

The aim of the follow-up research of the intervening rescuers was to determine their needs and endurance, and propose areas for improvement. The sample contained 120 people.

Keywords: affected people; Czech Republic; disaster victim identification; fire rescue forces; first responder; mass-casualty incident; police; psychosocial; psychosocial support; research; train crash

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(I100) Toward Integrated Emergency Health Services: Alternative Strategies for the Future

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Introduction: Complex emergencies (conflicts or disasters caused by natural events) do not recognize borders. The connection between conflict and trauma regarding psychosocial development and well being has long been established as emergencies expose and exacerbate existing individual and societal problems.

Methods: An extensive literature search, including non-governmental organizations' "grey" literature, was performed. Articles were analyzed for key contributions, available programs, and mental health measurement indicators.

Results: Analysis revealed that the emergency mental health services are not integrated into emergency relief response and/or are insufficient. Provision of early mental health interventions reduces the burden on a country's health facilities and/or relief responses. In order to achieve integrated physical and mental health services (a key World Health Organization goal) alternative strategies are proposed.

Conclusions: Establishing a referral network among relief organizations stimulates collaboration and sharing of best practices. The recent publication of the Inter-Agency Standing Committee (IASC) Guidelines offers concrete strategies for ensuring that emergency care is effective, inclusive, and culturally appropriate. Training relief workers in the use of psychological first aid and mental health needs assessments provides opportunities to raise awareness about these guidelines. The training sessions reinforces cooperation established by the referral network. With greater appreciation of the necessity to integrate emergency mental health services, relief workers become advocates for change within their own organizations, and together, within the political arena. With concrete guidelines to assist them in articulating specific funding priorities to politicians and measurement indicators to ensure accountability, advocating for changes will be more meaningful and persuasive.

Keywords: emergency medical services; humanitarian; mental health; psychosocial; referral network; relief worker; training

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(I101) Working in Disasters, Under Stress: Expectations and Motivation Sources of Relief Workers in Turkey

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Introduction: In recent years, the number of the relief efforts has increased, especially after the Marmara and Duzce Earthquakes that occurred in Turkey in 1999. The plight of the relief workers during and after disasters has been a main point of focus in Ministry of Health (MoH) and one of the major fields in disaster management.

Methods: A questionnaire was developed pertaining to demographic information; range of relief workers' numbers, professions, training experience, and working experience in a disaster; stress factors and symptoms; self-help strategies during the disaster work; and the motivation sources of being a relief worker. This questionnaire was distributed to 551 medical rescue workers that participated in the 3rd National Medical Rescue Training and Practicing Programme held in Bursa, Turkey in 2007.

Results: All the data were analyzed using SPSS Pocket Programme 11.5. The results showed that the ability to train and work under stress are the basic factors of being an adequate relief worker. The major stress factors are taking extreme risks and being an eyewitness to the death or injury of a relief worker.

Conclusions: A supportive approach for relief workers should be a main component of disaster management. Identifying the expectations of relief workers is extremely important for effectively working in disaster area.

Keywords: disaster management; emergency health; medical rescue; motivation; relief workers; stress factors

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(I102) Deprivation Prevalence in an Emergency Service and Elaboration of a New "Identifying Test"

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Introduction: Deprivation has harmful consequences on health care (renunciation to medical care, diseases complications). Emergency services are the first healthcare resources used by socially disadvantaged people. The deprivation prevalence in an emergency service was assessed using the Evaluation of Precarity and Inequalities in Health Examination Centers (EPICES) test score. An attempt was made to construct a simpler "identifying test" derived from the EPICES index.

Methods: Questionnaires were distributed in Beaujon Hospital. Deprivation prevalence was assessed using the EPICES test score (validated individual index of 11 weighted items related to material and social deprivation) as a gold standard and was checked against socio-economic demographics and medical data. The 11 items were statistically analyzed in order to highlight the most important deprivation markers. A simpler "identifying test" was derived.

Results: Out of 208 patients, 62.5% were deprived. Deprivation increases with age (80.6% of the 80-102 years old). "Not having complementary medical insurance", "experiencing monthly financial difficulties", and "not having

had holidays for the last 12 months” were the most significant items. The administration of a minimal test did not allow for the elaboration of a relevant tool (sensitivity: 60%, specificity: 92.2%)

Conclusions: Deprivation prevalence is high, the more so among the older population. The EPICES score test appears to be the minimal “identifying test” for deprived patients, simplification was not conclusive.

Keywords: deprivation; Evaluation of Precarity and Inequalities in Health Examination Centers; older population; psychosocial; socio-economic

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(I103) Issues of Mental Health during the Acute Phase of a Disaster in Japan—Lessons Learned

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Purpose: To demonstrate features of the mental health care during the acute phase of a disaster due to natural hazards in Japan. This report will discuss issues in devastated area of Chuetsu in Niigata Prefecture after an offshore earthquake.

Methods: The earthquake of 16 July 2007 had a magnitude 6.8. It injured 2,153 people, including 192 with severe injuries, and caused 14 deaths. The Tokyo Medical Association (TMA) deployed disaster medical relief teams on the day of the event, and performed mental care in internally displaced person (IDP) camps. Other mental care teams took over the mission three days after the event.

Results: There were 27 medical teams was 27. They visited 88 IDP camps. Medical teams treated 2,288 cases during first four days. Forty-seven cases included psychiatric problems. Three of 13 refugees who had psychiatric symptoms needed new medicine. Four were under psychiatric treatment and could continue their treatment with their attending physicians.

Earthquake victims displayed the following characteristics during the acute phase: (1) poor adaptation in the elderly; (2) fluctuation of compliance for medications; (3) occult anxiety and complaints; and (4) unconsciousness of sleep disturbance.

Conclusions: The development and education of liaison methods about mental health care during the acute phase of a disaster is needed for emergency physicians and general surgeons of Disaster Medical Assistance Team and Medical Association relief teams that perform treatment during the acute phase of disaster. They must understand and have skills for triage of different mental health cases.

Keywords: acute phase; earthquakes; Japan; mental health; psychosocial issues

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Oral Presentations—Triage

Continuous Vital Signs Acquisition Improves Prehospital Trauma Triage

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Introduction: Vital signs (VS) data collected in prehospital care and recorded in trauma registries are often missing or unreliable as it is difficult to record dynamic changes while performing resuscitation and stabilization. The purpose of this study was to test the hypothesis that analysis of continuous vital signs improves data quality, and predicts life-saving interventions (LSI) better than use of retrospectively compiled Trauma Registry (TR) data.

Methods: After Institutional Review Board approval, six emergency medical services helicopters were equipped with a Vital Signs Data Recorder (VSDR) to capture continuous VS from the patient onto a handheld personal digital assistant (PDA). Prehospital LSIs (fluid bolus, cardiopulmonary resuscitation, drugs, intubation, etc.) and those performed within two hours after arrival in the trauma resuscitation unit were considered outcome variables. The VSDR and TR data were compared using Bland-Altman method. A multivariate analysis was performed to determine which VS variable best predicted LSIs using the values in the TR and the VSDR.

Results: Prehospital VSDR data were collected from 177 patients. There was a significant difference between the highest and lowest heart rate, systolic blood pressure (SBP), and oxygen saturation between the VSDR and the TR data ($p < 0.001$). The VSDR highest heart rate and lowest oxygen saturation recorded predicted LSIs while none of the TR vital signs did so in a multivariate model. The SBP was not an independent predictor of LSI.

Conclusions: The VSDR data increased the odds of predicting LSIs compared to the TR data. Using continuous vital signs in prehospital care may lead to the development of better trauma prognostic models.

Keywords: disaster; emergency medical services; life-saving interventions; prehospital; Trauma Registry; vital signs

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Effect of Shift Duties and Patient Volume on Triage during Peace and Mass-Casualty Incidents

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Background: Triage is an effective method to streamline patient flow and shorten the delay for definitive care. We studied the effects of shift duties and patient volume on triage.

Methods: Patients presenting to the emergency department were tagged with a red, yellow, or green wristband as