Norwegian government and implemented by Norwegian Red Cross through a state-to-state agreement.

The first part of the project was directed at 12 cities in Serbia. An assessment revealed a low level of EMS staff skills and a lack of equipment and equipment maintenance. Therefore, the project focused on EMS training, purchasing equipment, and developing the medical software needed for the dispatch centers. The latter included the development of a call center in the capital of Serbia; this project is presented as a case study at Microsoft.com.

The positive changes as a result of these activities were immediate, but short-lived, because they were not supported with new regulations. This points to the importance of systemic changes and new policies to address both the management and content of EMS. These findings resulted in a 2006 project with the main focus of determining a new set of rules and standards for the EMS system to be introduced throughout Serbia.

The presentation will cover following topics: (1) EMS system development (topic no. 3); (2) education and training (topic no 2); and (3) miscellaneous (topic no. 9). It will discuss the means used in order to achieve the project's objectives, the results of the reform, and challenges the team faced with during the process.

Keywords: assessment; Emergency Medical Services; policy; Serbia; training

Prehosp Disast Med 2007;22(2):s48-s49

## (82) Which System Should Be Used in Prehospital Health Services: "Scoop and Run" or "Stay and Play"?

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The most important factor for survival is the efficiency and the speed of the prehospital health services. The discussions on whether to use the "scoop and run" approach or the "stay and play" approach have progressed, and now the topic of discussion is the SAVER method.

Over the last 15 years, dramatic progress has been made in Turkey in the field of prehospital health services.

	September 2005	September 2006	October 2005	October 2006
NDT1	7.9	5.3	6.3	4.9
NDT2	14.8	14.0	14.4	14.0
NDT3	12.5	13.0	12.7	13.1
NDT4	26.3	26.9	26.2	26.8
NDT5	15.8	16.9	16.2	16.7

Table 1—Mean per month

Contrary to many other countries, doctors are on duty in Turkish ambulances. Regarding the approach to the patient/injured in the field, life-saving interventions are applied first (SAVE), and then, very swiftly (RUN), the patient/injured is transported to a center where the most effective treatment can be applied. In penetrating injuries, every possible medical intervention is realized within the ambulance during transport. In blunt traumas, a stabilization procedure also is applied, and vital interventions and transportation is ensured.

Turkey provided a successful example in terms of emergency health services in the prehospital field.

Keywords: prehospital health services; "scoop and run" approach; "stay and play" approach; Turkey

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(83) More Personnel is Not Enough

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Objective: The objective of this study was to prove that even if personnel are hired, the performance of a nationwide emergency medical services (EMS) system is multifactorial, and all the factors must be improved in order to be effective. Methods: All the calls that the EKAB handlde and were analyzd ndt1:call - transmit, ndt2: transmit -arrival, ndt3: time on the scene, ndt4: scene - delivery, ndt5. These factors during months: September 2005 to October 2006 were compared. A multi-way ANOVA was conducted to see if there was an improvement in times.

Results: In September 2006, the EKAB hired 400 personel (20% of the existing personel). Data prove that the new personnel was responsible for 7–9% of the workload of the EKAB. No improvement in the times was found.

Conclusions: New personnel improves the pre-scene performance of an EMS system. The time after-scene must be improved in order for the entire system to improve. Emergency medical services facilities must be used correctly. Keywords: emergency medical services; Greece; improvement; institution; personnel;

Prehosp Disast Med 2007;22(2):s49

#### (84) Where There Is No Emergency Medical Services: Prehospital Care in India

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Objective: The objective is to determine the prehospital care currently available to the accident victims in the city of Mumbai, in the absence of a formal Emergency Medical Services (EMS) system.

Methods: One hundred and seventy narratives were collected from randomly selected victims (AIS>2) in their native languages. These narratives focused on costs, transport times, the role of facilitators/informal care takers, and the route taken to reach the Level-One Trauma Care center.

Results: The most frequently identified people who first cared for the victims were the police (22.4%), passerbyers (21.7%), accompanying persons (18.9%), and the accused (5.6%). The police were involved at some point in 71.3% of the cases and were the first to notify the family in 89.7% of the cases. Of those interviewed, 52.6% of cases received no first aid at all, and 41.5% received elementary first aid. Casualties reached the trauma center by taxi in 24.8% of cases, government ambulance in 21.4% of cases, private ambulance in 19.3% of cases, and by police pick up van in 19.3% of cases. Additionally, 2.1% arrived on foot. One fifth of the patients traveled more than 50 kms, and 5% of the cases traveled from more than 300kms away.

Discussion: There are poor guidelines and weak licensing requirements for ambulances. No one waits for the EMS to arrive, as there is none. Contrary to popular belief, the police usually were present.

Conclusions: Prehospital services in India are inequitable, with different services provided to urban versus rural, and paying versus non-paying patients. However, the lack of an EMS system in India did not significantly delay arrival of patients to the hospital. With this in mind, though, the responsibility for prehospital care should not fall on uninvolved citizens.

Keywords: ambulances; Emergency Medical Services; first aid; India; prehospital care

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# (85) Implementation of Automated External Defibrillation in the Belgian Emergency Medical Services System and Introduction of Public Access Defibrillation

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Introduction: Every year, 10,000 people die due to sudden cardiac arrest. This is the major cause of death in prehospital care. Ventricular Fibrillation (VF) and Pulseless Ventricular Tachycardia (VT) are the most frequent initial rhythms documented in witnessed cardiac arrest. Defibrillation is the most effective treatment for VF/Pulseless VT. If performed in time, this is an intervention with a high rate of success.

Mission-Organization-Training: In 2003 and 2005, the government of Belgium interviewed all prehospital EMS. With this enquiry, the number and type of Automatic Electronic Defibrillators (AEDs) in use, their frequency of application, and the percentage of ambulance people familiar with the use of AEDs could be identified.

During 2003 and 2004, instructor sessions (ERC Guidelines) were organized to implement uniform AED use. One hundredsixty instructors were trained by a pyramid system of teaching 9,000 ambulance men in the EMS system. Practical problems were discussed, such as uniformity and compatibility of AED devices and training equipment for education.

The total cost of equipping the ambulances that did not have an AED was estimated at 1,000,000 euros. In the 2006, the government distributed semi-automatic defibrillators to equip all ambulances in the EMS system. A change in the law in 2006 allowed PAD (Public Access

Defibrillation) for everybody. The Red Cross is now starting to train lay people.

Conclusion: Much progress has been made; however, Basic Life Support Defibrillation should be promoted because cerebral damage after ROSC is a major problem.

Keywords: automated external defibrillators; Belgium; costs; efficacy; emergency medical services; public access defibrillation; research training

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## (86) Ruptured Ectopic Pregnancy: Risk Factors for a Life-Threatening Condition

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Objective: To determine the risk factors for the rupture of an ectopic pregnancy in order to help physicians identify women who are at greatest risk.

Methods: The total of number of cases of ectopic pregnancy that were treated in the Gynecology Department of the General Hospital George Genimatas in Athens, Greece, between January 1988 and December 2006 was identified. The following parameters were examined retrospectively: (1) rupture status; (2) past history of pelvic infection or ectopic pregnancy; (3) use of intrauterine contraceptive device (IUCD); (4) operations for infertility treatment/tubal surgery; (5) parity; and (6) gestational age. The study group was assigned into two subgroups: (1) ruptured ectopic pregnancies (Group A); and (2) unruptured ectopic pregnancies (Group B). Where appropriate, Pearson's Chi-Square test was applied. Statistical analysis was performed using STATA 8.0 statistical software.

Results: Two-hundred and twenty-three cases of ectopic pregnancy were retrieved for the studied period. Of these, 144 (65%) were ruptured ectopic pregnancies (Group A) and 79 (35%) were unruptured ectopic pregnancies (Group B). Past history of ectopic pregnancy was present in 55 patients from Group A and 18 patients from Group B (38% vs 23% respectively, p = 0.019). Moreover, there was a statistically significant positive association between rupture and parity. No statistical significance was found concerning past history of pelvic infection, use of IUCD, operations for infertility treatment or tubal surgery, and gestational age.

Conclusions: Previous history of ectopic pregnancy and parity seem to be significant risk factors for the rupture of an ectopic pregnancy.

Keywords: ectopic pregnancy; gynecology; parity; pelvic infection; rupture

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### (87) Prehospital Use of the HemCon Bandage by Paramedics of Magen David Adom, the Israeli National Emergency Medical Services System

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Introduction: Magen David Adom (MDA) is the Israeli national emergency medical services (EMS) system that