

(> 50 years of age), and those who had been working in EMS for longer periods were found to have significantly lower scores ($p = 0.05$). Overall scores of paramedics was significantly higher than driver/medics. ($p = 0.05$).

Conclusions: Both pre- and post-tests were reliable. Post-test scores improved significantly after the intervention. Age and seniority are factors that must be considered when developing continuing education interventions. Possibility should be given to implementing role specific continuing education interventions. Attrition of knowledge must be investigated.

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(A313) Integrating Paramedics into the Health System — Israel as a Case Study

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Background: Since its development in the 1970s, the paramedic profession has tried to expand its traditional role of providing pre-hospital emergency care in ambulances into new fields of practice (e.g. community care). Paramedics in Israel are employed almost exclusively in the emergency medical services (EMS). Similar to other countries, the manpower shortage in the Israeli health system forced policy-makers to consider the expansion of traditional roles of various healthcare professions including paramedics.

Objectives: This presentation seeks to: (1) map the current situation and challenges facing paramedics in Israel; (2) examine paramedics' professional status among policy-makers; and (3) examine the best way to integrate paramedics in the Israeli health-system.

Methods: Qualitative interviews were conducted with 20 senior policy-makers in the Israeli EMS system, Academia, Health Ministry, and military. A policy analysis of documents, laws, regulations, and public media was conducted.

Results: The Ministry of Health in Israel did not play a significant role in the regulation of the profession. Nevertheless, according to the interviewees, paramedics have gained considerable professional recognition among policy-makers, healthcare professionals, and the general public. Following the medical manpower crisis that is evolving in Israel, and the trends that are common in many western countries of expanding the traditional roles of allied health professions, most policy-makers in Israel see the paramedic role evolving into new field of practice. According to policy-makers, legislators, and EMS officials, the major challenges that the paramedic profession faces deal with legislative and professional (mainly academization) issues.

Conclusions: The paramedic profession must adapt itself to the new medical environment. More research should be conducted to build a model, adapted for different local national context, to expand the traditional role of paramedics. This will influence training, research and policy-making regarding the paramedic profession, and will change the traditional professional medical borders.

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(A314) Challenges Faced in Establishing the Emergency Prehospital Ambulance Service in North Central Sri Lanka: Developing Something from Nothing

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The existence of a prehospital emergency care system signifies how secure an area is in aftermath of a health-related emergency. The systems save lives during most out-of-hospital health emergencies. Until 2010, there was no regular prehospital care system in Anuradhapura, or even in the entire north central region of Sri Lanka. Trauma patients were brought to the hospital generally with little or no prehospital care. They were transported to hospital by relatives or other people at the scene with using whatever vehicle was available at the time, which in many occasions was a trishaw. The concept of developing a prehospital emergency ambulance service to cover the municipality of Anuradhapura as a pilot project was formulated in 2009. The objectives were to: (1) provide emergency prehospital care in the municipality; (2) identify the difficulties; and (3) assess the feasibility of implementing it in the entire district. Some of the challenges faced in the process from the initial draft of the concept up to now include: 1. Studying an established emergency medical services (EMS) system; 2. Developing a pressure group in hospital; 3. Convincing the need to administration; 4. Funding in the initial period; 5. Selecting the proper team and supportive peers; 6. Providing standard training to selected staff; 7. Formulating duty norms and standard operating procedures; 8. Infrastructure development, acquiring instruments, and vehicles with limited fund capacities; 9. Cooperating with the trade unions and external/internal negative forces; 10. Rallying the collaborators with same interest; 11. Handling donors; 12. Getting the support of other key institutions (police/municipal council); 13. Utilizing local media to help promote the project; 14. Social mobilization to ensure sustainability; and 15. Ensuring worker satisfaction, encouragement, and liaison with other units of hospital.

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(A315) Improvement of the Prehospital Healthcare System in Iran

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Background: The prehospital time delay in acute health problem still is a problem in most low- and middle-income countries, like Iran. It often is possible to minimize adverse consequences by promptly providing effective prehospital services

Aim: This study was designed to compare the response time interval occurring during the prehospital care process in Tehran during the last decade.

Methods: A retrospective, comparative study was designed, and the mean response time intervals in relation to prehospital care were identified from September 1999 until September 2000 were compared with data from September 2009 until September 2010. Data were collected from Tehran emergency medical services (EMS) center registries.

Results: The EMS center of Tehran dispatched 213 ambulances every day in 1999–2000 compared with 1,200 in 2009–2010. During the 2009–2010 period, the mean response time for city locations was 14.18(+ /-4) minutes, compared with 1999–2000 the mean response time for city location was 16(+ /- 8). The mean response time from the time period of 1999–2000 also was longer than for 2009–2010 (14.18 vs. 16.58 minutes).

Conclusions: Despite the prominent increase in the number of ambulance dispatching everyday, the mean response time in Tehran decreased during last decade. This improvement can be due to the improvement of the prehospital system in Tehran, including the number of: ambulances, trained staff, EMS stations, etc. However, it still is far from a national standard (eight minutes for city).

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(A316) Pre-Hospital Emergency Care in Sudan - Current Practices in Disaster Management (DM)

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Introduction: The problems of pre-hospital care and training in the developing world are very similar – resource limitations and training deficiencies. Humanitarian conditions in the Sudan have been among the worst in the world including both man-made and natural disasters. Effectively responding to emergencies is of paramount importance.

Methods: The information was collected by a group of Sudanese physicians working in the emergency department at a large urban public hospital in Khartoum, Sudan and in the U.S. for the purpose of establishing structured training programs for pre-hospital responders.

Results: There are currently 37 registered state operated mini-ambulances serving ~8 million people in the capital city of Khartoum. There is 1 central dispatching command center operated by the state Ministry of Health (MOH) that serves 29 hospitals. Services are available by calling a central “999” emergency response number. There are no private ambulances in Khartoum; however, most patients are transported by private or public transportation. Ambulance transport teams consist of ~2 ambulance emergency assistants with limited medical training. Ambulance transport costs are covered either by insurance for the insured; however, the majority of patients are self paid. Emergencies are also managed by the Department of Civil Defense, which is a branch of the Sudanese MOH that responds to natural and man-made disasters. There are 2 layers of this team; 420 physician with masters degrees in DM and emergency rescue workers. These emergency rescue workers do not have formalized training. Other important findings are: lack of training centers for first emergency responders, no standardized practice guide lines among pre-hospital care personnel.

Conclusion: Emergency response in the Sudan is a relatively new practice but has shown a promising trend for the continued

development of a highly advanced and functional pre-hospital/emergency response system. More structured training through collaborative efforts and substantial resources are needed.

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(A317) Evaluation Outcomes - Capacity Building for Emergency Medical Services along National Highway No. 5 in Hai Duong Province, Vietnam – October 2009

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Background: This project was designed to reduce secondary injury of road traffic accidents (RTA) victims in Hai Duong (HDRC) province in Vietnam in collaboration with the Red Cross with funding from Medical Teams International (MTI). The approximate number of beneficiaries was 601,820, including the 1,820 direct beneficiaries who received first responder training and emergency treatment. The 600,000 indirect beneficiaries is the population along a 45km corridor of National Highway #5 crossing Hai Duong province.

Methods: In late October 2009 an evaluation team from MTI reviewed the training of Vietnam Red Cross volunteers in Hai Duong province. The pre-evaluation activities (review of patient contact log books and patient interviews) were conducted by the MTI-Vietnam staff. 58 trained lead volunteers and 20 community members participated in this evaluation. Additionally 92 patients who had been treated by the volunteers were also interviewed.

Results: Findings included: a) the volunteers who received training stated an increase in their confidence to respond to emergencies, b) a 65% increase of Red Cross volunteers, c) a increased awareness of EMS within the province, d) greater community engagement at emergency scenes, and e) broad respect from the community towards the HDRC volunteers.

Discussion: Considerations for the future include: a) development of a continuing education program, b) increase of supplies to volunteers, c) more training involving multi casualty incidents, d) development of a communications protocol between volunteers and other healthcare providers and e) limit CPR training to drowning related events.

Conclusion: The outcomes exceeded the planned goals: knowledge and retention of course materials and skills is good, confidence levels of volunteers increased and those that are involved in emergency events in Hai Duong province are safer. The profile of EMS and first responders as a critical component of community health has been measurably raised among key stakeholders and the community.

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(A319) Using a Computer Simulation (CS) to Improve Training and Event Management of Paramedics for Mass Casualty Incidents (MCI)

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Using a Computer Simulation (CS) to improve training and event management of paramedics for Mass Casualty Incidents