

**Results:** A total of 4,114 patients required airway management; 73 (1.8%) with FLM. The average age was 50.7 ±20.5 years. Endotracheal intubation using FLM was not possible in four patients. In 35 of the 73 patients (48%) the cause of airway compromise was medical, whereas in the remaining 38 (52%), it was traumatic. Twenty-five of the 35 (71.4%) patients with medical etiology presented with cardiac arrest compared to 10 (26.3%) with traumatic etiology. Eighteen (51.5%) of the patients with medical etiology and 24 (63.2%) of those with traumatic etiology were alive at hospital arrival.

**Conclusions:** Fastrach Laryngeal Mask intubation is an easy technique that allows rapid airway management in patients with extrinsic and intrinsic conditions.

**Keywords:** critical care; emergency medical services; intubation; Laryngeal mask; patients

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#### (N46) Introduction of a Semi-Automatic, External Defibrillation Program in Galicia—A Cost-Effectiveness Study

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**Introduction:** A total of 63,000 myocardial infarctions occur annually in Spain, one-third of victims die before reaching the hospital. The use of a semi-automatic external defibrillator (AED) device may improve patient outcome if it is applied shortly after the collapse. This study was intended to evaluate the cost-effectiveness relationship of an AED program that has been implemented by the emergency service of Galicia (ES-061).

**Methods:** A cost calculation was performed using the identification, classification, and quantification of costs structure. In order to measure the effectiveness of AED program, three indicators were established, each reflecting either the progress or the worsening resulting from the program, using the following criteria: (1) number of attempted resuscitations; (2) return of vital signs; and (3) survival to hospital discharge. The cost:effect ratio was calculated, taking survival as the effect: saved lives as a consequence of AED program implementation.

**Results:** Total attempted pre-AED; 12 months pre-AED; total post-AED. AED patients; 790; 451; 776. Defibrillated patients; 259; 148; 244. Return of spontaneous circulation at the point; 119; 68; 141. Survival to hospital discharge without any impairment; 48; 28; 90. Criterion 1 Index: 172.06; Criterion 2 Index: 207.36; Criterion 3 Index: 321.43. AED program cost-effectiveness (cost per patient discharged from hospital): €8,783.

**Conclusions:** The AED program of the ES-061 is effective, and resulted in an increase in the numbers of assisted CRA, return of vital signs, and hospital discharges. The

cost of a life saved by AED implementation is €8,783. The AED program's cost-effectiveness relationship in the Galician autonomous region is high.

**Keywords:** arrhythmia; cost-effectiveness; emergency health; semi-automatic external defibrillator

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#### (N47) Impact of Emergency Department Overcrowding on Regional Disaster Preparedness in the Western Region of Sweden

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**Introduction:** The preparedness and capacity of ambulance and emergency departments for receiving casualties is a major part of a regional disaster plan. Besides economic gain, regionalization in Sweden aims toward coordinating health-care facilities by reducing hospital beds and the number of emergency departments (ED). Overcrowding of EDs, irrespective of the reasons, may endanger regional security.

**Methods:** The regional registry at the Prehospital and Disaster Medicine Center was reviewed (2006–2008). The number of incidents regarding ED overcrowding and its causes were analyzed. Literature and publications concerning the impact of such incidents were reviewed.

**Results:** There was an increase in the number of ED overcrowdings, mainly caused by the lack of beds at ordinary wards and/or intensive care units and technical problems at the radiology departments. The overcrowding resulted in ambulance diversions between hospitals, reducing and limiting the prehospital capacity. Based on the literature review, such incidents not only increase patient's morbidity and mortality in short term, but also increase the national healthcare costs in long-term.

**Conclusions:** Emergency department overcrowdings, despite the cause, leads to consequences such as ambulance diversions, endangerment of patient's safety, and increased in-hospital mortality. It also reduces and limits the regional preparedness by minimizing the surge capacity. In order to prepare for future disasters, this problem should be addressed by further regional studies and a review of other nations' experiences.

**Keywords:** ambulance diversion; capacity; emergency medical services; overcrowding; regional preparedness; Sweden

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#### (N48) Evaluation and Comparison of Tourniquets for Hemorrhage Control

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**Introduction:** Tourniquets (TKs) have significant implications for disaster response. Traditional TK application has been required to be proximal to joint application; many disaster responders do not carry commercial TKs. We compare proximal vs. distal placement of TKs and the efficacy of commercial vs. improvised TKs.