(32) Pediatricians Training System for Operation in Emergencies

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The Pediatric Department of the All-Russian Centre for Disaster Medicine ("Zaschita") has been operating since 2001. Besides the permanent staff members of this Department, volunteers also are involved in emergency operations.

A system of selecting and training pediatricians consists of preliminary selection and three basic levels of emergency operation training. The preliminary selection of volunteers includes a complex evaluation of professional qualifications, references, and computerized testing. A special test program provides an evaluation of mental ability, physiological stability, and self-concentration under increasing pressure.

The first level is a theoretical course of covering problems of disaster medicine and special sections for different groups of specialists. The second level consists of field training where various mock emergencies are peformed. Important elements of field training include arranging telecommunication channels and evacuating the injured. The third level is performing the plan during a real emergency. The operation of evacuation teams in the Moscow region presents the everyday, routine model.

The highest level of training is provided working at the Children's Field Hospital "Zaschita" and the aeromobile hospital, EMERCOM. Therefore, 65 pediatricians from different Russian cities participated in the work of Children's Field Hospital in the Chechen Republic in 2001–2002, and in Beslan (2004).

The system of selection and training of disaster medicine service specialists has been successfuy and those completing the training are prepared for field conditions in the situations and countries where necessary.

Keywords: All-Russian Centre for Disaster Medicine; disaster medicine; emergencies; pediatrics; training; Zaschita
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(33) Analysis of Effectiveness of Current Education and Training Methods for Mass-Casualty Incident Management

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The terrorist incident of 11 September 2001 fundamentally changed the United States' perception of safety for prehospital emergency responders. This study is a comparison of the US and the UK prehospital ambulance service safety preparedness for mass-casualty incidents. This is pursuant to a US Fulbright Scholarship.

The danger to responders does not have to be the result of a large-scale, terrorist incident. Natural or technological disasters create hazards as well. This paper considers the safety preparedness of ambulance personnel during mass-casualty incidents. The rationale and objectives of this research are to determine the usefulness of major incident preparation when responders are involved in mass-casualty incidents.

Theoretical and actual safety preparedness and response may differ significantly, as with many prehospital responder issues. This research considers: (1) the UK and US training standards for ambulance personnel; (2) the training provided in each country; (3) the variability of its application throughout ambulance services; and (4) the confidence of responders within the training programs.

Methods will include: (1) rigorous quantitative data acquisition through the use of questionnaires; and (2) observation of paramedics and emergency medical technicians during mass-casualty incident responses (actual or simulation conditions). This paper will present the preliminary analysis of the data.

Keywords: ambulance personnel; current education; management; mass-casualty incidents; preparedness
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(34) Pre-Disaster Stress Exposure and Stress Inoculation Training for First Responders

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Introduction: Acute stress reactions can occur when novice first responders treat severely injured individuals or people in cardiac arrest. Sympathetic nervous system acute stress reactions cause predictable biochemical cardiovascular changes seconds after adrenaline enters the rescuer's bloodstream. Field treatment sites with rapidly changing conditions can foster diagnostic and treatment ambiguity. These stressors strain a first responder's cognitive, technical, physiological, and psychological abilities.
Purpose: Normal physiological reactions become task distractions where novel bodily sensations are sensed as unnatural responses. When task distractions receive cognitive processing, patient assessment cues may not be fully processed. Thus, relevant treatment information may not be accessed because of human information processing overload. Consequently, despite their training, novice rescue personnel may display suboptimal patient assessments and treatments.
Methods: Meichenbaum's (1985) stress inoculation training (SIT) model has showed efficacy in lessening cognitive attention to adrenaline-induced physiological responses and the psychological misinterpretations of these responses. Pre-event preparatory stress information, skill acquisition and rehearsal for criterion environments, and application and practice in simulated, acute stress emergency response conditions will be discussed. Classroom training for skill acquisition and retention and stress exposure training for effective performance in the responder's environment will be explained.
Results: The meta-analysis of 37 studies in Saunders et al (1996) found conditions where SIT reduced anxiety and improved performance in stressful situations.
Conclusion: Stress Inoculation Training (SIT) and stress exposure training instructional programs for first responders can lessen the acute stress of emergency response and ideally reduce post-event stress reactions.

Keywords: acute stress reactions; first responders; novices; stress inoculation training; stressors
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