

Top-Off Exercise in Washington, DC

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Objective: To report on a TOP-OFF exercise conducted in the Washington, DC area, and describe the differences from Japanese planning against weapons of mass destruction (WMD) attacks.

Methods: In May 2000, the government of United States conducted a large-scale exercise for responding to WMD attacks in three cities: 1) Denver, Colorado; 2) Portsmouth, New Hampshire, and the Washington, DC-area. These exercises were called "TOP-OFF" because of the involvement of top officials according to the direction of the US Congress in 1998. The exercise conducted in Washington was called "National Capital Region 2000" (NCR-2000).

Results: The NCR-2000 was a simulated bombing and radiological attack. It required detection of radio-activity, patient collection, decontamination (DECON), patient care, and transportation to hospitals by ambulances.

In Japan, on-site decontamination (DECON) has not been developed fully because: 1) It was after the attack on 11 September 2001 that the Japanese cabinet office officially announced a guideline for responding to WMD attack, and introduced the basic concept of on-site DECON by fire, police, and the military; 2) Japanese medical law does not allow paramedics to give medications or advance life support, such as intubation, and severely ill patients are transported urgently to a hospital before receiving DECON; 3) Medical teams are not fully equipped for a WMD attack; and 4) It is difficult to provide necessary medical care both at the site and inside the hospital.

Conclusion: In Japan, local core hospitals have a crucial role in dealing with contaminated patients; they have not fully equipped for fighting against WMD attacks.

Keywords: advanced life support; decontamination; exercise; hospitals; intubation; medical care; weapons of mass destruction
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Training Hospital Staff to Cope with a Chemical Mass Casualty Event (CMCE)

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Since chemical weapons and mass destruction events emphasized their potential catastrophic effect on the population, hospitals in Israel have been committed to be prepared for the administration of optimal medical services to a large number of casualties. Successful coping mechanisms of the medical staff for such treatment necessitates special organization, based on five phases:

1. Establishing standing orders and instructions;
2. Preparation of decontamination facilities and protective gear for the personnel;
3. Designation of the hospital staff;
4. Training programs and drills.

These drills take place on an annual basis, and simulate a realistic scenario. This requires the hospital to allocate the necessary staff and equipment, update the instructions, the standing orders and implement acquired knowledge. Videos recorded during these drills become a visual educational aid for future training.

Preparedness for a drill is a long and complicated procedure. The model contents four crucial steps:

1. Designation of the hospital staff;
2. Preparation of the special training equipment required;
3. Training the relevant staff; and
4. Training voluntary and ancillary teams who participate in the drill.

Conclusion: "War Games" — (drills) are a very important part of the training program aimed to ensure the ongoing preparedness and alert of the medical staff.

Keywords: chemical; coping; decontamination; drill; mass casualties; personal protective equipment; staff; training
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Night Field Drill for Disaster Medical Assistance Team (DMAT)—Full-Scale Mountain Exercise

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Objective: A Disaster Medical Assistance Team (DMAT) is an emergency response team available to provide medical services following a devastating disaster. They have been developed and established in many countries including Taiwan since 2000. The experiences from a night field drill in a mountainous area were presented. It was the first large-scale DMAT exercise in Taiwan. The study compared the differences between nighttime and daytime drills in the field of deployment and preparedness.

Methods: This outside drill was held at Nan-tou county (mid-Taiwan), which was near the epicenter of Chi-Chi earthquake that struck Taiwan on 21 September 1999. It consisted of a 5-day (12–15 September 2001) course for both national DMATs and local DMATs. Four sections including operation, planning, logistics and administrative were deployed for this joint drill. Tabletop exercises and radio communication were scheduled in the training course. Mobile multiplier shelter with and electric power system was introduced and used for major illumination system.

Results: Two national DMATs and six local DMATs from northern and southern Taiwan joined this field exercise. A total of 160 persons were enrolled. The major differences at nighttime drill included: 1) more mistakes and wrong judgments were made at the triage area; 2) short of manpower; 3) increase in electric power; and 4) more difficulty with communication between each other in the dark area.

Conclusion: The experience gained from this night, field drill was an important training for DMATs. How to overcome these inconveniences and even worse situations is another challenge for emergency response team.

Keywords: communication; DMAT; drill; electricity; experiences;

nighttime; triage
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Regional Training Course for Radiation Emergency Medicine in Asia

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Introduction: Previous accidents of radiation exposure that required medical care occurred in Chernobyl in 1986, Tokaimura in 1999, and Thailand in 2000. In order to provide information for the appropriate management of radiation accidents, and also to establish a cooperative system for the management of radiation accidents in Asia, the National Institute of Radiological Sciences (NIRS) held a regional training course entitled: "Medical Preparedness and Medical Response to Radiation Accidents" in August 2001 in Chiba, Japan.

Methods: A training course consisting of lectures, drills, and case studies was sponsored by NIRS in cooperation with International Atomic Energy Agency.

Results: Twenty-two doctors from 12 countries participated in the course that focused on the practical aspects of detecting and measuring radiation, managing a patient with acute radiation syndrome or contamination, and preventing the spread of contamination. The case studies of accidents included an outline of critical radiation accident in Tokaimura.

Conclusion: This course provided s means to increase the knowledge and skills of radiation emergency medicine, and develop the human network for radiation emergency medical preparedness in Asia.

Keywords: contamination; education; international cooperation; radiation

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International Urban Search and Rescue Team Training: The Stress and Medical Complaints of Taskforce-1 of Taiwan

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Objectives: The Urban Search-and-Rescue (US&R) team of Taiwan Taskforce-1 received "whole-team" training in USA in 2000, the first large-scale, international, US&R training. All divisions including command, search, rescue, medical, technical, and logistics were trained for six weeks. This survey was conducted to evaluate: 1) The physical and psychological problems encountered in the training; and 2) The stress levels and the correlative factors.

Methods: A structured questionnaire including the "Chinese General Health Questionnaire-12" (GHQ-12) for stress evaluation was surveyed for all 68 Taskforce members.

Data were analyzed using SPSS-10.0.

Results: The leading causes of physical and mental discomfort were: diarrhea (30.2%), musculoskeletal sprain (25.4%), depressive mood (25.4%), bad temper (20.6%), and headache(12.7%). More than 50% of the Taskforce members experienced >3 selected discomforts. The medical team had significantly discomforts than did the other groups ($p < 0.05$): The GHQ-12 score for 25.4% defined their high stress level. Higher educated persons and those with chronic diseases or a nervous character suffered more discomforts and stresses ($p < 0.05$). Logistics ($p < 0.1$) and medical ($p < 0.05$) teams demonstrated higher stress levels. Marriage and family status did not influence stress or training efficacy. Of all of the members, 36% won't participate similar programs, and 50.8% cases preferred relocating future training domestically.

Conclusion: Selection of US&R members for international training should be informed. Both physical and mental stresses are of concern. Medical and logistic personnel developed higher stress levels. The adequacy and efficacy of "whole-team"-style training should be refined.

Keywords: adequacy; international training; stress; urban search-and-rescue,

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Legal Aspects of Disaster Medicine

The Right to Health of the Disaster Stricken

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Health is a fundamental and inalienable human right. In the spirit and precept of the World Health Organization, health is defined as "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity".

A major emergency or disaster destabilizes the "mental and social well-being" of a victim, even if there has been physical "absence of disease or infirmity". As such, the disaster stricken, even if not injured, are diminished in their health, and therefore in their fundamental right to health-care. Besides all the reasons that society has to help the victims of a disaster, a main reason is also the necessity to ensure one of the fundamental human rights: the right to health.

Keywords: disaster; health; human rights; well-being

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Psychosocial Aspects of Disaster Medicine

Psychological Correction and Psychotherapy of Post-Traumatic Stress Disorder in Children and Adult Victims of Natural Disasters

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Objective: To evaluate a new programme for treatment of