

# Vladivostok EMS Conference Highlights Disaster Response

*By Joanne Neuber*

As US, CEE and NIS emergency medical service (EMS) personnel traveled to the First Annual AIHA EMS Conference in Vladivostok, Russia, a school bus carrying 50 children in Rostov, Russia collided with a train, killing 21 and injuring many others when railroad crossing signs malfunctioned. The tragedy underscores the random nature of disasters and their devastating impacts, said Sergei Goncharov, director of the Russian Center on Disaster Medicine in Moscow, in calling for an increase in vehicle-related trauma prevention programs.

"Disaster knows no borders, and it is especially significant that you are sharing common experiences in disaster... because only through this sharing can we hope to reduce the high rate of disasters that occur in our global community," Goncharov told attendees of the conference, which focused on disaster response and other emergency medicine issues.

According to Goncharov, improving disaster and emergency response requires a focus on planning, training and communications. These three aims were addressed by NIS, CEE and US presenters throughout the three-day EMS conference that convened from September 30 to October 2.

## Planning for Disasters and Emergencies

Disasters can strike at any minute, leaving entire communities devastated for days, weeks or even months. From damaged health care delivery systems to interruption of lifeline systems, disaster response teams can easily be overwhelmed

A well-designed disaster plan can facilitate emergency response, noted keynote speaker Richard Aghababian, MD, FACEP, chairman of the Department of Emergency Medicine and associate dean of Continuing Medical Education at the University of Massachusetts Medical School in Worcester.

"We must learn from the lessons of the past in developing advanced emergency response plans," Aghababian said, citing the 1996 Atlanta Olympics bomb that killed two people and injured 111 others. (See box )

Although rescue workers may often attend to the "walking wounded" first, they should instead immediately try to identify and triage the most serious victims, who, Aghababian said, are usually situated near the epicenter of a disaster. Rescue workers are able to do the greatest good for the greatest number of people by prioritizing injuries through the universally recognized color-tagging system.

As the AIHA-sponsored regional EMS centers begin to develop emergency response plans, they should rely on federal guidelines similar to the US recommendations outlined by the Federal Emergency Management Agency (FEMA) that facilitate the delivery of all types of assistance to oblast (state), regional and local disaster response teams, said Alexander Sorokin, MD, deputy chief of the Federal Department of Biomedical Problems and Disaster Medicine, Russian Federation Ministry of Health.

"Otherwise, there will be confusion and conflict over who is in charge... as we witnessed in Sakhalin," where over 500 died during a 1995 earthquake, Sorokin said. His department, which has administered federal disaster relief for 50 years and participated in the Chernobyl disaster relief effort, is creating 72 regional disaster management centers in collaboration with the Russian Federation Ministry of Health, along with federal emergency care guidelines. Sorokin said he hopes to collaborate with AIHA to provide training to the centers' first responders so that "together, we can improve the quality of emergency care."

Similar efforts are underway in Ukraine, where the Kiev EMS Training Center is collaborating with the Ukrainian Ministry of Health to function as the National Emergency and Disaster Medicine Training Center. A manual for nationwide use, "Safety Precautions and Guidelines for Personnel Involved in Disaster Response," was printed by the Center this fall under the auspices of the health ministry for use throughout Ukraine's rescue brigades.

## **Training for Disasters and In-hospital Interface**

The eight AIHA EMS Training Centers in CEE and the NIS have made great strides in training first responders, said presenter Dario Gonzalez, MD, associate medical director of the New York City Fire Department.

Since their creation in 1994, each center has conducted an average of 20 pre-hospital training courses annually, graduating more than 600 physicians, nurses, ambulance drivers and paramedics every year. Centers also adapted their two-week, pre-hospital courses to provide first response and basic first aid training to the wider community, including traffic police, fire units, search and rescue teams, factory workers and even children.

Because every emergency response system is different, training provided to EMS teams must be adapted to meet specific local needs, said Gonzalez. For example, the Tallinn EMS Center in Estonia tailored the pre-hospital training curriculum to meet the specific needs of health care personnel who staff the EMS training center, poison center and regional disaster medical center.

And training must also be adapted to address the needs of different age groups, especially when working with children, said Sharon Roy, RN, senior staff nurse, Emergency Department, Hennepin County Medical Center in Minneapolis, Minnesota. "You can't bargain with children... you need to be honest with this age group and gain their trust," Roy said.

The Vladivostok-Richmond EMS Training Center, under the direction of Alexander Partin, MD, provides pediatric trauma instruction to its EMS teams. The center also designed a basic life support (BLS) course for children that includes coloring books as instructional tools. The BLS course for children has been adopted by the school system in Primorskiy Krai.

The centers are also working with hospitals to create in-hospital emergency departments, which generally did not exist in the NIS and CEE. This is an important paradigm shift, because without it, emergency disaster management cannot be addressed, said Gregory Ciottone, MD, director, Institute for Disaster and Emergency Medicine, University of Massachusetts Medical Center.

Ciottone cited the in-hospital curriculum that was developed by partners at the Yerevan-Boston EMS Center in Armenia. This curriculum was first presented at the EMS Training-of-Trainers Workshop that was held last July in Worcester, Massachusetts, and was adapted by the four original EMS Centers to meet local needs.

For example, the Emergency Hospital in Chisinau, Moldova is faced with a high number of cardiac patients, 45 percent of whom are transported to the hospital via ambulance. To make sure that these patients are given priority, George Ciobanu, chief physician at Emergency Hospital, envisions the creation of both an in-hospital emergency department and a triage center within the department that allows minor injuries to be moved to the polyclinic within the emergency department.

The Yerevan Emergency Hospital is introducing a two-year residency program designed to retrain intensive care physicians in emergency medicine. The first six EMS physicians will graduate in June and then begin work as Armenia's first in-hospital emergency medicine physicians.

## Communications and Dispatch

Patient care begins when the telephone rings and continues until the patient reaches the hospital. Yet, if a dispatcher hangs up the phone before the ambulance arrives, "we've maybe lost the opportunity to save a life," said Jerry Overton, executive director of the Richmond Ambulance Authority in Virginia.

Ambulance dispatch centers are staffed by trained medical personnel who send ambulance teams to the accident site. Dispatch centers may be operated by local fire departments, hospitals, police stations or can be free-standing. Dispatchers need to be trained in the use of call-prioritization, resource deployment and pre-arrival instructions to operate as an efficient, modern emergency medical services system, he said.

The Richmond Ambulance Authority relies on the Emergency Medical Priority Dispatching System, which was developed 17 years ago in the US to provide telephone patient triage. The system provides emergency medical dispatchers with a set of instructional cards that outline 32 chief caller complaints such as cardiac arrest, choking and childbirth. The dispatcher, who undergoes a three-day intensive training course, relies on the cards to provide continuous telephone instruction to the caller until the arrival of the emergency personnel. The cards also contain information that allows the dispatcher to prioritize the calls based on the information from the caller, so that scarce ambulance crews can be utilized in an efficient manner, Overton said.

"Too often we are concerned about how many horses and how many men we should send to put Humpty Dumpty back together again," said presenter Michael Smith, international representative for Medical Priority Consultants, Inc., in Salt Lake City, Utah, referring to a popular nursery rhyme to remind the audience that their ambulance resources are limited and that calls must be prioritized.

AIHA will continue to address the issues outlined during the sessions on planning, training and communications as it opens four new EMS training centers in 1997: two in Ukraine and one each in Ashgabat, Turkmenistan and Tirana, Albania.

The continued expansion of the EMS training center model is evidence of its valuable contribution in the development of successful regional approaches to emergency medical services, said Yury Seliutin, head, Primorskiy Krai Health Administration.

"I have found that the sharing offered through the partnership is a commitment to providing better services and new talent for saving lives in our global community."