

The Evolution of Combat Casualty Care during Swords of Iron War - Introduction of the “Skip” Approach

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Introduction

- The Swords of Iron War, which began in October 2023, prompted major changes in how the Israel Defense Forces Medical Corps (IDF-MC) employed its echeloned medical system. We describe the shift from the planned model (company-level care progressing through battalion aid stations and, when needed, forward surgical capability) to an operational reality characterized by rapid evacuation and expanded en route care.
- We aim to describe those changes and how they have contributed to the remarkable success in saving lives on the battlefield, as seen in the lowest casualty fatality rates (CFR) seen during the current war.

Methods

- Descriptive operational review of IDF-MC medical system employment during the Swords of Iron War, focusing on:
 1. Echelon utilization
 2. Evacuation pathways and handovers
 3. En route care roles and platforms
 4. Forward resuscitation capabilities, including staged implementation of low-titer O whole blood supported by cold-chain systems and platform engineering integration.

Results

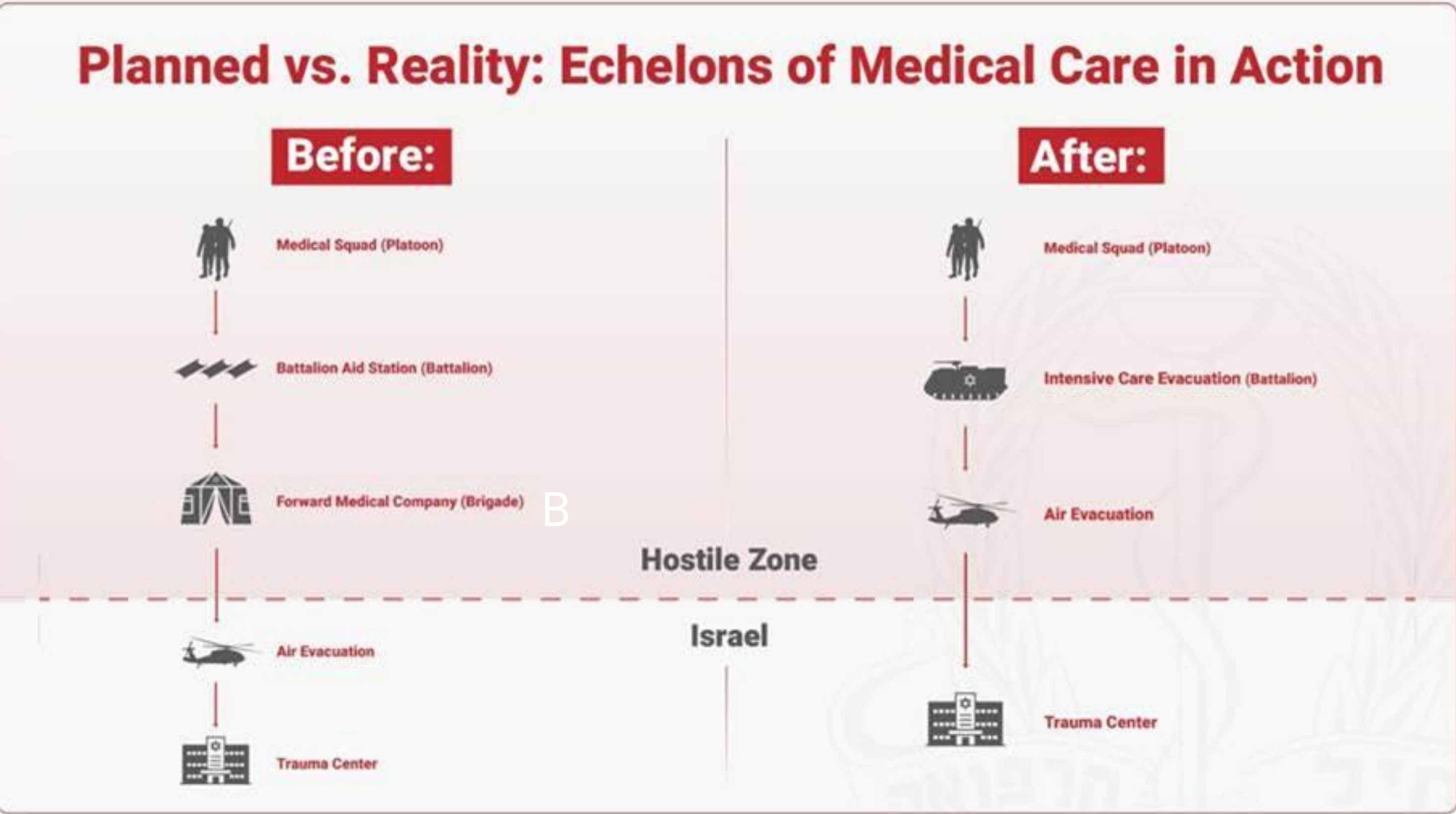
- Battalion aid stations were generally not established.
- Battalion and surgical-company personnel were re-tasked primarily as ground evacuation teams on armored and non-armored platforms.
- The “skip” approach – bypassing intermediate echelons with direct transport from point of injury to helicopter landing zones or onward evacuation assets – reduced handovers and shortened time to definitive trauma care without apparent detriment to battlefield care.
- Prolonged field care was not required, likely due to short evacuation distances and forward aeromedical access.
- In parallel, remote damage control resuscitation scaled forward, including staged implementation of low-titer O whole blood enabled by cold-chain systems and platform integration.
- Whole blood units were maintained at 2–6°C using a combination of passive insulated transport systems, including reusable shippers and active refrigeration. These systems were integrated into evacuation platforms that moved casualties from the point of injury to landing zones for aeromedical evacuation or to ground ambulances for onward transport to trauma centers.

Figure 1: Types of active refrigeration used during “Swords of Iron” War.

A) APRU 6L, Delta Development Team Inc., AZ, USA.
B) Dometic CFF-series.



Figure 2: Echelons of medical care: planned model versus operational reality.



Conclusion

- During the Swords of Iron War, the IDF-MC echeloned model was functionally replaced by a rapid-evacuation paradigm with expanded en route care and forward resuscitation.
- Bypassing intermediate echelons streamlined patient flow and reduced handovers, while forward deployment of remote damage control resuscitation - including low-titer O whole blood - supported early hemorrhage management in austere settings.



Disclaimer: This study was conducted by the listed researchers. Statements and opinions published in this abstract are solely those of the individual abstract authors and not the Israel Defense Forces (IDF). This study did not receive external funding or support. All authors had access to the data utilized in this study.



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IDF MEDICAL CORPS.**