

to multidisciplinary, and from theoretical knowledge to complex decision-making in teams.

The available training programs, learning environments, and research programs with respect to CBRN training have been inventoried in order to support formulating the requirements a CBRN training system should meet. It appears that technologically more sophisticated learning environments, such as virtual reality, hardly are available, although these immersive and interactive worlds can be powerful.

The presentation describes the functional requirements a CBRN training system should meet and its various functional components.

**Keywords:** chemical, biological, radiological, nuclear; education; European Union; first responder; training

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### Oral Presentations—Theme 3: Emergency Medical Services (EMS) Systems

#### Session 1: System Design

*Chairs: Jerry Overton; Andrew Marsden; J. Luitse*

#### Planning for Prehospital Emergency System Improvements in Iran

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**Introduction:** In Iran, emergency medical services (EMS) are responsible for responding to medical emergencies. This system employs well-trained and well-experienced personnel, and has been effective. However, due to the rapid population growth and the development of urban regions in recent decades, this system has become increasingly incompetent in its responses.

**Methods:** Operational research was applied to effect system improvement. This study was performed in 2000–2003. A committee consisting of senior managers and experts was formed. The current situation of the system was evaluated. Essential measures to improve the situation were determined, and it was decided to execute the resulting plan in a timely fashion.

**Results:** Based on a system evaluation, the most important suggestions included:

1. Increasing the number of ambulances and decreasing the average age of ambulances;
2. Equipping and standardizing the ambulances;
3. Designing ambulances with special functions such as mobile intensive care units;
4. Developing a motorcycle and air ambulance system in some of the larger cities;
5. Increasing the number of emergency stations;
6. Defining a close relationship between the fire and police departments;
7. Employing experts with higher levels of education;
8. Connecting staff at the scene of the incident to the consultant physician in the dispatch center; and

9. Publishing training materials and conducting regular training course for emergency medical technicians.

**Discussion:** Two decades after an EMS system was established in Iran, the system must be restructured. This applied study, based on scientific programming, has led to an increase in the number of duties, an optimized duty time, and the improvement in the quality of care provided.

**Keywords:** emergency medical services; improvement; Iran; planning; prehospital

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#### Four Years in Uzbekistan: An Emergency Medical Service Success Story

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The Medical Teams International (MTI)-Uzbekistan Emergency Medical Services (EMS) training program began in 2002. More than 7,000 students have been trained throughout Uzbekistan using a “train-the-trainer” paradigm. In cooperation with Medical Teams International (MTI), local health and education ministry officials provide oversight and support to seven regional training centers throughout Uzbekistan.

In the spring of 2006, a MTI evaluation team visited Uzbekistan to review the status of this ongoing program and examine its progress. The goals of this project were to upgrade EMS training and to increase the effectiveness of EMS in serving Uzbekistanis. The outcome of this project was to reduce premature mortality, morbidity, and disability from emergencies by increasing the knowledge base of first responders and medical providers. The project provides training for medical providers and emergency responders in prehospital emergency care for victims of disasters and traffic crashes.

The evaluation process consisted of two parts. Part One involved a site visit and survey of training equipment at the training centers. Part Two contained a series of focus groups held throughout Uzbekistan. The separate focus groups were comprised of students, Ministry of Health and Defense officials, and staff, respectively. Medical Teams International has built upon the successes of the Uzbekistan program to launch >10 other EMS training programs around the world.

The findings of this evaluation demonstrate the effectiveness of the EMS focused train-the-trainer modality in a developing country.

**Keywords:** emergency medical services (EMS); Medical Teams International (MTI); prehospital emergency care; training; Uzbekistan

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#### Impact Assessment of Emergency Response Service in Eight Cities in Andhra Pradesh, India

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**Introduction:** The Emergency Response Service (ERS) was launched in the state of Andhra Pradesh, India on 15 August 2005. The objective of the launch was to respond to emergency calls of the Medical, Police, and Fire Departments.