



Scottish Society of Anaesthetists Spring Meeting 2025 Abstract Submission Form

Abstract Title

Improving preoperative mortality risk scoring for patients undergoing emergency laparotomy/laparoscopy

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Abstract text (maximum 300 words)

Introduction

Emergency laparotomy is a surgical procedure associated with significant morbidity and mortality¹. The use of pre-operative mortality risk calculators helps identify high-risk patients and guide decision-making, patient and family discussions, and perioperative management¹. The Emergency Laparotomy and Laparoscopic Scottish Audit (ELLSA) recommend mortality risk scoring using the National Emergency Laparotomy Audit (NELA) calculator preoperatively for all patients undergoing emergency laparotomy as a Key Performance Indicator (KPI)². Our centre, a large district general hospital in Scotland, undertakes frequent emergency laparotomies. Baseline data collection demonstrated the rate of preoperative NELA scoring was well below the KPI recommendation of >90%.

Our aim was to improve the rate of pre-operative NELA mortality risk scoring for patients undergoing emergency laparotomy/laparoscopy.

Methods

Data were collected on all emergency laparotomy/laparoscopy cases undertaken in our centre through retrospective review of medical notes and using NELA inclusion and exclusion criteria³. The baseline data period was October-November 2024 and intervention period was December 2024 - March 2025.

A series of PDSA cycles were designed and implemented monthly to improve pre-operative mortality risk scoring, including anaesthetic departmental presentations, infographic posters, and prompt cards with a Quick Response (QR) code for the NELA calculator in theatre.

Results

A total of 53 ELLSA procedures were performed in the 6-month project period. The rate of preoperative NELA scoring was $\leq 25\%$ in the 2-month baseline data collection period. PDSA 1, a departmental presentation, resulted in significant improvement in documentation of NELA scores to 75%. Although this level was not sustained, the rate of mortality risk scoring remained above pre-intervention level.

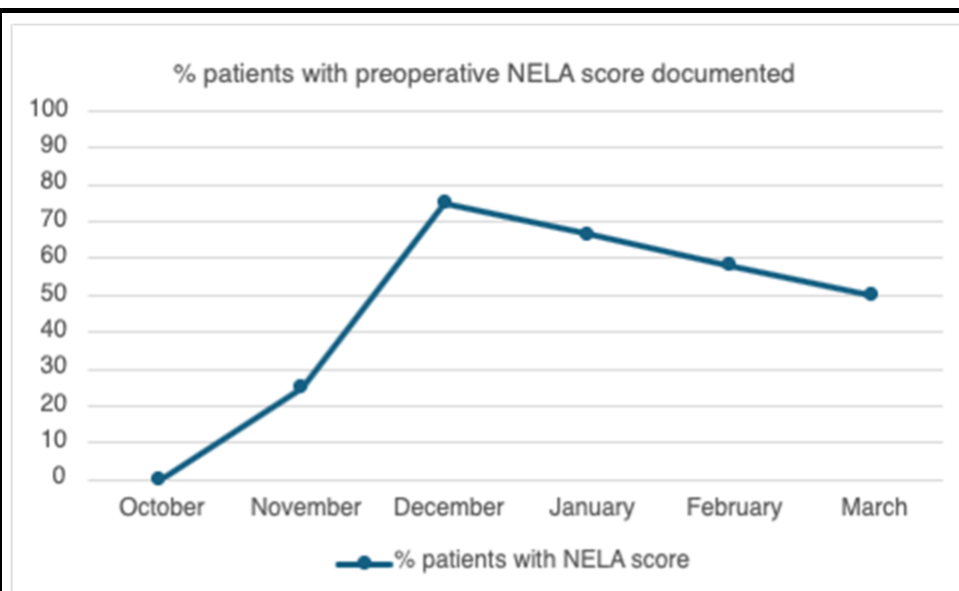


Figure 1: % ELLSA cases with NELA score documented preoperatively

Discussion and Conclusion

The implementation of simple interventions improved the rate of preoperative mortality risk scoring for patients undergoing emergency laparotomy. However, our project demonstrates that further interventions will be necessary if this improvement is to be sustained and ultimately reach the 90% target.

References

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3. NELA Inclusion/Exclusion Criteria. National Emergency Laparotomy Audit. <https://data.nela.org.uk/information/nelaincexl> (accessed 02/04/2025)