# Escape to Learn: Enhancing Neonatal Sepsis Education Through Game-Based Simulation

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## Introduction

Escape rooms are emerging as effective, engaging tools in healthcare education. [1] By transforming learning into an interactive, time-pressured challenge, they foster active participation, teamwork, and critical thinking. [2] This project aimed to improve medical student engagement and understanding of neonatal sepsis during their paediatric hospital placement through a bespoke escape room experience.

## Methods

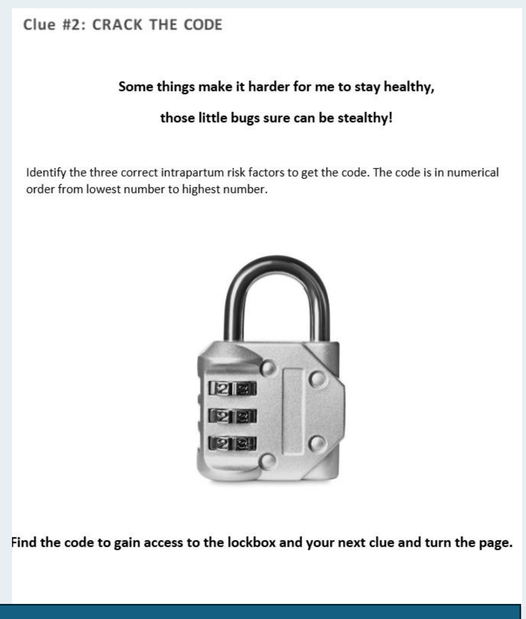
A neonatal sepsis-themed escape room was designed. Targeting fourth-year medical students, the session aimed to improve recognition of maternal, intrapartum, and neonatal risk factors; identify clinical signs of neonatal sepsis; and enhance skills in communication, teamwork, and clinical reasoning.

Prior to the session, students received a structured teaching presentation and completed a baseline questionnaire assessing their confidence in managing neonatal sepsis and their attitudes toward game-based learning.

The 15-minute escape room tasked students with solving puzzles involving sepsis risk stratification, early warning scores, and drug calculations. Each puzzle was linked to clinical scenarios, requiring learners to apply knowledge collaboratively to progress through the challenge.

Post-session questionnaires captured changes in confidence and perceived educational value.


Photograph 1: The Escape Room Set Up

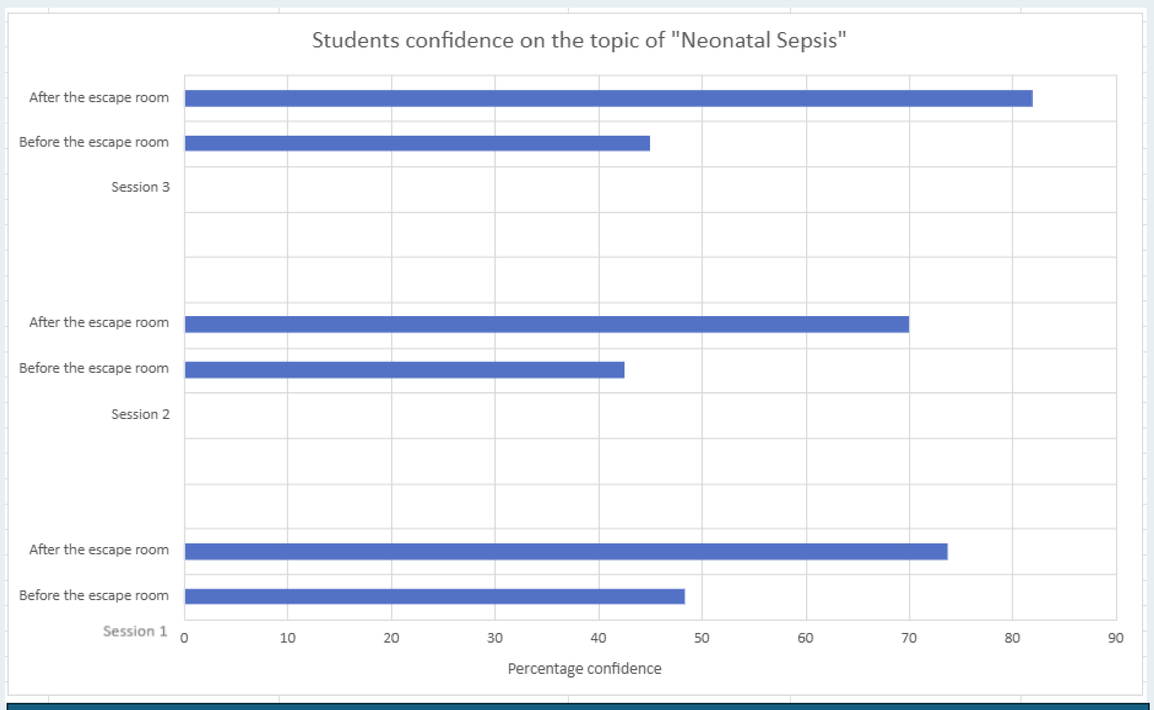



Screenshot 1: Example of the Escape Room clues

## Results

Three groups of students (n=16) completed the pilot. All teams successfully "escaped" within the allocated time. Self-reported confidence in recognising and managing neonatal sepsis increased from an average of 45% pre-session to 75% post-session.

All participants rated the escape room format as enjoyable and valuable, particularly highlighting its effectiveness in reinforcing teamwork, leadership, and decision-making skills.




Bar chart 1 to show the student's confidence on the topic of Neonatal Sepsis before and after the Escape Room Session

## Conclusion

This novel neonatal sepsis escape room significantly improved student confidence and engagement, suggesting that game-based learning can enhance both knowledge acquisition and essential non-technical skills. It offers a replicable, low-cost intervention to enrich undergraduate medical education and prepare future clinicians for the complexities of neonatal care.

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## References

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