

Emergency Medicine in Sweden

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Abstract: Sweden is considering establishing emergency medicine (EM) as a medical specialty, with ten hospitals nationwide trying to develop training programs for residents. Sweden currently practices the 'multidisciplinary' model of EM, and the healthcare system is predominantly publicly owned. Emergency care is provided by larger hospitals with EDs. In general, at the major teaching hospitals, patients are triaged according to both the nature of their complaint and the acuity of their illness, and the EDs are staffed by interns, residents, and specialists from differing fields. Developing residency programs are modelled after the European curriculum for emergency medicine, but there is currently no national consensus regarding a curriculum, so each hospital is developing its own model for teaching and practicing. Emergency medicine in Sweden had its origin in the mid 1990's, as healthcare personnel re-evaluated the overall efficacy of emergency medical care. In Stockholm specifically, patient volumes at primary care clinics began to rise, and the overflow was absorbed by hospital emergency departments. In 1998, the Swedish Society for Emergency Medicine (SWeSEM) was formed, and a growing interest in emergency medicine arose among the country's younger physicians. Currently, the Swedish Cabinet of Ministers is scheduled to decide on emergency medicine as a medical specialty in late spring 2005. In all likelihood, emergency medicine will be granted specialty status in conjunction with a base specialty in another field such as medicine or surgery. This could provide Sweden with the framework to develop a national curriculum, to offer residents in emergency medicine professional security in the field, and to support current efforts to develop and advance the quality of emergency medical care throughout the country.

Introduction

Sweden is considering establishing emergency medicine (EM) as a medical specialty, with ten hospitals nationwide trying to develop training programs for residents. Sweden currently practices the 'multidisciplinary' model of EM. As such, EM is not a recognized specialty and non-EM specialists from other medical specialties provide emergency care. Alternatively, in the 'specialty' model for emergency care, emergency medicine is an independent specialty and patients are treated by trained emergency physicians in the emergency department (ED).¹ In the European Union, this system is currently practiced by the United Kingdom, Ireland, Iceland and the Netherlands.² We describe the recent developments of emergency care in Sweden.

Background

Sweden is one of five Nordic countries and has a population of roughly nine million people, living in an area approximately 500,000 square kilometres. Ten percent of the population are immigrants. The leading cause of morbidity and mortality is cardiovascular disease, but the overall health status of the population is good, with an average life expectancy of 77.5 years for men and 82.1 years for women. Sweden has a large elderly population: Approximately 18% of its inhabitants are over the age of 65.

The Swedish healthcare system is predominantly publicly owned with 90 public hospitals and 950 regional primary care clinics. There are very few private clinics. Emergency care is provided by larger hospitals with EDs. Urgent and Primary Care is provided by hospital-

based walk-in clinics, or by general practitioners in the regional clinics. Patients are often referred from these clinics to the ED for immediate care and testing.³ Healthcare costs are covered by a national insurance program, funded by taxes on Swedish citizens who pay a very small co-payment at the time of each medical visit.

On average, there is one doctor for every 300 citizens, and close to two thirds of the physicians are specialists. Sweden currently recognizes 62 different medical specialties. According to Sweden's National Board of Health and Welfare, a significant shortage of physicians is anticipated by 2010 if the current demand for doctors remains unchanged.³

Medical Education

Medical training is university-based and begins after completion of secondary school. In total, roughly 1000 new students are admitted to the six medical schools nationwide each year. Medical students receive their degree after 5.5 years of preclinical and clinical study. They then complete a 1.5 year internship with rotations in various fields. Upon successful completion, they receive their license to practice medicine in Sweden.³

Once licensed, the physicians apply for a specialist training program that lasts from five to seven years, depending upon the chosen field. Upon completion, specialists will either be hospital-based or work in a regional health clinic. Specialty certification exams are not required, although some fields have introduced voluntary examinations: Accordingly, there is no compulsory recertification process. Emergency medicine is not yet a specialty in Sweden.

Emergency Medical Services

A formal ambulance system has been operational in Sweden since 1983. Prior to that, emergency calls were handled by fire and police department personnel with limited training in delivering prehospital care.⁴ Sweden, like other EU nations, has 112 as its emergency activation telephone number.

Dispatch of ambulances is controlled by a regional dispatch centre, which may also coordinate fire and rescue calls. Stockholm's dispatch centre is the largest in Europe, and is buried 30 meters beneath the city to function as a command center in case of disaster. The average response time is approximately seven minutes to the scene. Ambulance personnel are trained in basic CPR and defibrillator use. For calls that are triaged as critical, mobile coronary care cars may be dispatched to the scene allowing a registered nurse to deliver more advanced care in the field. These nurses have additional training in anaesthesiology and advanced cardiac life support, but all vehicles are equipped with defibrillators.⁵

This system, however, may delay the time of the patient's arrival to the Emergency Department where more advanced care can be rendered, and has come under scrutiny recently by practitioners of the 'specialty' model of EM, formerly known as the Anglo American system. To date, however, there are limited multinational studies that directly compare this model of emergency care with a system that attempts to deliver the patient to the hospital after delivering less care in the field, as in the Franco-German model of emergency care.⁶

Sweden has phased out most mobile coronary care cars recently, and there are now only two remaining to cover Stockholm and the surrounding areas. Instead, it is anticipated that all ambulances will have a registered nurse present by 2007.

Emergency Department Features

Organization

ED organization varies with the type of hospital in Sweden. In general, at the major teaching hospitals, patients are triaged according to both the nature of their complaint and the acuity of their illness. A patient with a presumed 'medical' complaint will be directed to the medical side of the ED, whereas a patient with a presumed 'surgical' complaint would be placed in the surgical area, and likewise for patients with orthopaedic injuries. Patients with urgent complaints are triaged to the Urgent Care area, which is often part of the larger ED. Paediatric, Obstetrics and Gynecology, Ear, Nose and Throat, and Ophthalmology patients are all triaged and treated in separate departments that are not associated with the main ED.

At Södersjukhuset (Stockholm South Hospital) in Stockholm, Sweden's largest ED, patients who are triaged as 'critical' will be placed in an area for the sickest patients, regardless of the nature of their complaint. Patients who are deemed unstable may be triaged directly to the Intensive Care Units and bypass the ED altogether. The annual patient volume at Stockholm South Hospital is 88,000, with 33 % percent requiring hospital admission, and 3% requiring admission to an intensive care unit.

Staffing

In general, the large university EDs are staffed by interns, residents, and specialists from differing fields. Depending on the work schedule for the day, a patient is as likely to see an intern as a fully trained specialist. At Stockholm South Hospital, there is no formal system to present all cases to a specialist. If the intern or resident feels comfortable with a patient's management, they are allowed to use their best judgement and to act independently: They may call for a specialist on an on-call basis. At nights and on weekends, when patient volume is lower, there may be no specialist present in the ED at all, although a call system is in place so that someone can be reached either in-house or at home, depending on the schedule for that day.

For trauma or critical 'alarm' cases, an alert system can be activated to rapidly summon a team of specialist physicians and nurses to assist the resident or intern. At Stockholm South Hospital, emergency department shifts for residents vary from eight to eleven hours, and they may not work more than 36 hours per week.

Many of the residents working in the ED are rotating for three month periods as part of their training in another specialty. This high turnover rate creates poorly regulated emergency care, especially when combined with a tendency for autonomous working roles, an absence of specialists trained in emergency medicine, limited working hours, and no mandatory specialist examinations.

Emergency Medicine Curriculum

The Swedish residency program is modelled after the European curriculum for emergency medicine. There is currently no national consensus regarding an EM curriculum in Sweden, so each hospital is developing its own model for teaching and practicing. In general, residents will rotate through different specialties for several months at a time, in addition to working clinically in the ED.

At Stockholm South Hospital, EM residents rotate through medicine, anesthesia, general surgery, orthopaedic surgery, and ophthalmology, and ear, nose and throat surgery. Out of hospital rotations include working in substance abuse clinics, pediatrics, and a brief EMS experience. There is also disaster training, ATLS and “AHLR”, a less intensive Swedish version of ACLS.

Emergency Medicine as a Specialty

Emergency medicine had its origin in Sweden in the mid 1990's, as healthcare personnel re-evaluated the overall efficacy of emergency medical care. In Stockholm specifically, patient volumes at primary care clinics began to rise, and the overflow was absorbed by hospital emergency departments.

At Stockholm South Hospital, three factors contributed to the development of more formalized emergency medicine practice: A poor working environment for physicians with long shifts and rapid turnover; excessively long patient waiting times; and a need to have fewer patient assessments by multiple specialists in the ED. Consequently, the hospital restructured its emergency department organization in 2000.

Other hospitals nationwide were facing similar problems, and also began to reevaluate their emergency care programs as well. During this period, the Swedish Society for Emergency Medicine (SWeSEM) was formed, and a growing interest in emergency medicine arose among the country's younger physicians.

Currently, the Swedish Cabinet of Ministers is scheduled to decide on emergency medicine as a medical specialty in late spring 2005. In all likelihood, emergency medicine will be granted specialty status in conjunction with a base specialty in another field such as medicine or surgery. Residents will choose a base specialty, and will then complete additional specialist training in emergency medicine. The total length of training may not exceed 8 years, but the residents will be able to fulfil requirements in both specialties concurrently.

If emergency medicine is granted joint specialty status, it will provide Sweden with the framework to develop a national curriculum, to offer residents in emergency medicine professional security in the field, and to support current efforts to develop and advance the quality of emergency medical care throughout the country.

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