

Validating the Medical Planning Process for Small-Unit Medical Planning

Survey Results from Ukrainian Military Medical Personnel

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1 Introduction

Ukraine's February 2026 Military Medical Doctrine (Resolution No. 247) mandates medical planning at all levels, including the tactical prehospital echelon (Role 1 & 2).(1)

Yet neither the doctrine nor the NATO frameworks it harmonises with (AJP-4.10, AJMedP-1) provide a structured planning method for medical leaders at company level and below.(2,3)

Recognizing this need already in 2024, we developed the Medical Planning Process (MPP) per request of Ukrainian military partners.

The Medical Planning Process (MPP), built on *Troop Leading Procedures*, uses the **CMPEC3** mission-analysis mnemonic to gather every relevant medical and tactical factor and to produce a medical CONOPS and evacuation scheme (**Figure 1**).(4) It is teachable in short formats and aligns with NATO-style command transformation. Previous results from 4 courses in 2025 for 66 deployed medical personnel showed that all valued the structured approach and could build a medical concept of operations within hours.(5)

Objective: test whether MPP-CMPEC3 is complete, relevant, teachable and applicable, using paired surveys across three 2026 course iterations.

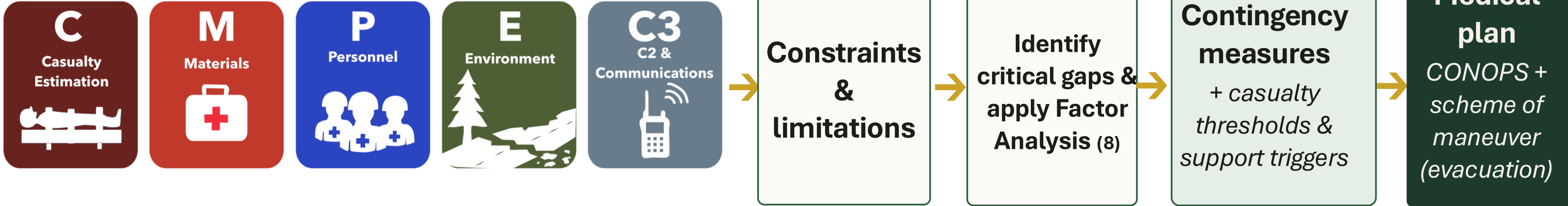
2 Methods

Design. Three Medical Planning Courses (Feb / Apr / May 2026) totaling 69 participants. Voluntary anonymous surveys with self-generated linkage codes were distributed before and after the courses.

Instruments. Baseline survey (response rate = 52) on current practice and deficiencies; evaluation survey (response rate = 35) on completeness, usability, capability / output gains and adoption intent. Mixed methods with a structured Likert-style item survey plus a questionnaire with open-ended questions.

Analysis. Non-parametric tests (Wilcoxon, Spearman, Kruskal-Wallis, Mann-Whitney), Cronbach's α , and reflexive thematic analysis.(6,7) Statistical analysis performed in JASP (JASP Team; 2026, Version 0.96.0 for Windows 11; open-source software, available at <https://jasp-stats.org/>)

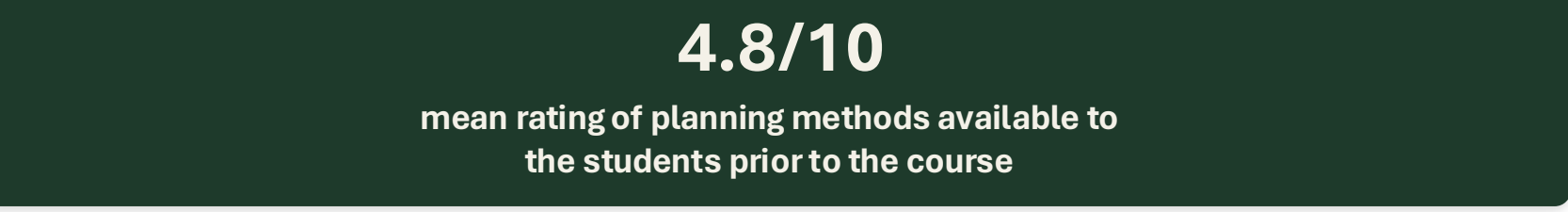
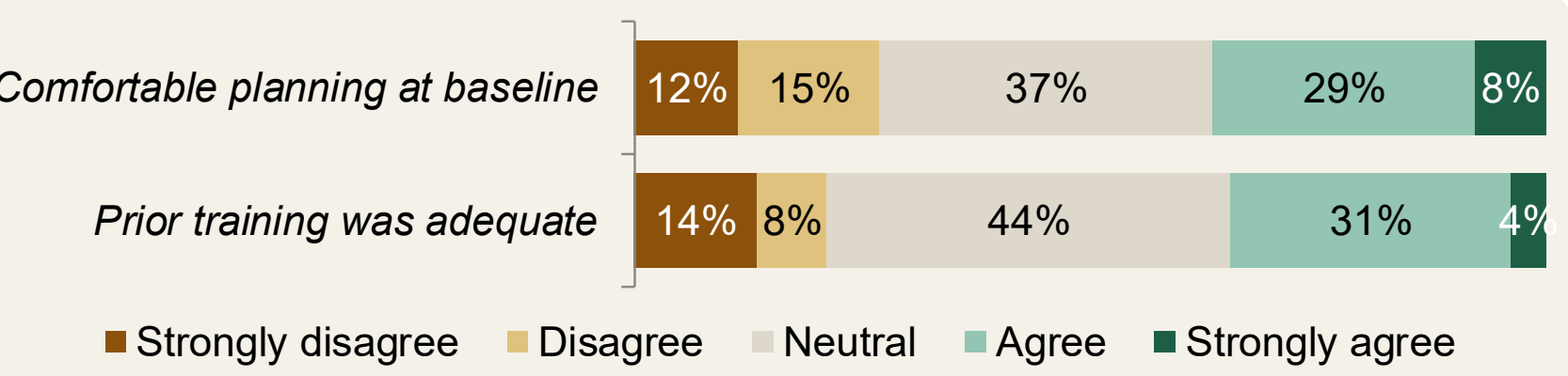
FIGURE 1 Outline of the MPP-CMPEC3 planning framework



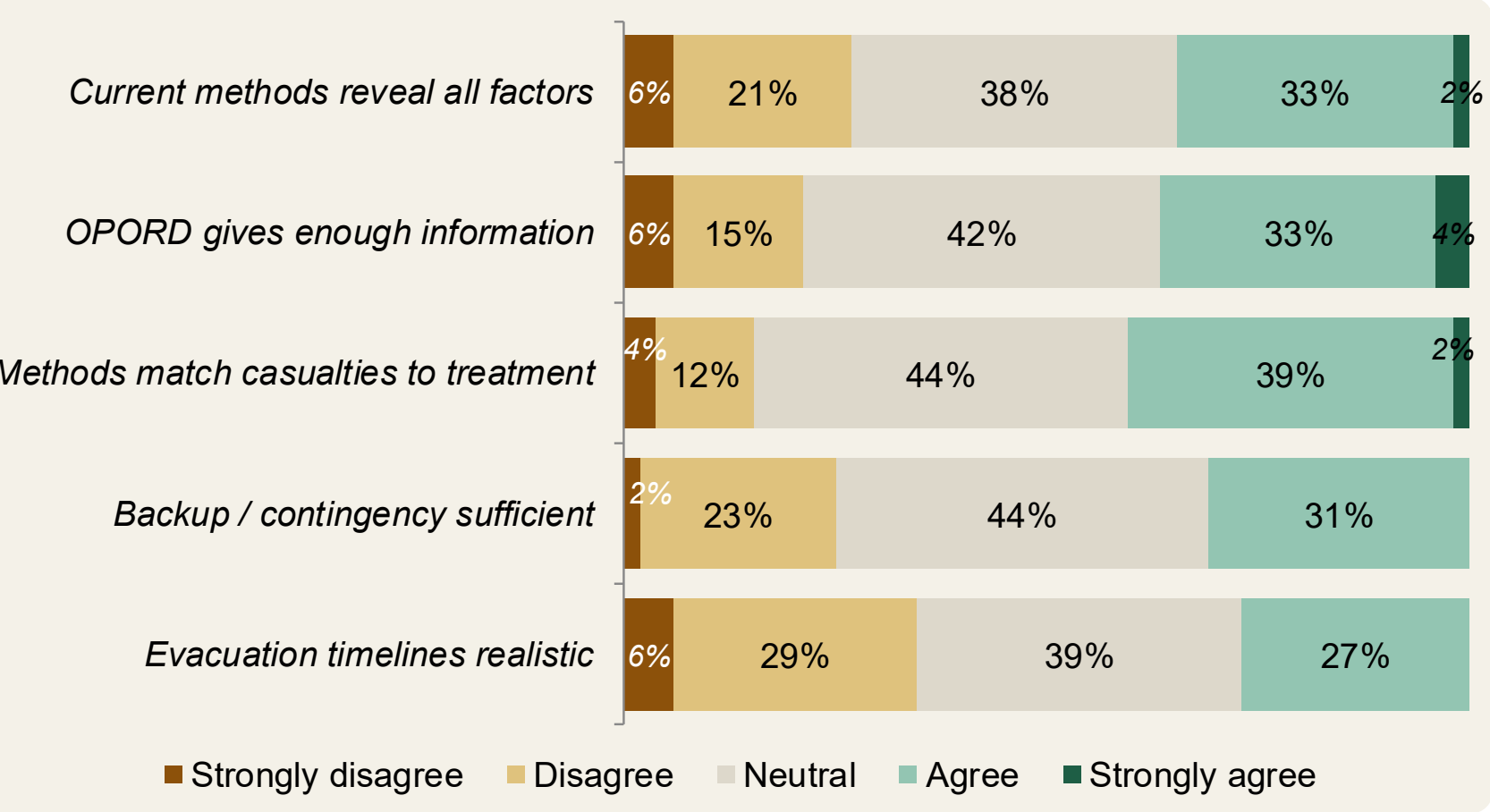
The MPP-CMPEC3 Method: five-domain mission analysis surfaces constraints and critical gaps, addressed by contingency measures and casualty thresholds, producing the medical CONOPS and evacuation scheme of maneuver. Adapted from Bongartz et al., Mil Med 2025 (ref. 4).

3 Results — Baseline (N = 52)

Comfort & preparedness entering the course



Perceived adequacy of current methods



Five-point agreement scale; comfort item uses very-uncomfortable→very-comfortable anchors. Labels show % of total responses.

Perceived benefits of current methods

- Supports task organisation **n = 31**
- Ease of use in planning time **n = 30**
- Completeness of coverage **n = 17**

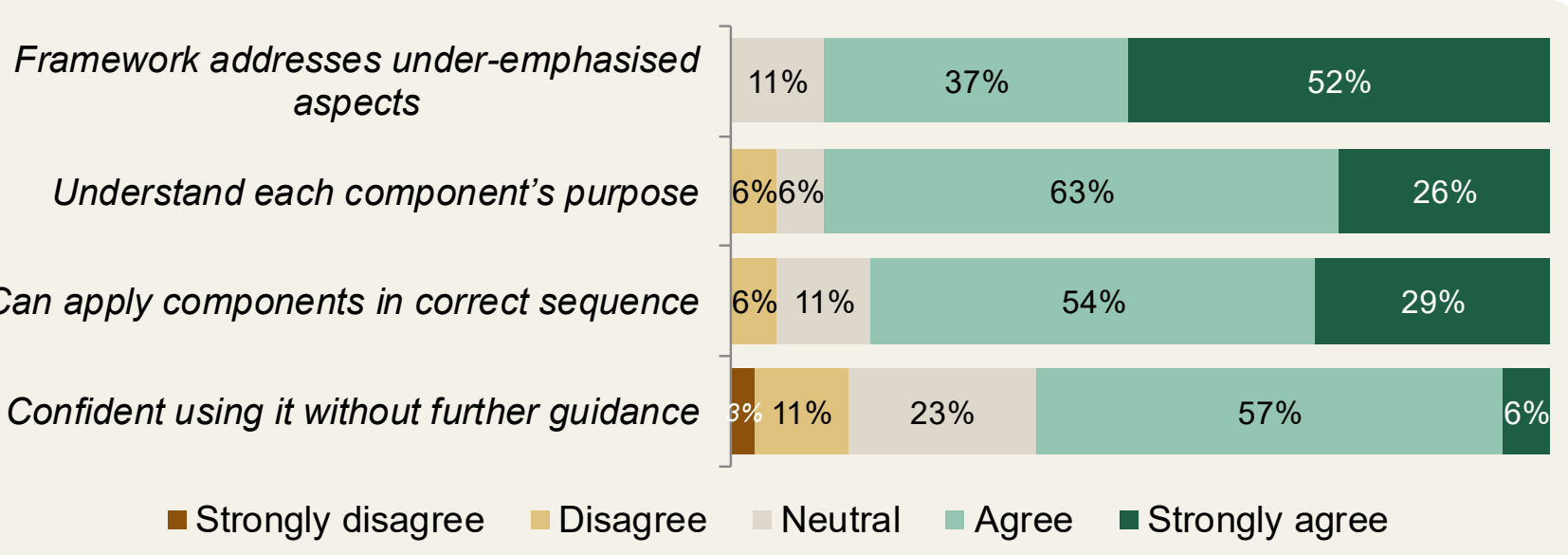
Perceived deficiencies of current methods

- Inter-person variability **n = 26**
- Unclear what neighbours plan **n = 21**
- Plans are unrealistic **n = 19**

4 Results — Post-course (N = 35)



Post-course self-assessment



Capability & output gains vs. previous methods (M ± SD)

Dimension	M ± SD
Planning capability	
Identifying capability gaps	4.4 ± 0.68
Understanding commander's intent	4.3 ± 0.75
Efficiency of planning time	4.3 ± 0.82
Parallel planning with command	4.2 ± 0.59
Matching casualties to treatment	4.1 ± 0.71
Less need for staff assistance	3.7 ± 0.85
Planning outputs	
Analysis of mission variables	4.6 ± 0.55
Quality of contingency plans	4.3 ± 0.66
Clarity of team-member tasks	4.3 ± 0.69
Accuracy of casualty estimates	4.2 ± 0.72
Integrating evacuation timelines	4.1 ± 0.73

The comparative capability & output scales (“Much Worse” = 1 to “Much Better” = 5) had a neutral mid-point option (“No change” = score 3).

Implementation — preferred echelons

Although designed for company level and below, the two most-selected echelons were **Battalion (35%)** and **Brigade (30%)**.

Top potential enablers for adoption

- Official doctrine / policy mandating use
- Additional training opportunities

Top perceived barriers to adoption

- Need for additional training / practice
- Lack of leadership support

Associations

- Baseline comfort was higher among those with ≥ 1 yr planning experience (**Mdn 4 vs 3; Mann-Whitney U = 488, p = .002**).
- Comfort with medical planning was **not** associated with how respondents rated current methods ($r_s = .27, p = .05, ns$).
- Perceived time burden was also **not** related to intent to adopt ($r_s = -.05, p = .79$) and to the rated gain in planning efficiency ($r_s = -.02, p = .93$).

Free-text surveys – salient quotes

“Evacuation is the least resilient element of the system — a single failure at this stage cascades into a breakdown of the entire medical system.”

— Baseline respondent, principal problems

“I expect not basic principles, but in-depth solutions for working under FPV threat, mining, loss of transport and personnel shortage.”

— Baseline respondent, course expectations

“I would increase the number of days, to spread the information out — there is a great deal of it, and by the end of the day it was not always absorbed.”

— Post-course respondent, what to change

“It is hard to take in and understand in such limited time. A great deal of new information.”

— Post-course respondent, comments

5 Discussion

Completeness: before any training, participants spontaneously named all five CMPEC3 domains as mandatory; the framework omits no relevant planning factor and codifies categories practitioners already use (component usefulness 4.3/5, $\alpha = 0.885$).

Relevance: it targets the top-named failure points (evacuation fragility, logistics under drone threat, inter-person variability); intent-to-use 4.5/5.

Teachability: delivered in a 3–4 day format with NPS +91 and capability / output gains across all role groups; the main constraint is course length and absent TLP/MDMP grounding.

Application & Scaling: demand reaches battalion and brigade, supporting MPP-CMPEC3 as the operational implementation of Resolution No. 247 and a model for tactical-level medical planning that may extend to brigade level and NATO partners.

Key references

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