

contained structured questions of the multiple-choice type, but a certain number offered the possibility for additional comments; open-ended questions were also included.

Results: Answers from the 66 respondents indicated that 53 persons (80.3%) had been subjected to threats and/or violence. This was experienced by the majority as unpleasant to some extent or other. Moreover, the patient-paramedic relationship is affected as soon as the paramedic is exposed to threat or the use of violence.

Conclusion: Threats and violence are a reality in the provision of ambulance service, and measures must be taken so that the effects on caregivers as well as patients are allayed.

Keywords: ambulance providers; emergency medical care; paramedics; patients; threats; violence

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Utilization of Communication Technology to Improve Team Recall Efficiency

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Background: The Disaster Medical Assistance Team (DMAT) in Taiwan was organized through voluntary individual hospital participation starting in 2000. At present, there are two levels of DMATs (national vs. local) made up of 60 and 20 people, respectively, as basic operation modules. The National DMAT of the south consisted of six local DMATs. Efficient communication (vertical vs. horizontal) during the time of recall as well as team status update, warrants opportune response and deployment.

Methods: A voice message center was set up on a GSM mobile phone system in a preregistered call list. For a deployment order, the executive office only has to send one voice message by predetermined priorities such as individual mobile phone first, followed by work phones, and then home phone. A pilot test was carried out from 11 to 21 November 2002. Horizontal contacts among 13 team leaders (Group I), and 18 team members in one operation unit (Group II) were processed vertically.

Results: The average response times in Groups I and II were 5.2 and 4.9 minutes (min), respectively; the 90% fractile response time was 14.3 and 11.7 min. The percentage of calls received and confirmed by reply in Group I was 67.1%, and in Group II was 61.4%. To increase the overall coverage rate, a tiered call-out system was supplemented by written message via mobile and fax.

Conclusion: To improve communication management, it's important to modify message delivery. Message contents were categorized into emergency, urgent, and routine notification. Emergency recall will be made by voice message, urgent communication by written message, and routine by fax. In general, this modified recall system with the advancement of communication technology can serve as a DMAT quality indicator. Periodic auditing will strengthen the chain of command, and also prompt the recall process to provide a better disaster response.

Keywords: communication; medical assistance team (DMAT), disaster management; messages; quality; recall; response times; technology; voice message center

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Medical Assistance in International Media Center

during 2002 FIFA World Cup Soccer Games in South Korea

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Introduction: The International Media Center (IMC) was made up of an International Broadcast Center (IBC) and a Main Press Center (MPC) for the 2002 FIFA World Cup Soccer Games. It was established and maintained in Seoul, South Korea, and covered an area of 40,000 square meters, which served approximately 12,000 press personnel and related persons. A medical-aid station was established in the IMC and operated for 45 days during the World Cup competitions. This presentation provides a description of characteristics and medical data obtained in the IMC medical-aid station.

Methods: Data were abstracted from preformed, special medical records of IMC medical aid. Some of the variables collected and analyzed included: (1) Total numbers of patients; (2) whether a first visit or revisit; (3) simple drug requirements; (4) native or foreigner to South Korea; (5) chief complaint; (6) disease or injury; (7) proportions of treatments by class; and (8) courses after medical care. Data also were analyzed for serial change by week, patterns according to characteristics of games, and for days with or without games.

Results: 1,000 patients visited, with an average 22 patients per day; 68% of patients visited the station for the first time, and 59% were foreigners. There was no serial increase of numbers or the rate of patient visits except for revisiting patients. There were more males than females overall (except for patients in the second decade of age); and all of the patients over 60 years of age were male. Sore throat was the characteristic chief complaint of patients working in IBC. The rate of patients injured was 19.6%, and the maximal number of patients injured were males in their fifties. Of all patients, 89% were discharged, and 2.3% were transferred. Among treatments, excluding those requiring medication, 11% required dressings. 73.9% of patients received oral medication, and 10.0% required injections.

Conclusion: Medical assistance for media centers in large sports events have different characteristics compared with medical assistance required for sports events. Preparedness and planning should be different, and suited for the patterns of patients. It will be necessary to study more cases to characterize various patterns of patients in a media center.

Keywords: demography; football; mass gathering; media center; medical aid; patterns; planning; preparedness; soccer; sports event; World Cup

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Medical Emergency Center of Wuhan, China

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Wuhan is a center of industry, finance, business, science, culture, education, and health in the middle of China. It has 8.13 million people in an area of 8,467 sq km. It is called the River City because both the Yangtze and the Han rivers run through it. Wuhan is a vital point of land

and water transportation in China, and has the name of "nine province main thoroughfares."

In 2000, Wuhan Medical Emergency Center and Wuhan Helicopter General Aviation Co. Ltd signed an agreement to make use of two Enstrom 480 helicopters to provide aerial rescue services. The aero radius is 180 km, or 11 flight hours. The helicopter rescue expert team consists of 65 high-grade doctors from 16 professional subjects of 15 large hospitals. We already have transacted the "A" flight permission procedure; we can fly as soon as we get the dispatch report, weather permitting. So far, the service has rescued five critically ill patients.

At the present time, Wuhan is the only large city in which the citizens can dial "120" to dispatch rescue helicopters. The EMS system shows the solid construction of aquatic, overland, and aerial rescue.

Keywords: emergency medical services (EMS); helicopter; rescue; system
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Chlorine Gas Lung Injury: Intravenous Versus Aerosolized Corticosteroid Treatment in a Porcine Model

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Objective: Chlorine gas remains one of the most common gaseous intoxicants due to its widespread use in modern society. Current treatment of acute chlorine gas injury is mainly symptomatic. This blind placebo-controlled study examined the effects of post-injury corticosteroid administration in chlorine gas injured pigs followed for 24 hours.

Method: Anesthetized and mechanically ventilated pigs were exposed to chlorine gas (400 ppm) for 15 minutes, then assigned to three groups: 30 minutes after gassing each group received either aerosolized budesonide (n=8), intravenous betamethasone (n=8), or placebo (double-dummy, n=8). Hemodynamics, gas exchange, and lung mechanics were evaluated for 24 hours.

Results: Airway and pulmonary artery pressure increased, and arterial oxygenation fell precipitously in all animals (from 13.5 ± 0.8 to 6.5 ± 0.9 kPa, $p < 0.001$). These immediate changes were followed by a gradual improvement over six to eight hours to a stable level of dysfunction for the remainder of the experiment in placebo animals. Arterial oxygen tension, pulmonary vascular resistance, and airway pressure recovered faster and more completely in the budesonide and betamethasone groups than in the placebo group ($p < 0.01$). Lung wet to dry weight ratio was greater in the placebo group than in the budesonide and betamethasone groups (6.34 ± 0.59 vs. 5.56 ± 0.38 and 5.53 ± 0.54 , respectively. $p < 0.05$).

Conclusion: Treatment of chlorine gas lung injury with aerosolized budesonide or intravenous betamethasone improved symptoms and signs of lung injury compared with placebo. This study supports early treatment with corticosteroids in victims of chlorine gas injury.

Keywords: chlorine gas; corticosteroids; lung injury
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Evaluation of Disastrous Consequences of BSE

Epidemic with Public Panic in Japan

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Background: In 2001, the detection of bovine spongiform encephalopathy (BSE) in Japan, the first case in Asia, made the public extremely nervous about the safety of food products containing beef, which led to deteriorating consequences on the beef market in Japan. Unfortunately, the anthrax threats in the United States in the same year drove the BSE epidemic to a kind of "media-induced" disaster in the society.

Objective: To address the public concern over the BSE epidemic, the mass screening system established by the Japanese government was reviewed with respect to its advantages and limitations.

Methods: Based on the evidence from BSE tests reported by the European Union, the accuracy of the screening system in Japan was investigated, and the number of false negatives and positives under the current system was estimated.

Results: The analysis indicated that, since Japanese cattle were still at low risk, there could exist a very small quantity of error in BSE detection with less than one false negative in four years. However, it was confirmed that the current system is far from the best for protecting humans from the BSE hazard.

Conclusion: Despite the BSE epidemic, the human risk for BSE in Japan is quite low in Japan compared with other medical risks. Scientifically rational communication through the media will be needed to prevent the next mass panic caused by irrationality.

Keywords: bovine spongiform encephalopathy (BSE); epidemic; media; public concern; risk; screening
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Enhancement of Management for Land Transportation of Dangerous Chemicals

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Every day, there are many vehicles transporting dangerous chemicals on the expressways. If the chemicals leak, catch on fire, or explode, a serious chemical event would involve the dense population living along the way.

1. Management issues associated with transportation of dangerous chemicals
 - a. Transportation without proper certificates or with disqualification certificates
 - b. Driving not in accord with the time scheme and designed traffic line
 - c. Imperfect safety regulations for blocking leaks and fire control
 - d. Drivers and escorts working without training
2. Reasons and lessons from chemical accidents
 - a. Some special vehicles transporting dangerous chemicals aren't qualified by the correlative governmental administration