

Interview

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The World History of Emergency Medicine

Dominique Jean Larrey, the French surgeon, proposed the ambulance theory during the French Revolution and following the experiences he had gained in transporting war casualties in the field at that time. He equipped these early ambulances with drivers, gravediggers and stretcher carriers. Because of the strategies that he adopted during the French wars, Dr. Larrey is today called the "Father of Emergency Medicine" (1, 2).

In the 1960's, however, in line with the greater modernization and technological advancements of medical centers and the increased number of American specialists, the demographic and social changes that took place led to increased hospital visits for medical purposes. Nevertheless, the specialization of medical services and the quality of emergency medical services were not compatible with the needs of the time, and emergency medicine was therefore the first new specialization created in line with the public demands rather than on the basis of new scientific discoveries or academic development toward the creation of a new knowledge.

In 1961, Dr. James Miller and three of his colleagues gave up their own private surgeries and set up a 24-hour emergency department in Alexandria, Virginia. By the end of the 1960's, hundreds of emergency physicians were providing medical services in the same way across the US. In 1968, by organizing emergency physicians, Dr. John Wiegstein and his colleagues established the American College of Emergency Physicians (ACEP) and tried to establish a specialized board of emergency medicine over the next decade. Given the need created for training a specialized emergency medicine workforce, courses were initially offered as ongoing or monthly training in academic medical centers, but it was clear that the only appropriate way was to train emergency physicians through formal emergency medicine resident programs (3, 4). The first center

established for this purpose was the University of Cincinnati, and given the increased number of visits to emergency departments throughout the country and the increased dissatisfaction with physicians and the services provided, Dr. Herbert Falsa, an internist, was given the responsibility of improving the quality of emergency medicine in this university. He requested a two-year emergency medicine fellowship program from the American Medical Association (AMA) to be offered after medical students had passed their medical internships and his request was approved under the family doctor training program, and the participants were given specialized training in emergency medicine (5). The program thus began as an emergency medicine residency program, and Dr. Bruce Janiak became the first emergency medicine fellow in 1970 (3, 4). Other centers, including the Pennsylvania School of Medicine, began their three-year emergency medicine residency programs, which were approved in 1971. Other academic centers involved in these efforts were the University of South Carolina and the University of Louisville. After a short while, however, another surgeon called Dr. Peter Rosen, who worked as an emergency medicine specialist, established an emergency medicine residency program at the University of Chicago. By 1975, a total of 31 emergency medicine residency programs had been established throughout the US, with half of them in the Midwest US. The first residents of this discipline felt that training had ended or had never existed in the emergency department when they entered these departments and that they would have to learn by trial and error through their many visitors. When they visited other specialized training departments in their rotation periods, they were viewed as strange people and no one could understand why they had chosen to train in an unknown field of medicine. In 1973, the AMA held a Workshop Conference on Education of the Physician in Emergency Medicine attended by many

organizations, government agencies and major medical specialties, and the issue debated was whether emergency medicine was necessary or not and if emergency medicine was in fact a specialty. The final report was in favor of emergency medicine and confirmed that this discipline is on the way to becoming an independent and formal specialty. Only six years later, the Emergency Medicine Specialty Board was approved by the American Board of Medical Specialty (ABMS) in 1979, and this approval opened the door for the development and support of emergency medicine residency systems in this discipline and the establishment of its academic infrastructures (3, 4). Unlike residents in the modern day, the group of residents who sought to train in emergency medicine in the 1970's were faced with an uncertain future and were not even sure whether they could graduate as a board certified specialist or not and there were no guarantees that what they had chosen would last. In the absence of a curriculum and the severe shortage of professors and scientific resources, the early emergency medicine residents managed their own training and tried to become the pioneers of this discipline by trusting each other. In the words of Philip Butaravoli, one of the members of these emergency medicine residents group from the University of Cincinnati: "*I still think that I received an excellent education and gathered a wealth of friends. We were different from everybody else. We were the soldiers of the future and tried to fight for our chosen way in a huge center. No one understands who we were and what we did*" (6, 7).

HISTORY OF EMERGENCY MEDICINE IN IRAN

With a gap of more than two decades from the time the specialty was approved in the US, the story of establishing emergency medicine as a distinct specialty in Iran began in a largely similar fashion as it had in the US in terms of the early fears and hopes. During the years of neglect when forgotten units without specialized or even the most basic facilities were run across the country as hospital emergency rooms with no particular trustees in charge and by the least experienced physicians, such as first-year residents of certain specialties and interns, who provided medical services to the weak and wounded, the ill and those in great need of advanced medical services, in the late 1990's, a group of physicians were ordered by the Minister of Health and Medical Education of the time to find a solution. After some investigation, they came up with two

approaches for solving the problem of medical emergencies: An approach that pursued the Franco-German or Anglo-American models; that is, the provision of an advanced and specialized pre-hospital system for providing certain emergency services on route to advanced medical centers and performing patient triage on route and handing over the patients to specialty and subspecialty units in hospitals, or the provision of a pre-hospital system for providing primary emergency services before the patient was transferred to advanced medical centers in the shortest possible time and continuing the emergency procedures in fully-equipped emergency departments with trained personnel specializing in treating and stabilizing patients in critical conditions (8-14).

Following the investigations carried out at the Ministry of Health of the time, the second model (i.e. the Anglo-American model) was approved, and the first application for commissioning this specialty was submitted to the secretariat of the Specialty and Subspecialty Education Council by Mashhad University of Medical Sciences in 1996 (15). Nonetheless, the process was halted until 2000, when Dr. Ali Bidari, internist-rheumatologist and in charge of the evaluation of medical specialty and subspecialty programs at the time, reviewed similar emergency medicine residency programs in the US, Australia, UK, Canada, etc., and drafted the first proposal with the guidance of two internationally-known professors of emergency medicine, Dr. Jeffrey Smith and Dr. James Holliman. The proposal received the final approval of the Specialty and Subspecialty Education Council. In the same year, seven of the main universities of the country were commissioned to launch this discipline, and Iran University of Medical Sciences accepted this rather vague mission. Select members of specialty boards in internal medicine, anesthesiology and intensive care, pediatrics and surgery were appointed to attend an emergency medicine residency program in the US with Dr. Bidari as the group director. On their return, they set up the first 24-hour specialized emergency medicine department in September 2001 at Rasoul Akram Hospital with the trained specialists and nine residents (7). The nine residents were constantly challenged by the question of why they had chosen a specialty that had no clear prospects, but they were determined to pave the way for emergency medicine as a new specialty in the country by accepting all the hardships and by

trying doubly hard over their three years of emergency medicine residency training. The first emergency medicine specialty board examination was held in 2004 by the Ministry of Health and eight graduates were accepted into the emergency medicine specialty board and began their academic work.

As the first step, the first group of emergency medicine specialists assumed responsibility for developing this discipline in two other main universities of Tehran, including Tehran University of Medical Sciences and Shahid Beheshti University of Medical Sciences, and with the guidance of the authorities of the time, they launched this specialty in two teaching hospitals, including Imam Khomeini and Imam Hossein Hospitals. In Tehran University of Medical Sciences, the first emergency medicine department was formed with the chairmanship of Dr. Mohammad Asl-Soleimani, internist and gastroenterologist and the head of the School of Medicine at the time, and with the presence of the following professors:

- Dr. M.T. Talebian and Dr. Sh. Farahmand, emergency medicine specialists
- Dr. A. Abbasian, Dr. R. Taslimi, and Dr. M. Esfandbod, internists
- Dr. M. Shariat-Mohareri and Dr. M.H. Ghafari, anesthesiologist and intensive care specialist
- Dr. R. Satarzadeh, cardiologist
- Dr. R. Tavakoli, general surgery specialist

The first Iranian Society of Emergency Medicine (ISEM) was established in 2004 by Dr. Bidari and a group of emergency medicine graduates, and began its work with an educational approach by holding national conferences, monthly educational seminars and public education programs. Gradually, the graduates of this specialty from the mentioned universities established themselves in other universities of medical sciences throughout the country. Today, emergency medicine residency programs are offered in most medical science universities in the country, including East and West Azerbaijan, Zanjan, Kermanshah, Hamadan, Markazi, Qom, Isfahan, Yazd, Kerman, Hormozgan, Fars, Khuzestan, Sistan and Baluchestan, Central Khorasan, Semnan, Mazandaran and Guilan provinces. The number of emergency medicine specialists surpassed 200 by 2009 and 400 by 2014, and with a current figure of 200-250 new graduates each year, the number of specialists in this discipline has reached more than 1000, and these specialists

serve in emergency departments even in the remotest parts of the country as education, research and medical staff or as medical personnel only. The standards set for training in this discipline advise one specialist per every 10,000 of the population, which means that the country needs to train more than 7000 specialists (15-18).

The last word: The route ahead

Close to two decades have gone by since the establishment of emergency medicine as a specialty, and the first group of these specialists are half-way through their academic life. Despite all the unkindness and resistance on the part of other specialties, this discipline has spread throughout all the medical centers across the country, and in addition to ongoing participation in education and research programs for students of various levels, these specialists provide their medical services to more than 30 million visitors of emergency departments every year (19-21). Both indicators, although rudimentary, affirm the expansion of this discipline. With the extension of the duration of the emergency medicine residency program from three to four years, it seems that the mission of the education, research and medical trustees of this discipline has transformed and the following goals can now be emphasized:

1. Improving the quality of specialized education, especially in intensive care and pediatric diseases.
2. Training and expanding the use of modern global equipment and technologies with the aim of reducing errors and accelerating the effective provision of critical care.
3. Planning to provide more specialized services for fighting the most common curable causes of mortality in the country, such as trauma and cardiovascular incidents, in the form of joint post-graduate education programs with other specialties.
4. Despite an approved subspecialty for this discipline, clinical toxicology and poisoning, planning to launch other subspecialties and fellowship programs.
5. More prominent presence in academic forums at the international level and facilitating discourse and the exchange of academic views with global centers.
6. Particular attention to the financial and professional issues associated with this specialty and the use of all the legal capacities for preserving the union rights of the specialists of this discipline.

Our hope is that, the route that begun to serve the people of this country will reach its intended destination through the improvement of the

services and the partial reduction of the needs of people in greatest need of health and medical services.

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