

EM ADVANCES

Emergency medicine training demographics of physicians working in rural and regional southwestern Ontario emergency departments

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ABSTRACT

Objectives: We sought to determine the emergency medicine training demographics of physicians working in rural and regional emergency departments (EDs) in southwestern Ontario.

Methods: A confidential 8-item survey was mailed to ED chiefs in 32 community EDs in southwestern Ontario during the month of March 2005. This study was limited to nonacademic centres.

Results: Responses were received from 25 (78.1%) of the surveyed EDs, and demographic information on 256 physicians working in those EDs was obtained. Of this total, 181 (70.1%) physicians had no formal emergency medicine (EM) training. Most were members of the College of Family Physicians of Canada (CCFPs). The minimum qualification to work in the surveyed EDs was a CCFP in 8 EDs (32.0%) and a CCFP with Advanced Cardiac and Trauma Resuscitation Courses (ACLS and ATLS) in 17 EDs (68.0%). None of the surveyed EDs required a CCFP(EM) or FRCP(EM) certification, even in population centres larger than 50 000.

Conclusion: The majority of physicians working in southwestern Ontario community EDs graduated from family medicine residencies, and most have no formal EM training or certification. This information is of relevance to both family medicine and emergency medicine residency training programs. It should be considered in the determination of curriculum content and the appropriate number of residency positions.

Keywords: emergency medicine; rural, community, emergency physician demographics; emergency physician training, residency

RÉSUMÉ

Objectifs : Nous avons tenté de recueillir des données démographiques sur la formation en médecine d'urgence des médecins travaillant dans des salles d'urgence (SU) rurales et régionales du Sud-Ouest de l'Ontario.

Méthodes : En mars 2005, un sondage en 8 points a été envoyé par la poste aux chefs des services d'urgence dans 32 salles d'urgence du Sud-Ouest de l'Ontario. Cette étude se limitait à des centres non universitaires.

Résultats : Parmi les SU sondées, 25 (78,1 %) ont retourné le sondage, et nous avons obtenu des

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données démographiques sur 256 médecins travaillant dans ces SU. De ce nombre, 181 (70,1 %) médecins n'avaient aucune formation professionnelle en médecine d'urgence (MU). La plupart étaient membres du Collège des médecins de famille du Canada (CMFC). Huit des SU sondées (32,0 %) exigeaient, comme compétences minimales, le certificat du CMFC, et 17 SU (68,0 %) exigeaient le certificat du CMFC ainsi que le cours en soins avancés en réanimation cardiorespiratoire (ACLS) et le cours en soins avancés de réanimation des polytraumatisés (ATLS). Aucune des SU sondées n'exigeait le CMFC (MU) ni le FRCP (MU), même dans les agglomérations de plus de 50 000 habitants.

Conclusion : La majeure partie des médecins travaillant dans des SU du Sud-Ouest de l'Ontario sont des diplômés de programmes de résidence en médecine familiale et la plupart n'ont pas reçu de formation complémentaire ni d'accréditation en MU. Cette information est pertinente tant pour les programmes de formation des résidents en médecine familiale qu'en médecine d'urgence. Il faut tenir compte de cette information pour la préparation du programme d'études et la détermination du nombre adéquat de postes en résidence.

Introduction

Emergency medicine (EM) training and certification in Canada involves either 5 years of EM-specific training by the Royal College of Physicians and Surgeons of Canada (leading to an FRCPC designation), or 1 year of EM training above and beyond a 2-year family practice residency by the College of Family Physicians of Canada (leading to a CCFP[EM] designation). However, the proportion of physicians currently working in Canadian emergency departments (EDs) who actually have EM training or certification, and the certification they have, remains poorly understood.

An Ontario billing data study examined whether family physicians (FPs) with EM certification actually practised family medicine (FM) or instead practised full-time EM.¹ Physicians were classified into 4 categories according to the proportion of patient assessments that occurred in an ED over 1 year: "almost all EM" (> 90%); "mostly EM" (51%–90%); "mostly non-EM" (10%–50%); and "almost no EM" (< 10%). This study found that of the 345 FPs with EM certification, 56% were in the "almost all" or "mostly" EM categories. Physicians in these groups were younger and less likely to be in a rural practice than physicians in the other 2 categories.¹ Another study examined graduates of the CCFP(EM) program at the University of Western Ontario and found that less than 20% of graduates of this training track actually practise any FM.² While these 2 studies commented on practice patterns of CCFP(EM)-trained physicians, neither examined the level of training of the physicians who staff rural and regional EDs.

In contrast with the United States,³ the demographics of EM providers in Canada has not been formally evaluated. The JANUS project, an initiative of the College of Family Physicians of Canada to collect information on the clinical

activities of FPs, found that 24% of 13 088 FPs surveyed worked in the ED setting and 7% described the ED as their main practice setting.⁴ A more comprehensive analysis of the Canadian community ED workforce would be useful to several stakeholders to better understand the current situation and to help guide the content of physician training and the allocation of residency positions. The purpose of our study was to determine the emergency medicine training demographics of physicians working in rural and regional EDs in southwestern Ontario.

Methods

Approval was obtained from the Health Sciences Research Ethics Board of the University of Western Ontario to carry out a physician workforce survey in EDs across southwestern Ontario. A survey instrument was developed and was piloted among physicians at the St. Joseph's Family Medical Center in London, Ontario (Appendix 1).

The Southwestern Ontario Rural and Regional Medicine Unit, an academic rural medicine research and teaching facility within the University of Western Ontario, was approached to help compile a list of EDs and their physician leaders in southwestern Ontario. The EDs of 3 London, Ontario, teaching hospitals were excluded as the study was limited to nonacademic centres. Physician leaders of the remaining 32 rural and regional EDs were contacted during January and February 2005 by telephone, email or regular mail by one of the investigators, and the survey was mailed during the month of March 2005, with a letter of invitation. Participant consent was assumed upon return of the survey as explained in the letter of invitation.

The survey consisted of 8 multiple choice and fill-in-the-blank questions. Anonymity of respondents and their prac-

tice sites was ensured by coding each questionnaire with anonymous identifiers upon receipt. Means with standard deviations were generated for continuous data, and percentage frequencies were generated for categorical data. Data analyses were performed using SPSS 13.0 (SPSS Inc., Chicago, Ill.) and Microsoft Excel 2002 (Microsoft Corp., Redmond, Wash.).

Results

Responses were received from 25 (78.1%) of the surveyed EDs, and demographic information on 256 physicians working in those EDs was obtained. Twenty-three (92.0%) surveys were fully completed, and partial data was available for the remaining 2 EDs.

Of the 256 physicians working in the surveyed EDs, only 75 (29.3%) had formal EM training (8 FRCP[EM] and 67 CCFP[EM]). The remaining 181 (70.1%) physicians had no formal training in EM (Fig. 1). Most of this group had CCFP certification.

A stratification of the qualifications of physicians working in the surveyed EDs by community population indicated that:

- 10 sites (40.0%) had a community population of less than 10 000 with an average of 7.5% (range 0.0%–25.0%) physicians with EM training;
- 6 sites (24.0%) had a community population of 10 000–19 999 with an average of 30.6% (range 0.0%–83.3%) physicians with EM training;
- 6 sites (24.0%) had a community population of 20 000–49 999 with an average of 43.1% (range 0.0%–91.7%) physicians with EM training; and
- 3 sites (12.0%) had a community population of greater than 50 000 with an average of 47.2% (range 25.0%–75.0%) physicians with EM training.

Of the physicians working in the surveyed EDs, 73.7%

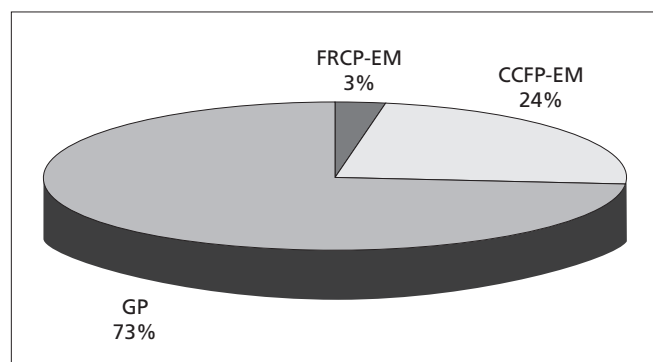


Fig. 1. Breakdown of total emergency department physicians in rural and regional southwestern Ontario by training. GP = general practitioner.

(range by ED 8.3%–100.0%) had no formal EM training. Smaller communities (< 10 000) were staffed predominantly by physicians with no formal EM training (92.5%), whereas CCFP(EM) and FRCP(EM) certified physicians were more prevalent in larger centres (Fig. 2).

The minimum qualification to work in the surveyed EDs was a CCFP in 8 EDs (32.0%) and a CCFP with Advanced Cardiac and Trauma Resuscitation Courses (ACLS and ATLS) in 17 EDs (68.0%). None of the surveyed EDs required a CCFP(EM) or an FRCP(EM) certification, even in population centres larger than 50 000.

Discussion

This study demonstrates that in community EDs in southwestern Ontario the minimum physician qualification is completion of FM training and a CCFP, usually with ACLS and ATLS certification, even in larger regional centres with populations greater than 50 000. Our findings show that the majority of surveyed physicians in the region who work in EDs originated from FM residencies (96.9%), and most (73.0%) have no formal EM training. Because physicians with no formal EM training are providing the bulk of ED coverage in the nonurban setting, FM residencies in the province of Ontario should consider providing greater EM teaching that could include mandatory EM rotations and appropriate EM seminars and lectures; and the government should consider whether the current size of EM residency programs is sufficient for the needs of the population.

Shepherd and Burden surveyed all physicians who had completed a CCFP(EM) at the University of Western Ontario from 1982 to 2004 and discovered that the majority of these physicians have worked in EM-only positions since gradua-

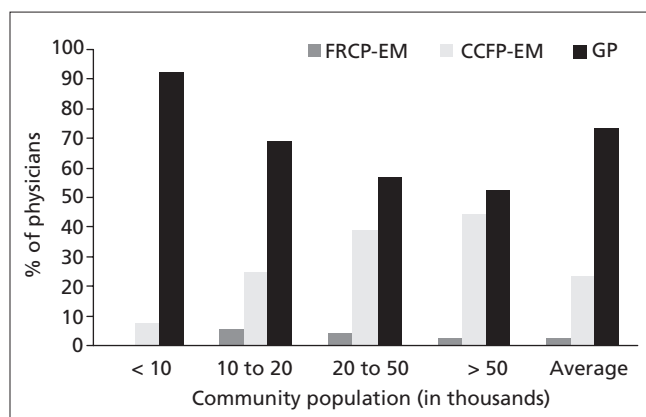


Fig. 2. Breakdown of training of emergency department physicians in rural and regional southwestern Ontario by population of practice community. GP = general practitioner.

tion. Less than 20% were engaged in a blended EM and FM practice.² Our study complements these findings and indicates that CCFP(EM)-trained physicians are much more prevalent in the EDs of larger communities.

Limitations

Because respondents to this study were the ED chiefs, it is conceivable that their responses were occasionally biased and not reflective of the opinion of their local colleagues. Physician characteristics were not captured in this study, so we cannot comment on age, sex or years of EM experience. This study excluded academic teaching centres and therefore excluded many FRCP(EM)-trained physicians. Future studies are needed to evaluate academic and tertiary care centres and to investigate the EM providers in these settings. We plan to carry out a larger study of all physicians working in EDs across Ontario to better understand training, demographics, work pattern and FM involvement of physicians in rural and regional EDs. Additionally, we hope to frame this more comprehensive information in the context of a “rurality index.” Leduc created a General Practice Rurality Index (GPRI) for Canada based on 6 factors: 1) remoteness from the closest advanced referral centre; 2) remoteness from the closest basic referral centre; 3) drawing population; 4) number of GPs; 5) number of specialists; and 6) presence of an acute care hospital.⁵ Applying such an index to the communities whose EDs are analyzed in a future study will allow correlation of the information gathered to a quantitative descriptor of each community’s rurality.

Conclusion

This study shows that in southwestern Ontario the majority of rural and regional physicians working in EDs

have trained through FM and have no formal EM training or certification. Despite the limited scope of our study, it appears that ED care is population-based and is practised differently depending on population size, as formal EM training is more prevalent in larger communities. This information is of relevance to both FM and EM residency training programs, and should be considered in the determination of curriculum content and the appropriate number of residency positions. We hope to continue this research to investigate further patterns and trends in the staffing of EDs in rural and urban areas.

Competing interests: None declared.

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Appendix 1. Survey

1. What is the population of your town?
 < 10 000 10 000–20 000 20 000–50 000 > 50 000
2. How many hospitals are there in this town?
 1 2 3 4 5
3. How many emergency rooms are there in the town?
 1 2 3 4 5
4. How many physicians staff the emergency room at your hospital? _____
5. How many of your emergency room physicians have FRCP training in EM? _____
6. How many of your emergency room physicians have CCFP-EM training? _____
7. How many of your emergency room physicians have neither CCFP-EM training nor FRCP-EM training? _____
8. What is the basic qualification required for a doctor to work in your ER?
 CCFP only CCFP with ACLS/ATLS CCFP(EM) FRCP(EM)