tion in Armenia, and a second one presents new data on relo-
cation 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 charac-
teristics, which will be discussed as well.
Keywords: Armenia; crisis intervention; earthquake; follow-up;
mental health; psychosocial

Free Papers—Theme 17: Tsunami-2

Survey for the Medical Needs and Life Conditions fol-
lowing 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 med-
ical service; (2) search for serious cases; (3) clarify the pub-
lic health situation in Sainthamaruthu.
Methods: The study was performed using comprehensive
interviews of disaster casualties (35 households, 199 per-
sons) 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 dis-
cases, 11 cases of skin disease, and seven cases with mental
issues. The state of public health, in terms of water and sanita-
tion, was maintained fairly well. As for the life condi-
tion, the supply of drinking water and the availability of
toilet facilities were not maintained as well as was the pub-
lic health state. However, with time, mental stress increased
gradually.
Conclusions: Because water was distributed by pipes, water-
borne 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 suffer-
ing mentally should follow during this phase, and the main-
tenance of public health should always be a task.
Keywords: Japan Disaster Relief (JDR); life conditions; mental
health needs; respiratory infections; skin disease; Sri Lanka; trau-
ma; water-borne diseases
Prehosp Disast Med 2005;20(3):s125

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 present-
ed 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 dis-
placed, and many of them have lost either one or both par-
ents, 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 are facing
threats of sexual and other forms of abuse, and above all,
immense psychological trauma. Many children were miss-
ing 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 trau-
ma 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.
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

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