

### Problems in the Aeromedical Evacuation by Helicopter at the Urban Disaster and Catastrophe In Japan

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On 12 July, 1993 at night, a big earthquake and tsunami struck the west coast of Hokkaido and the small island of Okushiri in a part of Hokkaido. In Okushiri, 4% of the population (111 people) died or were missing. On the morning after this earthquake, 34 severely injured patients were transferred to the well-equipped hospital in Sapporo by helicopters as is the usual mode of emergency transport after a disaster. But, after the Great Hanshin Quake, many helicopters were stranded in Kobe, and only 18 patients were able to be transferred from damaged medical facilities in Kobe to the well-equipped hospitals in adjacent regions by helicopter during the first three days after the earthquake. This fact demonstrates some problems with aeromedical evacuation and transportation after a big urban disaster in Japan.

Emergency rescue services by ambulance care in Japan are administered by the Ministry of Affairs of Government and Division of the Fire and Disaster Prevention of the Self-Governing Body. Rescue by helicopter is provided by the air-rescue corps that is part of the Self-Governing Body, prefecture, and Ordinance-Designated Cities and Self-Defense Forces.

In disasters, especially in catastrophic events, Japanese Ground Self-Defense Forces (JGSDF) usually have been asked to help with rescue and evacuation services under the Disaster Relief Act in Japan. The appeal for assistance to JGSDF is requested from the Ministry of each prefecture to the JGSDF commander of each region. But, the JGSDF has no experience in the use of helicopters in big cities during disasters or even in usual emergency transports, as there are not enough landing spaces to establish the landing spaces in the urban areas. Also, there is little close coordination between the Fire Department and Self-Defense Forces. So, the dispatch of helicopters was delayed after the Great Hanshin Quake.

As a result of the Great Hanshin Quake, the Government intends to provide Fire Department with helicopters from each prefecture and to ensure easier use of helicopters belonging to Self-Defense Forces for the disaster and emergency transport.

**Key Words:** aeromedical evacuation; earthquake; Great Hanshin Quake; helicopters; Self-Defense Forces; urban disaster

### 10 Years with the Chief Emergency Physicians System in Hamburg

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Hamburg is a city with approximately 1.8 million inhabitants with an area of 750 sq. km. It has one of the biggest sea harbours in Europe and includes a busy industrial zone. The airport is located near to the city center.

In September 1985, the Chief Emergency Physician (CEP) system was introduced in Hamburg. In the event of mass casualties, the activities of emergency medical and rescue systems need coordination. Otherwise, patients may not be adequately treated or will overload the emergency rooms in nearby hospitals.

At the scene, the CEP is part of the control of operations. The CEP is in charge of all medical personnel at the scene. The CEP is notified by wireless telegram (beeper), and transportation to the scene is provided by the Fire Brigade.

Indications for CEP-alarm include:

- Emergencies with more than six victims;
- Emergencies with more than two MICU on scene;
- Emergencies with very difficult or prolonged extrication;
- Emergencies with a large number of health endangered people (e.g., HazMat casualties).

During the ten years of its existence, the CEP-system was activated on 165 occasions. During this period, 2,180 persons were treated by the CEP-system. Among all of the patients seen, 54% sustained minor injuries, 6% were severely injured, 2.4% were killed, and 37.6% required evacuation. The average time from alarm to arrival at the scene was 22 ± 20 minutes.

The personal equipment of the CEP consists of a protective uniform, including helmet and mask, and a beeper. If needed, the CEP may use the telecommunication resources of the operation control (wireless fax, radio, etc.).

**Conclusions:** The CEP system proved to be effective in disaster management and improved the performance of operation control.

**Key Words:** chief emergency physician; mass casualties; notification; operation control

### Disaster Response System of Fire Service and Emergency Medicine, Saitama Prefecture, Japan

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Saitama prefecture is located in the Metropolitan area surrounding Tokyo. Geographically, it is a landlocked prefecture adjacent to Tokyo, 103 km long from east to west and 52 km<sup>2</sup> from north to south, lying almost in the Center Of Kanto Plain. It covers an area of 3,797 km<sup>2</sup>, about 1% of the whole country. The population as of 01 September, 1996 is 6,803,892, which is the fifth largest in Japan.

The Hannshinn and Awaji Great Earthquake which occurred before dawn on 17 January, 1995 caused more