

Maintaining a Military Trauma Registry During High-Intensity Conflict with the Highest Casualty Burden in Israel in Four Decades

Daniel Brenner 1, Guy Vishnevsky,MD 2,3, Harel Gershgoren,MD 1, Danielle Akler,MD 1, Irina Radomislensky, BSc 4, Inbal Dym,MD 1, Gal Khanchin,MD 1, Bar Zemer Tov, MD1, Teva Amir,MD 1, Pavel Eidelman, MD 1,5, Arthur Shapiro,MD 1,6

1 Israel Defense Forces Medical Corps, Surgeon General's Headquarters, Tel Hashomer, Ramat Gan, Israel. 2 Department of Internal Medicine H, Tel Aviv Sourasky University Medical Center, Tel Aviv, Israel, 3 Gray Faculty of Medical & Health Sciences, Tel Aviv University, Tel Aviv, Israel, 4 Gertner Institute for Epidemiology and Health Policy Research, Sheba Medical Center Tel Hashomer, Ramat Gan, Israel, 5 Department of General Surgery and Transplantation, Sheba Medical Center, Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel, 6 Orthopedic Department, Emek Medical Center, Afula, Israel

Introduction

This study describes the Israel defense force (IDF) Medical Corps effort to sustain high-quality registry data in real time under extreme conditions.

The IDF Trauma Registry (IDF-TR) is the primary platform for data collection of prehospital combat casualty care across all echelons. Data collection during the prolonged, high-intensity Swords of Iron War was hindered by the surge in casualties, geographic dispersion, and injury complexity.

Methods

On October 2023, three types of specialized survey teams were deployed along roles of care:

- Casualty Survey Teams:** Documented mechanisms of injury and operational context through direct interviews with casualties.
- ALS Providers Survey Teams:** Collected clinical data and treatment along all echelons of care through interviews with providers.
- Mortality Survey Teams:** Reviewed post-mortem materials, including injury maps, imaging, and photographs.

Analysis & Integration: All data were integrated with field medical records and unit debriefs into the IDF-TR. To describe this challenge, IDF-TR performance during wartime (Oct 2023–Nov 2025) was compared with a reference period of relative peacetime (Oct 2020–Dec 2022).

Results

- **Casualty Volume:** A total of 10,916 casualties were recorded, with a mean of 420 per month during the war period, compared to 104 per month during Oct 2020-Dec 2022.
- **Data Completeness:** Data collection for 87% of events in the southern warzone and 83% in the northern warzone was complete.
- **Data Yield:** The Survey Teams collected 5,017 casualty, 1,086 ALS providers, and 823 post-mortem records.
- **Documentation Rates:** Overall rates were 60% for pulse, 50% for oxygen saturation, 50% for Glasgow Coma Scale, and 45% for blood pressure. For urgent casualties, these rose to 80.6%, 73.7%, 69.9%, and 63.4%, respectively.

Conclusions

- A high-intensity conflict presents unique operational, manpower, and logistical challenges for maintaining a comprehensive trauma registry.
- Deployment of three types of Survey Teams enabled **high-fidelity documentation** and **near-real-time analytics, supporting learning and system level decision-making** during the Swords of Iron War.
- This experience demonstrates that **systematic wartime data management can preserve registry quality even under extreme operational constraints.**



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