

Conclusions: First, although it is not possible to predict the number and types of casualties, it is recommended to provide an adequate number of nurses (1-1.5:1 nurse:physician ratio). Furthermore, the nurses should be specialized and rotated as needed. Second, the language and cultural barriers, despite the abundance of translators, should not be undermined. And finally, the hygienic status in a field hospital requires management by nurses with active participation of all members.

Keywords: barriers; casualties; earthquake; field hospital; Israeli Defence Forces (IDF); medical services; nurse:physician ratio; nursing; translators; Turkey
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Using Disaster Simulations to Prepare Emergency Nurses for the "Real Thing" in Emergency, Post-Graduate Programmes

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Recent global events have tragically highlighted the need to include disaster management and bio-terrorism in the post-graduate curriculum for emergency nurses. Monash University School of Nursing has developed a relationship with the Australian Navy, and now include, as a compulsory component of the Graduate Certificate/Diploma of emergency nursing, a simulated disaster exercise at HMAS Cerebus. Emergency students work with the Navy medics, fire services, air rescue, and paramedic students from the university on a simulated disaster. Students assume various roles such as victims or emergency nurses. There are multiple learning modes in this type of simulation. This paper will describe the setting up of the simulation, the preparation required, the multiple levels of learning that occur during this exercise and debriefing as an experiential learning tool. The objectives of such an exercise will be discussed along with the learning outcomes, both expected and unexpected.

The students' responses to this exercise have been overwhelmingly positive, and the learning outcomes continue even after the completion of the course. This type of simulation allows for emergency nursing students to be placed in situations in which they have little or no experience such as patient triage or being in-charge. This occurs under the watchful eye of the educators.

This type of learning that occurs outside of the traditional classroom, is a valuable experience that begins to prepare emergency nurses to cope clinically and to gain insight into their own coping mechanisms in situations of high stress and emotion.

Keywords: disaster education, nursing education, disaster simulation training
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Ability and Willingness of Healthcare Personnel to Report to Duty During Severe Disaster Response

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As terrorism escalates around the world, the role of the healthcare workforce is being redefined and expanded to include increased attention to disaster preparedness and response for biological, chemical, mass casualty, nuclear, and radiological events. A well-prepared workforce that is willing and able to report to duty during times of crisis is essential for effective response capabilities, yet little work has been done in this area to examine the actual intentions and abilities of staff to report to work for disaster duty.

This paper will present the results of two studies conducted at the Columbia University Center for Public Health Preparedness at the Mailman School of Public Health to identify the ability and willingness of healthcare personnel in the public health and hospital sectors to report to duty during disaster situations. Facilitators and barriers for reporting were identified. This information is useful for preparedness planning, as employers may initiate strategies to reduce barriers and influence willingness, thus increasing the probability of having a ready and willing workforce for disaster response.

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Keywords: disaster; healthcare personnel; hospitals; planning; preparedness; public health; report for duty; workforce
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Enhancing Standards in Rural CBR Management

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There is a recognised need for a more systematic approach toward effective multi-agency responses to Chemical, Biological, and Radiological (CBR) incidents in the Grampians Region. In addition, an improved understanding and level of cooperation between key stakeholders in planning and response arrangements are required. To address these issues, Public and Acute Health personnel from the Department of Human Services (DHS) are working with Emergency Departments from referral hospitals in the Region to:

- a. Increase skill levels through a program developed and delivered free of charge by DHS Regional staff; and
- b. Assist with CBR planning arrangements.

Critical to the education is a training program targeting Registered Nurses in Emergency Departments. On the completion of the "C" (chemical) component, the model will be used to provide "B" (biological), and "R" (radiological) training. The initial "C" program is divided into five packages:

- I. Increasing awareness
- II. Enhancing knowledge
- III. Developing skills
- IV. Practical fitting and removal of personal protective

equipment (PPE)

V. Scenario/Exercise

Overall objectives include: (1) Development of a Health Services (ED) specific CBR Plan; (2) Enhancing multi-agency communication and co-operation; (3) Improving patient outcomes; (4) Improving staff safety; and (5) Protection of the public health system.

Public and acute health personnel also are working with Emergency Service Organisations (fire, police, ambulance, Local Government, Health Services, state emergency services) to strengthen public health emergency management capacity through:

- a. Consultation and liaison
- b. Formation of agreements, protocols, procedures and plans
- c. Acting as drivers and leading change processes

This has been facilitated through the development of a regional medical and public health emergency management plan.

Keywords: agreements; chemical, biological; nuclear; consultation; emergency departments; emergency services organizations; hospitals; plans; protocols; public health; regional; safety

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Free Papers: Global Sharing: Disaster Planning

Disaster Collaboration on Hokkaido Island

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Introduction: Japan consists of four islands. Hokkaido Island is located in the north and comprises one-fifth of the total area of Japan. It includes rural areas and isolated islands. Hokkaido Island is famous for active volcanoes.

Objective: Hokkaido Island experienced many catastrophic events during the last 10 years. Based upon this experience, collaboration between the medical functions and those of other organizations has been developed.

Cases: Typical events/disasters that have occurred within the last decade include: multiple chain-reaction traffic accidents on a freeway in 1992 (2 died); an offshore earthquake in Kushiro in 1993 (2 died); another offshore earthquake in southwestern Hokkaido in 1993 (229 died); collapse of the Toyota tunnel in 1996 (20 died); the eruption of the Mt. Usu volcano in 2000; and the bomb blast (terrorism) at the Yosakoi festival in 2000.

Results: During such situations, an emergency delivery system using helicopters is required. A transportation system for conveying severely injured patients using helicopters and/or fixed-wing aircraft was established after the eruption of Mt. Usu; this system was applied on the Okinawa summit (G8) in 2000. Hokkaido Island has an atomic power plant with its associated risks. Accidents in this plant have occurred three times, and resulted in the

following injuries: severe burns, an anoxic accident, and a leg fracture. In these cases, the patients were transported to the hospital by helicopter.

Conclusions: The disaster circle always must be considered, and training provided during the silent phase. It is important to construct collaboration with fire departments, police stations, self-defense force, and prefecture government. Enlightenment of citizens is also necessary.

Keywords: accidents; atomic power plant; collaboration; disasters; education; fixed-wing aircraft; helicopters; preparedness; training; trauma

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Improving Disaster Management

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Disasters never can be considered routine. A disaster is defined as a sudden massive disproportion between hostile elements of any kind and the survival resources that are available to counterbalance these within the shortest period of time. A multi-departmental approach to disaster planning is effective to meet the broad scope of needs; however, circumstances and approaches differ for each type of precipitating event and for individual departments. Disasters can take on a life of their own, so being prepared for the unexpected and unplanned is the only way to improve circumstances.

When a disaster occurs, healthcare settings experience everything except the routine; demands exceed the capacity of personnel and facilities. In recent years, there has been an increased incidence of civil disasters; the spectrum of possible catastrophes also has increased dramatically as a result of an increasingly technologically sophisticated society. Being prepared for the unexpected and unplanned is the only way to improve circumstances. Disaster preparedness plans must encompass the possibility of nuclear accidents, hotel and high-rise fires, terrorist attacks, aviation accidents, bomb blasts, riots, and industrial explosions, as well as natural calamities such as floods, epidemics, drought, and cyclones.

The emphasis of medical management shifts from individualized treatment to standardized therapy for disaster victims with the aim of providing maximum benefit to a maximum number of salvageable patients. A successful medical response to civilian disasters that produce multiple victims, whether natural or manmade, dictates formulation, dissemination, and periodic assessment of a contingency plan to facilitate the triage and treatment of the victims.

Keywords: casualties; multiple demands; disasters; events; injuries; needs; plan; preparedness; resources; technology; triage

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Community-Based Disaster Preparedness in West Bengal

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The Indian State of West Bengal is prone to all types of natural disasters including those from floods, cyclones, drought, landslides, earthquakes, and high tide, as well as