

## Problems Associated With Large-Scale, Mass-Gathering Events in Hokkaido Island, Japan

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**Introduction:** Japan consists of four main islands. Hokkaido Island is located at 45°N latitude and makes up 20% of the area of Japan. Hokkaido hosted two large-scale, mass-gathering events in the past. One was the Sapporo Winter Olympic Games in 1972, which was the first Winter Olympic Games in Asia, and the other was the 2002 FIFA World Cup in Korea/Japan. Recently, training and preparedness for casualties during mass gatherings have become main topics in the disaster medical field. This paper considered the problems associated with mass gatherings in Hokkaido.

Recent mass-gathering events in Hokkaido included: (1) the Sapporo Snow Festival, which is held in Sapporo every February and attracts 1.8 million spectators from around the world; (2) the Yosako-Soran Festival, which is held in Sapporo every June and has become a larger event than the Sapporo Snow Festival, attracting more than 40,000 participants and two million spectators to the festival each year; (3) the 2002 FIFA World Cup Korea/Japan: the soccer games between Germany and Saudi-Arabia and England and Argentina took place at Sapporo Dome Stadium; (4) the World Rally Championship (WRC) was held in Obihiro city in 2004 (the first WRC ever held in Japan), attracting approximately 210,000 spectators at this event; and (5) the professional baseball team, Nippon Ham Fighters, has played its home games at Sapporo Dome Stadium since 2003, and about 30,000 spectators attend each game.

**Results:** Penetrating cardiac injury resulted from a terrorism-related, nail bomb explosion, which occurred during the Yosako-Soran Festival in 2000. As a result, an emergency plan and disaster core hospital network was constructed during the 2002 FIFA World Cup Korea/Japan. These mass gatherings illustrate the importance of helicopter transportation in addition to collaboration and training among the fire department, police station, and self-defense force.

**Conclusion:** The following are necessary preparations for a large-scale, mass gathering: (1) guidelines and a manual for mass gathering must be developed; (2) a nationwide disaster and emergency medical network with an Internet mailing list must be established; and, in order to develop mass-gathering medical care plans in accordance with the types and size of mass gatherings; and (3) data must be collected and risk factors for patient presentations must be examined for a variety of events.

**Keywords:** events; Japan; large-scale; mass gathering; problems; response; World Cup

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## Theme 11: Terrorism

Chair: Jeffrey Arnold

### Epidemiology of Terrorism-Related (TR) Injuries

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**Introduction:** Israeli civilians have experienced an escalation of terrorist attacks in recent years.

**Methods:** An analysis of national trauma registry data from October 2000–December 2003 was performed.

**Results:** From 01 October 2000–31 December 2003, 1,789 patients were recorded in the Israeli national trauma registry with terrorism-related (TR) injuries, and 69,877 were entered due to other trauma. Terrorism-related victims were young, with 55% between the ages of 15 and 29 years, compared to 22% in this age group among the population injured by other (non-terror) forms of traumatic events. The proportion of severe and critical injuries in the population was significantly higher, 26% vs. 10% in non-terrorism-related (NTR) trauma. Twenty-five percent of the TR population, compared to 7% of NTR patients were admitted to the Intensive Care Unit. 19% of TR patients vs. 8% of NTR patients were hospitalized for more than two weeks. Inpatient mortality of the TR patients was 6%, three times higher than for the other trauma patients (2%).

Multiple injuries were more common in TR victims (54%), compared with 23% of NTR victims. Terrorism-related victims suffered eight times more injuries to blood vessels, and four times more injuries to nerves than NTR, and required more specialized care.

**Conclusion:** The epidemiology of TR injuries is different from that of NTR. Terrorism-related injuries are more severe and increase the utilization of hospital resources. The TR victims are young, implying a great loss of potential healthy life years and potentially long, disabled lives. Although the proportion of these patients in the overall population is small, the accumulated workload they create is extensive, and the needs they present are unique.

**Keywords:** demography; impact; resources; terrorism-related injuries  
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### The Role of Emergency Medical Services (EMS) in the Planning of the Medical Response to Mega-Attacks by Terrorists

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From October 2000 to October 2004, Israel was constantly exposed to terrorist activities. More than 1,500 terrorist events occurred during this time—63 were defined as multi-casualty incidents (MCIs)—with 25 to 136 persons injured per event.

Magen David Adom (MDA), the Israeli national emergency medical services (EMS) system, treated and transported 3,483 injured (average of 55 injured per incident) to the hospitals. There were 731 (21%) urgent injuries and 453 (13%) urgent, unstable injuries, of which 110 required