

with continual heavy rain from 22 October to 02 November, 1998. Although the eye of the storm did not make landfall in our territory, the huge area of rainfall included the entire country. The rains were most severe in the coastal areas. Costa Rica had developed an integral and coordinated plan to face disasters and major emergencies. This plan was activated as soon as information was available regarding the potential risk to our country by Hurricane Mitch.

Close and continual monitoring of previously identified flood-prone areas and a timely evacuation of people in those areas was coordinated through the National Emergency Commission.

#### Results:

- 1) 16,500 people had to be evacuated, 5,500 to 99 shelters and the rest to friend's or relatives homes;
- 2) Four people were reported dead and four were missing;
- 3) 10 people suffered injuries that required medical care;
- 4) 74 major roads were either blocked by landslides or damaged by flooding;
- 5) 36 bridges were destroyed;
- 6) 39 schools were damaged;
- 7) 740 houses were destroyed or damaged; and
- 8) Agricultural production was affected, particularly rice, sugar cane, bananas, coffee, corn; dairy products, and fishing.

**Conclusion:** Although Costa Rica was not directly affected by Hurricane winds, it suffered moderate to severe rains for 12 days. In spite of significant damage to crops and infrastructure, there were only minor consequences to human life and health.

We believe that emergency and disaster reduction, preparedness, and planning, as well as increasing public awareness and education must play a significant role in the end results from a phenomenon such as Hurricane Mitch; and that this accounts for the minor death and injury toll that we experienced.

**Keywords:** Costa Rica; disaster planning; Hurricane Mitch; infrastructure; preparedness; rain

#### G-41

##### Domestic Disaster Relief Activities in the Japanese Red Cross Society

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Disaster relief has been one of the Japanese Red Cross Society's (JRCS) primary activities since it first dispatched a medical relief team to assist victims of the terrible Mt. Bandai eruption in 1888. The JRCS demonstrated its strength in disaster relief after the Great Kanto (1923) and the Great Hanshin-Awaji (1995) earthquakes, the Unzen-Fugen volcanic eruption (1991), and various other natural disasters. The JRCS also is involved in rescue operations in cases of major accidents, for example, plane and train

crashes, gas explosions, and fires in public places such as hotels and department stores.

Under the Disaster Relief Law and the Disaster Countermeasures Basic Act, the JRCS is required to give medical care, manage the handling of corpses, and also to play a role as the coordinating organization to cooperate with the government and other public agencies in relief operation.

The author presents the JRCS disaster relief operations undertaken with the advanced cooperation of the other chapters in this forum during the heavy rain and flood disasters Japan encountered during the summer of 1998.

**Keywords:** accidents; cooperation; Disaster Countermeasure Basic act; disaster relief; Disaster Relief Law; Japanese Red Cross Society (JRCS); Great Hanshin-Awaji (1995) earthquake; Great Kanto (1923) earthquake; rescue

*General Session-X*  
**Prehospital Care**  
**Tuesday, 11 May, 8:00-9:00**  
**Chair: Michael Oles, Kei-ichi Tanaka**

#### G-48

##### Mobile ICU for Transport of Critically Ill — The Whangarei Experience

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**Introduction:** The transport of critically ill patients is a necessity the world over. With centralisation of Critical Care Medicine and Emergency Medicine resources, effective and quick transport of the critically ill becomes an integral part of modern medicine. Efficient transport of the critically ill and provision of ongoing transit intensive care for the critically ill are of great importance to New Zealand — a country with a land area the size of Japan and a population of 3.4 million. Northland is New Zealand's northern-most province with a population of 140,000. The density of population is 14 people per square kilometre.

**Results:** The nursing and medical staff at the Intensive Care Unit in Whangarei Hospital, New Zealand have been involved in transit care of the critically ill for 10 years. Health resources are centralised largely to the Whangarei Area Hospital, the base hospital for the region. The terrain is tough and subjected to the vagaries of weather. A mobile intensive care unit (ICU) provides transit care of the critically ill that facilitates movement of patients within the region and, in appropriate cases, transfer to a tertiary centre for cardiothoracic and neurosurgical management.

We use an effective mobile ICU — the bridge — that locks onto the patient stretcher, and is an efficient contraption for holding all the basic requirements of an ICU in a compact manner. The patient-bridge unit is