

very small communities and are separated by great distances. As a result, small changes in the absentee rate for nurses can have a significant impact on the operation of these hospitals. This paper will argue that policy changes in other sectors, such as education, can impact on societal activities such as childcare, volunteer emergency service work, and hospital staffing, in ways that may not be anticipated unless the impact on all Basic Societal Functions are considered by policymakers.

Prehosp Disaster Med 2011;26(Suppl. 1):s30–s31
doi:10.1017/S1049023X11001117

(A110) A Survey of Health Professions Students Attitudes towards and Knowledge of Emergency Preparedness

D. Markenson,¹ M. Reilly²

1. Center for Disaster Medicine, New York, United States of America
2. School of Health Sciences and Practice, New York, United States of America

Introduction: The possibility of natural disasters and public health emergencies coupled with the possibility of terrorism support the need to incorporate emergency preparedness into the curricula for every health professional school. **Methods:** A survey methodology was employed to assess both attitudes towards and knowledge of emergency preparedness amongst health professions students which included the schools of medicine, nursing, dentistry and public health. The survey was piloted to graduating students and then administered prior to institution of an emergency preparedness curriculum and then repeated as an annual survey.

Results: The survey found that 51.8% had been present at a disaster as non-responder while only 12.1% had ever been present as a responder. With regard to baseline class room exposure over 50% reported no exposure to such key concepts as incident command, triage, all-hazards planning, surge and aspects of terrorism. In addition at baseline most students felt they had no competency in emergency preparedness. As an example only 10% of students felt competent with personal protective equipment. While exposure both as a responder and student was low, 82.5% of students felt that emergency preparedness should be a mandatory topic in their education. Lastly, with a minimal curriculum change students showed statistically significant increases on knowledge testing.

Conclusions: While exposure was low for emergency preparedness topics and most did not recognize how information they had been taught might be applicable to emergency preparedness, there was a strong desire for additional training. In addition simple curricular adjustments can lead to significant improvements in knowledge.

Prehosp Disaster Med 2011;26(Suppl. 1):s31
doi:10.1017/S1049023X11001129

(A111) Role, Resources, and Clinical and Educational Backgrounds of Nurses Who Participated in the Prehospital Response to the 2009 Bushfires in Victoria, Australia

J. Ranse,¹ S. Lenson²

1. Faculty of Health, Canberra, Australia
2. Canberra, Australia

The bushfires of February 2009 in Victoria, Australia resulted in the deaths of 173 people and caused injuries to 414. Furthermore,

> 2,030 houses and 3,500 structures were destroyed. The role and experience of nurses in this environment are not well understood, and little is known about the clinical and education background of nurses in this setting. This presentation will provide an overview of the bushfires and report on two research projects. The aims of these projects were to explore participant demographics and various aspects of nursing activities in the prehospital environment. These projects used volunteer nursing members of St John Ambulance Australia who responded to the Victorian fires. The first project used a retrospective, descriptive postal survey, and the second was descriptive and exploratory, using semi-structured interviews as a means of data collection. The survey highlighted that nurses had varying clinical and educational backgrounds. Males were overrepresented when compared to the national average of nurses. Most participants had taken disaster-related education, however, this varied in type and duration. Similarly, most had participated in training or mock disasters; however this usually was not related to bushfire emergencies. The qualitative findings identified two main themes having expansive roles and being prepared. These highlighted that nurses maintained a variety of roles, such as clinicians, emotional supporters, coordinators and problem solvers, and they were well prepared for these roles. This research provided insight into the characteristics and level of preparedness of nurses who responded to the 2009 Victorian bushfires in the prehospital environment. Additionally, it highlights the need for more structured education and training for nurse that is aligned with their role and deployment environment.

Prehosp Disaster Med 2011;26(Suppl. 1):s31
doi:10.1017/S1049023X11001130

(A112) Development of Model Medical Care Protocols for Alternate Care Sites during Pandemics and Public Health Emergencies

D. Markenson,¹ M. Reilly²

1. Center for Disaster Medicine, New York, United States of America
2. School of Health Sciences and Practice, New York, United States of America

Introduction: Developing alternative systems to deliver emergency health services during a pandemic or public health emergency is essential to preserving the operation of acute care hospitals and the overall health care infrastructure. Alternate care sites which can serve as areas for primary screening and triage or short-term medical treatment, can assist in diverting non-acute patients from hospital emergency departments and manage non-life threatening illnesses in a systematic and efficient manner. Maintaining consistent standards of care in these settings is essential to a uniform approach to the medical management of a public health emergency.

Methods: Subject matter experts in emergency and disaster medicine, public health, pediatrics, and various other medical specialties were convened at regular intervals over an 18-month period. Through a consensus-based process this working group created a universal standard of care along with model clinical protocols to manage patients in an out-of-hospital setting using medical and non-medical personnel.

Results: These protocols were designed to allow the mild to moderately ill patient to be managed in a non-acute care

hospital or community-based care setting for a limited period of time and then return to their homes for convalescence. Of particular importance are that these protocols applicable to all public health emergencies and do not rely on the active presence of physicians at the alternate care site to render care.

Conclusion: The development of consistent standards of care and the ability to care for patients in an out-of-hospital setting during a pandemic or public health emergency is essential to preserve the sustained operation of acute care hospitals and the entire health-care system. Diverting patients to a community-based alternate care site or encouraging the early discharge of patients to these locations can assist in managing the large numbers of casualties anticipated during a pandemic or public health crisis.

Prehosp Disaster Med 2011;26(Suppl. 1):s31–s32
doi:10.1017/S1049023X11001142

(A113) Ethics in the Delivery of Humanitarian Health Response: Learning from the Narratives of Health Care Workers

L. Redwood-Campbell,¹ M. Hunt,² L. Schwartz,³
C. Sinding,⁴ L. Elit,⁵ S. De Laat,³ J. Ranford³

1. DFM, Hamilton, Canada
2. Centre for Research on Ethics, Montreal, Canada
3. Department of Clinical Epidemiology and Biostatistics, Hamilton, Canada
4. Social Science, Hamilton, Canada, 5obstetrics and Gynecology, Hamilton, Canada

Aims: 1. To hear the types of ethical challenges foreign health care workers (HCWs) experience while providing health care in conditions of disaster and deprivation. 2. To hear how they responded 3. To understand the kinds of resources that may have been helpful to support HCWs in these ethical dilemmas.

Methods: Qualitative study, loosely grounded theory. Canadian trained HCWs ($n = 20$, mean age 39) who have worked in disaster response, conflict, post disaster.

Results: Ethical dilemmas emerged from 4 main sources: resource scarcity, historical/political/social structures, aid agency policies/agendas, HCWs norms roles/interactions. Participants described little preparation to deal with ethical dilemmas, and the value in pre-departure training. Clinicians are nurtured in western ethics- mostly formed on autonomy, beneficence, non-maleficence and justice. New realities for many were related to community oriented Public Health Ethics. Early discussion has emerged about the possibility of developing a simple, practical, hand held decision-making model (toolkit) to be used in the field to help guide reflection about ethical dilemmas for HCWs in disaster settings.

Prehosp Disaster Med 2011;26(Suppl. 1):s32
doi:10.1017/S1049023X11001154

(A114) Disaster Medical Services System in Hyogo Prefecture from the Lessons of the Great Hanshin-Awaji Earthquake

S. Nakayama, S. Kozawa, T. Ukai

Disaster Information Control Center, Kobe, Japan

Purpose: To examine how did Hyogo prefecture renovate disaster medical services system from the lessons of the Great Hanshin -Awaji Earthquake.

Method: Countermeasures after the experience of the Earthquake were 1. Establishment of disaster-related medical information network which was introduced to each of various institutions to collect and disseminate medical information at the time of disaster. 2. Designation of sixteen hospitals as Disaster Medical Centers, which were expected to play leading role in disaster management, and to receive many patients at a time of disasters. 3. Construction of Hyogo Emergency Medical Center which was designated as a main Disaster Medical Center to train medical staffs, to operate the Emergency Medical Information Control Center.

Results: We have several training courses for medical staffs. The most important training course is the DMAT (Disaster Medical Assistant Team) training course. DMAT trainings held at two main Disaster Medical Centers, east National Disaster Medical Center, west Hyogo Emergency Medical Center. More than three hundreds teams have been cultivated now. We experienced five disasters in Hyogo prefecture in these seven years. 2 were natural disasters by the typhoon. 3 were a collision of the ship, the collision of the truck, train derailments each. A big JR train accident occurred in Amagasaki city of Hyogo on April 25, 2005. Hyogo Emergency Medical Center worked as the emergency information control center, dispatched doctor attended ambulance, performed on-site triage and first aid, dispatched second team by helicopter, received four severe cases by helicopters, dispatched third team in the evening and provided confined space medicine, and took initiative of surveillance study of the casualties.

Conclusion: Disaster medical services system from the lessons of the Earthquake functioned at the time of the JR Train accident.

Prehosp Disaster Med 2011;26(Suppl. 1):s32
doi:10.1017/S1049023X11001166

(A115) Disaster Preparedness and Learning Habits of the German Security and Rescue Forces: A Survey

P. Fischer,¹ J. Christian,² A. Wafaisade,² T. Kees,²
K. Kabir,² M. Müller,³ M. Rohner,⁴ S. Müller⁴

1. Orthopaedics and Trauma Surgery, Bonn, Germany
2. Bonn, Germany
3. Göttingen, Germany
4. Department of Anaesthesiology and Intensive Care, Bonn, Germany

Objective: Developing an e-learning platform addressing security and rescue forces to eradicate the lack of disaster preparedness underscored by diverse studies. In order to reach this aim the performance of a needs analysis is essential.

Methods: The audience of security and rescue forces was clustered in (emergency) physicians, fire-fighters, policemen, Paramedics and members of the Federal Agency for Technical Relief (THW). For each cluster a questionnaire was developed and corrected by specialists in disaster care. The questions were about previous knowledge, habits of studying; further training habits and internet requirements.

Results: The questioner was posted online during 4 months and was filled in by 1142 persons (141 physicians, 194 fire-fighters, 108 policeman, 444 rescue workers and 255 members of the THW). The biggest lacks in previous knowledge were shown