and pre-existing mental health issues (e.g., dementia, depression). There must be a focus on PTSD, which may present differently in older than in younger persons.

Keywords: capacity building; competencies; education; geriatrics; gerontology; preparedness; psychosocial issues; special populations; training
*Prehosp Disast Med* 2009;24(2):s22–s23

## *Poster Presentations—Disaster Health Management*

### (B10) A New Model for Medical Records for International Disaster Relief Operations

*Koichi Shinchi; Toyoka Shinchi; Kazue Kawahara; Kiyoshi Yoshimizu*
Faculty of Medicine, Saga University, Saga-shi, Japan

During international disaster relief operations (IDRs), useful and practical medical record-keeping is important for effective triage and treatment. A standard model for medical records is desirable when triaging a large number of patients. The authors proposed Shinchi's Medical Record (SMR) in 2003. The SMR is only one sheet of paper that includes the medical records, laboratory data, and prescribed drug sheet. Use of the SMR also registers the triage category and primary diagnosis. Use of SMR is simple, inexpensive, and easy to prepare for many patients. After the publication of SMR, it was revised according to the advice of 108 doctors and nurses who participated in IDRs. The authors also referenced the same kind of medical records used by the International Committee of the Red Cross and other non-governmental organizations. The new medical record is more useful because it is easier to record the chief complaints and symptoms. This medical record will enhance effective medical relief activities during IDRs.

Keywords: disaster management; international; medical records; model; relief; Shinchi's Medical Record
*Prehosp Disast Med* 2009;24(2):s23

### (B11) Disaster Health-Related Challenges: Grounded Theory Study in the Iranian Context

*Hamid Reza Khankeh;[1] Reza Mohammadi;[2] Davoud Khorasani[2]*
1. University of Social Welfare and Rehabilitation Sciences, Tehran, Iran
2. Karolinska Institutet, Stokholm, Sweden

**Introduction:** Despite frequent, devastating natural disasters, concern about the effectiveness of Iran's disaster health services has been expressed. The purpose of this study was to explore the experiences and perceptions of individuals affected by, or responding to the recent earthquake in Iran. Challenges in the delivery of effective healthcare services were examined.

**Methods:** The study was conducted using grounded theory. Study participants included members of a multidisciplinary disaster response team as well as residents of the affected community. Data collection included semi-structured interviews and focus groups, while constant comparative analyses were conducted simultaneously.

**Results:** The most important factors that challenged the disaster response were: (1) lack of specialist human resources; (2) inattention to the ethnicity and cultural issues of the lay people and providers; (3) providing the services emotionally; and (4) a lack of coordination for distributing facilities and equipment.

**Conclusions:** Although a number of studies have identified a lack of resources as the major obstacle to an effective disaster response, this study indicates that ethnicity and cultural issues and a lack of coordination of resources were the most significant factors that proved to be challenging when providing disaster healthcare services.

Keywords: challenge; disaster health; disaster management; grounded theory; Iran; natural disasters
*Prehosp Disast Med* 2009;24(2):s23

### (B12) Electronic Patient Reporting during an International Patient Evacuation from Malaga, Spain to Helsinki, Finland

*Markku Kuisma;[1] Timo Vesterback;[2] Tuomas Hiltunen;[1] Arto Tennilä;[1] Jouni Pousi;[1] Jarkko Pajarinen[1]*
1. HUCH, Helsinki, Finland
2. Rescue Department, Helsinki, Finland

**Introduction:** A bus crash involving 49 Finnish tourists occurred in Malaga, Spain on 19 April 2008. Eleven patients were evacuated from local hospitals to Finland. A commercial aircraft was equipped for an ambulance flight. An electronic patient reporting (EPR) system was used. This presentation will report on the use of EPR during an international patient evacuation.

**Methods:** The Merlot Medi® EPR system was used. This system includes individual electronic patient reports, a shared situation diary, a resource view, and a summary of triage categories. Documentation is done by touch screen laptops. Data are transmitted from laptops to the server via a General Packet Radio Service (GPRS) connection that it is readable from every laptop involved in the situation.

**Results:** All patient data were entered into the EPR system in Malaga when they were transferred from ambulances to the aircraft. In addition, a shared situation diary was completed. The process could be monitored in real-time in Helsinki. The system was used online until the captain put on the fasten seatbelt sign. During the 4.5-hour flight, the EPR system was used off-line without GPRS. Vital parameters could not be transmitted from patient monitors to the EPR because the use of Bluetooth was not allowed during the flight. Therefore, vital signs were typed into the EPR laptop. After landing in Helsinki, the GPRS connection was activated and all data registered during the flight were uploaded to the server in less than three minutes. Patient reports were printed at the airport to accompany patients to the receiving hospitals.

**Conclusions:** The EPR system with GPRS data transmission was useful and reliable. The next step in system development is the implementation of a satellite telephone connection to be used during the flight or in case of an overloading of the mobile telephone network.

Keywords: assessment; data; electronic patient reporting; evacuation; monitoring
*Prehosp Disast Med* 2009;24(2):s23



https://doi.org/10.1017/S1049023X00053231 Published online by Cambridge University Press