#### Difficulties in the Approach for Fire Engines Due to Overflowed Parking of a Hospital: Usefulness of Video Analysis for Prevention

L. Fdez-Yarritu; M. Ortega; R. De Celis; A. De La Serna; A. Martin; A. Soto; E. Zubeldia; A. Franjo Emergency and Intensive Care Unit, Galdakao Hospital, Spain

**Introduction:** A badly organized hospital access and parking creates great difficulties to fire engines in case of serious accidents or catastrophes. When planning the preventive actuation in case of a fire in the hospital, it is essential to take into consideration this important handicap.

We present a video analysis to demonstrate this phenomena in our center.

Method: We agreed with the fire brigade to simulate a fire alarm at Galdakao Hospital. During the simulation of extinguishing the fire and rescue, a home video recorded the difficulties concerning access, fire fighting, and evacuation (the hardest ones appeared as a consequence of overflowed parking site).

**Conclusions:** Difficulties for access of fire engines are particularly serious in a hectic hospital parking area, but they are inevitable. Video analysis is a useful tool for evaluating causes and potential solutions in order to improve actuation plans in case of fire.

Key Words: access; fire-apparatus; hospitals; video analysis

## Effects of a Simulated Subway Accident on the Emergency Room of a Hospital

L. Fdez-Yarritu; E. Barbero; A. De La Serna; R De Celis; M. Ortega; A. Martin; A. Oleagordia; J. L. Azpiazu

Galdakao Hospital, Basque Health Service, Spain

**Description:** This is a videotape of a simulated, underground accident. It was carried out in Bilbao City in the north of Spain. A call to the coordinating center, 0-8-8, mobilized the local police, health professionals, and firefighters. Thirty-five people were evacuated to four different hospitals.

Videotape images of the simulation include: 1) evacuation of the patients from the wagons; 2) triage and first health assistance provided on the subway station over the platform; 3) transport through railways to the street and into the ambulances; 4) transport to the hospitals; and 5) the first management at the emergency room.

Objectives: The effects of the drill on the Emergency Room was studied using video analysis. In addition, a survey was carried-out among those doctors who took part in the exercise. The structure and the impact on the demands of the Hospital created by the simulation also are described.

Conclusion: Very positive effects on the training of prehospital services were achieved. This exercise did not comprise a challenge to the staff, since this center meets much bigger demands daily. Ninety-five percent of the surveyed staff disapproved of the trial. The slowness caused by hectic traffic in the Emergency Room and the staging of the exercise at night resulted in annoyance of the staff.

**Key Words:** hospital; impact of simulation exercise; multi-casualty simulation; simulation; subway

# Stress of Nurses in Affected Hospitals at an Earthquake Disaster

Akiko Takahashi; Sakayu Terashi; Kiyoji Nagao; Masahiro Iwakiri; Hideto Hirotsune; Taturo Kai; Muneo Ohta

Osaka University, Osaka, Japan

**Introduction:** This surveillance study was performed to identify the stress levels of nurses in affected hospitals after the Hanshin-Awaji Earthquake disaster. The aim of this paper was to study the mental support of nurses in the affected area.

Methods: A questionnaire was completed by 1,931 nurses in six nucleus hospitals in the affected area. The study focused on the relationship between the Impact Event Scale (IES) and the nurses' background at the disaster including personal environment, hospital environment, and physical problems At the same time, the manners with which the nurses coped with the stress of the event was assessed.

Results: A positive correlation between IES and disaster background was found. The fact that the stress levels of the affected nurses was dealt with in several ways and in a delayed fashion was uncovered. The hospital environment with human relationships, relief from outside, and provision of materials, promoted more stress as opposed to the on-site environment.

Conclusion: These result suggest that coping skills are important factors in dealing with nurses' stress. Additionally, basic knowledge and skills on disaster nursing will bring less stress to nurses in disaster situation.

Key Words: disaster; Impact Event Scale (IES); nursing;

#### Session 4A: Training

Chairpersons:
S. Lennquist (Sweden)
M. Fahey (New Zealand)

### Quality of EMTs' Vocational Training: Results of an Empirical Investigation in Germany

Klaus Runggaldier

University of Osnabruck, Osnabruck, Germany

The qualification of EMTs is one of the components for success in EMS. A high qualification is based on a good vocational training. Opinions in Germany about the quality of the qualification of EMTs vary considerably. Some believe the qualification of the EMTs is sufficient. However, most experts believe that the qualifications of the EMTs is inadequate. Both groups agree that their findings are not based on facts, but upon personal experiences and opinions.