

tion, mental health, and international coordination. According to the results of the post-test, the greatest areas of improvement were in disaster epidemiology, on-site medical facilities, hospital evacuation, international coordination, and media relations. There was significant country-to-country variability.

**Conclusion:** A majority of the disaster preparedness course was new, even for experienced hospital personnel. There was improvement in all topic matters after the course, with a significant improvement in disaster management topics. These topics should be targeted even more in future disaster preparedness courses.

**Keywords:** assessment; disaster; education; hospital personnel; knowledge; management; preparedness; training

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### National Strategy For Training Disaster Medicine Service Experts in Russia

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There has been an increasing incidence of technogenic accidents and disasters during the last three years in Russia. In addition, there is a greater emphasis on the problems associated with terrorism. Together, these factors indicate a great need for training Disaster Medicine service experts in order to reduce health after-effects of emergencies.

The primary institution for training Disaster Medicine experts is the Institute for Disaster Medicine located in the All Russian Centre for Disaster Medicine, “Zaschita”. There also are regional institutes for advanced medical training that constitute a part of the Disaster Medicine sub-faculties in regions other than Russia.

A primary goal of the national strategy of education is training highly qualified, Disaster Medicine experts for the mitigation of the damage created by events and the realization of the benefits of medical care at both the prehospital and hospital stages, preparedness of medical institutions for mass admission of the injured patients, and the delivery of timely medical care.

Within the framework of the Institute for Disaster Medicine, the following tasks are being solved: (1) organization and implementation of occupational training and certification of Disaster Medicine experts in the areas of management, treatment, and prophylaxis; (2) implementation and coordination of scientific research relating to Disaster Medicine; (3) implementation of regional and inter-regional drills on basic Disaster Medicine (i.e., radiation and chemical accidents, terrorist attacks); (4) training scientific and teaching personnel about Disaster Medicine; and (5) development and introduction of new forms of training (i.e., modular training, telemedicine conferences). More than 6,000 students have undergone training in 20 cycles of Disaster Medicine professional skills during 2000–2003. Being the Euroasian training center, ARCDM, “Zaschita” conducts out-reach training in the Republics of the former Soviet Union.

The new standardized curricula were evaluated highly by the Russian Ministry of Health and have been recommended

for higher institutions for the training of Disaster Medicine experts. The basis of the curriculum is formed by recent scientific and practical developments in Disaster Medicine. These curricula also provide new teaching aids (information and telemedicine technologies) and special attention is given to acquiring practical habits and mastering the main issues related to medical responses during an emergency.

Within the framework of a joint program with the town of Tübingen, Germany, ARCDM, “Zaschita” also conducts an international experience in training devoted to responses to chemical terrorism. This system of training facilitates the development of a highly qualified Disaster Medicine physicians, and thus, promotes the level of preparedness of medical personnel for emergency response operations.

**Keywords:** ARCDM; chemical; curricula; disaster medicine; education; preparedness; Russia; terrorism; training

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### Treatment of Patients with Multiple Organ Failure (MOF) Due to Traumatic Injuries

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Within one year, the intensive care unit (ICU) at Zha Bei Central Hospital in China received 15 patients with multiple traumatic injuries, including 11 with injuries to three organs. Eleven persons recovered and four died. Care of the wounded consisted of physical examination soon after hospitalization and ICU monitoring.

Hemodynamic monitoring was used to determine the character of pulmonary edema and to display the hemodynamics of the patients with septic shock and pulmonary function.

Those cases complicated by acute renal failure received continue artero-venous filtration to remove the overhydration and medium small molecule substances from the blood.

Anti-coagulant therapy also was used. The victims of multiple traumatic injuries and the multiple organ failure (MOF) usually have received massive blood transfusions and suffer from disseminated intravascular coagulation (DIC). Then, the mechanism for blood coagulation and DIC had to be determined. If the patients have delayed prothrombin time and thrombin times, then cryoprecipitate and FEP are used. If diagnosis of DIC is proven heparin, then other antihemolytic substance are used.

Overwhelming infection post splenectomy is a new problem. If it is possible, the patients must be evaluated using immuno-deficiency testing and receive the most appropriate treatment. Use of the ICU to manage the critically injured victims can decrease the mortality rates.

**Keywords:** artero-venous filtration; critical care; disseminated intravascular coagulation (DIC); infection; intensive care; multi-organ failure (MOF); trauma

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