

### The Nurses' Perspective: Strengthening Disaster Preparedness and Emergency Medicine Systems in Developing Countries through Nurse Participation

Lisa M. Hilmi;<sup>1</sup> Robert B. Bristow,<sup>2,3</sup> Anil Jasinghe,<sup>4</sup> Eshara Kottegoda Vithana,<sup>4</sup> Sol Kuah,<sup>5</sup> Ranjith Ellwala,<sup>4</sup> Pushpa de Zoysa<sup>6</sup>

1. AmeriCares Foundation, Nawala, Sri Lanka
2. Columbia University, New York, New York, USA
3. New York Presbyterian, New York, New York USA
4. Ministry of Health, Colombo, Sri Lanka
5. Columbia University School of Public Health, New York, New York USA
6. National Hospital, Colombo, Sri Lanka

**Introduction:** In many developing countries, the nurses' role in disaster response has been neglected and is not coordinated within the traditional disaster planning and response framework. However, Sri Lankan Trauma Secretariat, in collaboration with international partners, sought a multi-disciplinary approach to system development, involving nurses as valued contributors.

**Methods:** Sri Lankan nurses' clinical competencies were strengthened through training in trauma management, disaster preparedness and drills, public health evaluation, injury surveillance, and hospital emergency preparedness. Surgeons, administrators, nurses, military and prehospital care providers collaborated in two large-scale disaster drills. Nursing students participated as "victims". Disaster plans were reviewed and nurses trained in six hospitals for injury surveillance. An international disaster response nongovernmental organization (NGO) and international hospitals and universities supported the exercises.

**Results:** Nurses' input in course planning and preparation improved the clinical effectiveness in the emergency department. Nurses refined hospital disaster preparedness tools through disaster kits, checklists, and improved documentation. Triage systems were streamlined and improved. Feedback from nurses during disaster drills enhanced performance for clinicians and prehospital responders, the media, and the military, leading to improved overall coordination. A video was developed to utilize for future exercises. National nursing schools requested additional instructor training to ensure sustainability.

**Conclusions:** Multi-disciplinary training may improve collaboration and communication in actual disaster situations with positive outcomes for patients. Nurse participation and consultation can assist in developing health strategies for emergency systems in the developing world. Strengthening nursing competencies in disaster planning and emergency response is vital to advancing nursing in developing countries and building capacity through global networking.

**Keywords:** developing countries; disaster preparedness; emergency medicine systems; nurse

*Prehosp Disast Med* 2009;24(2):s100

### Poster Presentations—Preparation and Planning

#### (H60) Natural Disasters—Spearheading the Alarming Increase of Global Risks

Nikoi-Olai Portillo; Juan Olivarez

NADMO/AMA, Accra, Ghana

Natural disasters are unexpected, spontaneous calamities caused and controlled only by the forces of nature. Incidentally, their occurrences are believed to be caused by the rotation and revolution of the earth. These events cause great destruction and vast loss of lives. Natural disasters destroy >\$10 billion of valuable properties and assets, and kill approximately 3% of the world population every year. The most hazardous, lethal, destructive, and terrible ones events include forest fires, earthquakes, volcanic eruptions, tsunamis, etc. Their occurrences can be scientifically detected, but cannot be prevented by any advanced, scientific device. The management, relief, and recovery of these natural disasters invariably remain expensive and complicated.

**Keywords:** disaster; risk

*Prehosp Disast Med* 2009;24(2):s100

#### (H61) Hospital Disaster Planning

Ali Vafaei

Shahid Beheshti University, Tehran, Iran

Iran is the fourth country in Asia and tenth in the world in regard to the frequency of disasters due to natural hazards. The country is located in an earthquake-prone area and possesses a variety of climates and topographies. It also has a land surface of 1,648,195 square kilometers. Considering these facts along with the importance of emergency medical practice as a therapeutic specialty, it is logical to plan for disaster management. An emergency reaction program has been prepared and executed in one of the referral hospitals in Tehran.

A *clinical crisis* was defined as a situation in which a hospital is not able to cope based on its normal daily capacity. Such situations include incidents that are not normally expected and that may result in a considerable number of deaths and injuries. In the current study, a procedure used in American and European hospitals was taken as the basis on which the study is conducted. The modes were modified as dictated by climatic, cultural, and clinical conditions in Iran. An aerial map of Shohada of Tajrish was used to depict the positions of field units and command centers when partially dilapidated. Training based on this procedure was provided to the staff, and the program was followed to the practice phase and a maneuver was conducted.

**Keywords:** disaster; disaster health management; hospital; Iran; planning

*Prehosp Disast Med* 2009;24(2):s100