

prehospital medicine should be acquainted with the complications of the MI and their management.

Keywords: arrhythmias; emergency; myocardial infarction; prehospital medicine

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(158) Modeling Multidimensional Networking as a Braided Cascade for Medical Capacity Sharing during Disasters

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Introduction: The “chain concept” in medical treatment resembles an automobile assembly line. It improves overall coordination and bottleneck management. In emergency and disaster medicine, however, this concept lacks both efficiency and flexibility. For obvious reasons, demand can only be forecasted and met here in terms of probability. Modern logistics provide the “network concept” in which passengers, containers, information packets, etc. are being routed using the online fastest path calculation. Is this concept feasible in emergency and disaster medicine as well?

Methods: Amsterdam hospitals started simulation modeling, for trauma department routing and inter-hospital routing in 2002. This year, students from the Amsterdam School of Technology modeled a combination of inter- and intra-hospital networking, using ED graphical simulation software for fastest path calculation.

Results: The study showed a significant improvement in both speed and efficiency, under three conditions: (1) online capacity information availability; (2) sufficient transport capacity; and (3) cooperative attitude.

Conclusions: The development and testing of network simulation models, such as the cascade model, will contribute to the understanding, and hence improvements of patient flow in emergency and disaster medicine. Development towards professional gaming can reduce disaster drill costs. Discussion is needed to learn more about views on the socio-organizational aspects.

Keywords: hospital; management; model; multidimensional network; simulation

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Oral Presentations—Theme 10: Nursing and Paramedic Issues

Session 1

Chairs: TBA

The Global Status of Nursing Research in Emergency Planning and Response

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Issues of nursing/midwifery research in emergency planning and response often lag behind exploration of other,

more easily identifiable concerns. The purpose of this presentation is to describe the global status of nursing research in the area of emergency planning and response.

An increased emphasis on mass-casualty education led to the development of the International Nursing Coalition for Mass Casualty Education (INCMCE). Hosted by Vanderbilt University, the INCMCE has met annually with funding from the US Department of Health and Human Services. This presentation is based on reports from the research subgroup of the INCMCE over the last three years, as well as an invitational consultation at the World Health Organization (WHO) held in November of 2006 at their Geneva headquarters.

Recommendations for nursing research include the: (1) design and implementation of a knowledge repository available through the Internet; (2) identification of focused research areas; (3) development of a tool for use in the field during and following emergencies; (4) promotion of funding for research in the priority areas; (5) support of a network for nurses who research emergency planning and response; (6) development of policy guidelines that would influence the nursing and midwifery research globally; and (7) consideration of the Utstein Style (as endorsed by the World Association of Disaster and Emergency Medicine (WADEM)) as a standardized framework for evaluation and research.

Nurses play an important role in successful emergency planning and response. Their contributions can be strengthened through an implementation of a global research agenda.

Keywords: global research; midwives; nurses; nursing research; planning and response

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Ambulance Crew Work: An International, Qualitative Examination of Work Flow and Patient Care

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Popular conceptions of prehospital emergency medical response conjure up images of ambulances with sirens screaming, speeding to patients with acute, life-threatening conditions. Once at the patient's side, ambulance staff perform heroic, life-saving procedures. This research looks behind such popular images and examines the day-to-day work of ambulance crews.

The first phase of this research project examines the delivery of prehospital emergency medical care of several ambulance services in the United States and United Kingdom. A social science researcher accompanied ambulance crews throughout their shifts, paying close attention to work activities, work flow, the needs and expectations of patients, and the place of prehospital care within a larger healthcare infrastructure. Ambulance crews are providing patients with chronic conditions, multiple conditions, and limited access to health care with care and entry into the healthcare system. There is a growing disconnect between the traditional focus of ambulance services (life-saving, acute care need) and the current needs of patients and care-

givers. A long-term goal of this research is to contribute to the continuing development of prehospital care systems.

Keywords: ambulance crews; health care; misconceptions; patient care; prehospital care

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Airport Emergency Medical Assistance: The Experience from Stockholm Airport

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In August 2004, the Stockholm Airport Emergency Medical Assistance in cooperation with the Swedish Airports and Air Navigation Services and the Karolinska Hospital. It consists of an emergency medical center providing emergency medical care to all passengers and airport staff daily from 08:00 hours to 17:00 hours.

Registered nurses with special competence in emergency and disaster medicine staff the center, which has all the necessary equipment for first aid. The nurses can be dispatched quickly using a kick bike and bring the equipment and drugs needed to respond to the different medical alerts. Although the nurses work independently, but if they need medical advice, a physician always is available by phone. The center also plays a role in the airports disaster plan.

Between January 2005 and November 2006, a total of 1,709 patients received medical care at the center. Among these, 706 patients (41%) were medical emergencies. Among the 353 medical alerts in 2006, 140 (40%) were sent by ambulance to hospital for further treatment.

The six most common medical problems observed were; wounds ($n = 200$), dizziness or loss of consciousness ($n = 186$), bone or soft tissue injuries ($n = 151$), cardiac ($n = 120$), abdominal ($n = 102$), and ear, nose and throat ($n = 93$).

The specially trained nurses that staff the Stockholm Airport Emergency Medical Center offer a sufficient response to the majority of the medical emergencies observed in the airport. They can rapidly evaluate and triage patients in need of further hospital care and also offer valuable advice and care to passengers with less severe medical problems.

Keywords: airport; assistance; emergency medical services; Stockholm

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Developing the Nursing Role in Emergency Nursing and Disaster Management to Address the Needs of Diverse Populations

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This presentation describes the development of an emergency nursing disaster management program utilizing a multi-disciplinary approach. This program focuses on leadership development and use of a multi-disciplinary approach to emergency and disaster management on diverse populations.

Objectives of the program are to clarify:

1. The roles of the nurse in a multi-disciplinary approach to emergency and disaster management;

2. The need for preparing emergency nurses in disaster management leadership skills; and
3. The impact of the multi-disciplinary approach to leadership training in addressing the needs of diverse and special populations during an emergency or disaster.
4. The target audience of the program consists of hospital and public health nurses and administrators, emergency preparedness planners, and coordinators.

Keywords: disaster management; diverse populations; emergency nursing; leadership; multi-disciplinary approach

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Forensic Emergency Nursing: A Potential Response to the Growing Need of Victims of Violence and Disasters

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Forensic nursing is a new professional concept in the Netherlands, although has been long established in the United States, England, Canada, and Australia. The roots of forensic nursing go back to clinical forensic medicine which focuses on the investigation of traumatic injury or patient treatment with legal issues. However, unlike forensic medicine, in which the pathologist is concerned with the deceased and the investigation of death, forensic nurses work in the field of the living, identifying and collecting evidence from living patients. Moving out the morgue and into the emergency department or clinical area paves the way for nursing involvement.

There is an increasing awareness of the importance of forensic evidence collection, and appropriate storage and disposal of materials in victims of violence and disasters. These actions are necessary not only for legal implications, but also for the psychological outcomes of the victims of traumatic events. The increasing emphasis placed on the proper collection of forensic evidence is a logical step in the development of holistic healthcare.

Currently, there is a void in healthcare system in the treatment of victims of violence and disasters. The introduction and development of forensic nursing will be an improvement to total patient care. Forensic emergency nursing should be recognized by law and by hospitals as an official, authorized, professional status in the Netherlands.

Keywords: forensics; law; nursing; victims; violence

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Poster Presentations—Theme 10: Nursing and Paramedic Issues

(159) Education of Iranian Undergraduate Nursing Students About Disasters: Viewpoints of Students and their Teachers

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Introduction: The occurrence of disasters and the resulting casualties have increased during the past 10 years. Nurses