



Original Research

Relationship between medical specialty and emergency department rotation performance of postgraduate year 1 residents

Pin Liu^a, Chung-Hsien Chaou^a, Chien-Kuang Chen^a, Chip-Jin Ng^a, Chien-Hung Liao^b,
Jih-Chang Chen^a, Yu-Che Chang^{a,c,d,*}

^a Department of Emergency Medicine, Chang Gung Memorial Hospital, Linkou, Taiwan

^b Department of Traumatology and Emergency Surgery, Chang Gung Memorial Hospital, Linkou, Taiwan

^c Department of Medical Education, Chang Gung Memorial Hospital, Linkou, Taiwan

^d School of Medicine, College of Medicine, Chang Gung University, Taoyuan, Taiwan

Revised 13 March 2014; accepted 25 March 2014

Available online 23 May 2014

Abstract

Background: Before July 2011, all medical graduates chose their specialties for residency training prior to receiving a 1-month postgraduate year 1 (PGY-1) emergency medicine (EM) training in Taiwan. Therefore, the EM curriculum content may not correlate well with the chosen specialty. Accordingly, the PGY-1 trainees might learn from their EM training differently depending on specialty.

Purpose: This study explored the influence of the specialties of PGY-1 trainees on their performance in the 1-month EM training using workplace assessment tools.

Methods: This retrospective study analyzed the clinical performance of 183 PGY-1 residents who underwent a 1-month EM training program in the emergency department of a teaching hospital. Their performance was assessed using several mini-clinical evaluation exercises (mini-CEXs) and a single monthly global rating. We classified trainees into three groups based on the extent to which the specialty chosen reflected primary care. (Radiology, pathology, nuclear medicine, and anesthesiology reflected little correlation. Obstetrics and gynecology, pediatrics, otolaryngology, ophthalmology, physical medicine and rehabilitation, psychiatry, neurosurgery, neurology, orthopedics, and urology reflected some correlation. Internal medicine, general surgery, EM, and family medicine had high correlation.) We analyzed the variation in the assessment outcomes between groups using Kruskal–Wallis test.

Results: Success in achieving learning outcomes in the emergency department was proportional to the degree of general practice of the specialty chosen. This trend was statistically significant for the mini-CEX domains of medical interviewing ($p = 0.028$), clinical judgment ($p = 0.012$), physical examination ($p = 0.001$), professionalism ($p = 0.023$), and clinical skills ($p = 0.001$). Compared to the mini-CEX, the final monthly global rating showed no significant correlation between degree of learning and the trainee specialty.

Conclusion: The success of PGY-1s in achieving learning outcomes after 1-month EM training was correlated with the degree of primary care of the specialty. The structured workplace assessment tool, mini-CEX, provided a more accurate evaluation compared with the single monthly global rating score.

Copyright © 2014, Taiwan Society of Emergency Medicine. Published by Elsevier Taiwan LLC. All rights reserved.

Keywords: clinical competence; educational assessment; emergency departments; emergency medicine; global rating; medical residency; mini-CEX

* Corresponding author. Department of Emergency Medicine, Chang Gung Memorial Hospital, 5 Fushing Street, Gueishan Shiang, Taoyuan 333, Taiwan.
E-mail address: changyuche@gmail.com (Y.-C. Chang).

1. Introduction

The mini-clinical evaluation exercise (mini-CEX), a structured and reliable tool used to assess clinical performance, was first developed by the American Board of Internal Medicine in the 1970s.¹ Although initially developed only to assess trainees in internal medicine departments,² the mini-CEX has since been widely implemented in many other specialty training programs.^{3–10} Its validity, reliability, and feasibility in assessing the clinical performance of residents in various specialties had been well established.^{11–13} The tool works well in the evaluation of many types of examinees: medical students, clerks, interns, residents, or even practicing physicians.^{7–9,14–16} In a mini-CEX encounter, the faculty member acts as an evaluator to observe the workplace performance of a trainee. The trainee, either a medical student or a resident, performs a focused history taking, physical examination, or medical counseling with a real patient in the clinical setting. After the encounter, the evaluator completes a structured rating form in multiple domains related to the trainee's clinical competency. In addition to serving as an evaluation tool, the mini-CEX has an educational component; by providing timely and focused feedback to trainees, it also improves the quality of training.^{17,18}

In Taiwan, since 2003 the 3-month postgraduate year 1 (PGY-1) general medicine training program has consisted of monthly rotations in internal medicine, surgery, and community medicine departments.¹⁹ In 2006, the general medicine training was extended to 6 months. From July 2009 to June 2011, the Taiwan Department of Health required all PGY-1 residents to complete a 1-month training course in the emergency department (ED), which was integrated into the former 6-month program.²⁰ These PGY-1 residents spend the remaining 6 months of the first year in their own specialty training courses (e.g., neurology or orthopedics). They had already chosen their specialty of residency training prior to graduating from a medical school, and may receive specialty training before or after the general medicine (including ED) training, based on the 1st-year course arranged by the departmental program director of the chosen specialty.

No previous study has yet focused on the influence of specialty background on the performance of PGY-1 trainees in the ED. In an era where medical education of the emergency department was highly emphasized, adult learning theory is a crucial factor to be considered in designing emergency medicine (EM) training curriculum. We therefore hypothesize that the chosen specialties of PGY-1 trainees with a holistic approach and their professions or daily practice highly associated with EM learning contents will achieve higher mini-CEX performance score in the 1-month EM training.

2. Methods

2.1. Study design and population

This retrospective study analyzed the assessment data of mini-CEX encounters and monthly global ratings of PGY1

residents in a medical center of northern Taiwan. The study period, study population, and data collection of mini-CEXs are the same as described in our previous study, whose aim was to determine the feasibility, validity, and impact factors of the mini-CEX ratings in the ED setting (and was published in the *Journal of Acute Medicine*). In addition to monthly global rating scales, we analyzed the same raw data of mini-CEXs. We hereby quoted a part of the description of the study period and population from Chang et al's¹⁹ study.

All PGY-1 residents who underwent a 1-month training program in the ED between August 2009 and December 2010 were enrolled in our study. Their performances were assessed with the mini-CEX and a final monthly global rating. During the 1-month rotation in EM, the PGY-1 residents underwent 1 week of trauma training conducted by trauma surgeons and 3 weeks of nontrauma training conducted by emergency physicians (EPs). The core contents of the 1-month EM training contained general principles of management of common emergencies and traumatic cases, basic life support and advanced cardiac life support skills, emergency medical services system, emergency and critical transfer, disaster and mass casualty management, ethics issues and medical malpractice in the ED, substance abuse and intoxication, gynecologic and obstetric emergency, and emergency medical sociology.

The clinical competency of each PGY-1 resident was assessed with multiple mini-CEX encounters, on average 3–6. The evaluator was either an EP or a trauma surgeon, depending on the clinical situation. Each PGY-1 resident also had a single clinical tutor to guide him or her throughout the 1-month EM course. The tutor gave the trainee a single overall (global) assessment at the end of the EM training, using a traditional 100-point scale.

The ED faculty received multiple lectures and video-based workshops on rater training prior to the formal implementation of mini-CEX as an assessment tool for the PGY-1 EM training. Therefore, most evaluators were assumed to be competent to perform this workplace assessment of clinical competency using the tool provided.

Based on the degree to which the chosen specialties used a holistic approach (i.e., one that takes into consideration the biological, psychological, and social environment of the patients) and the association between the teaching contents provided in the 1-month EM training course for the PGY1 trainees and their daily practice or experience required and documented in their residency training programs, we classified the PGY-1 trainees into three groups. Group A (radiology, pathology, nuclear medicine, and anesthesiology) includes medical specialties with less of the character of a general physician using a holistic approach skill, and there was a higher disparity between EM teaching contents provided and trainees' specialty training required. Group C (internal medicine, general surgery, EM, and family medicine) contains specialties whose practice uses a holistic approach such as that of a general physician and lesser disparity between EM teaching contents provided and trainees' specialty training required. Group B (obstetrics and gynecology, pediatrics,

Download English Version:

<https://daneshyari.com/en/article/3244970>

Download Persian Version:

<https://daneshyari.com/article/3244970>

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