Manpower crisis in emergency medicine: Can residency programs make an impact?

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RÉSUMÉ : Une étude sur la main-d'œuvre canadienne menée en 1994 avait prédit une pénurie à l'échelle nationale de 562 médecins d'urgence qualifiés avant 2001. Plusieurs facteurs ont changé depuis la publication de ces données; cependant, aucun n'a changé l'ordre de grandeur de cette pénurie. À la lumière de ces renseignements, on a étudié la situation de la Edmonton Capital Health Region (CHR) et évalué l'impact des programmes de résidence en MU de l'Université de l'Alberta (CRMC [Collège Royal des médecins et chirurgiens du Canada] et CMFC [Collège des médecins de famille du Canada], créés en 1992) sur les besoins locaux en main-d'œuvre.

Le nombre de médecins d'urgence certifiés dans la CHR est passé de 9 du CRMC-MU et 2 du CMFC-MU en 1990 à 14 du CRMC-MU et 16 du CMFC-MU en 1999, soit une augmentation de 27 %. Le gain le plus important provenait du recrutement de 14 diplômés en médecine d'urgence de la région; cependant, malgré ce succès, et même avec un recrutement de 100 % des diplômés de l'Université de l'Alberta, on constate encore une pénurie importante de médecins d'urgence dans la CHR.

Cette situation n'est pas unique. Elle est le résultat d'un nombre insuffisant de postes de formations en médecine d'urgence au Canada. La seule solution possible à long terme serait d'augmenter considérablement le nombre de postes de résidence du CRMC tout en maintenant, et dans certaines juridictions en augmentant, le nombre de diplômés du CMFC.

Key words: manpower, emergency medicine, residency programs

Background

During recent years, US and Canadian emergency medicine (EM) workforce studies have been published.[1–3] A 1994 manpower study[3] suggested that by 2001, Canada will be short 562 qualified emergency physicians; however, for several reasons, this prediction may not be accurate. First, it is difficult to gauge how the changing health care environment will modify the demand for emergency physicians. Second, since the 1994 publication, the number of Canadian entry-level EM training positions (RCPSC and CFPC) has increased from 60 to 101 per year.[4] Third, while some Canadian emergency physicians are leaving the country, others are returning after completing US residencies, and transborder fluxes are difficult to quantify. Finally, the College of Family Physicians of Canada's (CFPC) practice-eligible certification option has offered an additional avenue to EM certification.[5] In our opinion, however, these variables have not substantially altered the manpower shortfalls predicted in 1994.

In light of this background information, and given the recent establishment of two EM residency programs in Edmonton, we performed a manpower review to determine the future needs for emergency physicians in the Capital Health Region (CHR), which includes metropolitan Edmonton and its surrounding municipalities.

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A Northern Alberta perspective

In 1990, the University of Alberta Faculty of Medicine created the freestanding Division of Emergency Medicine. At this time, a manpower review indicated that, of 55 emergency practitioners, 9 (16%) were Royal College certified, 2 (3%) were CCFP-EM certified and 44 (80%) had CCFP or other qualifications. Subsequent efforts to recruit trained and certified emergency physicians proved unsuccessful. Between 1990 and 1992, perhaps related to the lack of local residency programs and the geographical location of Edmonton, only 3 individuals were recruited and only one of these physicians practises in Edmonton today.

Edmonton's two EM residency programs were launched in 1992. Our first residents enrolled in the 1993–94 academic year and graduated in 1994 (CFPC-EM) and 1996 (RCPSC) respectively. The Royal College of Physicians and Surgeons of Canada (RCPSC) program accepts 3 residents each year, but the situation with our CFPC-EM program is more complex. Between 1993 and 1997, all CFPC-EM positions were reserved for physicians who agreed to relocate to rural or regional Alberta centres. Since 1997 the situation has changed: we now have 3 rural track positions and 2 unrestricted positions.

In January 1999, to assess the impact of our residency programs and to estimate our current emergency physician resources and future needs, we conducted a follow-up manpower survey. The 1999 survey identified 63 practising emergency physicians who comprise the bulk of clinical and academic EM faculty. The number of certified EM physicians has increased from 11 in 1990 to 30 in 1999, and the largest growth is in the CCFP-EM category (Table 1). A substantial proportion (43%) are 45 years or older.

While we still have a long way to go, our success in recruiting local EM graduates and other certified emergency physicians has increased since 1993 (Table 2), and the general profile has shifted significantly toward certified emergency physicians. It is noteworthy that the CFPC-EM graduates who left generally did so because of their contractual commitment to practise outside large urban centres.

The CHR EM Program Council recently addressed current and 5-year manpower needs for the region and concluded that there is an immediate need for 16.65 full time equivalent (FTE) positions and that, in 5 years, there will be an additional need for 16.75 FTE positions. The 33.4 FTE positions include 23 clinical, 2 administrative, 3.65 teaching and 3.75 research. Our current annual residency output is 3 RCPSC and 2 (urban-eligible) CCFP-EM physicians. Even in a best-case scenario, if we successfully recruit all 25 local graduates into full-time practice over the next 5 years, there will be 8.4 unfilled FTE positions.

Is this shortfall an isolated phenomenon specific to the CHR? We suspect not. While US residencies graduate 1039 emergency specialists annually,[2] Canadian residencies graduate about 20 RCPSC and 80 CCFP-EM physicians respectively.[4] The number of Royal College EM residency positions is 5 times lower (per capita) than the number of US EM positions. These statistics are troubling because they suggest that our substantial manpower shortfall is likely to continue. They also clarify how and why CFPC emergency medicine programs — which were designed to enhance the EM skills of family physicians and to provide administrators and clinical faculty for CFPC-EM programs[5] — have, by default, become a major training route for full-time urban emergency physicians. Canada needs graduates from both programs, but there is currently a serious shortage in training positions for emergency medicine (RCPSC) specialists.

Solutions

The emergency physician manpower shortage is alarming. Despite recent recruiting success, our number of EM training positions is insufficient to meet local needs and we face the certainty of a serious ongoing emergency physician shortage. This situation is not unique; it reflects the Canadian EM reality and it points to the obvious local and national solution. Canada has a large shortage of EM train-

Table 1. 1999 Edmonton Capital Health Region (CHR) manpower

Type of certification	Age group (and %)			Total
	≥ 50	45–49	< 45	
RCPS-EM	5 (8)	3 (5)	6 (9)	14 (22)
CCFP-EM	1 (2)	1 (2)	14 (22)	16 (24)
CCFP and other	13 (20)	4 (6)	17 (27)	34 (54)
Total	19 (30)	8 (13)	37 (58)	64 (100)

Table 2. Recruitment and loss of CHR emergency physicians 1993-1999

Type of change	Edmonton residency graduates		Out-of-region certified physicians		
	RCPS-EM	CCFP-EM urban	RCPS-EM	CCFP-EM	Total
Recruited	4	10*	2	2	18
Departed	2	0	1	0	3
Net	2	10	1	2	15

*Denotes inclusion of 5 graduates with a rural/regional return-in-service commitment who remained in the city.

ing positions, especially in RCPSC programs. Unless this problem is resolved, the predicted shortfall of 562 qualified emergency physicians[3] will remain a reality. Immediate resolution is impossible, but urgent planning is essential. It will take a 4- to 5-fold increase in the number of Royal College entry positions to provide long-term solutions. Unfortunately, cutbacks in health care and higher education have made it difficult for university administrators to find new funds, and convincing faculties of medicine to invest in new EM residency positions will be a huge challenge.

It is safe to assume that the total number of postgraduate training positions will remain constant and that emergency medicine will be forced to compete with other disciplines experiencing manpower shortages. Even if EM directors lobby successfully and increase the number of Royal College residency positions, it is important to maintain (and in some jurisdictions increase) the level of output of CFPC emergency medicine programs. This will preserve much needed short-term relief in urban settings and will eventually enable the CFPC-EM programs to fulfill their official mandate.

Conclusions

Edmonton's EM training programs are fulfilling their educational mandate and producing qualified emergency physicians, but they cannot provide enough graduates to meet local needs. The situation is the same across Canada; however, the solutions for the local and national EM manpower shortages are clear and feasible. The task ahead is difficult but not impossible.

Competing interests: Drs. Steiner, Yoon and Holroyd are emergency physicians. Drs. Steiner and Yoon are CFPC-EM program administrators, and Dr. Holroyd is the Director of the Division of Emergency Medicine at the University of Alberta and the Chief of Service of the Department of Emergency Medicine at the University of Alberta Hospital, Edmonton, Alta.

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