRs). We hypothesized that surveying PDs and CRs may provide valuable information regarding factors influencing the adoption of such a curriculum. Finally, we introduce a pilot curriculum that has been successfully integrated into the 2-y cycle of the SCORE curriculum at our institution.

Methods

Following IRB approval, PDs from 276 general surgery residency programs and general surgery CRs from 255 general surgery residency programs accredited by the Accreditation Council of Graduate Medical Education (ACGME) were surveyed. Residency programs with no current CR class were not solicited for CR surveys, although PDs from these programs were still solicited. Programs that require approval by the Association of Program Directors in Surgery before trainee survey dissemination were not solicited for CR surveys but were sent for PD surveys. Methods for recruitment included personalized solicitation letters sent independently via electronic correspondence to PDs and to residency coordinators. Coordinators were then asked to distribute surveys to CRs. Contact and accreditation information was obtained from the ACGME database of General Surgery Residency Programs. Two follow-up reminders were sent after the initial recruitment. Surveys contained no identifying data and were administered via the institutional Research Electronic Data Capture program.[12]

Chief resident survey and variables

Demographic information, including age, sex, geographic location, prior paying work experience, and program type was collected. CRs were asked whether they perceive that they are currently being educated formally in several nonclinical topics, and responses were measured in a Likert scale categorized into negative (disagree), neutral, and positive (agree) responses. In addition, CRs were asked to indicate their level of knowledge in certain nonclinical subjects, and their confidence to independently perform several nonclinical tasks, again using a Likert scale categorized into "independent" or "dependent" (Appendix 2). CRs were not queried regarding their perceptions of the importance of research based nonclinical topics, as these may or may not be relevant to their career plans.

Descriptive statistics were performed on PD and CR responses. Given that three quarters of CRs had a prior paying job, and two-thirds of participants are engaged in academic programs, subgroup analysis comparing CR and PD answers by program type (i.e., academic, community, community with academic affiliation, and military) and CR answers by prior work experiences was performed using chi square or Fischer's exact test as appropriate.

Program director survey and variables

Demographic information for PDs, including geographic location and program type was collected. PDs were asked whether they currently have dedicated educational time and whether they follow a structured curriculum (e.g., SCORE, Scientific American Surgery, etc.) PDs were also asked whether they currently include any of several specific nonclinical topics, including health care systems, burnout, malpractice claims and lawsuits, coding and billing, reimbursement, job search, contract negotiation, and personal finance management. PDs were also asked if they felt these topics should be taught during residency. Responses were measured in a Likert scale which was then categorized into negative (disagree), neutral, and positive (agree) responses. PDs were additionally asked whether additional topics such as the creation of a productive research environment, obtaining research funding, and the understanding of resource-based relative value units are important to include in resident education. Finally, PDs were asked, if a validated lesson plan were to exist for these subjects, which topics specifically they would incorporate into their educational system (Appendix 1).

Results

There were 110 total survey respondents, including 42 PDs (17% response rate) and 68 general surgery CRs. The response rate for CR was unable to be calculated, as surveys were disseminated through residency coordinators, leaving the total number of CRs who received the survey unknown. A summary of relevant PD and CR demographics is provided in Table 1. The vast majority of PDs (98%) reported currently having dedicated educational time for their surgical residents, with 39 (93%) following a structured curriculum.

Chief resident perspectives on current nonclinical education and their confidence in their "Real World" skills

CRs were queried regarding their perceptions of the current state of their nonclinical education. Fewer than 30% of responding CRs feel as though they receive dedicated mentorship or a formal education in negotiating a contract. Less than 40% of CRs feel they are educated on navigating life as a junior attending or conducting a job search, and fewer than 50% perceive that they are educated in understanding resource-based relative value units, handling a lawsuit, or coding and billing. Notably, over 70% feel adequately educated on how to maintain a healthy work-life balance and over 80% of CRs report receiving some form of education dedicated to managing burnout.

In addition, CRs were asked to reflect on their level of confidence to perform nonclinical tasks independently (Fig. 1).