

Conclusions: These results have important implications for prehospital disaster preparedness, specifically, for paramedic education and training.

Keywords: emergency medical services; fear; paramedic; response; risk perception

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A New Platform to Enhance the Transportation Safety Aspects of Emergency Medical Services

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Introduction: Historically, emergency medical services has focused on and been driven by acute and emergency health care, and its expertise and oversight are based in these areas. The issues of transportation systems safety engineering have had minimal focus. Identification of a transportation platform to address the research and technology aspects of EMS transportation in the United States is described.

Methods: The need for an independent, national transportation and automotive platform with interdisciplinary involvement, an interest in EMS, the scope for development of a research agenda and funding opportunities, and the need to address the goal of improving patient, provider, and public safety transportation systems engineering, was identified, and a pathway to address this need was implemented.

Results: The Transportation Research Board (TRB) of the National Academies is a comprehensive, independent, multidisciplinary infrastructure that is highly skilled and equipped to provide a platform to bring together necessary expertise to address transportation safety systems issues relates to EMS. The TRB annual meeting included submissions and presentations of key issues impacting EMS transportation safety. This facilitated recognition of EMS transportation safety needs. The EMS Transport Safety Subcommittee was established in 2007, and commenced determining EMS focus areas. In 2008, it held an inaugural interdisciplinary Ambulance Transportation Safety Summit, attracting 49 on-site attendees and <100 electronic participants. Development of an EMS transportation Safety research agenda currently is underway.

Conclusions: The establishment of a nationally focused Subcommittee addressing EMS transportation safety within the National Academies Transportation Research Board has been achieved, and demonstrated that such a platform has a role in enhancing EMS transportation safety development.

Keywords: ambulance; emergency medical services; issues; safety; transportation

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First Aid and Harm Minimization for Victims of Road Trauma

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Introduction: This project investigated the use of first aid by bystanders at road traffic crashes (RTCs). The project was performed in recognition of the significant impact of early first aid intervention on the mortality and morbidity of RTCs.

Objective: The aims of this project were to investigate the: (1) prevalence of first aid training; (2) incidence of being a bystander and providing first aid; (3) range of first aid skill being used; (4) motivation to intervene; and (5) perceived impact of first aid training.

Methods: An Internet-based survey was distributed to a population of 12,500 road users and 773 responded. Statistical and thematic analyses of data were completed.

Results: A total of 77% of participants had first aid training at some stage, 28% held a current first aid qualification, 11% had provided first aid at a RTC, and 75.3% who had provided first aid were traveling in a vehicle. First aid training and age increased the likelihood of intervention, as did owning a first aid kit or pocket mask. The most commonly used first aid skills were changing posture, opening an airway and providing comfort and reassurance. Key concerns for first aiders included feeling a lack of follow-up, or opportunity to debrief.

Conclusions: First aid training is an enabler for providing care at RTCs. Strategies to increase training, improve support, and increase confidence of first responders are discussed.

Keywords: bystander; emergency care; first aid; road traffic crash; skills

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The Changing Nature of Emergency Medical Services Delivery: Potential Models for the Future!

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Introduction: Internationally, emergency medical services (EMS) are under pressure from increasing demand. Australian demand for EMS is increasing 8–16% per year, with similar trends occurring internationally. Increasingly, policy makers are exploring alternative models to the long-standing service delivery philosophy traditionally based on, “if we get called we go, if we go we transport, if we transport we transport to the nearest public hospital facility”. The aim of this presentation is to stimulate discussion on a range of potential models to contextualize contemporary thinking on future EMS delivery.

Methods: A literature review identifying new and emerging models for EMS delivery was conducted.

Results: The following models have been identified: (1) current EMS model; (2) public sector model; (3) private sector model; (4) mixed public/private sector model; (5) chain of survival model; (6) public safety model; (7) public health model; (8) social support/welfare model; (9) primary care model; (10) continuity of care model; shared care model;

(11) “treat and leave” model; (12) alternate dispositions models; (13) professional autonomy model; (14) the World Health Organization global model; and (15) emergency preparedness and disaster health model. The review suggests that policy makers are attempting to achieve the goals of an EMS system through a range of emerging models. However, the evidence base of their effectiveness and efficiency is yet to be established.

Conclusions: This review suggests a range of emerging diversity in EMS models that may provide useful input into discussions in various EMS systems that are finding themselves under threat from an increasing workload. One key question is proposed as an outcome of this review, namely, “is EMS delivery a new mono-discipline, or is it multi-disciplinary”?

Keywords: alternate model; demand; emergency medical services; future; model

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Evidence-Based Case Development for Blast Injury Assessment and Management

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Introduction: The traumatic sequelae associated with blast injuries from improvised explosive device (IED) detonation, including barotrauma, traumatic brain injury (TBI), traumatic amputations, thermal burns, and shrapnel injuries, have changed the face of combat medicine. The mission of this study was to develop an evidence-based instructional aid for combat casualty assessment and initial management, with case design based on the reality of injuries encountered in-theater. Training material also included new trauma management protocols, including advancements in hemorrhage control, intraosseous fluid resuscitation, and management of war fighters with TBI.

Methods: Upon establishing core-learning objectives for each simulation, a case definition matrix was designed. Each case was linked with specific core objectives, interventions, medical devices, and outcomes. Thirty simulation cases were developed in this manner, based upon available clinical evidence from military medical reference data collected during Operation Iraqi Freedom and Operation Enduring Freedom. Descriptive case definitions, including anatomical injury pattern and acuity, were based upon abstractions of summary and categorical statistics from available casualty data. These extrapolated results were applied to the case definition framework.

Results: A virtual reality simulation platform was designed to provide pre-deployment and in-theater training to non-surgical physicians and combat medics so clinical decision-making could render improved results for patient outcomes while enhancing the assessment and management skills among these providers in the austere environment.

Conclusions: In order to determine the relevance and usability of the training cases, qualitative evaluations cur-

rently are being solicited among a cohort of military and civilian users. Full results will be presented.

Keywords: assessment; blast injury; education; evidence base; management; training

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War Injuries in the 2000s

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Introduction: The second Lebanon war lasted 33 days, during which the Israeli Defense Forces (IDF) acted in southern Lebanon while the Israeli home front absorbed a large number of missiles. Military activities resulted in 848 soldiers injured, 119 fatally. This presentation describes the type and characteristics of these injuries.

Methods: Data regarding all soldiers hospitalized or killed as a result of the second Lebanon war were collected and analyzed. Soldiers that were treated in the emergency department and discharged, as well as those with non-physical symptoms were excluded.

Results: All but two of the injured were males. The mean age was 24.1 ± 5.3 years. The majority (n = 689, 81.2%) of the casualties were hospitalized; however 63% of them had suffered only minor injuries (ISS 1–8). Sixty-three percent of injuries were penetrating. The most frequent mechanism of injury was fragments, both among fatalities and among casualties. Gunshot wounds were four times more frequent and burns were six times more prevalent among fatalities than among survivors. A total of 67% of the injuries occurred during the day. The average number of body regions injured was two; most injuries were to the limbs; 23% of the patients suffered injuries to the chest, 21% to the head, and 9% of the injuries were to the eye region. Among soldiers who were killed, there was a higher prevalence of head injuries, chest injuries, and combined head and chest injuries than among the survivors. There were no survivors among soldiers who suffered major burns (more than 20% total body surface area). The use of various procedures and the distribution among hospitals was explored and will be presented.

Conclusions: War casualties predominantly sustain penetrating injuries. The distribution of injury patterns among casualties of this war was similar to that in recent wars, except for an excess number of eye injuries that should be explored further.

Keywords: civil-military collaboration; injuries; penetrating injuries; second Lebanon war; war

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The Impact of Surgery on Global Health

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Access to surgical services is an important contributor to global public health. Surgical interventions impact morbid-