

(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

Prehosp Disast Med 2009;24(2):s45–s46

Evidence-Based Case Development for Blast Injury Assessment and Management

Robert D. Furberg,¹ Paul N. Kizakevich,¹
R.T. Dombroski,² John W. Holloway,¹ Kevin Merino¹

1. RTI International, Research Triangle Park, North Carolina USA
2. United States Army Asymmetric Warfare Office, Washington, DC USA

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

Prehosp Disast Med 2009;24(2):s46

War Injuries in the 2000s

Limor Aharonson-Daniel,^{1,2} Eran Hadad,³ Aviram Weiss,³
Gil Hirshhorn,³ Dagan Schwartz^{1,2}

1. Ben Gurion University of the Negev, Beer Sheba, Israel
2. University Center for the Research of Preparedness and Response to Emergency and Disaster Situations, Ben Gurion University, Beer Sheba, Israel
3. Israeli Defense Forces, Tel Hashomer, Israel

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

Prehosp Disast Med 2009;24(2):s46

The Impact of Surgery on Global Health

K.A. Kelly McQueen

Harvard Humanitarian Initiative, Phoenix, Arizona USA

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