use of MIP enables the association of morbidity and mortality more accurately to the affected body region, clarifying the obscured "multiple injury" diagnosis, which resulted in loss of information.
Conclusions: Multiple injury profiles improve the ability to present injuries. The use of MIPs facilitates the identification of all patients with a specific injury, even if secondary while providing a better description of the full pattern of injury and the injury combinations that potentially could be fatal.
Keywords: injury; multiple injury profile; presentation; research; war
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Maintaining a Flexible Framework: Conducting a Large, Mixed Methodology Study of Refugees' Ideas on Family Planning at Mtendeli Refugee Camp, Kibondo, Tanzania

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Introduction: Mtendeli Refugee Camp housed approximately 27,600 Burundian refugees. Comprehensive reproductive health services, including family planning and youth-centered services were available, however contraceptive prevalence ranged from 3.7% to 8.3%. The goal of this research was to develop, test, and evaluate a research methodology to accommodate the dynamic movement of the population with security challenges within refugee camps.
Methods: In-depth interviews of a random sample of 48 mixed gender refugees, 17–63 years of age were completed between March and August 2006. The study design had built-in flexibility in site selection and sampling methodology. Age stratification ensured that all ranges were represented. Data extraction for group health services and individual use was triangulated with in-depth interviews.
Results: The study design included options for transferring the study site based on security. A dynamic mapping system with a mathematical formula created an innovative sampling framework able to accommodate shifting populations due to constant repatriation and resettlement. This method maintained randomization and minimized the effect of sample clustering. Grouping of selected houses minimized travel time over the 35-kilometer camp.
Conclusions: Maintaining flexibility in study design and appropriate adjustments in the implementation phase allowed for the completion of this large qualitative study with methodological rigor. The use of in-depth interviews with individual and aggregate data allowed for a more comprehensive evaluation of the beliefs surrounding family planning.
Keywords: Burundi; family planning; refugee; Tanzania
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Evidence-Based Emergency Preparedness Guidelines for Persons with Disabilities

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Introduction: A cadre of experts and stakeholders from government agencies, professional organizations, emergency medicine and response, persons with disabilities, mental health, and disaster preparedness were gathered to review and summarize the existing data on the needs of persons with disabilities in the planning, preparation, and response to disasters or terrorism. This review was followed by the development of evidence-based consensus guidelines and recommendations on the needs of persons with disabilities during disasters, acts of terrorism, and public health emergencies.
Methods: An evidence-based consensus process was used in conjunction with a modified Delphi approach for selecting topic areas and discussion points. The methodology used to develop the guidelines and recommendations in the current report was one of a previously validated evidence-based consensus process that has been used in prior studies, supplemented by a modified Delphi approach for topic selection.
Results: The final recommendations of the conference focused on 13 major areas:

1. Disaster Communications
2. Emergency Transportation
3. Decontamination, Isolation and Quarantine
4. General and Medical Needs Sheltering
5. Disaster Drills
6. Community Preparedness
7. Individual Preparedness
8. Children with Special Healthcare Needs
9. Continuity of Care
10. Strategic National Stockpile
11. Mental Health Needs
12. Federal Disaster Response Programs
13. Specialized Training for Emergency Planners and Responders

Conclusions: These recommendations and guidelines represent the first multi-disciplinary, evidence-based standards for persons with disabilities and emergency preparedness.
Keywords: disability; emergency preparedness; guidelines; research; special populations
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Benchmarking for Hospital Evacuation: A Standardized Data Collection Tool

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Introduction: Hospital evacuation is an increasingly common occurrence. Most hospital evacuation events have been examined, studied, or reported anecdotally in after-action-reports or in other non-systematic interviews. These methods offer inconsistent and possibly unreliable results needed for individual and regional hospital evacuation planning, decision-making, and resource utilization. The purpose of this study was to design and implement a standardized, consistent, and systematic interview process for hurricane evacuated hospitals by building upon a previously validated regional hospital evacuation tool.
Methods: Investigators used a previously validated tool applied to eight hospitals that evacuated due to the Northridge Earthquake, modified its use for appropriateness for hurricanes, and applied the questionnaire to seven hospitals that evacuated due to Hurricane Rita.

Results: This tool builds upon previous design efforts by applying a standardized method for examining the situational dynamics associated with the incident. These include: (1) hospital demographics; (2) disaster plan characteristics; (3) impact of 2005 hurricane season; (4) hospital decision-making and incident command; (5) movement of patients within the facility; (6) movement of patients to other facilities, and (7) hospital recovery.
Conclusions: Applying a standardized hospital evacuation tool provides an opportunity to study both individual and regional hospital evacuation decision-making so that Incident Management Teams may better prepare for the likelihood to evacuate.
Keywords: benchmarking; data collection; decision-making; disaster; evacuation; hospitals; hurricane; incident management teams; regional; standardization
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Video Technologies in Emergency Health Research in Assessing Quality of Care: A Study of Trauma Resuscitation Milestones

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Background: Studies have demonstrated that trauma resuscitation times are predictive of patient outcomes and increased delays are detrimental to patient care. Use of video technologies in emergency research is a novel way of ensuring quality of care and efficiency. Resuscitation times, milestones, and factors that influence golden hour trauma patient care in the emergency department were assessed.
Methods: Following Institutional Research Board approval, video-recorded images of 145 patients presenting with major trauma were analyzed retrospectively during a four-week period. Time to computed tomography (CT) scan, conventional *x*-rays, Lodox Statscan, endotracheal intubation (ETI), insertion of chest tubes, and central venous access was measured from the time of patient admission. A multivariate analysis was performed to account for the influence of diurnal and on-call teams, patient census, Injury Severity Score (ISS), and the effect of Glasgow Coma Scale (GCS) score on time to resuscitation milestones.
Results: The video analysis of trauma resuscitation showed 100% compliance with time to CT within two hours in patients with GCS ≤13. Reduced GCS score and high Injury Severity Scale score were strongly predictive of time to CT and ETI in a multivariate regression analysis (p <0.001). Use of Lodox Imaging low emergency department census was associated with significantly reduced resuscitation times.
Conclusions: Video recording has the advantages of providing accurate times to interventions that are not hindered by poor documentation or the memory of those involved. It can be a useful tool in resuscitation quality evaluation and for identifying variances in process flow that helps addres inefficiencies in emergency care.
Keywords: emergency health; quality of care; research; resuscitation; trauma; video
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Emergency Management in the United States: Fifty Years of Policies, Politics, and Disasters

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Introduction: Emergency management aims to protect victims from disasters. Questions remain regarding how hazards become disasters, their functional attributes, related policy decisions, and who benefits from resulting actions. This presentation discusses who benefits the most from disaster policies and the role that political and social power plays among different socioeconomic groups.
Methods: A review of the literature was performed using keywords on disaster management, public policy, and disaster epidemiology, economic, and social impacts of disasters.
Results: Since 1953, >1,800 disaster declarations have been issued, with <2% for anthropogenic incidents. Sixty-one people per month have lost their lives, mostly from storms with >US$800 billion in damages. Those most protected from disasters are those with greatest loss risks, not the most vulnerable, with an influence from race, class, and socioeconomic status. The failure of the market to provide affordable private disaster insurance forced the government to offer programs such as the National Flood Insurance Program (NFIP), in which the average yearly premium equals US$500 and favors groups with more political and social power.
Conclusions: Disaster costs are distributed widely but benefits are concentrated among powerful special interest groups. Relief represents a small portion of disaster assistance for those who lack the economic, social, or political means to take advantage of it effectively, with the rest supporting more affluent groups. Emergency management must be centered on vulnerability for more equitable distribution of benefits.
Keywords: disaster policy; disaster sociology; disaster vulnerability; emergency management; research
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Compassion Fatigue: The Consequences of Caring

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Introduction: Post-traumatic stress disorder (PTSD) is familiar to many people who have experienced horrific life events. Now, it has come to light that the healthcare professionals who care for these individuals also are at risk for a phenomenon known as "Secondary or Vicarious Traumatization" (ST/VT), and "Compassion Fatigue"(CF). For emergency room staff in particular, the research is almost non-existent.
Methods: Surveys were administered, including a CF self-test from the American Continuing Education Network, the Compassion Satisfaction and Fatigue test, and the Professional Quality of Life Scale.
Results: Preliminary results from nursing staff at an Ontario Level-1 Trauma Center indicated that 70% of staff was at moderate to very high risk of compassion fatigue and had high score for psychological symptomatology.
Conclusions: Compassion Fatigue and Vicarious Traumatization are taking a toll on emergency room pro-