

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)

Prehosp Disast Med 2005;20(2):s44-s45

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

Prehosp Disast Med 2005;20(2):s45

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

Prehosp Disast Med 2005;20(2):s45

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.