Risk Factors	Rate of suicidal ideation (%)	Odds ratio (95% Confidence Interval)
Female gender	14	2.3 (1.23–4.2)
Age >50	11	1.7 (1.04–2.7)
Post-traumatic stress disorder	26	9.6 (6.0–15.4)
Panic disorder	31	6.6 (3.6–12.0)
Generalized anxiety disorder	49	17.7 (10.1–31.0)
Problems with spouse	21	4.9 (3.0–7.9)
Problems at work	18	11.7 (16–22.0)

Table 1—Predictors of suicidal ideation by the Chi square analysis significant at 0.05

Keywords: 11 September 2001; mental health; post-traumatic stress disorder; predictors; screening; suicidal ideation (SI)
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Free Papers Theme 14: CBRN -1

Aftermath of the World's Worst Chemical Disaster

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Current practice in preventive environmental health action includes chemical analysis of land, water, and air for known (controlled), toxic chemicals and comparisons against standards for identification of breaches of regulatory limits. This methodology also is followed after an event or disaster to ensure air, water, and food safety. Some problems, not easily addressed by this methodology include: (1) unidentified toxic chemicals; (2) non-conventional uses of toxic materials; (3) unexpected synergetic effects of toxic mixtures; and (4) human health consequences of exposure to toxic materials with unusual and unidentified pathways of exposures. In Bhopal, the citizens were faced with a mixture of approximately 27 toxic substances, a variety of exposures related to activities of the persons, for example, remaining in their homes or running in the toxic cloud, and a variety of perceived injuries, of which not all would have been predicted simply by analyzing the chemicals involved.

The benefits of combining different approaches, such as examining the health, social, and cultural environments, and the economic situation of the victims in Bhopal, and the effects of each on health is presented. This more broad analysis provides a clearer, overall picture of the problems in the aftermath of exposure, and also provides clues to effective treatment and alleviation of future problems. Two effective strategies for connecting health problems ten years after the exposure to the original event, and understanding the biochemical reactions in the body when invaded by a mixture of toxic substances, as well as how such an understanding will, in turn, affect public policy planning, emergency preparedness, and emergency medicine will be presented.

Keywords: analysis; Bhopal; chemical; disaster; health effects
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Tasks of Disaster Medicine Services to Counteract the Risk of Accidents at Operating Nuclear Power Plants in Russia

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Taking into account the experience of the Chernobyl nuclear power plant (NPP) response operations, a suggested protocol is being developed for coping with the risk of potential accidents at operating NPPs in Russia for the Subjects of the Russian Federation (SRF). This concept reveals those territories in Russia with NPPs who have the potential for accidents, and, therefore, should be familiar with the zones of radiation hazard. The zone of a high radiation hazard (territories of 11 Subjects of the Russian Federation where NPPs are located), and the zone of an elevated radiation hazard (12 Subjects of the Russian Federation whose territories border the zone of the high radiation hazard) already are determined. Eleven Subjects of the Russian Federation belong to the radiation-safe zone.

The rest of the territories in the radiation hazard zone (55 SRF) are referred to as potential radiation hazard zones. In light of this concept, the tasks of disaster medicine services on medical support of a population in case of a large-scale event at a nuclear power plant are considered.

For the SRF categorized as being in the high radiation hazard zone, the entire SRF must be provided with a radiation accident protective measures in full volume when planning medical support.

For the SRF falling in the elevated radiation hazard zone, the same measures in full volume must be provided for the population residing within the area of 100 km from the NPP. It is sufficient to provide protection from penetration of Iodine-131 and other radionuclides into a human organism for the population of the other territories of SRF and those living in the SRF referred to as the zone of potential radiation hazard.

Keywords: hazard; nuclear power plant (NPP); radiation; Subjects of the Republican Federation (SRF); zones
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High Security Bio-Safety Isolation under Operational Circumstances

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The increase of multi-national peace missions in nearly every area of the world stresses the need for planning to address the risk of highly communicable diseases in operational circumstances.

The deployment of South African forces into central Africa required planning to address outbreaks of African Viral Hemorrhagic Fevers in operational circumstances. The reluctance of air transport authorities to transport these patients, the different health regulations for re-entry of communicable diseases of contributing countries, as well as evacuation distances required training to establish high-level isolation facilities under operational circumstances.

The South African Military Health Service developed a simple color-coded layout system to assist unskilled personnel to establish a high security bio-safety isolation facility to isolate Viral Hemorrhagic Fever patients under operational circumstances, using tented accommodations or existing buildings.

The developed training package is a self-paced, interactive, computer package to train personnel in the different Viral Hemorrhagic Fevers, the establishment of an isolation facility, and basic procedures to run an isolation facility.

Basic principles are taught on how to set up safe facilities, as well as how to operate these facilities with minimally skilled personnel.

Keywords: hazards; infectious disease; isolation facilities; nuclear, biological, chemical; training; viral hemorrhagic fever
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Free Papers Theme 15: Education-1 Triage, etc.

Triage System Development in the Palestinian Territories

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Introduction: Health facilities in the Palestinian Territories face substantial emergency medical care needs, and emergency department (ED) development and clinical training opportunities are non-existent. Currently, there is no organization responsible for ED development and clinical accountability. West Bank and Gaza Strip hospitals encounter a significant number of casualties and general emergency patients, but have no formal training in mass-casualty triage or standard emergency department triage. This has led to a culture within government EDs in which practitioners are overworked, understaffed, and under constant anxiety and stress for their own safety and security. Emergency departments are overcrowded, disorganized, and function on a first-come, first-serve basis, instead of by order of severity.

Objectives: This study aimed to develop and train ED physicians and nurses in a validated, five-level, triage system using a severity index acuity scale.

Methods: Forty-eight physicians and nurses undertook a one-week, emergency and disaster training course, emphasizing mass-casualty triage and hospital triage system development. Participants were introduced to a five-level triage system and the severity acuity index scale during this training. This was followed by a one-week training course six months later on triage, triage system development, and charting. Sixteen trainers from five key regional Palestinian hospitals participated.

Results: Fifteen of 16 participants successfully passed the written and practical triage training course. Implementation of this triage system has led to the following new innovations in each of the five hospitals: (1) formation of fully equipped triage rooms and 12-hour, assigned triage-trained nurses; (2) establishment of a standardized triage chart and triage policy and protocol agreed upon by the ED medical directors and nursing directors; (3) empowerment of senior qualified nurses; and (4) developed a basis for ongoing continuous quality improvement (CQI). In three months, a follow-up evaluation will assess the validity and reliability of this system using the severity index tool. Triage validity will be evaluated by examining the correlation between triage acuity score and hospital admissions, location of admission, number of ED resources utilized, and patient and provider satisfaction. Triage reliability will be evaluated by assessing paired nurse inter-rater agreement using the assigned triage scores.

Conclusion: In a conflict setting, developing and implementing a five-level triage system with an acuity index builds ED capacity through improved human resources and patient care management.

Keywords: assessment; development; emergency department; implementation; triage
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Israeli-Polish Cooperation Program for Disaster Preparedness

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Since October 2002, the Israeli-Polish cooperation program has trained 380 professionals. Among them were 200 medical providers (doctors, nurses, paramedics, and the majority from management), 100 fire and rescue officers, and approximately 80 people from the police forces, the army, and crisis management.

The Israeli-Polish cooperation program established a universal training program adopting international experience (particularly Israeli) to local needs, which are limited.

Nearly 80% of incidents in Poland are related to road traffic crashes (mostly involving buses). According to data from the last five years, almost 90% of crashes occurred in rural areas far from hospitals. These cases require special consideration.

The Israeli-Polish cooperation program also developed special training programs such as decision-making in emergency medicine and a special police-training program related to mass-casualty incidents (MCIs).

The Israeli-Polish cooperation also created local procedures. The Polish Emergency Medicine system adopted a tag system for triage, published a manual for MCI management, and developed drills and evaluations for them.

Keywords: disaster; education; emergency medicine; Israeli-Polish cooperation; mass-casualty incident (MCI); preparedness
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