

## Special Forum: Emergency Preparedness

Chair: Dr. Eric Noji, MD, MPH

Special Principal Deputy for Disaster Medicine to the U.S. Surgeon General

### System of Academic Centers for Public Health Preparedness in USA

Stephen S. Morse, PhD; Kristine Qureshi, RN, DNS [c]

Columbia University Center for Public Health Preparedness at the Mailman School of Public Health, New York, New York USA

During the fall of 2000, the United States Centers for Disease Control and Prevention funded the initiation of Academic Centers for Public Health Preparedness (the Centers) through a cooperative agreement with the Association of Schools of Public Health. The purpose of the Centers is to link public health practice with academe in order to develop the public health workforce and support the development of a public health emergency / disaster preparedness and response infrastructure in the United States for biological, chemical, mass casualty, nuclear and radiological events. The Centers accomplish this through activities that focus on assisting local and state health departments with developing and implementing emergency preparedness plans, competency-based training curricula, and conducting relevant preparedness research. In addition, narrowing the gaps between the hospital and pre-hospital sectors and public health are a concern that the Centers are helping to address.

This presentation will describe this national network of Centers in detail, and illustrate how the partnering of the academic and practice sectors of public health can serve to build and strengthen the emergency response infrastructure of a nation. Activities by the Columbia University Center at the Mailman School of Public Health in response to the events of 11 September and the anthrax events of autumn 2001 will be discussed. Lessons learned and challenges to achieving efficient, productive partnering also will be discussed.

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**Keywords:** academe; centers; health departments; infrastructure; network; preparedness; public health; research; response; training, competency-based; U.S. Center for Disease Control and Prevention (CDC)

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### Identification of Emergency Preparedness Competencies for the Healthcare Workforce

Kristine M. Gebbie, DrPH, RN; Jacqueline Merrill, MPH, RN

The nature and numbers of terrorist events is escalating throughout the world. Events such as bioterrorism, nuclear and chemical threats, as well as large, mass casualty incidents have increased in possibility and probability, while our more complex communities make response a greater challenge. The occurrence of any of these events poses a serious challenge to a nation's healthcare and public health systems. A health workforce that is competent in

all phases of emergency/disaster preparedness and response is essential for the defense of any nation. The first step in this challenge is to identify the emergency preparedness competencies that are required of the healthcare workforce.

This paper discusses competency-based workforce development using the Core Emergency Preparedness Competencies that have been identified for the public health and hospital workforces as well as the newly released Bioterrorism and Emergency Readiness Competencies. These sets of competencies developed at the Center for Health Policy define what healthcare staff must be able to perform in order to participate actively in a hospital or public health agency's response to an emergency or disaster. Competency sets include those that every employee needs, as well as specific competencies for defined groups, such as clinicians and leaders/administrators. Each attendee will receive a copy of Bioterrorism and Emergency Readiness: Competencies for all Public Health Workers approved by the U.S. Centers for Disease Control and Prevention as the standard for public health training in the United States.

**Keywords:** competencies; emergency; disaster; hospitals; planning; preparedness; public health

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### Development of a Quantitative Assessment Score for Analyzing Emergency Department Disaster Preparedness

Dr. Peter Aitken

Australian Society for Emergency Medicine, Townsville General Hospital, Townsville, Queensland, Australia

The levels of disaster preparedness vary between different emergency departments (ED). How do we compare these, and identify areas for improvement?

This is an attempt to develop a simple, quantitative tool for assessing the disaster preparedness of emergency departments. As well as an overall index of readiness, this tool also should be able to be used to identify areas of weakness, and ultimately, allow for improvement. While a number of other assessment tools already exist, most are not designed specifically for emergency departments. In addition, these existing tools also are very detailed and time consuming to complete.

The Disaster Readiness Emergency Department (DRED) Score was developed using de Boer's '3 M' model of Methods, Manpower, and Materials as the basis. Frequent problem issues were identified by literature review, confirmed by interviews with emergency physicians, and then, were grouped accordingly.

A score was allocated from one to five for each of the three areas. These are combined to give an overall score out of five - the DRED Score. As a trial, the scoring system was used to assess disaster preparedness of all of the Australian Emergency Departments accredited by the Australasian College for Emergency Medicine. Scores were compared across Australia, within various demographic groupings and to the departments' self-assessment of their ability to manage a disaster.

Details of the DRED Score are presented as the results of its application to Australian Emergency Departments.

**Keywords:** '3 M' model; assessment; Australia; de Boer; Disaster Readiness Emergency Department (DRED) Score; emergency departments; preparedness, scoring system  
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## Review of Disaster Preparedness of Australian Emergency Departments

Dr. Peter Aitken

Australian Society for Emergency Medicine, Townsville General Hospital, Townsville, Queensland, Australia

**Introduction:** Emergency departments (ED) often are the first part of the health system to be affected in a disaster. How prepared are they?

**Methods:** This review was a prospective, postal survey distributed to the directors of all adult and mixed (adult and paediatric) Australian Emergency Departments. Those not accredited by the Australasian College for Emergency Medicine (ACEM) were excluded. Surveys were sent to 78 departments. Overall responses were reviewed, as were groupings by state, role delineation, annual attendances, hospital bed numbers, and access block. Actual disaster plan activation also was reviewed. The survey assessed all aspects of disaster preparedness from risk assessment and planning, to staffing, training, education, equipment, and funding. The impact of recent world events on preparedness was reviewed while departments also were asked to assess their own ability to manage disasters using a Likert-like scale.

**Results:** The response rate was 78%. There was no significant difference in response rates between various states or various ACEM role delineations. There was a large variation in levels of disaster preparedness between departments. The majority had a reasonable level of planning, but provided limited education, training, or exercises. Those most prepared were those departments from New South Wales or Victoria with a Major Referral role. The Sydney Olympics had a significant effect on preparedness, but there was little correlation with previous disaster plan activation.

**Keywords:** education; emergency departments; equipment; exercises; funding; hospitals; management; planning; preparedness; risk assessment; staffing; training

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## Findings of Health Reporting as Criteria of Preparedness in Emergencies

G. V. Kipor

All-Russian Service for Disaster Medicine, "Zaschita", Moscow, Russia

Within last decade, the status of the public health system of Russia has changed drastically. The changes might be considered as a critical event for survival of state medical services and the new development of commercial medicine services.

This paper describes major tendencies of primary and integrated health characteristics of the population. For this purpose, an organization of public health services, methodology of health status assessment and situations in different regions of the European territory of Russia, its relationship to emergency medicine, and the criteria used for health system preparedness will be analyzed.

In public health and in disaster medicine, health monitoring is based on a large body of data that include parameters of activity of subordinated services as well as for the whole the system. This includes, first of all, hierarchical organization of initial statistical data collection, the subsequent transformation of the data into databases, data analysis, and presentation of output information.

Some approaches and conclusions of modern health monitoring methodology that serve as groups of basic indices for preparedness criteria elaboration and for decision-making include:

Group 1 — (a) Evaluation of demographic parameters and structure of population; (b) Evaluation of the health state dynamic in different sub-populations; (c) Evaluation of morbidity and mortality for specific diseases; and (d) Evaluation of causality of mortality. This group includes up to 36 basic integrated tables. Analysis of this group gives us basis for evaluation of health reserves capacities.

Group 2 — (a) Evaluation of resources and estimation of qualitative and quantitative parameters of public health system; and (b) Evaluation of general state and quantitative parameters of availability of medical, prophylactic and sanitary organizations, and the number of medical and nursery personnel. It includes indices of access of the Russian population to all kinds of medical services provided by the state public health system. This group includes 25 basic integrated tables. Analysis of this group gives us basis for evaluation of health system capacities and its potential applicability during emergencies.

Group 3 — Specific evaluation of parameters of availability of maternal and children services related to health indices for pregnant women, those for births, abortions, perinatal and fetal mortality, etc. This group includes nine integrated tables and gives us a basis for evaluation of specialized medical services in emergencies and their capacities in various emergency-prone regions.

Group 4 — Evaluation of medical and sanitary severity in emergency situations, resources of medical emergency services required for their permanent readiness. This group includes six integrated tables and provides a basis for preparedness evaluation of disaster medicine service.

**Keywords:** data; decision-making; development; disaster medicine; emergencies; evaluation; monitoring; preparedness; public health; Russia; services

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## Description and Evaluation of Crash Program to Prepare Healthcare Professionals to Manage Casualties and to Instruct Their Colleagues Concerning Non-Conventional Warfare

Nela Marks, RN, BN;<sup>1</sup> Robert Cohen, PhD;<sup>2</sup> Lion Poles, MD<sup>3</sup>

1. Ministry of Health, Department of Emergency, Israel.
2. Center for Medical Education, Hebrew University Faculty of Medicine, Jerusalem, Israel
3. Kaplan Medical Center and the Ministry of Health, Israel

The possibility of a non-conventional attack on the State of Israel during 2003 encouraged the Emergency Services Department of the Ministry of Health to rapidly develop and implement an educational intervention to prepare healthcare professionals to deal with such an attack. This