Practice patterns of graduates of a CCFP(EM) residency program

A survey

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Abstract

Objective To determine the practice settings of graduates of a residency program that leads to a Certificate of Special Competence in Emergency Medicine (CCFP[EM]).

Design Web-based survey using standard Dillman methodology.

Setting Canada.

Participants All graduates of the CCFP(EM) residency training program at the University of Toronto (U of T) in Ontario between 1982 and 2009.

Main outcome measures Practice type and location, job satisfaction, and nonclinical EM activities of graduates of a CCFP(EM) residency program.

Results Of 146 graduates surveyed, 88 responded (response rate of 60.3%). All of the respondents indicated that they had practised EM at some point after completing the CCFP(EM) program at U of T. At survey completion, 76.7% were practising EM. Of the EM-practising cohort, 93.9% worked in urban or suburban hospitals as opposed to rural settings. Those practising EM expressed high levels of job satisfaction, with 83.3% reporting a score of 8 or higher on a 10-point satisfaction scale. Most (57.0%) of the graduates of the CCFP(EM) residency program at U of T had participated in leadership activities in EM on local, provincial, or national levels.

Conclusion Most graduates of the CCFP(EM) residency program continue to practise EM, and most of them practise in urban and suburban environments. The low attrition rate of CCFP(EM) graduates should be regarded as a success of the CCFP(EM) program, and the geographic distribution of all physicians, including EM providers, warrants further study to help plan future physician resources in Canada.

EDITOR'S KEY POINTS

- The goal of this study was to determine the practice settings of graduates of a residency program that led to a Certificate of Special Competence in Emergency Medicine (CCFP[EM]), as well as to determine the amount and type of nonclinical EM activities in which these graduates participated.
- Nearly 77% of the respondents who completed the CCFP(EM) residency program at the University of Toronto in Ontario continued to practise EM following graduation, and most of these graduates practised in urban and suburban centres.
- Most (57%) CCFP(EM) graduates had participated in leadership activities at local, provincial, or national levels (eg, serving on hospital committees, teaching medical student and resident seminars, coordinating local disaster preparedness plans, and serving as EM program directors).

This article has been peer reviewed.
Can Fam Physician 2012;58:e385-9

Modèles de pratique des diplômés du programme de résidence en médecine d'urgence (MU) du CMFC

Une enquête

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Résumé

Objectif Déterminer les milieux de pratique des diplômés d'un programme de résidence du CMFC conduisant à un certificat de compétence spéciale en médecine d'urgence (MU).

Type d'étude Enquête via le Web à l'aide d'une méthodologie Dillman standard.

Contexte Le Canada.

Participants Tous les diplômés du programme de résidence en MU du CMFC à l'Université de Toronto (UdT), en Ontario, entre 1982 et 2009.

Principaux paramètres à l'étude Type et lieu de pratique, satisfaction vis-à-vis le travail et activités non cliniques des diplômés du programme de résidence en MU du CMFC.

Résultats Sur 146 diplômés consultés, 88 ont répondu (taux de réponse de 60,3%). Tous les répondants ont indiqué avoir fait de la MU à un certain moment après avoir complété le programme de résidence à l'UdT. Au terme de l'enquête, 76,7% faisaient de la MU. Parmi ces derniers, 93,9% travaillaient dans des hôpitaux urbains ou suburbains plutôt qu'en milieu rural. Ceux qui exerçaient en MU se disaient très satisfaits de leur travail, 83,3% d'entre eux rapportant un score de 8 ou plus sur une échelle de satisfaction comportant 10 points. La plupart des diplômés du programme de résidence en MU du CMFC à l'UdT (57,0%) avaient participé à des activités de leadership aux niveaux local, provincial ou national.

Conclusion La plupart des diplômés du programme de résidence en MU du CMFC continuent de pratiquer en MU et la majorité d'entre eux exercent en milieu urbain ou suburbain. Le faible taux d'abandon de ces diplômés devrait être considéré comme une réussite de ce programme de Mu; il faudrait aussi se pencher sur la distribution géographique de tous les médecins, incluant ceux qui dispensent des soins d'urgence, afin de mieux prévoir les ressources médicales futures au Canada.

POINTS DE REPÈRE DU RÉDACTEUR

- Cette étude avait pour but de déterminer les milieux de pratique des diplômés d'un programme de résidence du CMFC qui conduit à un certificat de compétence particulière en médecine d'urgence (MU), mais aussi d'établir la quantité et le type des activités non cliniques auxquelles ces diplômés ont participé.
- Près de 77% des répondants qui ont complété le programme de résidence en MU du CMFC à l'Université de Toronto ont continué à faire de la MU après leur diplôme; la plupart d'entre eux pratiquaient dans des centres urbains ou suburbains.
- La plupart de ces diplômés avaient participé à des activités de leadership à des niveaux local, provincial ou national (p. ex. en faisant partie de comités hospitaliers, en tenant des séminaires à l'intention des étudiants en médecine et des résidents, en participant à l'élaboration de plans en prévision de désastres locaux et en agissant comme directeurs de programme en MU).

Cet article a fait l'objet d'une révision par des pairs.
Can Fam Physician 2012;58:e385-9

The third-year residency program to achieve Certification in Emergency Medicine (CCFP[EM]) from the College of Family Physicians of Canada was designed for family medicine graduates to develop special competence in EM, recognizing that most physicians practising EM in Canada were family physicians. The primary objective was clinical competence as opposed to research or other academic interests in EM.[1] The first Certification examination was in 1982, and since then the program has expanded substantially. In 2010 approximately 120 positions were offered across Canada to family medicine residents completing their residency.[2] However, the disposition and practice settings of graduates of the program are largely unknown. To date, only 2 studies have examined the practice settings of graduates of programs that lead to acquiring CCFP(EM) designation.[3,4]

In 2002, Chan reviewed Ontario Health Insurance Plan billing records and determined that of the 345 family physicians with the CCFP(EM) designation, 56% were practising "almost all" or "mostly" EM.[3] Three years later another study surveyed CCFP(EM) graduates at the University of Western Ontario (UWO). This study showed that at the outset of training, 47% of graduates had intended to have blended careers of family medicine and EM. However, most of the graduates surveyed practised almost all EM (56%) and less than 20% were engaged in blended family and EM practices.[4]

The 2001 Institute for Clinical Evaluative Sciences *Atlas Report* on emergency department (ED) services in Ontario highlighted the growing need for EM-trained physicians. Between 1993 and 2001 there was a 20% decline in physicians practising EM. However, this report also highlighted that the proportion of ED visits provided by CCFP(EM) graduates rose from 13% to 25% and explained that these graduates saw higher volumes of patients per year than family physicians without CCFP(EM) designation.[5]

The primary objective of this study was to determine the practice settings of graduates of the CCFP(EM) residency program at U of T. A secondary objective was to determine the amount and type of nonclinical EM activities in which the CCFP(EM) graduates participated.

METHODS

Between April 15, 2009, and May 13, 2009, we surveyed all 146 physicians who had completed CCFP(EM) training at U of T between 1982 and 2009. Our survey was conducted electronically using Web-based survey software (SurveyMonkey), according to standard Dillman methodology (ie, 1 prenotification, actual survey, 3 reminders over 3 weeks).[6] Our survey consisted of 32 multiple-choice questions and was structured using logic so that respondents would be asked questions based on key responses (eg, if they had ever practised EM full time). Graduates were asked whether they had ever practised EM and whether they were currently practising EM. The latter response guided further questions to respondents, including percentage of clinical time spent in EM, type of hospital setting, whether they had practised in underserviced areas, and their level of satisfaction in EM. All graduates were also asked questions regarding nonclinical activities. Examples of these activities included holding administrative positions in EDs, serving on local, provincial, or national committees, or publishing scientific papers in peer-reviewed journals.

RESULTS

Of 146 graduates surveyed, 88 responded (response rate of 60.3%) and 86 respondents completed the entire survey. The 2 incomplete surveys were not included in the analysis of the data. The year of graduation ranged from 1982 to 2009, and respondents evenly represented this range. Respondents were 57.0% male and 43.0% female. Demographic data are summarized in **Table 1.**

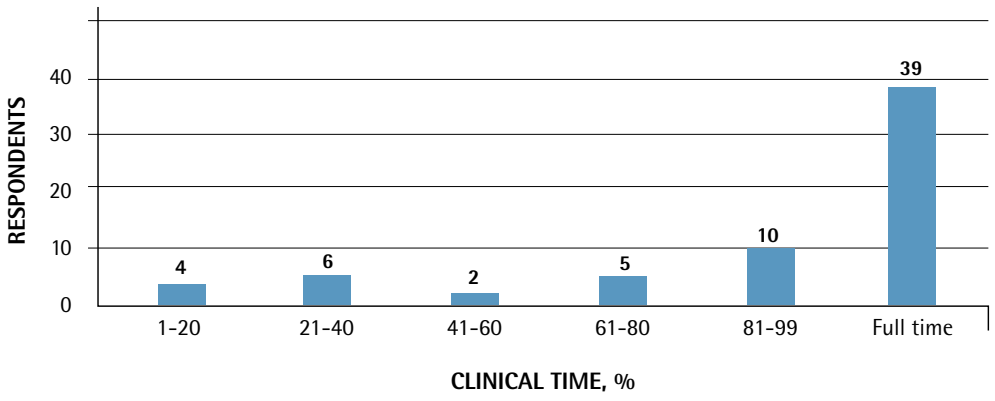
All of the respondents indicated they had practised EM at some point after completing the CCFP(EM) program at U of T, and 66 of the 86 respondents continued practising EM (76.7%). Of respondents who continued practising EM, 59.1% were exclusively practising EM full time (**Figure 1**). Of the EM-practising cohort, 93.9% spent most of their EM career working in urban or suburban hospitals as opposed to rural settings (**Figure 2**). Of all 86 respondents, 37 had practised EM in underserviced areas at some point in their careers (43.0%).

Of those practising EM, 83.3% reported a score of 8 or higher on a 10-point satisfaction scale. The respondents no longer practising EM reported lower levels of job satisfaction, with only 45.0% reporting a score of 8 or higher.

Of the respondents no longer practising EM, a variety of reasons were cited for stopping. The most commonly cited reason was preferring another area of clinical practice (40.0%), followed by having found shift work too demanding for family or personal life (25.0%). No respondents chose inadequate remuneration as a reason for discontinuing. These graduates practised EM on average 7 years (SD 4.7; range 2 to 12 years) after completing their EM training before ending their EM practice.

Most (57.0%) CCFP(EM) U of T graduates had participated in leadership activities at local, provincial, or national levels. Some examples cited by respondents included serving on hospital committees, teaching medical student and resident seminars, coordinating

Figure 1. Proportion of clinical time that EM-practising respondents spent working in ED: *N* = *66.*



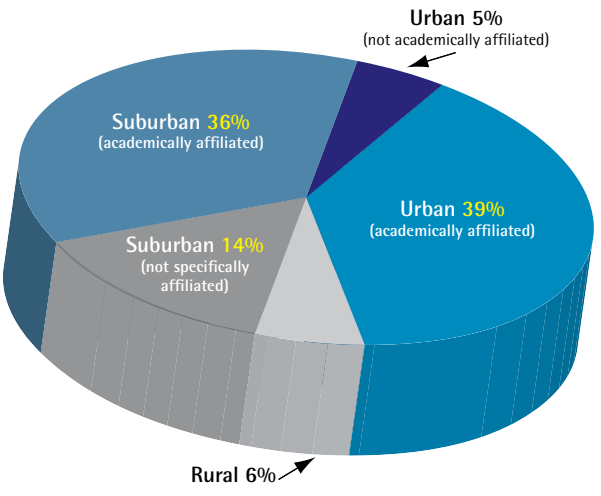
ED—emergency department, EM—emergency medicine.

Table 1. Characteristics of respondents: *N* = *86; mean age 40.6 years.*

CHARACTERISTICS	N (%)
Sex	
• Male	49 (57.0)
• Female	37 (43.0)
No. of years since EM training	
• < 5	27 (31.4)
• 5-10	19 (22.1)
• 11-15	16 (18.6)
• 16-20	15 (17.4)
• > 20	9 (10.5)

EM—emergency medicine.

Figure 2. Geographic distribution of most of EM-practising respondents' EM careers



EM—emergency medicine.

local disaster preparedness plans, and serving as EM program directors. These activities also included the 7.6% of respondents who were directors of EDs, and the 11.4% who had published academic papers and abstracts since completing their EM year.

DISCUSSION

This survey reports the practice patterns of graduates from one CCFP(EM) program. At survey completion 76.7% of graduates continued to practise EM, and most of these graduates practised in urban and suburban centres. This is the first published census reporting CCFP(EM) graduates' job satisfaction, reasons for discontinuing EM practice, and nonclinical activities.

In Canada, EDs are staffed by family physicians, family physicians with special certification in EM (CCFP[EM]), physicians who have completed EM residency programs, and physicians with American Board Certification in EM. In recent years, EM physician training has incited considerable debate among stakeholders, and there are frequent appeals for reevaluation of the current training system in Canada.[7-9] While these discussions are ongoing, graduates of CCFP(EM) programs are seeing higher proportions of total ED visits and are increasingly an integral part of the provision of emergency care in Canada.[5]

At survey completion, most of the respondents were practising EM, and less than half of graduates were practising EM full time. Given that most of the program's graduates continue to practise EM, these graduates fill much-needed roles in Canadian EDs. As indicated by Bhimani et al, in 25 southwestern Ontario EDs surveyed, only 30% of the physicians had formal EM training.[10] Furthermore, highlighted by the 2001 Institute for Clinical Evaluative Sciences *Atlas Report*, as the total number of physicians practising EM in Ontario declines, physicians who work full time in EDs are needed to provide timely and efficient emergency care.[5]

Similar to previous studies, most of the CCFP(EM) respondents practise EM in urban and suburban hospitals.[3,4] Additionally, 39.4% of the practising EM graduates describe their hospitals as urban, academic tertiary care centres. Notably, however, 43.0% of the respondents had practised EM in underserviced areas at some point in their careers. It is unclear from this survey the length of time the respondents worked in underserviced areas or why these respondents did not continue in underserviced regions. These questions warrant further study.

This study's findings highlight that the current challenge for EM does not appear to be the number of physicians practising EM but rather their disproportionate geographic distribution. Furthermore, EM physicians' geographic distribution compared with the distributions of other specialties is currently unknown. Previous studies evaluating factors influencing physicians to enter rural practice report trainees who have rural upbringing or exposure to rural postgraduate training are more likely to choose rural practice locations.[11,12] These influential factors should be considered when reevaluating the current EM training systems in Canada.

In this cohort, reasons cited for stopping EM practice are varied. It might be, therefore, CCFP(EM) graduates' reasons for choosing a practice type are equally diverse. The numerous unique responses cited as reasons for stopping EM highlight the complexity of the decision making when determining an individual physician's practice type. As reported in the UWO survey, practice type is independent of a physician's demographic variables.[4] Therefore, many considerations likely determine the career paths of CCFP(EM) graduates, and this complexity should be recognized in work force planning.

Limitations

This study has potential limitations. Robust statistical conclusions cannot be drawn from 86 respondents, despite a good response rate. Further, with survey methodology, there is possibility of selection bias. It might not be possible to generalize the findings of a survey of Toronto graduates to all Canadian CCFP(EM) programs. However, similar findings regarding practice settings of graduates were reported from UWO in 2005, which suggests this survey might be adequately representative.

Conclusion

This survey reports that most of the graduates from the CCFP(EM) residency program at U of T continue to practise EM, and most of these graduates practise in urban and suburban environments. The low attrition rate of CCFP(EM) graduates should be regarded as a success of the CCFP(EM) program, and the geographic distribution of all physicians, including EM providers, warrants further study to help plan future physician resources in Canada.

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Contributors
All authors contributed to the concept and design of the study; data gathering, analysis, and interpretation; and preparing the manuscript for submission.

Competing interests
None declared

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