What is emergency care?

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Prague Emergency Medicine Lessons (PEML)
Prague, Czech Republic

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The American College of Emergency Physicians has an official extended **definition of Emergency Medicine**. It reads as follows "Emergency Medicine is the medical specialty with the principal mission of evaluating, managing, treating and preventing unexpected illness and injury. It encompasses a unique body of knowledge reflected in the "model of the clinical practice of emergency medicine". Clinical Emergency Medicine may be practiced in emergency departments, urgent care clinics and other settings. The clinical practice of Emergency Medicine encompasses the initial evaluation, treatment, and disposition of any person at any time for any symptom, event, or disorder deemed by the person – or someone acting on his or her behalf – to require expeditious medical, surgical, or psychiatric attention. Emergency Medicine provides valuable clinical and administrative services to the healthcare delivery system, including care for individuals who lack other access to healthcare, pre-hospital care planning and medical control, and patient care coordination – across venues and among providers. Consequently, Emergency Medicine serves as a nation's healthcare safety net. Emergency physicians develop a deep understanding of healthcare systems and are uniquely positioned to plan, implement, and evaluate them."

The American College of Emergency Physicians further defines emergency service as "emergency services are those healthcare services provided to evaluate and treat medical conditions of recent onset and severity that would lead a prudent lay person, possessing an average knowledge of medicine and health, to believe that urgent and/or unscheduled medical care is required."

Very similar to the previously mentioned definition of emergency medicine is the definition as agreed upon by the International Federation of Emergency Medicine. The original composition of this group was the American College of Emergency Physicians, The Australasian College for Emergency Medicine, The British Association of Accident and Emergency Medicine, and the Canadian Association of Emergency Physicians. As most of you know, the membership of the International Federation of Emergency Medicine has more recently expanded to include a number of other National Emergency Medicine organizations and societies. These of course include the Czech Society for Emergency

and Disaster Medicine. The International Federation of Emergency Medicine gives following definition: "Emergency Medicine is a field of practice based on knowledge and skills required for the prevention, diagnosis and management of acute and urgent aspects of illness and injury affecting patients of all age groups with a full spectrum of undifferentiated physical and behavioral disorders. It further encompasses an understanding of the development of pre-hospital and in-hospital emergency medical systems and the skills necessary for this development".

Emergency Medicine is the first medical specialty to develop in response to a demand from the public, namely that for better emergency health care.

It is one of the youngest medical specialties: it is only about 30 years since its initial development as a separate medical specialty in the United States. It is important to emphasize that Emergency Medicine is a broad specialty encompassing care for all types of medical and surgical problems in all age groups. If you ask some physicians in some places in Europe what Emergency Medicine is, they respond that it only involves cardiopulmonary resuscitation cases or perhaps additional resuscitation cases but nothing else. Clearly this narrow view of Emergency Medicine does not fit with how the specialty is practiced in countries where the specialty has matured.

It is important also to emphasize that the practice of Emergency Medicine is centered on serving patients. Emergency Medicine sees patients 24 hours a day, 7 days a week, 365 days a year and evaluates everyone who presents for emergency care without restriction or discrimination. This public service aspect of Emergency Medicine is one of its most important characteristic features. Because of this, emergency physicians are very strong patient advocates often in situations where other doctors fail to be such strong advocates for patient care.

Some of the value statements of the American College of Emergency Physicians which reflect upon the structure of emergency medicine include the following:

1. Emergency Medicine is an essential public service.
2. Quality emergency care is a fundamental right and unobstructed access to emergency services should be available to all patients who perceive the need for emergency services.
3. There is a body of knowledge unique to Emergency Medicine that requires continuing refinement and development.
4. Emergency physicians have the responsibility to play the lead roles in the definition, management, evaluation, and improvement of quality emergency care.
5. Quality Emergency Medicine is best practiced by qualified credentialed emergency physicians.

One of the important aspects of Emergency Medicine, which differentiates it from other medical specialties, is **the time dependent nature of Emergency Medicine's interaction with patients**. Emergency Medicine is responsible for providing all of the care and management needed for at least the first hour of any type of acute medical or surgical emergency. Emergency Medicine is also responsible for determining that patients require emergent or urgent care by specialists in other medical disciplines and appropriately and expeditiously referring these patients to the other specialists for further care. For some emergency conditions proper skilled emergency care must be provided immediately and for many other emergency conditions care must be provided in just a few minutes. This time critical nature of the specialty makes it different from the other medical specialties. Emergency physicians must be able to immediately provide life saving care and must know how to do so without taking time for consultation or reflection.

Should emergency care only be for critical or life or limb threatening conditions? The answer is "of course not".

Emergency Medicine can appropriately manage conditions that turn out to be minor and not necessarily serious. However, a skilled rapid assessment is always needed to correctly identify whether a patient's perceived emergency is truly an emergency. A number of studies have shown that even among patients presenting with symptoms or findings initially classed as minor or non-emergent, 5 to10% of these patients turn out to have an emergent condition or require hospital admission for further medical care. It is an important role of Emergency Medicine to carefully examine all patients presenting to determine if they have a truly emergent condition. By performing this examination, even if the patient turns out not to be emergent, most of the work has then been done to take care of the patient. It is then more efficient within the overall health care system to have Emergency Medicine finish the additional care required for management of the patient's acute presentation and then refer the patient for further follow-up care by other specialists. This again points out the "safety net" function of Emergency Medicine, which allows all presenting patients to be screened and then identified as emergent or non-emergent. Having Emergency Medicine always available to perform this screening function protects all patients from being in a situation where they would not receive appropriate emergency care for acute problems.

What is Emergency Medicine not?

Emergency Medicine is not the definitive management of every type of medical or surgical problem. Emergency Medicine focuses on the early management of acutely presenting problems. Clearly for many medical problems more advanced and sub-specialist care will be necessary for definitive management. For example, an emergency physician might identify a cancer as the cause for a patient having

chest or abdominal pain but the emergency physician would not provide further definitive management of the cancer itself. This management would of course be referred to medical and surgical oncologists. Emergency Medicine does not involve the scheduled rechecking of patients with chronic medical problems. Emergency Medicine does not involve the routine re-evaluation of asymptomatic conditions such as hypertension. This long term follow-up medical care is best provided in other environments besides the emergency department and best provided by other medical specialists. Emergency Medicine does not involve routine health maintenance. This again is best provided by physicians with whom patients can have longer term continued care relationships.

Is Emergency Medicine a threat to the other medical specialties?
I think the answer to this is clearly no. Good Emergency Medicine helps all the other medical and surgical specialties to a great degree. Good Emergency Medicine makes life easier for the other specialists and allows them to better concentrate on their own areas of expertise and interest. Emergency Medicine does not take patients away from the other specialists but instead guarantees these specialists appropriate referral of patients after their emergency care is rendered. Emergency Medicine can also provide training for other medical specialists in how to manage emergencies relevant to each specialty. In turn, training of Emergency Medicine physician specialists is best accomplished when their training is contributed to by other medical specialists. If well-trained emergency physicians are on duty in a hospital emergency department then the hospital does not have to be staffed in-house with other medical specialists. These specialists can be in an on call status to back up the emergency department when sub-specialist care would be required. Emergency physicians can also help the other specialties by coordinating care between specialties for patients that have multiple medical problems that "cross the boundaries" between different specialties.

What are some of the benefits then of having well trained Emergency Medicine practitioners?
Good Emergency Medicine prevents deaths and disability especially from trauma, as from motor vehicle or farming accidents, or from falls. Emergency Medicine is also skilled at managing trauma, which occurs from interpersonal violence, which unfortunately is an increasing problem in many parts of the world. Emergency Medicine is very good at dealing with medical conditions, which compromise the airway or breathing. Also Emergency Medicine can provide efficient care for serious but not obviously life threatening problems such as wound and laceration repairs, correction of orthopedic injuries, and management of acute infectious illnesses. Additional benefits of quality Emergency Medicine training are the ability to provide comprehensive care for patients with medical

problems which involve more than one specialty, providing expertise in the management of environmental emergencies, and providing expertise in the management of mass casualty incidents and larger disasters. Emergency Medicine involves the almost daily management of small or mini disasters (such as multiple casualties from motor vehicle crashes). By having this daily practice emergency physicians are well suited to step up their efforts in the event a major disaster occurs, and provide effective medical leadership in management of this type of larger disaster.

Another important aspect of Emergency Medicine is that it involves practice in a variety of environments.
It is certainly possible to practice Emergency Medicine in the pre-hospital environment in the ambulance. Emergency Medical Services or EMS, defined as all emergency care rendered outside the hospital environment, is a very important component of Emergency Medicine. Emergency Medicine is best practiced where there is coordination of care between the pre-hospital environment, the hospital based emergency department, inpatient specialty care units, and follow-up or rehabilitation services. Emergency physicians can provide the key link at making sure patient care operates in a smooth continuum between these different environments.

There presently exist different models of the system of providing pre-hospital and in-hospital emergency care. In many countries physicians provide much of the pre-hospital care. However, what is lacking in many of these countries is good in-depth training, supervision, and quality assurance for the emergency care provided by these physicians. Often also there is lack of coordination of this pre-hospital care with further care rendered for the patients in the hospital. Whether having physicians or non-physicians provide pre-hospital care, the key important system component is that the people providing emergency care must have good in-depth and broad training in Emergency Medicine. The care they offer should be supervised within a system and coordinated with the further in hospital and post-hospital care that patients will require.

Why is there increasing interest in the specialty of Emergency Medicine?
I think there are a number of reasons for this, including the recent awakening by many countries that they should develop Emergency Medicine partly because of public demand for better Emergency Medicine services. In addition Emergency Medicine in a number of countries has fully matured as a specialty and so can act as a role model for other countries. Also the collapse of communism has opened up multiple countries to people and new ideas, and Emergency Medicine is really a new idea "from the outside". Finally, multiple international Emergency Medicine conferences have just gotten started in the last few years such as the one at which I am speaking today.

Why is there increasing interest in developing Emergency Medicine within most other countries?

Most countries are undergoing overall medical system development improvement. In addition, even the developing countries with poor economies are undergoing rapid urbanization of their populations. This has resulted in a significant demographic transition from the predominance of infectious diseases in the past to the predominance of morbidity and mortality from trauma and cardio-respiratory diseases. This is occurring in all countries including those with poor economies and limited health care infrastructures. In addition in most countries there are increasing outpatient visits and this is partly related to the increase in the percentage of the elderly in most countries throughout the world. The elderly have been demonstrated to legitimately require a higher frequency of emergency health care services than younger patients. Also increased public expectations for Emergency Medicine have come about partly because of the popularity of the international television shows such as "ER", "Rescue 911", and "Casualty". In addition, increased international travel over the last decade has allowed more people to be exposed to the need for better quality of emergency health care in many countries.

What is the relationship of disaster medicine to Emergency Medicine?

It is my opinion that disaster medicine is really a subset of Emergency Medicine. The daily practice of Emergency Medicine encompasses management of frequent small disasters and emergency health care personnel can use this daily mini disaster experience to make them more able to quickly deal with a greater magnitude disaster. Development of an independent disaster management system is an inefficient use of resources and personnel by any country. Far more lives are saved by application of good day-to-day Emergency Medicine than by any separate disaster medicine management system, even in countries, which are prone to disasters. An example is to compare the very high mortality and poor management of the Kobe, Japan earthquake with the much lower mortality from the Northridge, California earthquake that struck a similarly populated area. The reason for the much better results of management of the California earthquake was the fact that California had a good day-to-day Emergency Medicine system in place at the time the disaster occurred whereas Japan did not. Therefore, I think that countries that do not have well established Emergency Medicine should develop this first before trying to develop any elaborate disaster medicine system. Having good day-to-day Emergency Medicine in place allows skill acquisition and maintenance to deal with disasters and provides a much more efficient and cost effective use of medical personnel and resources. All review studies have shown that the main benefits of disaster response are dependent upon the preexisting local system rather than from outside help. Emergency Medicine and EMS are obvious key components of the local health care system that would be needed to deal with any disaster.

What basic health system improvements can Emergency Medicine offer to the developing nations?

Some people think that provision of public health measures or anti-infectious disease measures are more important for the developing nations. However, as I already pointed out, because of the demographic transition with increasing morbidity and mortality in developing countries from trauma and cardio-respiratory illnesses, Emergency Medicine does have quite a bit to offer the developing countries. Improvements in basic trauma care, better training for non- physician pre-hospital care providers, decreased hospital admissions for diagnostic work ups (which saves the health care system a lot of money), better management of multi-casualty incidents and coordination of care for patients with multi-system problems can all be very helpful benefits of Emergency Medicine in developing countries.

What are the necessary features for development of Emergency Medicine within a country?

First there must be a cadre of physicians interested in developing the specialty. Government support and support by the other physician specialties is also critical. There should of course exist the infrastructure components of health care facilities capable of providing emergency care, transportation and communication systems for patient access, availability of referral and follow-up care, and the key thing, of course, is the existence of good training programs for emergency physicians and the other emergency health care personnel. One of the key steps in developing Emergency Medicine is to select and train the so called "core faculty" for Emergency Medicine. These would represent the people who would start the specialty and found the first specialty training programs in Emergency Medicine within a country. It is necessary for these core faculty to be very devoted to the specialty of Emergency Medicine and to obtain the training for themselves that they need to be broad based Emergency Medicine practitioners.

What are some of current common problems in Emergency Medicine in all countries?

There has been a tremendous increase in emergency department caseloads in many countries over just the past few years. This has resulted in significant overcrowding in many emergency departments. The reasons for this are multiple and complex but are often due to increasing total population, increasing percentage of elderly patients, increasing numbers of patients with complex and more severe illnesses, limitations of the inpatient bed capacities of hospitals, and decreased availability of other medical specialists for ongoing or follow-up care. In addition there are similar funding problems for Emergency Medicine in many countries despite differences in health care payment systems. Emergency Medicine really should be regarding as an essential public service, just as in most countries

police and fire are regarded as essential services. This means that Emergency Medicine should receive at least partial support from the government since it is generally the government's responsibility to provide the public with these essential services.

What is the future for Emergency Medicine?
I think the future for Emergency Medicine is very bright in all countries. The specialty is a critical component of any national health care system. The training systems currently in place are not yet sufficient to supply all of the qualified emergency physicians that we will need in all countries for the foreseeable future. The demand for emergency physicians should continue to escalate, as there appears to be no decrease in sight in emergency department caseloads in most countries. There is great potential for international collaboration in Emergency Medicine, both clinically as well as in conducting research projects to hopefully improve emergency care even further. It has certainly been my impression that clinical problems in Emergency Medicine are almost exactly the same from country to country, so there is quite a bit we can learn from each other in how to manage common problems in the emergency department. In addition there is great potential for further collaboration on an international research projects in Emergency Medicine both at the basic science level as well as, perhaps even more importantly, regarding clinical care. I strongly encourage all of you to become more involved in international Emergency Medicine efforts and collaboration.

Emergency medicine, I think, is a wonderful career.
It currently is the most popular residency in the U.S. and we have many more U.S. applicants for our residency training programs than we have residency positions. I anticipate that there should be the same popularity for Emergency Medicine in other countries. The individual rewards for emergency health care practitioners in seeing how the results of their efforts directly benefit patients and their families provides a lot of work and career satisfaction. There is great opportunity also for more collaboration internationally on developing improved training programs in Emergency Medicine, both for doctors as well as for the other important personnel in the emergency health care system such as nurses, technicians, medics, and others. There is also significant potential for further development of Emergency Medicine training materials such as textbooks, procedure manuals, and interactive computer based training programs.

In summary, I think the future for Emergency Medicine is very bright at any national level and at the international level, and I am most happy that I have made this my career.

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