based emergency health for this discipline to be recognized as a sub-specialty with its own research and knowledge base, designated graduate training program, and which operates in a multi-disciplinary and collaborative environment. It suggests the benefits to the community, and governments, in recognizing community-based emergency health as a medical sub-specialty.

Keywords: community-based; discipline; emergency; emergency medical services; health; management; medical; multi-disciplinary; sub-specialty; training
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Free Paper Theme 8: Emergency Medical Services System Design—System Issues

Emergency Medical System in Hyogo Prefecture and the Role of The Hyogo Emergency Medical Center

S. Kozawa; S. Nakayama; T. Ukai
Hyogo Emergency Medical Center, Japan

On 17 January 1995, a massive vertical-thrust earthquake resulted in the loss of lives and destroyed urban infrastructures. The scale of the earthquake exceeded all expectations, contributing to many problems in disaster response, including: (1) unavailable transportation; (2) severely reduced emergency medical services (EMS); (3) inadequate utilization of medical staff and facilities; and (4) insufficient stock of drugs and other medical supplies. After this earthquake, a leading role in establishing an emergency medical system for Hyogo Prefecture in disasters was taken.

Several countermeasures were developed after the earthquake. A comprehensive disaster-related medical information network system was introduced to each of various regional institutions to collect and disseminate medical information in the situation of disaster.

The Hyogo Emergency Medical Center was designated as a disaster medical center (main core hospital in Hyogo Prefecture), equipped with the ability to train EMS crews, and a stock of EMS supplies for emergency delivery. Everyday operations for the Hyogo Emergency Medical Center include offering emergency treatment as a emergency medical center, operating a doctor care service, receiving patients brought by helicopter, and managing and operating the emergency information center. During disasters, the Hyogo Emergency Medical Center operates a disaster emergency information and instruction center, receives patients from the disaster area, and dispatches relief workers.

Fifteen core hospitals are the regional bases for treatment of patients in a disaster, and have earthquake-proof buildings, large storage facilities for keeping drugs and other medical supplies, large water storage tanks, and electrical power generators.

Conclusion: The damage caused by this earthquake as a warning to urban civilization must be realized. Based on this experience, a proposal for an emergency care network designed to facilitate access to and level of medical care in the face of a disaster has been presented.

Keywords: core hospitals; disaster-related, medical, information network; earthquake; Hyogo Emergency Medical Center; Hyogo Prefecture
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Development of an Emergency Medical Care System in Georgia

K. Chikhradze; T.T. Jorjoliani; Z. Metreveli
Centre of Disaster Medicine, Republic of Georgia

Georgia, one of the republics of the former Soviet Union, is situated on the southern part of the Caucasus Mountain Ring between the Black and Caspian Seas. Its territory is 64,700 square kilometers, with a population of 4.5 million. With the breakdown of the Soviet Union, the Soviet Healthcare System also was broken down, and the development of a new, western model of a healthcare system became difficult because of the indigence.

This presentation represents the schedule of needed measures, which are necessary to construct an orderly system. The goal of this presentation is to help reduce the mortality and fatal outcomes during emergency situations.

The system is composed of the following stages: (1) Prevention; (2) Prehospital; (3) Hospital; and (4) Rehabilitation. The *Prevention Stage* registers those measures, which will help to avoid complicated cases, such as: teaching the population how to provide emergency medical care and teaching different professionals (police, firefighters, drivers) the skills of basic life support (BLS).

The *Prehospital Stage* emphasizes delivery of adequate emergency medical care at the prehospital stage. It includes training and ensuring emergency medical care providers in transport, medications and medical equipment, verifying the arrangement and equipment of the emergency department, training the staff, and optimizing communication.

In the *Hospital Stage*, adequate and qualified medical care of the patient delivered at the hospital is assessed. Two main focuses in this stage are the optimization of communication and the development of a referral system.

The *Rehabilitation Stage* emphasizes the eradication of results, and the physical and social rehabilitation of casualties. It is important to implement rehabilitation into state programs and to create rehabilitation hospitals and hospices.

A complete system will be developed, which will allow the management of emergency situations adequately, the number of mortalities and complications of critically ill patients will be reduced, and pamphlets, booklets, and other teaching materials will be created and after their popularization, the Georgian population will become informed and familiar with the skills of first aid.

For population and special purpose groups, the audible, video, photo, and printed teaching materials will be created, which will give opportunities to develop standardized methodical model. After the integration of a pilot part, the policemen familiar with first-aid skills will serve the most crowded part of Georgian auto-lines (Tbilisi-Khashuri).

The analyses of the results of pilot studying will give the opportunity to create and realize studying process in all

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regions of Georgia and creating a bank of information will provide analyzes and estimation of the information about performed work, also for the creation of methodological approach and normative acts.

Keywords: development; emergency medical care; hospital; Georgia; prehospital; prevention; rehabilitation; system
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A Decade of SAVAN: The Journey so Far

A. Bafor; E. Ehikhamenor
Nigeria

SAVAN is an acronym for "Save Accident Victims Association of Nigeria". The pre-SAVAN era in Nigeria was characterized by patient rejection at emergency rooms because of a lack of ability to pay for services as well as problematic hospital policies. This, in the face of virtually non-existent prehospital care, culminated in unacceptably high rates of morbidity and mortality for accident victims.

It was against this backdrop that the concept of SAVAN was developed. The challenges have been daunting, coupled with a rapidly expanding scope of operations borne largely out of necessity. Significant successes have been made, particularly during the last decade. SAVAN has continued to strive to rectify some of these problems by collaborating with several designated hospitals. This is made possible via a host of programs like seminars, workshops, use of volunteer workers.

SAVAN has grown substantially and continues to strive towards its vision of "acceptable" levels of morbidity and mortality in Nigeria.

Keywords: Nigeria; prehospital care; SAVAN
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Role of Standard Treatment Protocol (STP) in Crush Injury

S. Abdaliha
Iranian Red Crescent Society (IRCS), Iran

At 05:26 hours on 26 December 2003, a major earthquake (6.5 on the Richter scale), struck the city of Bam. More than 30,000 people were killed, and approximately 20,000 were injured (of which some 12,000 were evacuated).

Beginning on the first night, 801 patients were admitted to hospitals during the first 72 hours following the quake Most of these patients arrived at one of three university hospitals in Tehran during the first 24 hours. Admissions were based on a surgical emergency team's judgment provided at the airport.

In the department of internal medicine, an emergency medical team was organized, including medical residents under the supervision of nephrologists. In the three university hospitals, in order to initiate effective therapy as soon as possible, a standard treatment protocol (STP) based on collected relevant clinical information and designed by the Iranian Nephrology Society (INS) was administered. Patients who were admitted to other city hospitals and who were referred to the Iranian hospitals were treated using different methods and with variable volume and hydration therapy (control group). In this presentation, the results of administering a STP are compared with those in the control group, and the effectiveness of both methods was evaluated. A total of 801 patients were transferred to Shaheed Beheshti University of Medical Sciences, of whom 20 (mean age 36.2 ±14.8 years, 15 males) developed acute renal failure, with a mean duration of 14.5 ±9.6 days. A control group was selected from those patients, and was treated with other treatment protocols in other medical centers. The prevalence of acute renal failure was significantly lower in the first group, compared to the control group.

Conclusion: An STP is more effective in terms of prognosis of the patients with crush syndrome. The level of creatinine kinase (CK) is the standard test for diagnosis and follow-up of the patients with crush syndrome. The CK curve is the best index for making decision about the need for dialysis.

The following issues must be considered as questions and recommendations to overcome the crush syndrome: (1) criteria for screening high-risk patients; (2) criteria for patients developing ARF; (3) need for significant predictors of the need for dialysis; (4) predictors of death; (5) the role of the use of Ward and Gabow formula for identifying high-risk patients in earthquake victims; (6) the role of the use of trauma scales in evaluating the earthquake victims; (7) the development of a specific trauma scale for earthquake victims; (8) the role of prophylactic hydration therapy in prevention and delaying the development of ARF and needs for dialysis; (9) the use of high tonicity versus low tonicity prophylactic solutions in patients with rhabdomyolysis; (10) the administration of bicarbonate and its role in prophylactic hydration therapy in patients with rhabdomyolysis; (11) the use of oral hydration therapy in prophylaxis of myoglobin-induced ARF; and (12) designing and distributing appropriate disaster victim charts in hospitals throughout the country, based upon this experience with Bam patients (limitations and shortages of response to this questionnaire).

Keywords: acute renal failure (ARF); Bam; crush syndrome; dialysis; earthquake; standard treatment protocol (STP)
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Determination of the T1:T2:T3:T4 Ratio in Coordinating Missions of Emergency Physicians (CEP), and Estimate of Mean Severity Index of CEP Missions in Bavaria

B.M. Schneider;[1] M. Mader;[2] C. Müller;[3] T. Kees;[4] H. Woltering;[5] B. Domres[6]
1. CEP-Group Augsburg, AG-CEP Bavaria, Germany
2. DISMED, Augsburg, Germany
3. AK-LNA Bayern, Germany
4. agkm Uni - Tuebingen, Germany
5. DISMED; Gronau, Germany
6. AGKM-Uni-Tuebingen.de, Germany

Introduction: Results from the educational efforts from the BLAEK in Munich, Germany, Coordinating Emergency Physicians (CEPs) have been available in the RCCs in Bavaria since the mid-1990s.

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