

LOGISTICAL LESSONS

Coalition Medical Logistics: Lessons from IDF Operation Roaring Lion for Enhanced Military Health Readiness

Dr. Daniel Elbo Arama, PhD^{1,2,3}; Prof. Declan McGuone, MB, BCh³; Yael Ben-Yehuda¹; Rom Neshet¹; Itai Even-Tov¹; Dr. Dean David Lichter, MD¹; Dr. Matan Daniel, MD¹; Iyar Serero Soffer¹; Tamir Peretz¹; Itay Honig¹; Libby-Zisel Tsitrin¹; Dr. Avi Shina, MD¹

1. Department of Military Medicine and "Tzameret", Faculty of Medicine, The Hebrew University of Jerusalem and Israel Defense Forces Medical Corps, Jerusalem, Israel
2. School of Public Health, Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer Sheva, Israel 3. School of Medicine, Yale University, New Haven, CT, USA

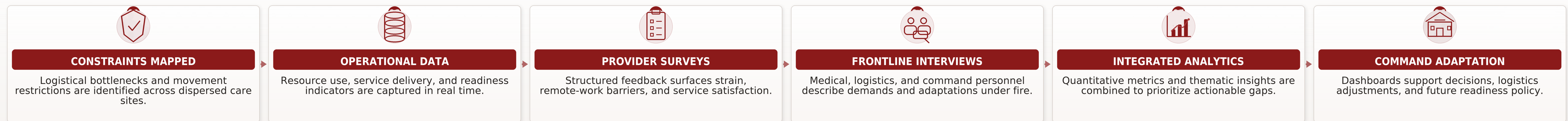
TAKE-HOME MESSAGE

Sustaining forces under fire demands preplanned infrastructure, agile supply chains, and real-time resource governance - readiness is built before the first shot.



FROM REAL-TIME DATA TO OPERATIONAL CHANGE

Mixed-methods evidence translated into command decisions, operational adaptation, and readiness learning



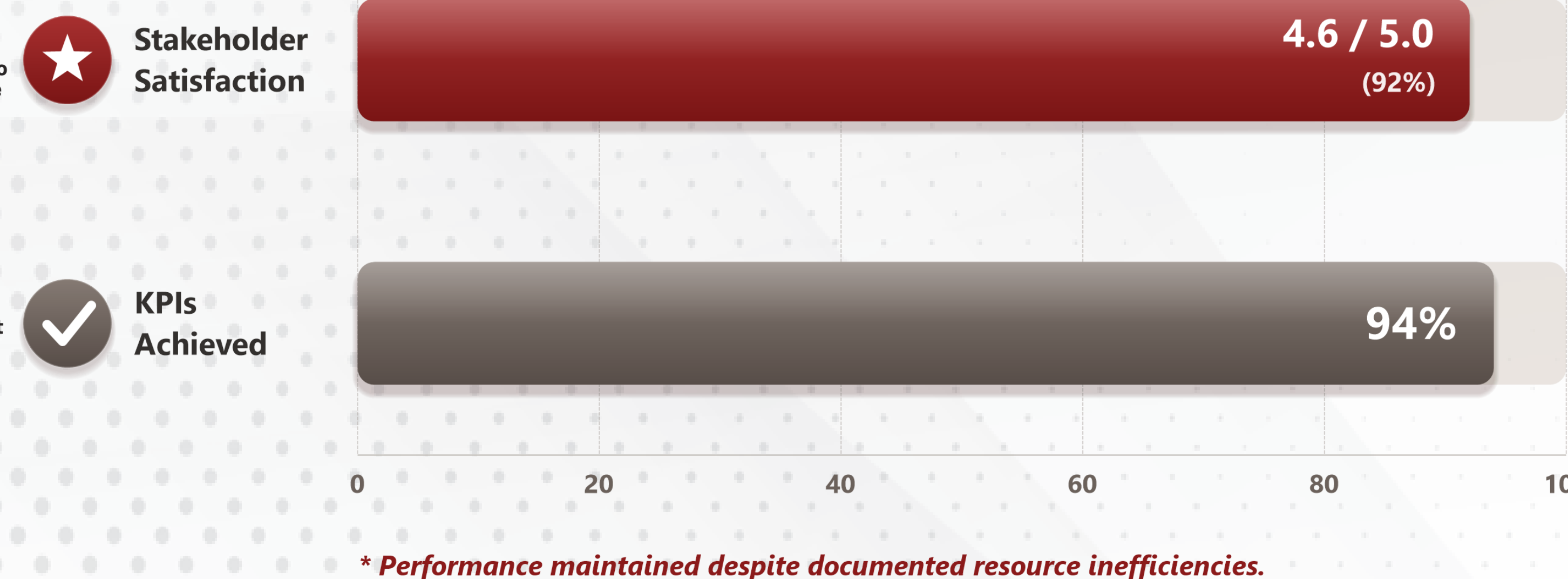
EMBEDDED LEARNING DURING WARTIME

Coalition Medical Logistics - IDF Operation "Roaring Lion" - operational learning cycle

- PROTECTION GAP**
Protective infrastructure constraints limited where medical services could operate safely and created a need for rapid physical adaptation during ongoing missile alerts.
- DISTRIBUTED WORKFORCE**
Medical services shifted toward remote work while attempting to preserve coordination, clinical continuity, and logistical command functions across dispersed teams.
- HUMAN FACTOR**
Personnel carried operational responsibilities while families were exposed to missile threats, creating a human factor that influenced workforce resilience and service continuity.
- TECHNOLOGY ENABLEMENT**
Digital tools enabled distributed clinical and logistical support across separated sites, helping maintain care delivery despite restricted movement and dispersed forces.
- MOBILITY BOTTLENECK**
Persistent missile alerts and severe movement restrictions constrained supply chains, redeployment, staffing, and access to medical service locations.

Quantitative Results (surveys – n=178, KPI – 100% analyzed)

Logistical Operations Performance Overview



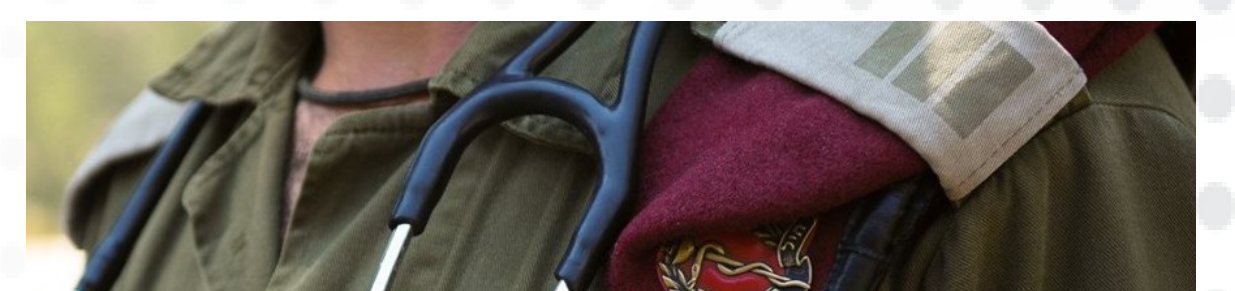
Qualitative Results Five Themes Emerged, n = 13

- LOGISTICS UNDER FIRE**
1 Delivering logistics under fire was the central challenge
- PROTECTIVE INFRASTRUCTURE**
2 Protective infrastructure drove most logistical needs
- DISPERSED SUPPLY LINES**
3 Supplying geographically dispersed teams with food and equipment was a major constraint
- RESERVE PERSONNEL**
4 Reserve personnel commitment was critical to sustaining emergency logistics
- EXTERNAL PARTNERSHIPS**
5 Effective crisis logistics required leveraging external civilian and governmental organizations

WHY IS THIS IMPORTANT?

Balancing Improvisation with Governance
Although the IDF met 94% of its performance targets through ad-hoc solutions and reservist dedication, the findings indicate that improvisation incurs significant resource inefficiency. The study argues that institutionalizing real-time resource tracking ahead of the next conflict is essential to reducing such waste.

SCIENTIFIC RIGOR & LIMITATIONS
This study integrated a qualitative component - 13 in-depth interviews with content experts - with quantitative data capturing 100% of the medical logistics delivered. However, findings were not benchmarked against external comparators, and the design does not support causal inference.



From Findings to the Field: What Actually Changed

- 350% INCREASE**
350% increase in protected spaces constructed at the Medical Services Center over the course of Operation Roaring Lion.
- 150% INCREASE**
150% increase in the deployment of reservists for logistical missions, organized by place of residence and designated supply chains.
- 100% UTILIZATION**
100% utilization of contracts with civilian entities and companies providing logistics services to the Medical Corps.

Abstract disclaimer: The authors declare that they have no conflicts of interest or disclosures relevant to the content of this abstract. All research procedures were conducted in accordance with established ethical guidelines and with the approval of the appropriate institutional review board. The findings presented are based on the data available at the time of submission and may be subject to further analysis or refinement.

DrDaniel@idf.il
Elbodaniel@gmail.com

www.linkedin.com/in/Daniel-elbo-arama

ORCID <https://orcid.org/0000-0002-2815-6125>

Dr. Daniel Elbo Arama



At the moment of truth,
IDF MEDICAL CORPS.

