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An International Career Development Survey of Critical Care Practitioners

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Abstract

OBJECTIVE—To understand the career development needs of an international multidisciplinary group of critical care practitioners in the 21st century.

DESIGN—A web-accessible survey deployed by the In-Training Section of the Society of Critical Care Medicine (SCCM).

SETTING—University health sciences center.

SUBJECTS—Physicians (MD, DO), Advanced Practice Provider (NP, PA), Nurses (RN), Pharmacists, and Student members of the SCCM.

INTERVENTIONS—The survey covered domains of demographics, opinions about career development, and opinions about the SCCM In-Training Section.

MEASUREMENTS AND MAIN RESULTS—1,049 of approximately 16,000 SCCM members responded to the survey (7% response rate). Continuing education (280, 26.7%), leadership skills (197, 18.8%), and scientific development (192, 18.3%) are among the most important issues for the respondents. Many critical care practitioners would like to assist SCCM's efforts in career development (948, 90.4%) and many would consider some aspect of committee involvement (796, 75.9%). The SCCM In-Training Section, whose primary mission is career development across the spectrum of providers and expertise levels, needs improved advertisement (981, 93.7%). There is strong support for upcoming Annual Congresses dedicated to career development (834, 79.5%). Of the three main methods of information dissemination for SCCM career development initiatives from the In-Training Section, respondents rank email highest (762, 72.6%), followed by webpages (228, 21.7%) and I-rooms (59, 5.6%). Over half of the SCCM membership surveyed lack a career development mentor in critical care.

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Copyright Form Disclosures:

Dr. Laudanski disclosed that he does not have any potential conflicts of interest.

CONCLUSIONS—This is the largest assessment of the international critical care community regarding the career development needs of 21st century critical care practitioner, although the limited response rate makes this work prone to sampling bias. Career development issues are broad and in need of further development by the SCCM In-Training Section. Although these initiatives need improved marketing, the SCCM membership is willing to help support them and work to further shape them in the future.

Keywords

career development; survey; critical care; SCCM; In-Training; professional development; mentor

INTRODUCTION

The Society of Critical Care Medicine (SCCM) is the largest multiprofessional organization dedicated to ensuring excellence and consistency in the practice of critical care. It has nearly 16,000 members in more than 100 countries, spanning the disciplines of nursing, medicine, respiratory therapy, pharmacy, physician assistants, and other professions related to critical care. Within each of these disciplines are specialty fields and their associated students, trainees, and fellows. Naturally, these broad groups of critical care practitioners all have unique career trajectories into various locations within academia (1-3), research (4-6), government, community practice, global outreach, and/or business. However, career development needs for critical care practitioners are ill-defined and often field specific (2).

SCCM and its In-Training Section are well-positioned to understand the general career development needs of their members, and to possibly begin addressing these needs at upcoming SCCM Clinical Congresses (4, 6). The specific aim of the section is to further develop and foster trainees and young faculty in their transition process from students to medical professionals holding senior positions. The most common misconception is that only individuals currently involved in training can participate in the section, however, the section provides a common platform for all SCCM members who would like to help pursue career development regardless of their stage of professional career.

Accordingly, the In-Training Section sought to understand the career development needs of critical care practitioners in the 21st century by deploying a survey in 2011 to the SCCM membership. The research purpose was to determine the attitude towards career development by SCCM members. The additional intent was to identify those interested in spearheading career development initiatives and to hone communication methods of delivering those potential initiatives.

MATERIALS AND METHODS

In conjunction with the In-Training Section of SCCM and the Vanderbilt Institutional Review Board, we developed the survey and cover letter to be used. Additional face-to-face, phone, and electronic focus groups of non-critical care physicians and critical care practitioners (from both SCCM and locally) were used to establish face and content validity, and cognitive interviews were used for item clarification and final survey structuring. The three main domains covered were demographic (twelve questions), opinions about career development (five questions on a 6-point Likert response scale, three multiple choice questions, two dichotomous questions), and opinions about the In-Training Section (three questions on a 6-point Likert response scale, two multiple choice questions, one dichotomous question).

Both the SCCM's Research Committee and Executive Committee granted approval for distribution of this anonymous survey to all its members. The survey was opened to the SCCM membership on August 17, 2011 via email advertisement, and focused on the MD, DO, NP, PA, RN, Pharmacist, and Student members. Additionally, a web link to the survey was posted to the SCCM Research Website, and a follow-up notice was placed the SCCM e-Newsletter. The survey closed on December 14, 2011.

Study data were collected and managed using REDCap (7) (Research Electronic Data Capture) tools hosted at Vanderbilt University. Data were analyzed using Stata 12.1 (StataCorp, College Station, TX).

RESULTS

Respondent Demographics

There are 1049 respondents who fully completed the survey out the potential 16,000 members (7% response rate), with a median age of 40 (IQR: 34-50) and 438 (41.8%) were female. The survey consisted of 855 (81.5%) respondents from the United States (US); additional respondents were from 58 other countries, with the top three non-US respondents being Canada (27), India (24), and Mexico (11). MD or DO providers represented 798 (76.1%) of the cohort, while NP, PA, RN, or Pharmacist providers accounted for 246 (23.5%), and there were only 5 student respondents. The majority of respondents (640, 61.0%) had a projected/current academic or university position with >50% of their time performing clinical work. Others respondents either worked or were planning to work in community practice settings (224, 21.4%), academic or university positions with >50% research (85, 8.1%), government or VA hospitals (36, 3.4%), administrative roles (35, 3.3%), armed services or military settings (14, 1.3%), business environments (8, 0.8%), global health settings or humanitarian need areas (6, 0.6%), or pharmaceutical companies (1, 0.1%).

Of the 856 providers who had completed their clinical training, 690 (80.6%) had also completed a critical care training program. The MD/DO providers had critical care training (past or present) based in either Critical Care Medicine with an Internal Medicine base (218, 32.3%), Pediatric Critical Care (218, 32.3%), Surgical Critical Care (105, 15.5%), Anesthesia Critical Care (92, 13.6%), Critical Care Medicine with an unspecified base (35, 5.2%), or Neurocritical Care (8, 1.2%). The allied health providers had critical care training (past or present) based in either Pharmacy with critical care focus (71, 42.8%), Nurse Practitioner (NP) with critical care focus (39, 23.5%), Nurse (RN) with critical care certification (29, 17.5%), Clinical Nurse Specialist with critical care focus (14, 8.4%), additional post-graduate critical care training (10, 6.0%) or no additional post-graduate critical care training (3, 1.8%).

Opinions About Career Development in Critical Care

When respondents were asked, "What aspect of career development is most important for you", the top three responses were continuing education in critical care (280, 26.7%), leadership development (197, 18.8%), and research and scientific development (192, 18.3%), and are listed in Table 1. Global health opportunities in critical care were least important to respondents and reconfirmed when asked in a contrary manner. There are 54.2% (569) of SCCM members without a career development mentor in critical care.

Derived from a 6 point Likert scale, 948 (90.4%) of respondents would like to help with SCCM's efforts in career development (230 strongly agreed, 424 agreed, 294 agreed a little), 796 (75.9%) would be willing to work with a SCCM committee (178 strongly agreed, 303

agreed, 315 agreed a little), and 226 (21.5%) of providers would be willing to serve as career development speakers.

Opinions About the SCCM In-Training Section

The SCCM In-Training Section needs improved advertisement (204 strongly agreed, 505 agreed, 272 agreed a little) according to 981 (93.7%) of respondents. Of the three main methods of information dissemination for SCCM career development initiatives from the In-Training Section (Table 2), respondents ranked email highest (762, 72.6%), followed by webpages (228, 21.7%) and I-rooms (59, 5.6%). An I-Room is a web-based virtual space for collaborations among geographically dispersed team members.

Of the 287 (27.4%) respondents who attended the 2011 SCCM Annual Congress, only 40 (13.9%) attended the In-Training Section session. Most survey respondents were unaware the In-Training Section focused on career development (732, 69.8%). For upcoming SCCM Annual Congresses, 834 (79.5%) would consider attending a career development event organized by the In-Training section and 924 (88.1%) believe there should be more events dedicated to career development in critical care.

DISCUSSION

This is the largest assessment of the international critical care community regarding the career development needs of 21st century critical care practitioner and there are no prior published surveys on this topic, although our limited response rate makes this work prone to sampling bias. Continuing education, leadership skills, and scientific development are dominant issues for the current critical care practitioner, although it remains unclear whether knowledge gaps or implementation barriers are larger drivers of these deficits. The large need for continuing medical education (CME) activities may be related to the increasing scrutiny being paid towards self-assessment as a link to improved performance improvement and patient outcomes (8, 9), but much work is required to learn how to best disseminate this material amidst a variety of learning styles. Leadership and scientific development are two large areas important for career development in both the academic and community settings; they are often covered superficially in traditional medical education given the increasing time devoted to the ever-expanding body of medical knowledge but represent future opportunity as traditional pedagogies change to meet the needs 21st century learners (10). Notably, more than half of the respondents lack a career development mentor in critical care. The lower interest in global health efforts may be a result of current global health efforts being focused on key and basic medical tenets of infection control, and delivery of clean water, food, and housing, as opposed to coordinating complex medical care that depends on high-end resources often required for supporting the critically ill patient.

Many critical care practitioners would like to assist SCCM's efforts in career development and would consider committee involvement. Given the response rate, the In-Training Section may consider improving branding prior to future career development studies across a spectrum of providers. There is strong support for upcoming Annual Congresses dedicated to career development. Career development is an important enough topic for clinicians such that they want to be directly contacted by email, as opposed to indirect methods like webpages and I-rooms that are more selective for an actively engaged user but may be an ineffective use of resources for information dissemination.

CONCLUSIONS

Career development issues are broad and in need of further development by the SCCM In-Training Section, whose leadership is using this data to guide the committee's directives.

Although these initiatives need improved marketing, the SCCM membership is willing to help support and shape them in the future. This survey will hopefully spark deeper investigations into the career development needs of the SCCM community.

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TABLE 1

What aspect of career development is most important for you?

	ALL RESPONDENTS	CRITICAL CARE TRAINING COMPLETED	CRITICAL CARE TRAINING NOT COMPLETED
	Frequency (% Column)	Frequency (% Column)	Frequency (% Column)
Continuing education in critical care (CME)	280 (26.7)	191 (26.8)	89 (26.5)
Leadership development	197 (18.8)	160 (22.4)	37 (11.1)
Research and scientific development	192 (18.3)	131 (18.4)	61 (18.2)
Work-life balance	135 (12.9)	96 (13.5)	39 (11.6)
Job placement	87 (8.3)	34 (4.8)	53 (15.8)
Teaching skill enhancement	82 (7.8)	49 (6.9)	33 (9.8)
Job promotion	35 (3.3)	30 (4.2)	5 (1.5)
Global health opportunities	21 (2.0)	7 (1.0)	14 (4.2)
Not listed	20 (1.9)	15 (2.1)	5 (1.5)
TOTAL	1049 (100)	713 (100)	336 (100)

TABLE 2

What is the most effective method to promote career development initiatives from the SCCM In-Training Section?

	Frequency	Percent (%)
Email (SCCM E-Newsletter)	762	72.6
Webpages on www.sccm.org	228	21.7
I-Room's at www.sccm.org ^a	59	5.6

^a An I-Room is a web-based virtual space for collaborations among geographically dispersed team members