



You can't fix what you can't measure: Quantifying Enlisted Medical Provider Expeditionary Skills at MTF vs MCP

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Introduction

Future conflicts will differ from previous ones due to geopolitical shifts and technological advances, demanding a reassessment of medical readiness. Enlisted Medical Personnel (EMPs) play critical roles in prehospital care yet receive limited training. Military Civilian Partnerships (MCPs) offer a solution, providing EMPs with hands-on trauma and critical care experience. This study recognized the gaps in tracking meaningful clinical exposure using traditional checklists and introduces an innovative approach to quantifying the clinical readiness of EMPs through a data-driven Quantitative Expeditionary Skills Tracker (QuEST).

Study Objective

This study aims to quantify the clinical skill exposure of Air Force Respiratory Care Practitioners (RCPs) and Aerospace Medical Technicians (AMTs) using QuEST

Materials and Methods

This observational cohort study evaluated the clinical skill performance of RCPs and AMTs at both Military Treatment Facilities (MTFs) and a MCP with a Level 1 trauma center—Las Vegas MCP (LV-MCP)—from January 2023 to March 2024. Participants recorded real-time clinical skills using the QuEST, a tool developed in alignment with the Air Force Comprehensive Medical Readiness Program (CMRP) guidelines. Three Prolonged Casualty Care (PCC) skills per specialty were analyzed using statistical methods to identify differences in clinical exposure and skills performed. The study aimed to assess the effectiveness of QuEST in identifying skill gaps and quantifying total clinical exposure across the two training environments.

Acknowledgments

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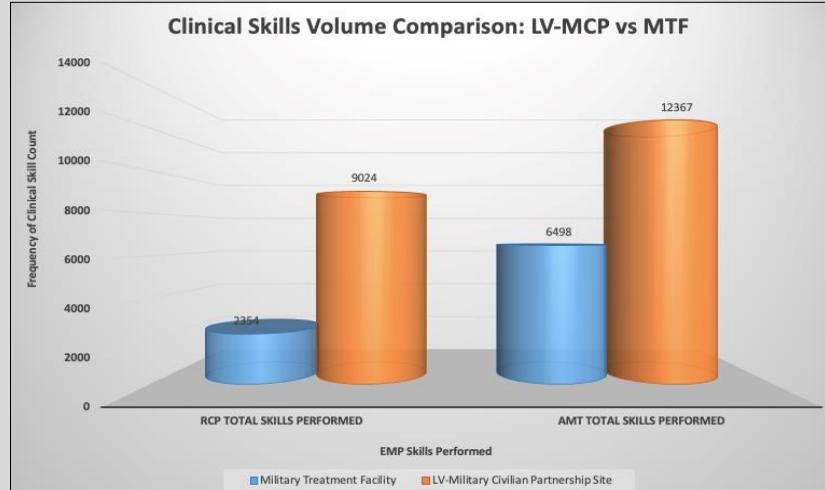


Figure 1: Comparing total number of clinical skills performed by RCPs and AMTs at the MTF versus the LV-MCP

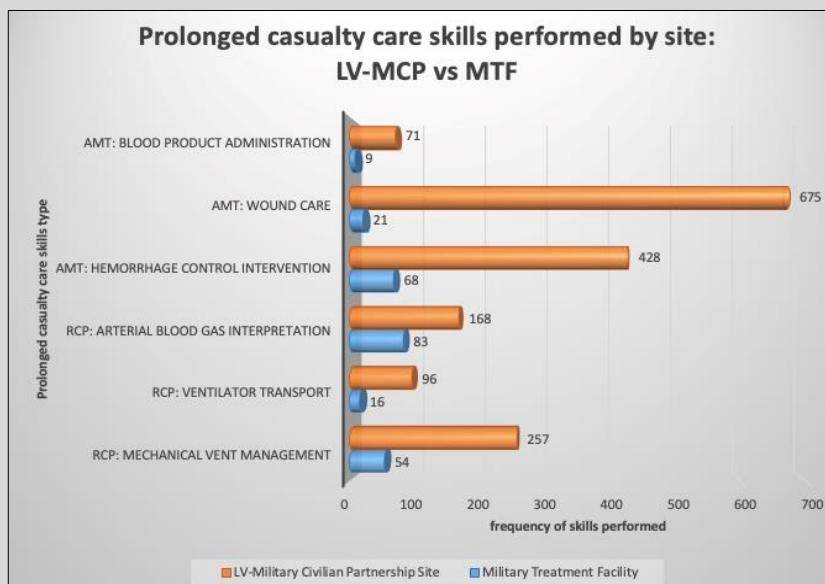


Figure 2: Prolonged casualty care skills performed at the LV-MCP site versus the MTF

Main Results

Data collected from the 88 EMPs (17 RCPs and 71 AMTs) during the study period showed that RCPs performed 9,024 skills at the MCP compared to 2,354 at MTFs—a 340% increase—with average skills per RCP significantly higher at the MCP (530 ± 52.6 vs. 138 ± 83.9 ; $p < 0.001$). AMTs showed a similar trend, performing 12,367 skills at the MCP versus 6,498 at MTFs, a 90% increase, with averages of 174.2 ± 24.8 at the MCP and 91.5 ± 56.5 at MTFs ($p < 0.001$) (Figure 1). Sub-analysis of key Prolonged Casualty Care (PCC) skills confirmed consistently greater exposure across all measured categories at the MCP, highlighting the effectiveness of MCPs in enhancing clinical readiness (Figure 2).

Conclusion

The LV-MCP offers a superior training environment for EMPs, delivering much needed hands-on exposure to PCC skills critical for deployment readiness. Comparative data clearly demonstrate that MCPs provide significantly greater clinical experience than traditional MTFs. The implementation of the QuEST further enhances this model by enabling real-time, data-driven assessment of individual skill proficiency. By identifying specific gaps in clinical readiness, QuEST empowers leadership to implement targeted training interventions, ensuring a more capable and combat-ready EMP force for future conflicts.

References



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