

# GAMIFIED CLINICAL REASONING: EVALUATING A MEDICAL ESCAPE ROOM TO IMPROVE ACUTE CARE DECISION-MAKING IN UNDERGRADUATE EDUCATION

## AUTHORS

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### INTRODUCTION

Developing clinical reasoning, prioritisation, and escalation skills in acute care remains a key challenge in undergraduate medical education. While students acquire theoretical knowledge, they often struggle to apply this in dynamic, time-pressured clinical environments. Traditional teaching methods may not adequately simulate clinical uncertainty, evolving patient conditions, or multidisciplinary team decision-making.

Gamified learning, particularly escape room-based education, offers a novel approach by embedding experiential and collaborative learning within structured clinical scenarios.

### OBJECTIVES

- Enhance prioritisation and escalation decision-making
- Improve integration of diagnosis and management
- Develop confidence in managing acutely unwell patients
- Strengthen teamwork and communication skills
- Promote shared decision-making in complex clinical scenarios

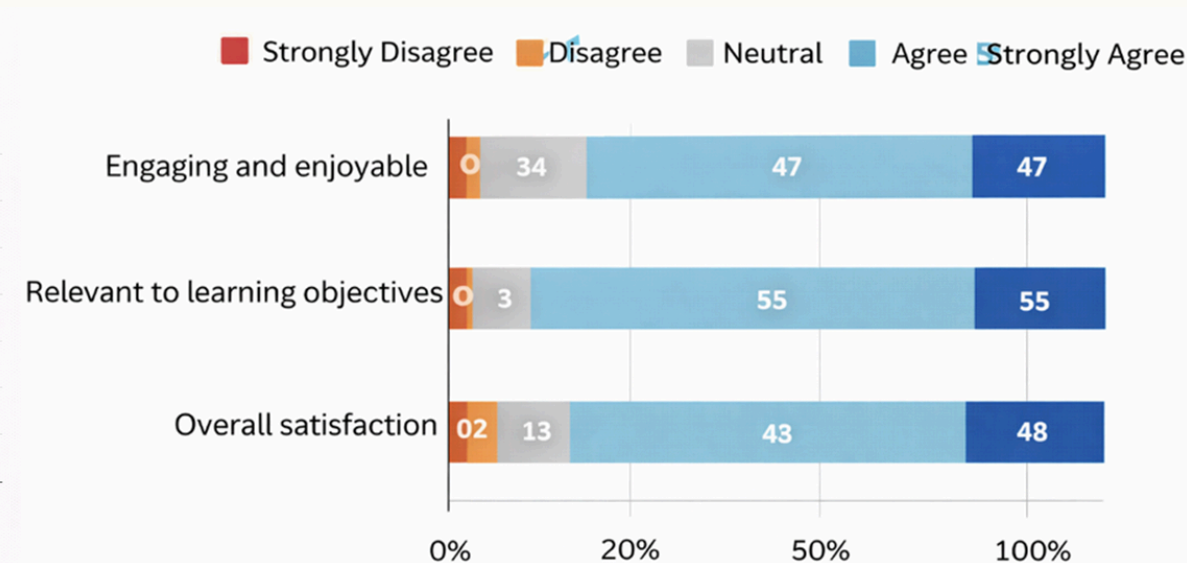
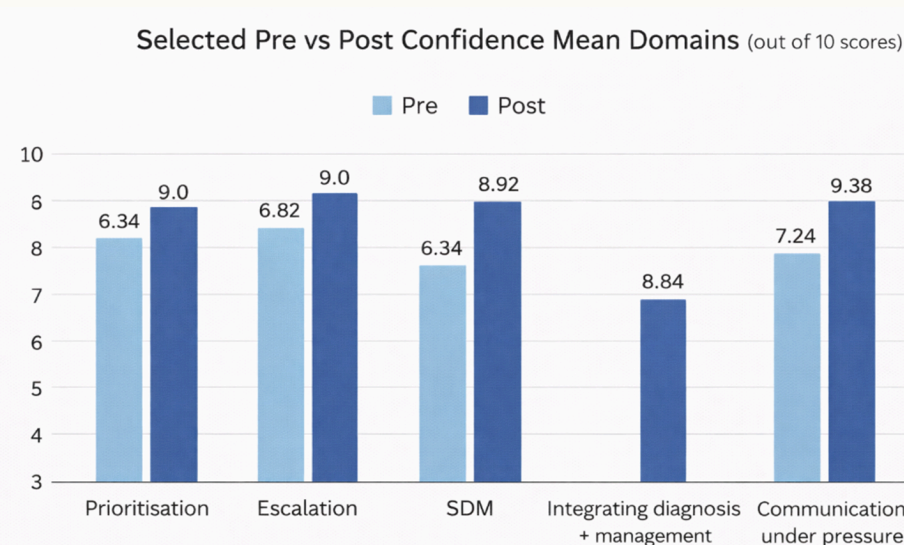
### METHODOLOGY

A structured, simulation-based escape room was developed for undergraduate medical students during their senior medicine block, incorporating four acute clinical scenarios: heart failure with hyperkalaemia, diabetic ketoacidosis, sepsis with competing diagnoses, and cirrhosis with spontaneous bacterial peritonitis. Each scenario followed a five-stage progression from initial assessment to shared decision-making. Students worked in small groups with defined roles, progressing through the cases by interpreting clinical data, prioritising management, and escalating care appropriately. The intervention was evaluated using pre- and post-session surveys assessing confidence across acute care domains, engagement, qualitative feedback, and scenario-based knowledge.

### RESULTS

#### Key improvements:

- Prioritisation of care
- Escalation decisions
- Communication under pressure



### CONCLUSION

The medical escape room model provides a structured, low-cost, and scalable approach to teaching acute care clinical reasoning. It enables students to practise prioritisation and escalation in realistic settings, develop confidence in managing uncertainty, integrate clinical knowledge with real-time decision-making, and engage actively in multidisciplinary teamwork. This approach shifts learning from passive knowledge acquisition to active clinical judgement, highlighting that effective acute care teaching should not only deliver knowledge, but also rehearse decision-making under pressure.

Teaching acute care should not only deliver knowledge—it should rehearse judgement under pressure.