

Development of emergency medicine programs in Israel and Canada: a tale of two countries

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Introduction

The emergence and recognition of emergency medicine (EM) as a distinct discipline, with its own body of knowledge and skills, is a relatively recent development dating back to the 1970s. Canada was one of the first countries to recognize the uniqueness of EM and to develop formal training programs in the discipline.¹ Since then EM has evolved on a global level, and at least 18 countries have EM as a recognized specialty with training programs. Thirteen countries have formal board certification, 4 have formal fellowships in EM, 28 have national organizations and 27 are conducting research in the field.² In Israel, the recognition of EM as a distinct discipline has recently occurred, and the development of postgraduate training programs is evolving.

The development of EM as a distinct discipline has to meet the geographical and demographic needs of each specific country, while taking into consideration the limitations resulting from available human and financial resources. Israel has throughout its existence taken the threat of war or terrorist activity to be a fundamental component in the development of both national and local health care planning. On the other hand, in Canada, priorities were different. However, the events of September 11, 2001, may change this.

This article describes the evolution of EM in Israel in comparison to Canada. The rationale for the directions taken in Israel will be reviewed, and the future directions of EM in Israel will be explored.

National emergency medicine certification process and training in Canada

In 1973, the Royal College of Physicians and Surgeons of Canada (RCPSC) developed the *Guidelines for Residency Training in Emergency Medicine*.³ This document served as the basis for discussion and early development of EM programs in Canada. In 1976, the RCPSC and the College of Family Physicians of Canada (CFPC) formed a Con-joint Committee whose mandate was to assess the need to improve EM care and education in Canada. The mandate included the requirement to suggest some form of national certification.

On Sept. 12, 1978, the Canadian Association of Emergency Physicians (CAEP) was created. One of CAEP's objectives was to foster research and education in the field of EM in Canada.⁴ By the end of 1979 the 2 national colleges went their separate ways, and in June 1980 the RCPSC recognized EM as a free-standing specialty requiring 4 years of postgraduate training. The CFPC identified the need to upgrade EM education for family physicians and it created the administrative framework for 1-year additional training in EM.

Each college developed an examination process for the graduates of their specific EM track. The CFPC held its first examination in November 1982, and the successful candidates received a special certificate of competence in EM (CCFP-EM). The RCPSC exams followed in the fall of 1983, and the first specialists in EM (FRCPC) in Canada were registered.

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Both colleges developed, and regularly update, national guidelines for educational objectives and accreditation of training programs in EM.^{5,6} Based on review, the RCPSC decided in 1993 to extend the training program for specialist to 5 years. This allowed more elective time and opportunity for subspecialty development.

In 1982 there were 3 CFPC-sanctioned and 3 RCPSC training programs in Canada. By 2000 these numbers increased to 16 and 11 respectively, and the number of annual graduates from each stream was about 80 and 20.^{3,7} Additionally, RCPSC residents can enroll in a variety of Masters level programs such as clinical epidemiology, education or public health.

Fellowships in pediatric EM have also been accredited by the RCPSC in 7 centres, and since 2001 a national certification without examination is offered in this discipline.⁵

Clinical EM training occurs in various settings: major urban tertiary and urban community centres as well in remote regional centres and in rural hospitals. The common requirement for all these teaching sites is that they have to be affiliated with a faculty of medicine sanctioned EM program. Training in other disciplines for EM residents from both streams is subject to the same guidelines. Clinical teaching is complemented by a variety of other educational activities such as rounds, academic half days or journal clubs.

EM in Canada also provides teaching to core family medicine residents, residents from other disciplines and medical students. EM residents actively participate in the educational process of other junior learners and medical students.

The emergence in 1999 of the *Canadian Journal of Emergency Medicine (CJEM)* provided an avenue for the

publication of advances in various areas of EM, such as research, education, administration and international development.

National emergency medicine certification process and training in Israel

In Israel, all 27 general hospitals are mandated to provide EM care.⁸ In 1992, emergency departments (EDs) cared for 5 million citizens; now, the population of Israel is approximately 6.5 million. In the early 1990s physicians perceived EM practice as unattractive and EDs were often the refuge for those who could not find employment elsewhere. The medical establishment viewed EM as a necessary but not a vital part of the hospital structure. Consequently, EDs were physically small, under-equipped, and chronically understaffed. Attending staff physicians were in charge on weekdays during regular working hours, and residents from medical and surgical departments had full responsibility after hours and on weekends. Often, unsupervised junior residents were making all patient care related decisions. The ED was compartmentalized, and specific specialties such as internal medicine, pediatrics, obstetrics and gynecology, general and orthopedic surgery were providing primary patient care in their respective disciplines. Comprehensive EM care did not exist. The Gulf War in 1991 revealed to the public, and to the government, that EDs in the country were inadequately resourced, staffed and trained for massive numbers of casualties.

It is in this environment that the Israeli Association for Emergency Medicine (IAEM) was created in 1992. A small number of dedicated physicians began the struggle to convince the medical authorities and government of the importance and distinctiveness of EM as a discipline, of the absolute necessity to improve the quality of care provided in EDs and of the need to develop EM training programs.

Major changes occurred rapidly. In 1993 a national trauma system was implemented, with 6 institutions being gradually designated Level I Trauma Centres (TC). Properly funded trauma units were created within the EDs of these institutions, and 24-hour continuous care by qualified trauma surgeons became the norm. Twelve other institutions received less funds and were designated Level II TC.

Since 1994, most of the directors of the 27 EDs were replaced with younger, dedicated, career EM physicians. These individuals are all Israeli-board certified in either internal medicine, anesthesiology and intensive care, pediatrics or surgery, and they all view EM as their chosen specialty. During this same time period the government



Fig. 1. Ambulance bay of a Tel Aviv emergency department. The building on the left houses security, emergency equipment, and the wet decontamination area; it also serves as a protection for the ED from bomb blasts.

provided more than US\$100 million to redesign and modernize equipment in most EDs.

IAEM's efforts to convince the Israeli Medical Association (IMA) of the need to recognize EM as a distinct specialty were ultimately successful. IMA is the national organization responsible for the recognition of specialties in Israel. The Scientific Committee of the IMA has the role of defining and accrediting all new disciplines. In 1994, under the auspices of the IMA, the IMA Scientific Committee and the IAEM formed a joint committee, with the mandate to look at the various specialty options, including a fellowship, a primary specialty and a super-specialty track. Following a 5-year long process, EM was recognized as a super-specialty in July 1999. The term "super-specialty" was chosen because the path to certification in EM calls for fully board-certified physicians in internal medicine, surgery, anesthesiology, pediatrics, orthopedic surgery or family medicine to undergo further 2.5 years of training in EM. The EM resident is actually a specialist in a traditional discipline that is being "retrained" in the horizontal discipline of EM. The list of primary specialties that can access EM training was developed as a compromise between the wishes of many of the 54 existing specialties and the goals of the IAEM.

The process of recognition of new specialists included an initial granting of EM specialist status through "grandfathering" to 57 physicians from the 6 accredited primary specialties with at least 8 years of ED experience. This event took place in 1999–2000. A national examination process for certification of other physicians is currently being developed.

IAEM followed the standard policies of the Scientific Committee for any new discipline and has developed formal EM residency program accreditation guidelines. A committee of peers carried out the review of each prospective EM program. In Israel, all postgraduate training programs are hospital department based. An inventory of the clinical and educational capabilities of the ED that applied as well as those of the entire hospital was carried out. Full official approval as an EM program required that all of the training objectives had to be met at that hospital. To date 8 EDs have been formally approved. The residents based at these institutions will spend the entire 2.5-year training program there. Seven other EDs in smaller hospitals, which are not able to offer full exposure to major trauma and to some medical or surgical specialties and subspecialties, have received partial approval. The residents in these programs will complete their educational objectives in trauma and surgery through rotations at Level I TC. Three of the EDs have started residency programs, with 1 to 4

residents each, and a total of 7 residents are currently enrolled in EM programs.

The objectives and content of the curriculum were developed with the goal of guaranteeing clinical and academic exposure to areas of EM training that the residents were not exposed to during their previous primary specialty training. The curriculum includes a predetermined number of procedural skills and mandates exposure to a variety of clinical cases. Active participation in departmental and extra-departmental academic activities is also obligatory.

Program directors for residencies must be board certified in EM, and teaching currently is provided by full-time emergency physicians (EPs) with or without EM certification. On off-service rotations, the residents are trained by the specialists in those domains. Residents in EM will gradually take over the clinical education of medical students and residents from other disciplines. Currently this is done by both EM-certified and non-certified EPs.

Medical students exposed to EM training demanded that universities recognize and provide formal EM education. Consequently, undergraduate clinical training in the discipline has become compulsory at all 4 faculties of medicine in Israel. Training for students is provided at hospitals affiliated with faculties of medicine on a regional basis.

The Faculty of Medicine at the Tel Aviv University has provided CME annually in EM to 35–40 EPs for the last 7 years. This program, along with the undergraduate teaching, is one of the stepping stones in the advancement of academic EM in Israel.

Faculty development is currently sustained through funds provided from generous donations made by the Dreznick–Gottlieb families and their supporters in the US.



Fig. 2. The 3-cm steel doors to the entrance of the ED can provide a hermetic lockdown. The ED can function as a self-contained unit for 24 hours in case of biochemical attacks.

Annually, 2 junior and 2 senior EPs are sent to US academic EDs for 4- to 6-week mini fellowships. These Israeli physicians are chosen for their long-term commitment to EM. Advanced Cardiac Life Support (ACLS) courses are now mandatory for all physicians working in EDs and will soon be mandatory for all Israeli physicians. The IAEM has had a major role in this process. Academic activities by the IAEM include a nationally and internationally attended annual meeting as well as national quarterly meetings.

IAEM has 150 members, and representatives have been appointed to all the national bodies relevant to EM. These include the IMA's powerful Scientific Committee, the National Trauma Committee, Magen David Adom (Israel's National Emergency Medical Service), the National Disaster Preparedness Committee and other agencies. Participation of IAEM on these governing agencies is giving it a voice in decision-making in all topics relevant to EM at a national level.

The *Israeli Journal of Trauma, Intensive Care, and Emergency Medicine* began publication in the spring of 2001. It is anticipated that the evolution of this Journal will offer a forum for the dissemination of academic, clinical and research initiatives for Israeli EPs and will provide the discipline with enhanced academic respectability.

Discussion

In the process of developing EM, Israeli EPs had to deal with problems both similar and different from those encountered by colleagues in Canada.

Limited funding and low prioritization for EM by decision-makers in the government are major impediments in both countries. However, in Israel the security needs of the state dictate the priorities of funding allocations. Money for health care and education are provided exclusively by the national government, whereas in Canada funds for direct patient care and education fall under provincial jurisdiction.

The Israeli approach to EM training is different than in Canada (Table 1). A single national governing body, the IMA, has recognized EM as a super-specialty. The reasons for this choice are 2-fold: a skeptical attitude by the Scientific Committee regarding the EM ability to train physicians into the breadth and depth of EM in a 5-year program, and the perception that this time period would not be sufficient to produce a clinically experienced and mature physician for the specific needs of Israel.

The EM residencies have much less detailed objectives, are less subject to formal national guidelines and offer a more flexible curriculum than those in Canada. This allows EM trainees who are already board-certified in 1 of the 6 primary disciplines to develop more individualized training. Lastly, residencies are hospital-based, not faculty of medicine based, and the advantages or disadvantages of this last point are debatable.

The deeply rooted negative preconceptions within the traditional medical establishment regarding the ability of EPs to deliver quality patient care and EM education is probably more acute in Israel because EM has not fully established its credibility. Time is essential to develop a critical mass of knowledgeable clinicians, respected educators and researchers in EM, and, until this occurs, the discipline will be under constant scrutiny by others. Also, turf protection by established medical specialties in Israel is at probably the same stage that EM in Canada experienced earlier in its development.

ED clinical practice is unattractive in Israel because EPs are salaried state employees. The EP remuneration system is insensitive to the law of supply and demand. There is no financial benefit to train in a super-specialty, and those who do it do so either because of their love of the discipline or for a lack of better job alternative in a system that has an overabundance of physicians. Despite this, prospective EPs have to compete for jobs with other specialties. The income to sustain current residency positions and even

Table 1. Canadian and Israeli residency training programs: current status

National accrediting body	Canada		Israel
	RCPSC	CFPC	IMA
Certification	Specialty	Competence in EM	Super-specialty
Examination	National	National	In development
No. of training programs	11	16	10 (3*)
No. of annual graduates	20	80	7†
Curriculum / objectives	Standardized	Standardized	Flexible
Administrative authority	Faculty of medicine	Faculty of medicine	Hospital ED

* Active programs
† Expected year of graduation: 2003–2004
RCPSC = Royal College of Physicians and Surgeons of Canada; CFPC = College of Family Physicians of Canada; IAM = Israeli Medical Association; EM = emergency medicine; ED = emergency department

some attending staff positions in other traditional disciplines comes from providing clinical coverage for the ED, and switching to full-time EPs would entail loss of training and attending positions for these departments.

The weekly clinical workload includes at least 40 hours and 1 or more 24-hour calls. There are no foreseeable changes to this situation in the future. Often, EPs supplement their income by working in private practices in their primary area of specialization. The combination of heavy workload and low pay leads to short “burn out” times for Israeli EPs. In contrast, in Canada most EPs have control over their work and ED teaching environment, they have a range of 22 to 43 clinical hours per week, the practice of EM is the sole source of income for most full time EPs and they are generally not forced to supplement their income through other clinical activities. This leads to more stable clinical teaching faculty human resources.

In Israel, academic recognition for EPs has been poor. There are only a few individuals who have received junior level academic appointments. The academic discipline suffers greatly from a lack of protected academic time and money. This leads to difficulties in improving the educational and research products. Recruiting of top-notch individuals is difficult for a discipline that currently commands relatively low peer esteem. In spite of this, a growing number of Israeli EPs are becoming prolific researchers, and many are becoming deeply involved in university teaching activities. The new generation of medical students per-

ceives EM as an attractive future professional environment. This situation is not dissimilar to Canada where, with a few notable exceptions, lack of support and recognition by the faculties of medicine is still the norm for most EM programs, teachers and researchers.⁸

The problems faced by Israeli EM have generally failed to gain wide media coverage, which tends to lead to public apathy. In Canada, the public is generally well informed about clinical but not academic issues facing EM; however, politicians generally are not very responsive to public opinion on these matters.

Future directions in Israel

The medical and political climate is changing slowly in favour of EM. This modification is important for the long-term development of the specialty. Future goals include completion of the national certification process, recruitment of EM leaders, improvement in the clinical care delivery modules, upgrading of the EPs’ academic work environment and improvement in the working relationships with other disciplines. Other important goals include the development of all aspects of academic EM in Israel, the total integration of EM into all the national decision-making bodies that are relevant to the delivery of the highest quality of care to the Israeli public, and the continued cooperation with other national and international EM bodies in humanitarian activities and EM development (Table 2).

Table 2. Future directions in Israeli emergency medicine development

1. Develop the national EM examination and certification process for residency programs.
2. Attract high-quality individuals, who will form the next generation of EM leaders, educators, decision-makers and researchers.
3. Gradually shift EM clinical care delivery from a fragmented system to a unified one with 24/7 coverage by EPs.
4. Limit EP shift duration to 12 hours or less.
5. Develop QA/QI tools to ensure the quality of practice and of the training.
6. Increase remuneration, provide openings of career opportunities in academia though protected academic and management time.
7. Ensure and develop a continuous cooperation with the established specialties in areas of clinical care, education and collaborative research.
8. Involve EPs in all aspects of EM education, at all levels, including academic teaching at universities, nursing schools, CME and public education.
9. Strive for excellence in teaching and support medical education related developments and research.
10. Develop, initially, clinical and epidemiological research in EM, with a view to advance into basic sciences at a later date.
11. Involve EM professionals in all relevant advisory and decision-making bodies at the national level and all aspects of emergency medical services (EMS) including the development of data management systems specifically for EM/EMS.
12. Provide EM leadership in the development, planning and implementation of civilian national preparedness for disasters and multiple casualty incidents.
13. Develop further international cooperation with established EM bodies, such as the Canadian and US colleges.
14. Continue IAEM’s involvement in humanitarian assistance in areas such as disaster relief, teaching and EM/EMS development in the developing world.

QA/QI = Quality assurance / quality improvement.; IAEM = Israeli Association for Emergency Medicine

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