Combat Ready or Clinic Rust:
Quantifying Surgical Technicians Readiness

A readiness-focused comparison of Military-Civilian Partnership (MCP) and Military Treatment Facility (MTF) exposure

TSgt William McNeill, CST[1,2] | Perez S. Oppong, MHA[2] | MSgt Nova Benington, CST[3] | Jeremy P. Kilburn, MD, FCCP[2] | Noehealani Antolin, PhD[4]

[1]711th HPW, C-STARS Las Vegas. [2]Office of Military Medicine, UMC Las Vegas. [3]633rd MDG, Joint Base Langley. [4]Kirk Kerkorian School of Medicine, UNLV

Introduction

U.S. Air Force Surgical Technicians assigned to MTFs face increasing challenges maintaining operational readiness due to limited surgical volume and limited exposure to high-acuity procedures.
MCPs with Level I trauma centers may increase clinical exposure, but traditional metrics such as case counts alone may not fully capture deployment readiness.

Objectives

- Compare surgical technician clinical exposure at a civilian Level I trauma center versus MTFs.
- Evaluate operative role, case acuity, and case volume as contributors to readiness.
- Develop and assess STORI as a readiness-focused metric.

Methods

1. **Retrospective analysis**
   Data pulled from calendar year 2025
2. **Study Population**
   23 STs during 2-week MCP rotation & MTFs
3. **Data Collection**
   Recorded surgical case volume, hours, specialty, role, and case acuity.
4. **Readiness Assessment**
   Calculated STORI scores using operative hours, procedural role, and case acuity, then compared outcomes between MCPs and MTF rotations

What is STORI?

Surgical Technician Operational Readiness Index

$$\text{Hours} \times [\text{Role} + \text{Acutiy}] = \text{STORI Score}$$

- **Hours**: Total procedural participation time.
- **Role**: STs primary position for the duration of the case.
- **Acutiy**: Deployment-relevant high-acuity exposure
- **STORI Score**: Readiness-weighted clinical exposure

Scoring Inputs

Procedural Role

Scrub	1.0
Circulator	0.5
Observer	0.25

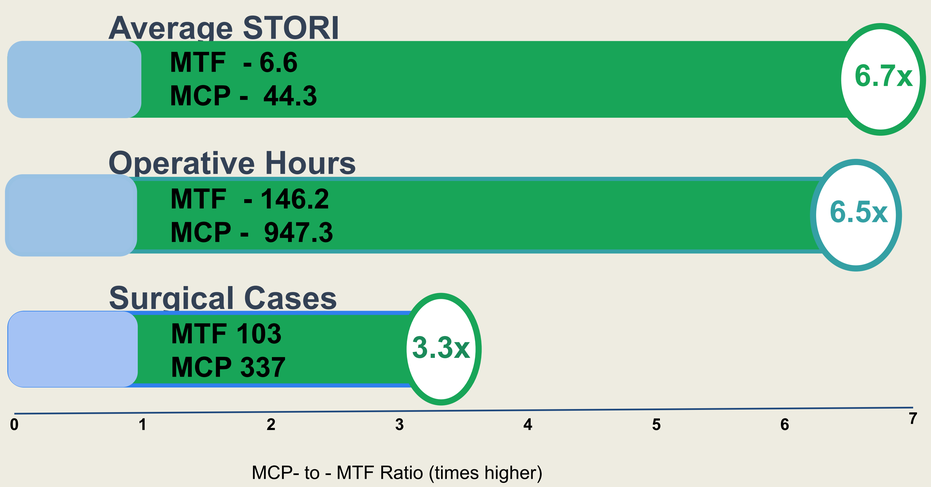
Clinical Acuity

High acuity	+0.25
Other	+0.00

**High-acuity cases include deployment-relevant procedures involving major trauma, burn, emergent operative intervention, or significant physiological instability.*

Key Results

Comparison of Surgical Technician Readiness Outcomes; MTF vs MCP



**Data represents cumulative outcomes from 23 U.S. Air Force Surgical Technicians during a 2-week Military Treatment (MTF) rotation and a 2-week Military-Civilian Partnership (MCP) rotation.*

Interpretation

MCP exposure produced greater surgical volume and substantially more operative hours. Readiness gains were strongest when hours, operative role, and acuity were weighted together. STORI offers a more readiness-focused framework than case counts alone.

Data Captured

- Case volume and operative hours
- Surgical Specialty distribution
- Procedural role: scrub, circulate, observe
- Case acuity: high acuity versus other
- Composite STORI score

Conclusions and Relevance

Military-Civilian Partnerships (MCPs) significantly enhanced the surgical technicians operational readiness by providing greater operative volume, increased exposure to high-acuity procedures, and participation in deployment-relevant surgical specialties.

Finding from this study suggest that traditional metrics, such as case counts alone, may inadequately capture true clinical readiness. The STORI metric offers a framework that incorporates operative hours, roles, and case acuity to better quantify meaningful clinical experiences. These finding support the continued expansion of MCPs as a strategy to mitigate skill degradation and sustain combat readiness in low-volume MTF environments.

Contact Us!