

of a 12-lead electrocardiogram (ECG) in patients who have had a syncopal episode. With the ability to perform prehospital ECGs, many regional protocols have recommended the use of 12-lead ECGs in patients with syncope. **Methods:** Over a two-year period, a retrospective analysis was conducted from the charts of patients who presented with syncope and had a 12-lead ECG performed. The ECGs were interpreted by an emergency physician for abnormalities. Run sheets were evaluated by both nurses and physicians to assess potential changes in management due to results.

**Results:** Charts were reviewed from September 2006 until December 2008. A total of 46,164 patients were transported during the time period. There were 134 patients presenting with a complaint of syncope without chest pain and had an ECG performed. Seventy-nine of the 134 patients had abnormal ECGs. Only one patient was identified as having a diagnostic ECG that potentially could have changed the prehospital management or destination.

**Conclusions:** Whereas an ECG may be valuable in the emergency department setting for determining the cause of syncope, it has limited utility in the prehospital management of patients. Agencies who currently recommend the use of ECGs in syncope should reconsider this policy. In cases of patients with syncope, 12-lead ECGs also may add significant time to transport with little clinical benefit.

**Keywords:** electrocardiogram; emergency medical services; patient charts; prehospital; syncope

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## Poster Presentations—Research

### (R94) Effect of Web-Based Health Education on the Knowledge and Cognition of Hepatitis B among Female University Students

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The purpose of this study was to investigate the effect of Internet health education on the knowledge and cognition of female university students about hepatitis B. A total of 189 participants were selected from universities in Kaohsiung City using a cluster sampling. The participants were divided into the experimental group and the control group. The experimental group included 130 participants willing to take Internet health education classes and the control group involved 59 who were not. Structured questionnaires including “demographic data”, hepatitis B knowledge”, “hepatitis B cognition”, and “Internet program satisfaction”, were applied to collect data. Surveys were conducted before the health education intervention, two weeks after the intervention, and four weeks after the intervention. Research results show that compared with the control group, the experimental group has significantly higher scores in hepatitis B knowledge after two and four weeks of the Internet health education program. There were no sig-

nificantly different scores in hepatitis B cognition between the two groups after two and four weeks of the Internet hepatitis B health education program. The overall satisfaction of the experimental group to the Internet health education is as follows: 60% of the participants indicated that the content of the program was easy to understand; 67.7% indicated the content was helpful; 66.2% were satisfied with the content; and 66.9% indicated that the university campus should adopt and popularize the Website. This study provides health professionals a reference for hepatitis B health education program using borderless Internet connections.

**Keywords:** education; health education; hepatitis B; Internet; knowledge

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### (R95) Rapid Evacuation Roadmap Distribution between Adjacent Hospitals in Cochabamba, Bolivia

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**Introduction:** Cities should be prepared with human assistance teams and adequate infrastructure during a disaster. Although the media is necessary, it often arrives late to the site of the disaster or emergency and on account of different factors that complicate the access to these regions. The aim of this study was to verify and identify access-exit routes from the disaster site toward nearby hospitals (Cochabamba, Bolivia) and vice versa, in order to improve the response time of the ambulances and thus facilitating immediate medical attention.

**Methods:** Qualitative and quantitative methods were used. An analysis was conducted by means of observation and documentation of the routes established by the Emergency Operation Center (EOC) for the ambulances of the different hospitals of the city. In addition, this research involved the study of traffic flow and the quantification of the number of hospitals, number of ambulances, potential places of disaster, and the number of cars in Cochabamba.

**Results:** Currently, the ambulance access-exit routes system is fixed by the EOC. However, this study verified that specific days exist in which the city has a high index of traffic congestion complicating the circulation of the ambulances in these established routes. New routes were identified to improve the response time performance of the ambulances to and from the hospitals.

**Conclusions:** When a disaster or emergency occurs in the area of more than one hospital, evacuation decisions and rapid distribution of injured among all the adjacent hospitals is a priority. The results of this study suggest that there are alternative routes that would improve ambulances response times according to the day of the week in which the disaster occurs in order to avoid traffic congestion.

**Keywords:** ambulance; Bolivia; disaster; hospital; response time; traffic congestion

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