

History of the Development of International Emergency Medicine

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International emergency medicine (EM) represents a new subspecialty, and most of its developmental history has occurred in the last decade or so. International EM consists of a number of different activities. These include developing EM and EMS training programs, developing clinical EM facilities, developing EM as a recognized specialty, charity clinical service, staffing expatriate medical facilities, re-patriation of United States patients from other countries, conducting exchange programs for health care personnel, and operating travel medicine clinics. This article reviews important milestones in the development of EM internationally; compares, in parallel, the timelines of EM development in different countries; and presents the general status of international EM.

There are a number of reasons for the rapidly increasing interest in international EM over the last decade. There has been a recent awakening by many countries that they should develop EM as a specialty [1-6]. EM in the United States, the United Kingdom, and a few other countries has fully matured as a specialty and thus acts as an example for EM development in other countries [7]. The collapse of the Soviet block has opened up multiple countries to people and new ideas (such as EM) from the outside. Multiple international EM conferences have been launched within the past decade.

Recently, there has been greatly increased support for international development from various national EM organization leaders [2,4,8,9].

There are also a number of reasons for recent increasing interest in developing EM within other countries [5,6,9]. These include the general overall medical system improvement in most countries. Also, virtually all countries are undergoing urbanization of their populations, with a demographic transition from infectious diseases to trauma and cardiorespiratory diseases, which are well handled by the specialty of EM. There are increasing outpatient visits and an increasing percentage of elderly patients who require EM services more frequently [10-13]. There has been the demonstrated success of EM in the United States and a few other countries, and this has become known to people throughout the world partly from popular television shows such as ER, Rescue 911, and Casualty. This demonstrated success of EM has increased public expectations for EM system improvement in many countries. In addition, increased international travel and terrorist and other mass casualty events have contributed to the push for EM system development in a number of countries.

Early emergency medicine system development

EM is a young specialty that has become well established and mature in a relatively small number of countries. EM in the United States, United Kingdom, Australia, Canada, Hong Kong, and Singapore can be regarded as a mature specialty. Early development of the specialty in these countries proceeded more or less in parallel, with perhaps much of the initial stimulus coming from the United States, in which the specialty developed first. Table 1 shows the comparative milestone years for EM development in these countries with mature EM. Some of the years are debatable in that there were different organizations in several of the countries involved in EM and academic development, and in some of the countries there was not a separate academic society but rather an academic subunit of a national society. With maturation of EM as a specialty in these countries, a number of EM practitioners in the early 1990s started to turn their attention to developing

Table 1
Comparative milestone years for emergency medicine development in the countries with mature emergency medicine

	United States	United Kingdom	Australia	Canada	Hong Kong	Singapore
Recognized specialty	1973	1986	1981	1980	1983	1984
National organization	1968	1967	1981	1984	1985	1993
Academic society	1970	1989	1988	1988	1994	1993
National certification examination	1979	1983	1986	1985	1997	1994

the specialty in other countries. In 1999, an article was published in the *Annals of Emergency Medicine* that proposed classification system for determining the level of EM development in different countries [2]. This categorization system placed countries in one of three categories: underdeveloped, developing, and mature. The four different general categories considered in this classification scheme were specialty systems, academic EM, patient care systems, and management systems. In this classification system, the underdeveloped category would apply to most African countries, the developing category to some of the European and Middle Eastern countries, and the mature category to the United States, the United Kingdom, Canada, Australia, Hong Kong, and Singapore. Tables 2 through 5 show how this classification system, for example, could be used to describe the development status of EM in the region of the Middle East. The use of this categorization system allows planning and direction as to EM development efforts within a particular country by pointing out the areas that are deficient and require further organizational work. A goal for those interested in international EM development is to have all countries reach the mature stage of EM development.

History of international organizations' involvement in international emergency medicine development

A number of organizations have been involved in international EM (Box 1). Following is a brief description of the history of international involvement by each of these organizations.

The International Federation for EM (IFEM) represents a consortium of national EM organizations and was founded by the American College of Emergency Physicians (ACEP), the British Association of Accident and Emergency Medicine, the Australasian College of Emergency Medicine (ACEM), and the Canadian Association of Emergency Physicians (CAEP) in 1989. After an initial meeting in London in 1986, this group of four organizations has conducted an international conference on EM every other year. A pattern was set up to rotate the ICEM conference every other year from the United Kingdom to Australia to Canada to the United States.

Table 2
Comparison of emergency medicine specialty systems

	Country class			
	Underdeveloped	Developing	Mature	Middle East countries
National EM organization	No	Yes	Yes	Some
EM residency training	No	Yes	Yes	Some
EM board certification	No	Yes/no	Yes	No
Official specialty status	No	Yes	Yes	Some

Abbreviation: EM, emergency medicine.

Table 3
Comparison of academic emergency medicine features

	Country class			
	Underdeveloped	Developing	Mature	Middle East countries
Specialty journal	No	Yes/no	Yes	Some
Research	No	Yes/no	Yes	Limited clinical
Databases	No	No	Yes	No
EM subspecialty training	No	No	Yes	No

These ICEM conferences have been successful at generating collaboration and networking between physicians interested in international EM development. Most of the conferences have had 1000 or more registrants. IFEM extended membership to other national EM organizations in 1998. Current members of the IFEM and the year the organization joined are: ACEP 1989, BAEM 1989, CAEP 1989, ACEM 1989, Hong Kong 1998, Mexico 1999, China 1999, Korea 2000, Czech Republic 2000, Taiwan 2000, Singapore 2000, Israel 2000, Turkey 2002, Poland 2002, Netherlands 2002, South Africa 2002, Spain 2002, Ireland 2002, and Argentina 2003. The IFEM is developing policy statements on international health issues and an international core curriculum for EM. The organization is expected to vote to open up the host site for the ICEM to countries other than the original four founders starting in the year 2010. The IFEM consortium represents probably the most active, broad-based, international organization dealing with international EM development issues.

For a number of years, ACEP did not have much active involvement in international EM except for its participation in the IFEM. In the late 1990s, the ACEP leadership started to directly support a number of EM activities [7]. ACEP members started a Section on International EM in 1998, which quickly became the second largest section within ACEP and currently has

Table 4
Comparison of patient care systems

	Country class			Middle East countries
	Underdeveloped	Developing	Mature	
Emergency physicians	Housestaff, other doctors	Some EM residency trained	All EM residency trained	GPs, some residency trained
Emergency department director	Other specialty	EM physician	EM-certified physician	Some EM
Prehospital care	Private car, taxi	BLS or EMT ambulance	Paramedic or doctor	Varies by area
Transfer system	No	No	Yes	No
Trauma system	No	No	Yes	No

Abbreviations: BLS, basic life support; EM, emergency medicine; EMT, emergency medical technician.

Table 5
Comparison of management systems

	Country class			
	Underdeveloped	Developing	Mature	Middle East countries
Quality assurance programs	No	No	Yes	No
Peer review programs	No	No	Yes	No
Specialty CME required	No	Yes/no	Yes	No

Abbreviation: CME, continuing medical education.

about 500 members. The ACEP leadership formed a task force on international EM that developed a long-term plan for further ACEP support of international EM efforts. In the mid to late 1990s, the *Annals of Emergency Medicine* published a series of articles describing EM development in different countries. ACEP leaders have recently become increasingly active with other countries' EM organizations, and it is expected that ACEP will soon start a process for formally endorsing other international EM conferences.

SAEM had an international committee from 1991 to 1996 and then changed the committee to an International EM Interest Group [14]. This quickly became the largest interest group within SAEM. The members of the interest group developed a reference database on international EM rotations and fellowship programs, which was converted to a Web-based electronic format at Boston University and transferred to the ACEP Web site as a result of a section grant award from ACEP, where it is maintained and updated. Members of the SAEM International Interest Group published a series of articles that provided the academic underpinning and literature basis for organized international EM development efforts [4].

Box 1. Organizations involved in international EM development

The American Academy of Emergency Medicine (AAEM)
 American Academy for Emergency Medicine in India (AAEMI)
 The American College of Emergency Physicians (ACEP)
 The Asian Society for Emergency Medicine
 The European Society for Emergency Medicine (EuSEM)
 Emergency International (EI)
 The International Federation for EM (IFEM)
 International Medical Corps (IMC)
 Medecins sans Frontieres [Doctors without Borders] (MSF)
 The Pan-Arab Society of Trauma and Emergency Medicine
 The Society for Academic Emergency Medicine (SAEM)
 The World Association for Disaster and Emergency Medicine (WADEM)

These articles included recommended curricula for international observational EM fellowships and international fellowship programs for United States EM residency graduates [7,15]. In addition, a listing all of the references published up to that time on international EM was compiled. Additional articles on methods for operation and evaluation of international EM projects and how to plan and develop EM at the national level in other countries were published [16-18]. The SAEM International Interest Group has conducted business meetings at the annual meetings of ACEP and SAEM since 1993 and has stimulated interest in international work among United States medical students and EM residents. SAEM also sponsored joint meetings with the UK Faculty of A&E Medicine in 1990, 1993, and 1998 and with the European Society of Emergency Medicine in San Marino in 1998. The members of the SAEM International interest group are active in promoting international EM research projects.

The World Association for Disaster and Emergency Medicine (WADEM) was founded in 1976 as the "Club of Mainz." The WADEM has conducted an international conference every 2 years since 1987 in a variety of locations across the globe [19]. The next conference for WADEM will be in 2005 in Edinburgh, Scotland. This organization has been concerned mainly with disaster medicine and not as much with EM system development. Many of the WADEM members are physicians from non-emergency medicine specialties. Prehospital and Disaster Medicine is the official journal of this organization and has published a number of articles related to international EM work.

The American Academy of Emergency Medicine (AAEM) has had an international committee since 2000. The AAEM co-sponsored the First Mediterranean Congress on EM in Stresa, Italy in September 2001 and the Second Mediterranean Congress in Sitges, Spain, September 14 through 17, 2003. This conference attracted over 1000 EM physicians from 80 countries. The European Society of Emergency Medicine and the AAEM have co-sponsored the European Society of Emergency Medicine Congresses, with the last one being in Slovenia in September of 2002 and the next one scheduled for Leuven, Belgium in 2005. The AAEM has been actively encouraging its members to undertake international EM work.

The European Society for Emergency Medicine (EuSEM) was founded at the IFEM conference in London in 1994. This organization conducted The First European Congress in Emergency Medicine in San Marino in 1998, which was widely attended. The EuSEM dropped out of sponsoring the second Congress, which was held in Wroclaw, Poland, in the year 2000 but resumed at the Congress in Slovenia in September 2002. The EuSEM co-conducted the Mediterranean Congress of EM in 2001 and 2003. The EuSEM has published The European Journal of Emergency Medicine since 1994 and published the important Manifesto for Emergency Medicine in Europe, which defines the needed structure for EM in the European countries. The EuSEM has started to develop recommendations for the

standardization of training and certification in EM for the European countries. The EuSEM supports the disaster medicine training center and degree program in San Marino, Italy. The EuSEM has struggled to increase its membership and currently has a membership of about 200.

The Asian Society of EM was founded in 1998 and has conducted multinational conferences in Singapore in 1999, Taiwan in 2001, and Hong Kong in 2003. The Asian Society is starting to develop curriculum recommendations and exchange programs for the Asian countries. EM has become well developed in a number of the Asian countries, including Hong Kong, Singapore, Korea, Taiwan, The Peoples Republic of China, and the Philippines.

Emergency International (EI), originally named "The Society for the International Advancement of Emergency Medical Care," started in the late 1980s. Early on this organization mainly conducted medical tours but developed into a grass roots organization devoted to assisting EM development in other countries. The organization had a number of regional-based projects, most prominently in China, The Middle East, and Latin America. EI conducted business meetings at the annual meetings of ACEP and SAEM regularly, but in the last several years EI has developed significant financial problems. The organization has not had any recent major development activities.

The International Medical Corps (IMC) was started by Dr. Bob Simon of Cook County Hospital in Chicago in the 1980s to provide medical care for Afghan refugees. The organization has been active in promoting refugee relief work in a number of different countries and in developing training programs for rural health care personnel [20].

Doctors without Borders (Medicines Sans Frontieres, MSF) is devoted mainly to international refugee relief work. MSF was dominated by French nonemergency physicians until the mid-1990s, when it started to use more EM physicians. MSF received the Noble Peace Prize in 1999 for its work in the Balkans and in Africa. IMC and MSF are active and interested in recruiting emergency physicians as volunteer and as paid workers [21].

The Center for International EMS was founded in 1991 by Elco Dykstra. This organization was originally headquartered in Wiesbaden, Germany and then in the Netherlands. The organization conducted a series of EM conferences that provided significant networking opportunities for emergency physicians from multiple countries. These conferences were entitled the Pan European Conferences on EMS. The first was conducted in Budapest, Hungary in 1992 and then Abano Terme, Italy 1994, Prague The Czech Republic in 1996, and Opatija, Croatia in 1998. The Center developed some financial problems and dissolved after being unable to organize a conference in Turkey in 2000.

The Pan Arab Society of Trauma and Emergency Medicine was founded in 2002 and is currently headquartered in Doha, Qatar. This organization conducted the Qatar International Trauma and Emergency Medicine

Conference in Doha in 2002, which had over 800 attendees. The organization conducted a second international EM conference in Doha April 7 through 11, 2004. The organization has published *The Middle Eastern Journal of Emergency Medicine* since 2001, and some of its members have conducted active regional training programs in modular EM courses in Doha for the last several years.

The American Academy for Emergency Medicine in India (AAEMI) was founded in 2001. The AAEMI represents a group focused on helping EM develop in a single country (India). The organization has cosponsored international conferences in India since 2002 with the Society for EM in India [22]. These are among the few internationally located conferences that have been awarded Category I CME credit. The next conference was conducted in Mumbai, India in November 2004. AAEMI has several committees working on projects related to international research, EMS development in India, and standardized curriculum recommendations for EM training.

Status of emergency medicine in different countries

Countries that have national EM organizations and annual EM conferences include the United States, the United Kingdom, Canada, Australia, Hong Kong, Singapore, Korea, China, Taiwan, Mexico, Argentina, Chile, Spain, Croatia, Turkey, Poland, Israel, India, Czech Republic, Hungary, Slovenia, and Italy. Countries that have national EM organizations but less regular EM conferences include Iceland, Estonia, Costa Rica, Romania, Brazil, Jordan, Belgium, Philippines, Sweden, and South Africa. The following countries have started EM residency training programs: Nicaragua in 1998, South Korea in 1993, China in 1995, Taiwan in 1994, Estonia in 1999, Israel in 2001, Bulgaria in 1999, Costa Rica in 1994, Turkey in 1994, Jordan in 1996, Hungary in 1992, Bosnia in 1996, and Belgium in 1990. Other countries with EM residency programs in development include Italy, Netherlands, Sweden, Romania, Philippines, Poland, Czech Republic, Oman, Saudi Arabia, India, Ireland, Mexico, Chile, Guatemala, Colombia, Iran, Egypt, and Qatar. The following countries publish EM journals: the United States, the United Kingdom, Australia, Korea, China, Hong Kong, Taiwan, Turkey, Qatar, Israel, Czech Republic, Poland, and India.

Several United States universities have developed international EM fellowship programs for graduates of United States EM residencies [23] (see the article by Anderson et al elsewhere in this issue). These programs are designed to provide academic career training for United States EM residency graduates who want to make international EM a major focus of their career. Current programs and their start year are as follows: Loma Linda University in 1994; University of Illinois in 1996; John Hopkins University in 1997; Harvard University in 1999; George Washington

University in 2001; New York University (Bellevue) in 2002; Rush University, Cook County in 2004; and North Shore-LIJ in 2004. Some universities in the United States have developed international EM fellowship programs for physicians from other countries. These programs are designed mainly to provide faculty development for physicians from other countries who want to start EM programs in their own country [8]. These programs include Penn State University, Loma Linda University, George Washington University, Harvard University, Stanford University, and University of Oregon. United States institutions with an active interest in international EM are Penn State University, George Washington University, Harvard University, Johns Hopkins University, Loma Linda University, University of New Mexico, University of Oregon, Bellevue Hospital, Long Island Jewish Medical Center, Mt. Sinai Medical Center, Emory University, Stanford University, University of Illinois, Boston University, University of Pittsburgh, University of Massachusetts, Yale University, and University of California, Irvine.

Summary

A future challenge for international EM development is expanding the specialty to Africa, where it is non-existent. Another goal for international EM development is to assist in the peace process in the Middle East. There is increasing need for good EM development throughout the world. Development of international EM has been rapid, with most of the spread of development occurring in the last 10 years. There is great opportunity and reward for students, residents, and EM physicians to further promote and develop EM internationally.

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