

(EMS) system providing prehospital basic and advanced cardiac life support using on-line tape recordings of prehospital cardiopulmonary resuscitation (CPR) efforts. In the evaluation of advanced trauma life support, voice recordings pose problems because of surrounding noise, the much more complex setting and the more differentiated treatment compared to advanced cardiac life support. Michaelson *et al*<sup>2</sup> described the usefulness of videotaping in trauma admitting areas when used to improve quality.

**Methods:** Prehospital trauma management performance of a helicopter crew (anaesthesiologist, paramedic, local EMS personnel) was recorded and evaluated using video recordings by a small, flexible, microcamera and a portable video tape recorder carried in a backpack.

**Results:** The described recording technique—even in remote surroundings—is easy to perform and very reliable. So far, 15 calls involving 32 patients have been evaluated during a two-month period. Mean values for time intervals between landing and take-off were 26 min. Three major time-consuming factors found were: (1) entrapped patients that took additional time of 18 minutes (min) on average; (2) difficult patient conditions (e.g., for the establishment of intravenous lines, endotracheal intubation) that required an average additional time of 18 min.; and (3) the lack of EMS team coordination during invasive measures (e.g., anaesthesia induction, chest tube insertion, etc.) that required an average of 6 min. of additional time.

**Conclusions:** Videotape recording using a microcamera is a reliable and feasible technique to evaluate the prehospital management of trauma patients and to define areas of quality improvement.

#### References

1. Schneider, et al: Resuscitation 1994;27:197–206.
2. Michaelson, et al: Eur J Emerg Med 1997; 4:94–96.

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**Key words:** advance cardiac life support (ACLS); advanced trauma life support (ATLS); anaesthesia; extrication; intervals; intravenous lines; intubation, endotracheal; quality assurance; trauma; videotape recording

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### Medical Support for Children During Mass Gatherings

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**Introduction:** Mass gatherings are special situations for which mass medical care must be preplanned. Fairs, concerts, parades, and rallies are some events that cause large numbers of people to gather in one place. The extent and quality of medical care was measured at a mass gathering of approximately 100,000 children, meeting at a television-sponsored fun fair.

**Methods:** Every patient contact was recorded on printed forms, including data such as the number of patients treated, patient gender, parent's escort, time distribution of patient contacts, duration of treatment, diagnosis, therapy,

and patient disposition.

**Results:** Eighty-one male and 111 female patients were included. Only 0.19% of the estimated number of participants were treated during the 9-hour period. Twenty percent of all of the children up to the age of 10 years, who needed medical help were not accompanied by an adult; 75% of all patient contacts were made during the afternoon; 164 (85.4%) suffered only from minor medical problems or injuries and were treated for less than 10 minutes. The most common complaint was minor trauma, 103 patients (53.6%), followed by minor medical problems, 21 patients (10.9%); insect bites, 20 patients (10.4%); and serious medical problems, 19 patients (9.9%). Treatment provided included dressings, 100 patients (52.1%); local therapy, 68 patients (35.4%); analgesic therapy, 10 patients (5.2%); and others. Only 4 patients (2%) had to be admitted to local hospitals, mainly for diagnostic measures, and 10 (5.2%) were transported to a family practitioner.

**Conclusion:** Most of the medical needs in this young population were minor. However, medical teams must be prepared for serious, life-threatening medical problems, including trauma, as well. The determining factor for overall quality of care is the rate of hospital admittance, which must be kept as low as possible.

**Key words:** children; demography; mass gatherings; medical care; preparedness

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### Clinical Practice of Cultivating Therapy in Treatment of Burns

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**Objective:** To probe into the curative effect of cultivating therapy in deep second- to light third-degree burns.

**Methods:** We selected the same term in-patients (40 cases) and cultivated their deep second- to light third- degree burns (light second and deep third excluded) with MEBO for external use.

**Results:** Deep second and light third degree burns in different locations were treated with the same therapy. The duration of both the liquefaction and the healing of the burns was different.

**Conclusion:** Cultivation therapy can improve the microcirculation and the liquefaction of the wound, and shorten the period of healing.

**Key words:** burns; cultivation, early; healing; liquifaction; MEBO; treatment; topical

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### Collaboration between Firemen, Civil Protection, and Medical Team During Extrication

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**Introduction:** During an accident with a truck, the driver is