

Mortality at Music Festivals

Ms. Tracie Jones

Fraser Health Authority, Langley, Canada

Introduction: Fatalities at music festivals are seldom reported in the academic literature, making it difficult to understand the full scope of the issue. This gap in our knowledge makes it challenging to develop strategies that might reduce the mortality burden. It is hypothesized that the number of fatalities is rising. Building on earlier research, two further years of data on mortality at music festivals was analyzed.

Methods: Synthesis of grey/academic literature.

Results: The grey literature for 2016–2017 documented a total of 201 deaths, including both traumatic (105; 52%) and non-traumatic (96; 48%) causes. Deaths resulted from acts of terror ($n = 60$), trampling ($n = 13$), motor-vehicle-related ($n = 10$), thermal injury ($n = 6$), shootings ($n = 5$), falls ($n = 4$), structural collapses ($n = 3$), miscellaneous trauma ($n = 2$), and assaults ($n = 2$). Non-traumatic deaths included overdoses/poisonings ($n = 41$), miscellaneous causes ($n = 36$), unknown/not reported ($n = 18$), and natural causes ($n = 1$). The majority of non-trauma-related deaths were related to overdose (44%). No academic literature documented fatalities that occurred while attending a music festival during 2016 or 2017.

Discussion: Reports of fatalities at music festivals are increasingly common. However, the data for this manuscript were drawn primarily from media reports, a data source that is problematic. Currently no rigorous reporting system for fatalities exists. In the context of safety planning for mass gatherings, a standardized method of reporting fatalities would inform future planning and safety measures for festival attendees. The hypothesis that mortality rate reporting increased was substantiated. However, the proliferation of music festivals, the increase in attendance at these events, and the overall increase in internet usage may have influenced this outcome.

Prehosp Disaster Med 2019;34(Suppl. 1):s151

doi:10.1017/S1049023X19003388

Needs of Family Survivors of Floods in Molepolole, Botswana

Dr. Dorcas Basetsana Maripe-perera¹

Ministry of Health And Wellness, Molepolole Village, Botswana

Introduction: Floods are common worldwide and are the leading cause of fatalities. They are destructive to property, crops, and livestock, and leave survivors homeless or displaced to evacuation camps.

Aim: To explore the needs of family survivors of floods in Molepolole, determine assistance received and needed, and identify coping strategies used to deal with the impact and effects of floods.

Methods: Jordan (2015) model of disaster survivors' hierarchy of needs guided the study. Purposive sampling selected six families, and seven participants from these families enrolled in the study. A pilot-tested semi-structured interview guide collected data. Data were analyzed using the content style.

Results: The study findings confirmed that survivors of floods had immediate and long-term needs, and these were classified into basic, safety, recovery, stress reaction, grief and loss, and growth. Not all survivors were grateful for the assistance they received following floods. Survivors used varied coping strategies to deal with their stressors. The study was conducted in Molepolole, hence, the findings may not be applicable in other settings. Individuals were interviewed on behalf of the entire family.

Discussion: There is a need for a multidisciplinary team which will keep the community at the forefront in tackling flood mitigation and developing policies specific to floods. Policies will include indigenous flood mitigation practices and will strengthen awareness of communities to improve knowledge, skills, and attitude. More research is needed on the needs of each survivor.

Prehosp Disaster Med 2019;34(Suppl. 1):s151

doi:10.1017/S1049023X1900339X

Needs of Patients in the Triage Category “Expectant” in Prehospital Disaster Settings: A Survey Among German Medical Incident Commanders and Palliative Care Physicians

Dr. Gerald Ripberger¹, Dr. Michael Oppert PD¹, Mr. Jens Werner Bickelmayer²

1. Klinikum Ernst von Bergmann, Potsdam, Germany

2. Bundeswehrkrankenhaus, Berlin, Germany

Introduction: The treatment of patients in the triage category “expectant” is not in the focus of the prehospital disaster medicine. The aim is to save as many lives as possible in situations with very limited resources. It is necessary to allocate the life-saving interventions to those who have the chance to survive, but there is a human right of best assistance even for those who are expected to die.

Aim: In Germany, it is possible to use the triage category “expectant” in overwhelming disasters, so there should be preparedness for those patients, who receive this categorization. A survey was conducted to find out what the needs are of those patients.

Methods: An online-survey was submitted to German medical incident commanders and palliative care physician in function of expert groups via their national associations.

Results: 219 physicians participated. The majority confirmed a necessity to treat those patients and to be prepared. Currently, in most of the areas, there is no preparation. The main needs are the treatment of pain, dyspnoea, fear, and loneliness. Following the “Dying person’s bill of rights” (1), the most relevant rights are:

- To be treated as living human being until I die
- To be free from pain
- To express the feelings and emotions
- To die in peace and dignity

Discussion: Palliative care should be part of disaster medicine planning. It is not too difficult to prepare a special group of helper for the care of dying patients. Medical incident commanders and palliative care physicians agree in the majority about the

necessity, so SOPs can be implemented to teach non-medics. The medics will be needed for the first aim of disaster medicine.

References:

1. Barbus, AJ (1975) Dying person's bill of rights. *American Journal of Nursing*. 1:99.

Prehosp Disaster Med 2019;34(Suppl. 1):s151–s152
doi:10.1017/S1049023X19003406

Neuropsychiatric Manifestations of Wildfire Exposure

Dr. Sobail Mohammad

Mayo Clinic, Rochester, United States

Introduction: Wildfires are life threatening incessant fires in thickly vegetated areas that spread extremely rapidly to human habitat and are difficult to control by human force. The impact of wildfires is enormous on population health and causes tremendous financial burden to individuals and communities.

Aim: The aim is to understand the potential disease burden secondary to wildfires both at an individual and population level and reflect upon the immediate and delayed neuropsychiatric manifestations of smoke exposure.

Methods: Data on wildfires associated direct and indirect costs on individual health and health care delivery appears to be scant. The effort of this presentation is to present the federal data from 2012 to 2016 on nationwide wildfires, estimated acreage consumed in wildfires, the population exposed, and deaths. Information was extracted from the National Interagency Fire Center, the United States Fire Administration, and the Federal Emergency Management Agency. Through literature review on neuropsychological sequelae of wildfires smoke inhalation and associated trauma, the goal is to reflect upon potential healthcare burden secondary to neuropsychiatric manifestations.

Results: Per National Center for Health Statistics, the national fire death rates from 2012 to 2016 ranged 10 to 11 per million population each year, and the property loss both residential and non-residential was estimated at 9 to 10 billion dollars each year. We know healthcare cost is expensive in the United States, and with the stated estimates, one can only envision the health care and public health system burden.

Discussion: The characteristic neuropathology of carbon monoxide toxicity is bilateral Globus pallidus necrosis and the common neuropsychological symptoms include fatigue, affective conditions, emotional distress, memory deficits, sleep disturbance, vertigo, dementia, and psychosis. The health effects and associated disability demand policymakers to allocate resources for wildfire prevention/containment and primary health care providers education, research, and building effective healthcare delivery systems.

Prehosp Disaster Med 2019;34(Suppl. 1):s152
doi:10.1017/S1049023X19003418

Next Level Triage: Applications of Point-of-Care Ultrasound in Disaster Response and Recovery

Dr. Tyler Stannard, Dr. E. Liang Liu, Dr. Lindsay A. Flax, Dr. Raymond E. Swienton, Dr. Kelly R. Klein, Dr. Jodi D. Jones, Dr. Mandy M. Pascual

Department of Emergency Medicine, University of Texas Southwestern Medical Center, Dallas, United States

Introduction: Ultrasound applications are widespread, and their utility in resource-limited environments are numerous. In disasters, the use of ultrasound can help reallocate resources by guiding decisions on management and transportation priorities. These interventions can occur on-scene, at triage collection points, during transport, and at the receiving medical facility. Literature related to this specific topic is limited. However, literature regarding prehospital use of ultrasound, ultrasound in combat situations, and some articles specific to disaster medicine allude to the potential growth of ultrasound utilization in disaster response.

Aim: To evaluate the utility of point-of-care ultrasound in a disaster response based on studies involving ultrasonography in resource-limited environments.

Methods: A narrative review of MEDLINE, MEDLINE InProcess, Epub, and Embase found 20 articles for inclusion.

Results: Experiences from past disasters, prehospital care, and combat experiences have demonstrated the value of ultrasound both as a diagnostic and interventional modality.

Discussion: Current literature supports the use of ultrasound in disaster response as a real-time, portable, safe, reliable, repeatable, easy-to-use, and accurate tool. While both false positives and false negatives were reported in prehospital studies, these values correlate to accepted false positive and negative rates of standard in-hospital point-of-care ultrasound exams. Studies involving austere environments demonstrate the ability to apply ultrasound in extreme conditions and to obtain high-quality images with only modest training and real-time remote guidance. The potential for point-of-care ultrasound in triage and management of mass casualty incidents is there. However, as these studies are heterogeneous and observational in nature, further research is needed as to how to integrate ultrasound into the response and recovery phases.

Prehosp Disaster Med 2019;34(Suppl. 1):s152
doi:10.1017/S1049023X1900342X

No More Suffering: Building Human Resource Capacities with the Sphere Standard

Nahoko Harada Ph.D., RN, MSN¹, Soichiro Kai RN, CNS, MD², Kayako Chishima RN, ASc³, Junko Miyamoto MHS⁴, Mitsuya Kodama MHS⁵, Masabide Koda Ph.D.⁶, Makoto Bando Ph.D.⁷, Hirofumi Tani BA⁸

1. Department of Psychiatric and Mental Health Nursing, School of Nursing, University of Miyazaki, Miyazaki city, Japan
2. Department of Emergency and Critical Care Medicine, Hyogo Emergency Medical Center, Kobe city, Japan
3. Disaster Medical Center, Tachikawa city, Japan
4. Department of Global Health, School of Nursing, Himeji University, Himeji city, Japan
5. Department of Global Health, School of Health Sciences, Faculty of Medicine, University of the Ryukyus, Nakagami district, Japan
6. Department of Psychiatry, Faculty of Medicine, University of Miyazaki, Miyazaki city, Japan
7. Crisis Management Department, Crisis Management Policy Division, Tokushima Prefecture, Tokushima, Japan