tion in Armenia, and a second one presents new data on relocation of victims who experienced the earthquake and the effects of relocation on their children. To sustain the success of the mental health program in Armenia, it is important that volunteers have certain important characteristics, which will be discussed as well.

**Keywords:** Armenia; crisis intervention; earthquake; follow-up; mental health; psychosocial

**Prehosp Disast Med 2005;20(3):s124-s125**

### Free Papers—Theme 17: Tsunami—2

#### Survey for the Medical Needs and Life Conditions following the 2004 Sri Lanka Tsunami

**K.N. Nakata**

Nippon School, Japan

**Objective:** To identify the medical needs, state of public health, and life conditions during the tenure of the Japan Disaster Relief (JDR) medical team during the sub-acute phase following the 2004 Sri Lanka tsunami. Additional objectives included: (1) contribute to the direction of medical service; (2) search for serious cases; (3) clarify the public health situation in Sainthamaruthu.

**Methods:** The study was performed using comprehensive interviews of disaster casualties (35 households, 199 persons) who were living as refugees and the examination of the quality of water and sanitation facilities that were available.

**Results:** During the early phase of the disaster, traumatic illnesses and respiratory diseases were the main medical problems found in patients without serious injuries. These were followed in frequency by skin diseases and mental or psychological problems. There were 23 patients presenting with traumatic injuries, 13 patients with respiratory diseases, 11 cases of skin disease, and seven cases with mental issues. The state of public health, in terms of water and sanitation, was maintained fairly well. As for the life condition, the supply of drinking water and the availability of toilet facilities were not maintained as well as was the public health state. However, with time, mental stress increased gradually.

**Conclusions:** Because water was distributed by pipes, waterborne diseases were not an issue. During the sub-acute phase following a tsunami, it is imperative that medical teams concentrate on traumatic injuries, respiratory diseases, and skin diseases concurrently; coping with patients suffering mentally should follow during this phase, and the maintenance of public health should always be a task.

**Keywords:** Japan Disaster Relief (JDR); life conditions; mental health needs; respiratory infections; skin disease; Sri Lanka; trauma; water-borne diseases

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#### Patterns of Injury at the ICRC/Norwegian Red Cross Hospital in Banda Aceh

**L. Riddez**

Sweden

**Objectives:** To evaluate the injury pattern and the need for a field hospital in Banda Aceh after the tsunami on 26 December 2004.

**Material and Methods:** All medical records for patients admitted to the hospital as well as for all patients treated in the outpatient department were abstracted. Age, gender, reason for admission, diagnosis, and treatment were recorded from the opening of the field hospital until 10 March 2005.

**Results:** As of 02 February 2005, a total number of 40 patients were admitted to the field hospital, some with severe injuries. In the outpatient ward, approximately 100 patients have been seen, many of them showing signs of post-traumatic stress disorder. Details on types of injuries, types of diseases, and psychiatric problems will be presented at the end of the study.

**Discussion:** The results will be discussed in the perspective of evaluating the real need for a field hospital in a similar disaster situation affecting a middle-income country. These results will be compared with a similar study performed by the author in Bam, Iran in December 2004.

**Keywords:** Bam; comparison; field hospital; injuries; patterns; relief; tsunami

**Prehosp Disast Med 2005;20(3):s125**

#### Tsunami Disaster and Child Victims in Sri Lanka—A Case Study

**P. Patabendi**

Team for Disaster Prevention and Sustainable Development, Sri Lanka

The recent tsunami has created a devastating situation in 15 districts of the coastal areas of Sri Lanka. Nearly 50,000 lives have been lost, of which 33% are estimated to have been children. Presently, thousands of children are displaced, and many of them have lost either one or both parents, siblings, and loved ones. The displaced people have lost their homes, belongings, and livelihood. Infrastructure facilities, including schools, have been destroyed. A large number of affected people live in refugee camps under very dilapidated conditions. As a result, the children, being one of the most vulnerable groups in the camps, also face threats of sexual and other forms of abuse, and above all, immense psychological trauma. Many children were missing after survival from the tsunami; there were few child trafficking cases reported to the police. Child abuse and sexual harassment were prevalent in the camps. The trauma to the elderly, children, and orphans was pathetic. The situation was worse in Northern and Eastern Sri Lanka, where most of the internally displaced children (IDC) were quarantined. The plight of the child survivors in the camps and temporary housing arrangements will be analyzed, and the actions initiated by the various international and local organizations to recover them from this situation will be presented.

**May – June 2005**

[http://pdm.medicine.wisc.edu](http://pdm.medicine.wisc.edu)  
Prehospital and Disaster Medicine
Implementation of an Emergency Measles Campaign—Aceh Province, Indonesia, January–March 2005

M. B. Brennan
Center for Disease Control and Prevention, Atlanta, Georgia USA

Introduction: Following the tsunami, there were concerns about the potential for a large measles outbreak in Aceh province, Indonesia. Reasons for the concern were low routine measles vaccine coverage (estimated at 50%), population movement, and overcrowding in camps for displaced persons. There also were concerns about access to good case management for the complications of measles.

Methods: The Indonesian Ministry of Health, assisted by the United Nations and non-governmental organization partners, targeted all children in Aceh province aged six months to 15 years to receive a measles vaccine, along with a supplementary dose of Vitamin A. Adjustments were made for missing, dead, and displaced persons when estimating the target population.

Results: The campaign targeted the entire Aceh province. However, priority was given to its capital, Banda Aceh, and three other highly-affected districts: (1) Aceh Besar; (2) Aceh Barat; and (3) Aceh Jaya. The campaign was completed in the first two locations with coverage of 70% and 94% in Banda Aceh and Aceh Besar, respectively. The campaign still is in process in the other two districts where heavily damaged infrastructure, loss of local health personnel, and lack of security continue to affect campaign progress.

Keywords: Aceh province; children; campaign; Indonesia; measles; Ministry of Health; vaccination

Post-Tsunami Health Interventions—Support Available from the Cochrane Collaboration and Priorities for Further Systematic Reviews in the Disaster Setting

M. Clarke
Cochrane Collaboration, Oxford, United Kingdom

Theme 13: Disaster Planning
Chair: Mauricio Lynn

Comparison of the Disaster Management Frameworks of the US and the UK: Similarities and Differences

K. Qureshi,1 R. Gershon2
1. Adelphi University, Garden City, New York USA
2. Columbia University, New York, New York USA

The geopolitical status of the world today intensifies the likelihood that disasters will increase in terms of numbers, type, and complexity. To this end, both the United States (US) and the United Kingdom (UK) have developed disaster management frameworks for the purpose of achieving command, control, and coordination. In the US, it is referred to as the Incident Command System, while in the UK it is referred to as the Combined Response (or sometimes the Gold, Silver, and Bronze System). Since many disaster events involve response from more than one nation, it is likely that there will be many instances where the US and the UK response teams will work side by side.

The purpose of this presentation is to compare and contrast the two disaster management frameworks, illustrating how they are similar and how they differ. Understanding how partner nations organize response operations is likely to facilitate international coordination and cooperation, and perhaps ultimately assist with the development of a universal standard.

Keywords: Combined Response; disaster management; frameworks; incident command system; preparedness; United Kingdom; United States

Assessment Report on the Amendment of Disaster Medical Services in Japan—What Has Been Changed during the Last 10 Years after the Great Hanshin-Awaji Earthquake?
Takashi Ukai
Hyogo Emergency Medical Center, Japan

Through the lessons learned from the 1995 Great Hanshin-Awaji Earthquake (GHA), which struck and destroyed parts of the modernized city of Kobe, the Ministry of Health and Welfare of Japan and the Government of Hyogo Prefecture developed several plans to improve the disaster medical services system. These plans included: (1) development of a widespread emergency and disaster medical information network; (2) designation of core hospitals for use during disasters; (3) education and training of medical personnel on disaster medicine; and (4) collaboration between the fire department and medical experts.

On the 10th anniversary of the GHA, the Hyogo Prefecture Government organized a committee for the assessment of the countermeasures taken following the earthquake. This presentation deals with the assessment report that was surveyed by the author in 2004 in Hyogo Prefecture. As to the area-wide emergency and disaster medical information system, almost all of the hospitals have been equipped with laptop computers that will be used exclusively for this system. However, most of the hospitals could not use this information system during multi-casualty incidents and the earthquake in Niigata in October 2004. Reasons for the low usage rate were investigated.

About 500 hospitals in Japan and 15 in Hyogo Prefecture are designated as disaster core hospitals. They are expected to play leading role in accepting patients in the disaster-affected area, and, if necessary, transfer those patients to the hospitals in the non-affected areas. The preparedness for disasters and capabilities of each of these hospitals were investigated and it revealed that there are many differences between the disaster core hospitals.

Training and education on disaster medicine was minimal before the GHA, and, if any was provided, it was