

Many of these lessons from Exercise Supreme Truth now have become incorporated into Australian practice, but still more questions remain unanswered.

**Keywords:** Australia; contamination; Exercise Supreme Truth; field exercise; mass casualty; terrorism

*Prehosp Disast Med* 2005;20(2):s57–s58

### The Bioterrorism Preparedness and Response Wall Chart

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Prior to the anthrax attacks in the United States, the Principle Investigators for the Bioterrorism Preparedness and Response Wall Chart were addressing the American Emergency Medical community's preparedness for a bioterrorism attack. The stealth nature of bioterrorism agents is inherent in their varied incubation periods, initial "non-specific" manifestations, and ability to be disseminated covertly, making recognition, diagnosis, and prompt treatment challenging.

Bioterrorism agent information was available, but lacked comprehensiveness and user-friendly packaging. One solution was the development of the Bioterrorism Preparedness and Response Wall Chart—a ready reference tool that could be hung in emergency departments and other clinical venues and used as a diagnostic aid.

The Bioterrorism Preparedness and Response Wall Chart captures nuances of the 13 aerosolized bioterrorism agents most likely to be deployed, using a systematic approach. Clinical manifestations for dermatological, gastrointestinal, neurological, respiratory, ocular, systemic, and other systems are listed. Agent-specific manifestations are denoted by "classic", "less common", "rare", and "hallmark" as they pertain to findings, and color-coded to enhance recognition. Additional agent-specific information is also provided.

Other features of the Wall Chart include: (1) an Infection Control section specifying precautions for each agent; (2) a list of Covert Assault Clues; (3) addresses for online resources; and (4) space where critical contact numbers can be inserted.

The Memorial Institute for the Prevention of Terrorism (MIPT) funded development, printing, and shipping to all United States emergency departments. Since debuting in 2003, nearly 30,000 Bioterrorism Preparedness and Response Wall Charts have been provided for emergency departments, first responders, and other clinicians by the MIPT.

**Keywords:** Bioterrorism Preparedness and Response Wall Chart; emergency departments; first responders; preparedness; terrorism

*Prehosp Disast Med* 2005;20(2):s58

### Disaster Nursing and Emergency Preparedness for Chemical, Biological, and Radiological Terrorism: An International Curriculum for the Twenty-First Century

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The extent to which we are able to address the complex challenges of the 21st Century, respond to the ubiquitous threat of terrorism, and continue to improve world health depends, in large part, upon the quality and preparedness of our healthcare workforce, particularly nurses. Nurses number the largest sector of any workforce, and as such, are certain to be "first responders" to any major public health event.

This publication is a comprehensive curriculum designed to prepare a global nursing workforce with the knowledge and skill-set to respond to any type of disaster or major public health emergency. This project represents the Companion Curriculum to the textbook, *Disaster Nursing and Emergency Preparedness for Chemical, Biological and Radiological Terrorism and Other Hazards* that was published in 2003 by Springer Publishers and won the 2003 AJN Book of the Year Award.

This interactive workshop will present twenty critical modules that include response strategies for all types of natural and man-made disasters, public health emergencies, and international, complex human emergencies. The content reflects the most current and reliable information available on each topic of interest. All content was subjected to a lengthy peer review process by expert reviewers, and was mapped to the educational competencies for nurses responding to disasters published by the International Nursing Coalition for Mass-Casualty Education. The curriculum includes a series of PowerPoint presentations, case studies, disaster scenarios, and methods for evaluation.

**Keywords:** curriculum; international; nurses; preparedness; terrorism

*Prehosp Disast Med* 2005;20(2):s58

### "Sentinel" Drills for Emergency Departments—A Way to Assess Bio-Terrorism Preparedness

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**Introduction:** In October and November 2001, 22 American civilians were infected with anthrax. Five of them died. Letters sent through the United States Postal Service (USPS) spread the spores. Eleven (50%) of the cases were respiratory anthrax, a disease characterized by respiratory symptoms, pulmonary and/or mediastinal radiographic findings, and meningeal involvement (rare). If discovered and treated early, respiratory anthrax is a fatal disease that can be cured. The disease can be prevented by early administration of preventive antibiotic therapy to individuals who were exposed to the bacteria. Therefore, early diagnosis of the first case can improve the prognosis

of both symptomatic patients and asymptomatic, exposed people that need preventive treatment. Emergency departments are the main “sentinels” for the detection of suspected anthrax cases and can be drilled for that scenario in a cost-effective manner.

**Objective:** To assess level of preparedness of emergency departments for diagnosing respiratory anthrax in a suggestive case and draw attention to pitfalls in the process.

**Methods:** ‘Sentinel drills’ were performed in 17 out of Israel’s 24 emergency departments. Actors were used as patients presenting to the ED with a triad of a febrile respiratory illness, mediastinal widening on x-ray, and information on three other colleagues with the same presenting symptoms. Performance was assessed by the actor (medics and doctors) and a reviewer that accompanied him—a doctor in the field of infectious diseases. Outcome measures were: (1) the inclusion of respiratory anthrax in the differential diagnosis; (2) the interpretation of the patient’s x-ray; (3) the performance of laboratory tests and x-rays; (4) the decision on admission or discharge from the ED; and (5) performing the chain of mandatory reports.

**Results:** Of the 17 EDs that participated in the drills, 11 included anthrax in their differential diagnosis (65%); 16 decided to admit the patient (95%) for further evaluation; only one decided that the patient could be discharged (5%); and 12 (70%) ordered another chest x-ray. In seven hospitals, the chain of report (ED doctor, infectious disease consultant, hospital management, and regional public health authorities) was performed (40%).

**Conclusion:** While the vast majority of the EDs will not discharge patients with the suggestive triad described above, only 65% suspected the diagnosis of respiratory anthrax. This means that most cases are likely to be diagnosed in the internal medicine departments causing a delay of 1–2 days in the diagnosis. Patients who have the above triad, should raise the suspicion of respiratory anthrax with the consequent bacteriological tests, consultations, and reports being made from the ED. More guidance and further drills will improve the system’s sensitivity for the early detection of respiratory anthrax.

**Keywords:** anthrax; clinical triad; detection; diagnosis; emergency department; outcome measures; reporting; simulations

*Prehosp Disast Med* 2005;20(2):s58–s59

## Free Papers Theme 21: Terrorism

### Health Center Designated for Mild Casualties in a Non-Conventional Terrorism Scenario

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**Introduction:** Non-conventional terrorist attacks, such as the sarin gas attack in Tokyo’s subway system, may result in a high number of mild casualties, which can overwhelm the

health system. A special center designated for patients with mild intoxication, stress reactions, or exacerbation of chronic diseases is a possible solution for this challenge.

**Objective:** To test the rate and quality of the triage of mild casualties into a temporary, mildly injured patient health center placed in a school in a chemical terrorist attack scenario.

**Methods:** The concept of a mild casualties health center (MCHC) in a toxicological (organophosphates) hospital drill involving 350 simulated patients was tested. Two different sites were tested: (1) a triage site, located at the hospital gate; and (2) a mild casualties health center (MCHC) located in a nearby school. A total of 150 patients with moderate to severe injuries, most of them non-ambulatory, were triaged to the decontamination site and into the emergency room (ER). A total of 200 ambulatory patients (mild injuries) were sent to the MCHC, and admitted directly without further triage. Physicians, nurses, and medics performed the secondary triage from the school’s classroom to two distinct sites: (1) a mental health site (for stress reactions); and (2) a central medical care site (for patients with deteriorating health). Twenty professional reviewers observed the drill. The rate of entrance and triage both at the triage site and at the MCHC, the suitability of a school building to function as an MCHC, and the appropriateness of the secondary triage of casualties inside the health center all were evaluated.

**Results:** Triage was quick and efficient. Within one hour, all 350 casualties entered either the hospital or the MCHC. The MCHC was drilled for two hours. There was no bottleneck at the entrance. As for the “secondary triage”, 28 patients were sent to the central medical site, 10 of whom were referred to the hospital. Only four of 60 simulated stress patients were sent to the mental care site.

**Discussion:** The combination of a triage unit at the hospital gates and a MCHC at a school building seems a logistically suitable solution for mild casualties in a mass toxicological event. The lack of triage at the entrance to the MCHC is important in order to avoid crowding at the school entrance. However, the secondary triage done in the classrooms was less than optimal. There was an over-triage of deteriorating casualties to the central medical care site, but a clear under-triage of stress reactions. Medical personnel inside classrooms must include psychologists/social workers and a “wandering” psychiatrist in order to improve this diagnosis.

**Conclusion:** The establishment and use of a mild casualties health center (MCHC) is a useful alternative for keeping non-critical patients away from the hospitals during mass toxicological emergencies.

**Keywords:** assessment; chemical attack; exercise; injuries; mild casualty health center (MCHC); staffing; stress reactions; triage

*Prehosp Disast Med* 2005;20(2):s59