OPTIMISING EMERGENCY DEPARTMENT SERVICES: EVIDENCE-BASED INTERVENTIONS TO REDUCE CLINICAL RISK

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INTRODUCTION

System-level, evidence-based interventions are essential to improve efficiency and safety within Emergency Departments (EDs).

OBJECTIVES

- To identify **evidence-based interventions** that enhance ED performance and patient safety.
- To evaluate the **implementation potential** of proven interventions within the Maltese healthcare context.

METHODS

A **Critically Appraised Topic** was undertaken by conducting structured searches in the Cochrane Database of Systematic Reviews, MEDLINE and Scopus.

Inclusion criteria: systematic reviews and meta-analyses evaluating ED interventions to improve delivery and patient or safety outcomes.

RESULTS

A total of **twelve** systematic reviews and meta-analyses met the inclusion criteria and were synthesised.

High Impact Intervention Domains were consistently associated with improved ED performance (Figure 1).

Overall, multifaceted, system-level redesign, rather than single interventions, yielded the greatest and most sustained improvements.

Evidence Gaps: variability in study designs and outcome definitions limited direct comparisons.

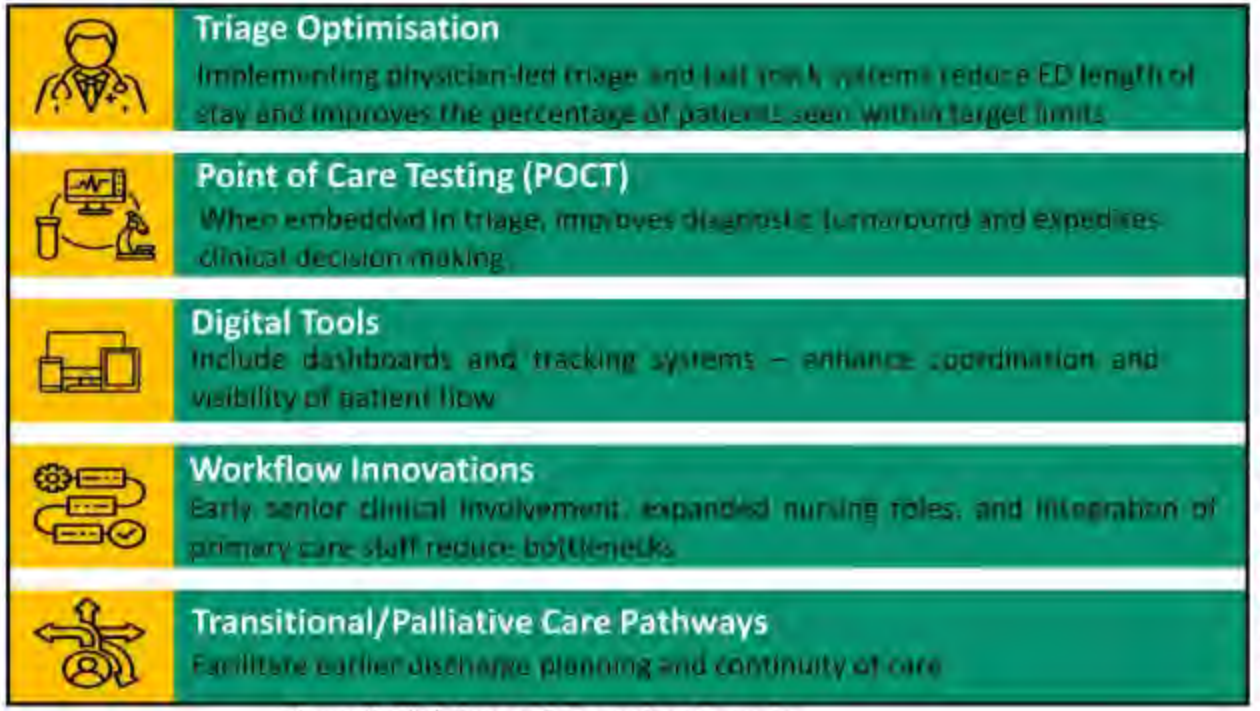

Figure 1. High Impact Intervention Domains

DISCUSSION

- **High-performing EDs** rely on integrated, system-wide strategies that streamline flow, strengthen communication and optimise resource coordination.
- Evidence shows that multifaceted redesign delivers the most sustained improvements, with physician-led triage and POCT emerging as feasible and high-impact options for local adoption.
- Implementation should begin with moderate resource interventions such as fast-track systems and triage optimisation, supported by outcome monitoring and governance frameworks to ensure safe, scalable improvements in the local ED.

CONCLUSION

A **strategic, systems-level approach** is essential to optimise emergency care delivery. Embedding targeted interventions, within **robust clinical governance and evaluation frameworks** ensures scalable and sustainable improvements across ED services.

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