

Conclusion: A combination of preparedness activities and application of protocols was useful for providing prehospital medical care during mass gatherings.

Keywords: continuity; mass gathering; prehospital protocols; on-scene treatment; preparedness

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Subway Accident in Rome, October 2006

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Introduction: On 17 October 2006, two trains carrying 1,400 passengers crashed into each other in downtown Rome, near Piazza Vittorio. The accident caused the death of one woman and injured 266 people.

Objective: To evaluate the pre-hospital emergency plan of Rome for managing a mass casualty situation.

Methods: A prehospital emergency plan specifically for Rome's subway stations was prepared. To evaluate the application of the plan on-scene, a major incident method was applied.

Results: The evaluation of the results demonstrated that:

1. safety measures directed at CBRNE situations were successfully applied;
2. Gold Strategic Command and Silver Tactical Command structures were used and included Government Authorities (Emergency General Director—Regional Command);
3. Bronze Command and Communication at the scene were difficult because the accident occurred three floors under street level;
4. good assessments were conducted at the scene according prepared protocols (22 ambulances, Logistic support, and a Casualties Clearing Station (CCS) were operational within 20 minutes; 44 ambulances, two CCS, and six buses were at the scene within the first hour; and 90% of the resources were well-located at the scene);
5. a START Triage method was applied on 116 patients (five red; 19 yellow; 91 green; one black);
6. patients were admitted into 17 hospitals;
7. 150 patients were not transported by the health services and went by themselves to one of two hospitals.

Conclusion: The use of a combination of preparedness activities, such as protocols, integration with other organizations, and a regional strategic command, are useful during a mass casualty situation.

Keywords: preparedness; regional strategic command; train crash; plans; protocols; START triage

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Managing Mass-Casualty Incidents: Protocols or Principles?

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Introduction: Mass-casualty incidents (MCIs) require management under conditions of uncertainty. The dynamic nature of the situation—the erratic flow of information and the large number of variables—dictates incident management. Preparing solutions ahead of time and thus, is

complicated by the uncertainty of a future event; its timing, location, characteristics, consequences, magnitude, and response required. For this reason, MCI planning, preparation, and training that is based on rigid, orthodox assumptions may be ineffective or even counterproductive.

Methods: The details of 93 terror bombings that occurred in Israel in the past five years were assembled. The range of casualties involved in these MCIs illustrates how difficult it is to draw conclusions for planning based on prior events.

Results: The mean number of casualties was 52; the median was 43. The range was between 12 and 160 victims, respectively. The results show that the percentage of severely injured (ISS = 16) was far from constant and ranged from 0 and 100%. Likewise the fatality rate ranged from 0 to 53%.

Conclusion: The medical manager of a MCI must approach the event with a high degree of flexibility in order to use all available resources in a manner that will lead to the most successful outcome. Training for the management of MCIs should stress these capabilities and skills.

Keywords: Israel; mass-casualty incident; mass-casualty incident planning; percentage of severely injured

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Poster Presentations—Theme 7: Mass Gatherings

(109) Emergency Care Services in Prehospital Intervention for an Uncertain Gas Leak

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Background: The impact of a gas leak in Ankara, Turkey, on 10 February 2005, in terms of epidemiologic outcomes, resource utilization, and the time course of emergency needs was estimated.

Objectives: The aim was to standardize interventions against chemicals.

Methods: All of the events that occurred following notification of the gas leak are presented as a case report.

Results: At 11:15 hours (h), the Dispatch Center received a call from Esenboga Airport reporting that two laborers working in the airport had become sick and were transported to Diskapi Hospital, and that a package in the same area would need to be removed. At 11:40 h, the Civilian Defense Team took measures to block entrance into the incident place. The Incident Place Management Team tried to detect the number of people affected and prepared them to change their clothes and be decontaminated. The Domestic Lines Chief offered to remove the contaminated plane away from the others, if not to take away other planes and personnel and control them continuously. It was found that 138 passengers along with cargo had been on the plane. The name and address lists of all passengers were obtained.

Conclusions: Incident place management should be conducted by the 112 Emergency Health Service teams. It should be decided ahead of time where and how to make personnel and area measurements. It also was concluded that communication networks should be guided centrally. Warning and quarantine stages, as well as hospital trans-

portation and local evacuation plans should be designated and medical teams must be full equipped.

Keywords: chemicals; decontamination; gas leak; incident place management; Turkey

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(110) Medical Preparedness for Mass-Gathering Situations at Major Baseball Stadium in Japan: Renovation Planning for Hanshin Koshien Stadium

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Introduction: Hanshin Koshien Stadium, Japan's oldest major baseball stadium with a capacity of 50,000 spectators, is under renovation planning. Built in 1924, it only has a small, old-fashioned clinic for the provision of first aid, it lacks a policy and equipment to cope with a multi-casualty incident. The hospital, located one km from the stadium, is expected to be the most active medical facility during major incidents, but the hospital's relationship with the stadium management has been superficial. After receiving a press report in November 2005 about the stadium's renovation plan, the authors contacted with the stadium management.

Methods: Meetings among the stadium management, city fire department, and the hospitals were initiated. The topics discussed were: (1) renewal of the stadium clinic; (2) elevators that would accommodate stretchers; (3) public access defibrillators; (4) approach and parking space for emergency vehicles; (5) evacuation route for spectators; (6) backup electricity; (7) emergency communication equipment; (8) open space for a triage post and a casualty clearing station; (9) stockpile of supplies; and (10) a Helipad.

Results: Stadium management was too slow to accomplish an agreement with the hospital within one year due to: (1) management's ignorance of the stadium's medical hazards; (2) a lack of administrative control on medical preparedness in mass-gathering situations; (3) the poor relationship between the management and the local medical community; and (4) absence of nationwide statistics about medical preparedness and responses for mass-gathering situations.

Conclusions: In order to promote preparedness for mass-gathering situations, the medical community should negotiate with venue managements or event organizers about: (1) hazards and potential incidents; (2) lessons learned from domestic and foreign incidents; and (3) national laws and local regulations.

Keywords: baseball stadiums; hospitals; Japan; management; relationships

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(111) Medical Assistance in 2006 World Roller Speed Skating Championship

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Introduction: The World Roller Speed Skating Championship was held from 01–09 September 2006 in Anyang City, South Korea. An on-site, medical-aid station was set up and, when necessary, patients were transferred to the emergency department of the appointed hospital. The objective of this study was to examine the characteristics specific to both injury patterns and mass-gathering support of inline roller skating.

Methods: Patient data were collected from special medical records at the medical aid station and from electronic hospital records. Collected variables were analyzed.

Results: A total of 215 patients visited during the 10 days. Of the total number of patients, 78% visited the facility for the first time and 56% were foreigners. There was no serial increase in the numbers or rate of patients except for revisiting patients. Except for teenagers, the number of male patients was greater than of females, especially for patients >60 years of age. Minor injury was the most common complaint of patients, especially for the players. Rate of injury among all visits was 62%. Twenty-four patients (11.2%) were transferred to the hospital. Provisions of medication and dressing were the first and second most common treatments, respectively.

Conclusion: Medical assistance for the inline roller skate game has the specific characteristics of inline roller skate injuries and the mass-gathering sports events. Preparedness should be suited to the specific patterns of patients. It will be necessary to study more cases every year for characterizing various patterns of patients in inline roller skate games.

Keywords: emergency department; injury patterns; medical aid station; preparedness; roller skating

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(112) Club Drugs and their Abuse: A Hospital Case Series and Experiences in a Prehospital Music Festival Environment

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A series of six gamma-hydroxybutyrate (GHB) overdoses during a 12-hour period presented to the emergency department following a local music festival. Two patients who presented to the emergency department simultaneously required intubation and ventilation.

Recent analyses of target populations have identified a rise in the recreational use of so called "club drugs", namely GHB, ketamine, and methamphetamine (MDMA) in some parts of the world. Following ingestion, patients may present in various states, ranging from mild intoxication to coma. Presentations have the capacity to utilize significant medical resources, which may be limited in a prehospital setting. Studies of GHB have demonstrated a high variability of sedative potential across volunteers, suggesting an