

other EMS services) and vertically (with hospitals and with the coordinating center). Magen David Adom protocols offer effective solutions, that have been used in Israel in drills and in real-life events. Emergency services should examine the adaptability of lessons learned and solutions offered by other countries.

**Keywords:** comparison; emergency medical services; Israel; M-11; Madrid; Magen David Adom

*Prehosp Disaster Med*

### Comparison of Medical Consequences of Two Recent Armed Conflicts Involving Israeli Soldiers

*Limor Abaronson-Daniel; Eran Hadad; Haim Gavriel; Aviram Weiss; Gil Hirshhorn; Dagan Schwartz*

Israel

**Introduction:** The Second Lebanon War lasted 33 days, during which Israeli Defense Forces (IDF) troops were in southern Lebanon while the Israeli homefront absorbed a large number of missiles. Military activities resulted in 848 soldiers injured, 119 fatally.

Two years later, a confrontation of similar duration in southern Israel lasted a but resulted in fewer casualties and fatalities. The type and characteristics of these injuries will be described.

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

**Results:** In the first conflict, all but two injured victims were males. The mean age was 24.1 ±5.3 years. The majority (689; 81.2%) of the casualties were hospitalized, however 63% 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 among fatalities than among survivors, and burns were six times more prevalent. 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 in the chest, and 21% to the head. Nine percent of the injuries were to the eye region. Among soldiers who were killed, there was a higher prevalence of head, chest, and combined head and chest injuries. These results will be compared with the more recent conflict outcomes in Israeli Soldiers.

**Conclusions:** War casualties often sustain multiple penetrating injuries. The consequences for soldiers in combat zones of two subsequent armed conflicts of similar durations may be quite different.

**Keywords:** armed conflict; comparison; Israeli Defense Forces; medical

*Prehosp Disaster Med*

### Disaster Planning and Analysis: An Evaluation of Emergency and Disaster Preparedness Education

*Andrea Allen, PhD; Stephen Sussman, PhD*

Barry University, Miami, Florida, USA

**Introduction:** Disaster preparedness necessitates a global, multidisciplinary approach. University programs are in a

unique position to systematically educate students about the scientific and applied aspects of disaster preparedness. This report focuses on one aspect of a university program aimed at integrating a specialization on disaster preparedness and response. The research will demonstrate how this can be facilitated by strategically equipping students with the applied skills and academic base necessary to serve as agents of emergency management planning at the global, national, regional, and local levels. It will focus on the theoretical and empirical foundations of planning preparedness, response, and recovery efforts.

**Methods:** The methodology will include a critical analysis of research-based planning models for aid in disaster preparedness and management.

**Results:** As part of a university program, the research will demonstrate the importance of emergency and disaster preparedness and management planning for first-responders and offer solutions to maximize their response capabilities through the use of methods and techniques that will help manage the stressors associated with disaster response.

**Conclusions:** This research effort will: (1) identify theoretical and empirical public and private sector planning models and integrate and apply them to key infrastructures, mitigation, preparedness, response, and recovery planning efforts; (2) critically examine issues and potential problems and solutions in planning and preparing emergency and public safety plans within a research-based framework; (3) analyze the potential ramifications of emergency and public safety operations on both the public and public safety workers; and (4) critically analyze concepts of current planning models and strategies to the planning and preparing process.

**Keywords:** disaster planning; disaster preparedness; education; research; students

*Prehosp Disaster Med*

### Emergency Preparedness in Ecuador

*Ing. Lorena Cajas*

Technical Secretariat of Risk Management

In the past 25 years, Ecuador and the Andean countries have been affected by major disasters. The study “Socioeconomic Impact Assessment and Environmental Disaster”, by the Economic Commission for Latin America and the Caribbean in 2003, found that approximately 33% of direct and indirect losses in the region were caused by natural hazards.

In the case of Ecuador, the study of the Corporación Andina de Fomento (CAF) “The Lessons of El Niño 97–98—Ecuador”, determined that El Niño caused an estimated \$280,000,000 in damage, nearly 15% of the 1997 gross national product.

In Ecuador, there have been no studies to determine causality between disasters and economic growth. However, when analyzing economic behavior during the last 25 years, there is an overlap between the occurrence of a major disaster (El Niño 1983, Earthquake 1987, El Niño 1997–1998) and the fall of the gross national product is apparent.

Ecuador is ranked fifth in the global disaster “hot spots”, and is subject to geological hazards (e.g., earthquakes and volcanic eruptions), hydrometeorological hazards (e.g., floods, windstorms, droughts, landslides and tsunamis.)