NELA
National Emergency Laparotomy Audit

Seventh Patient Report of the National Emergency Laparotomy Audit

December 2019 to November 2020

EXECUTIVE SUMMARY

RCoA Royal College of Anaesthetists | NIAA National Institute of Academic Anaesthesia | HSRC Health Services Research Centre | Royal College of Surgeons ADVANCING SURGICAL CARE | HQIP Healthcare Quality Improvement Partnership

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The National Emergency Laparotomy Audit is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing, and National Voices. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual projects, other devolved administrations and crown dependencies: hqip.org.uk/national-programmes.

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An emergency laparotomy (emergency bowel surgery) is a surgical operation for patients, often with severe abdominal pain, to find the cause of the problem and treat it. General anaesthetic is used and usually an incision made to gain access to the abdomen. Emergency bowel surgery can be carried out to clear a bowel obstruction, close a bowel perforation and stop bleeding in the abdomen, or to treat complications of previous surgery. These conditions could be life-threatening. The National Emergency Laparotomy Audit was started in 2013 because studies showed this is one of the most risky types of emergency operation and lives could be saved and quality of life for survivors enhanced by measuring and improving the care delivered.

Executive Summary

Results from 2019–2020 – the Seventh Year of the National Emergency Laparotomy Audit

(For data about the impact of COVID-19 please refer to the Impact of COVID-19 on Emergency Laparotomy interim report).

Principal performance statistics are available here.

1. **21,846** patients who had emergency bowel surgery in England and Wales were included in the Year 7 audit

National **30-day mortality rate** has fallen to **8.7%** **(11.8% in Year 1)**

2. Improvements in care have reduced patients' average hospital stay from **19.2 days** in **Year 1** to **15.1 days** in **Year 7**

19.2 days
15.1 days

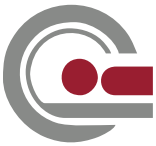
3. **85% of patients** now receive **a preoperative assessment of risk** **(up from 84% last year, and 56% in Year 1)**

4. **94.0% of patients with a high documented risk** had **consultant surgeon** input before surgery

75.5% of patients with a high documented risk had **consultant anaesthetist** input before surgery

5. **82.3%** of high-risk patients were admitted to critical care **(85.2% in Year 6)**

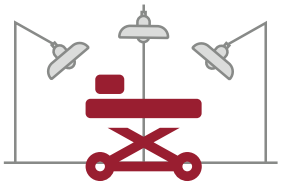
6. **92.5% of patients** received a preoperative CT scan (90.5% in Year 6)



65.9% of these patients had their scan reported by a **consultant radiologist** (62.3% in Year 6)

7. Both **anaesthetic and surgeon consultant presence** during surgery is at 90.1%, and **increased from 77.4% (Year 6) to 85.2% out of hours** (00:00 to 08:00)

8. **Almost 1/3 of patients** needing **immediate surgery** did not get to the operating theatre in the **recommended time frame**



9. **Time to antibiotics in patients with suspected sepsis** remains poor with **78.3%** not receiving antibiotics **within one hour**

10. **55.4% of patients** are over the age of 65 and **18.1% of patients** are over the age of 80.

Only 27.1% of patients 80 or over or 65 and frail had geriatrician input

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The NELA Project Team and Board would like to express their thanks to all staff at NHS Trusts and Welsh health boards who have collected and submitted data during what has been a particularly difficult year for healthcare services. Many staff collect and enter data in their own time without additional resources and we commend their dedication to improving patient care. Thank you to all NELA Anaesthetic and Surgical Leads for their leadership, hard work, and enthusiasm. The success of NELA over the last seven years, and the enormous benefits to patients through improved care, would not have been possible without your continued engagement.

The NELA Project Team and Board would also like to thank the members of the NELA Clinical Reference Group for helping to shape the dataset and report, in particular Dr Arturo Vilches-Moraga (British Geriatrics Society) and Dr James Stephenson (Royal College of Radiologists). Members of the NELA Project Board and Clinical Reference Group can be found here: nela.org.uk/NELA_Team#pt

Data used to compute case ascertainment and mortality for English hospitals has been obtained from NHS Digital

1 The NELA key messages and recommendations: improving outcomes and reducing complications

Care commissioners, executive and senior leadership teams are responsible for providing adequate resources, financial investment and infrastructure to facilitate the implementation of the recommendations made in this report.

Local clinical teams should continue to use data from the online NELA webtool, including the NELA exponentially weighted moving average (EWMA) mortality charts and quarterly reports, to monitor performance and patient outcomes.[1] The use of benchmarked data to raise concerns or challenge apparent gaps in care pathways is encouraged. Individual patient care can also be evaluated against recommended standards using the NELA 'Excellence and Exception' reports.

All clinical staff should keep up to date with topical NELA webinars, through social media (@NELANews) and via NELA newsletters.

KEY MESSAGE 1

High-risk patients undergoing emergency laparotomy do not consistently benefit from early recognition of acute abdominal pathology through Emergency Department (ED) triage, assessment, investigation and surgical review (Chapters 4.2 and 4.5).

Recommendation 1.1: Ensure NELA leads for Emergency Medicine are appointed with job planned time to work with Anaesthetic, Surgical and Radiology NELA leads. (Audience/s: Medical Directors).

Recommendation 1.2: Ensure inter-departmental pathways for patients with acute abdominal pathology:

- Incorporate triage, assessment, investigation and surgical review stages
- Are designed and implemented by multi-professional healthcare teams
- Are regularly evaluated, updated and supported by use of NELA data.

(Audience/s: ED, Anaesthetic and Surgical Clinical teams; local NELA team)

KEY MESSAGE 2

Patients with sepsis do not receive the recommended standard of care with respect to receiving antibiotic therapy and timely definitive source control through delays in surgical decision making and arrival in theatre for emergency laparotomy. Emergency laparotomy patients must remain a priority for clinical and theatre teams at all times (Chapter 4.4).

Recommendation 2.1: Follow national guidance for the management of patients with suspected abdominal sepsis (United Kingdom Sepsis Trust, 2019; NICE, 2016) and:

- Commence antibiotic therapy immediately, in line with guidance
- Review the timeliness of interventions by using local NELA data via the NELA webtool on a monthly basis
- Present this information at inter-departmental governance meetings.

(Audience/s: ED, Surgical and Anaesthetic clinical teams; local NELA teams)

[1]Access to the NELA webtool can be requested through your local NELA leads or by emailing the NELA helpdesk: NELA@rcoa.ac.uk.

Recommendation 2.2: Ensure rapid access to emergency theatres for all emergency laparotomy patients. (Audience/s: Theatre teams; Surgical and Anaesthetic clinical teams).

KEY MESSAGE 3

Patients undergoing emergency laparotomy do not consistently benefit from in-house consultant reporting of preoperative computerised tomography (CT) scans. Outsourcing of radiology reporting is common with associated increases in discrepancy rates (Chapter 4.3).

Recommendation 3.1: Ensure local workforce planning facilitates consultant reporting whenever possible. (Audience/s: Clinical Directors and Medical Directors).

Recommendation 3.2: Ensure appointment of NELA leads in Radiology with specific job planned time to perform this role. (Audience/s: Clinical Directors in Radiology and Medical Directors).

Recommendation 3.3: Implement in-house consultant supervision and co-validation of registrar reporting on preoperative CT scans before outsourcing radiology reports for external review. (Audience/s: Clinical Directors in Radiology and Medical Directors).

Recommendation 3.4: Ensure that reporting of CT scans is a standing item on review meetings, including radiology events and learning meetings (REALM). (Audience/s: NELA leads in Radiology).

KEY MESSAGE 4

As in the Year 6 report key messages, the care of frail, older patients remains a concern. Increased frailty is an independent marker of poor outcomes. Frail patients should be considered high-risk regardless of risk score. Despite this, consistent geriatrician input at hospital level remains variable but generally poor, with many older frail patients missing out on the care and expertise of geriatric and frailty teams (Chapter 7).

Recommendation 4.1:

- Formally assess and document frailty of patients over the age of 65
- Consider frailty scoring an integral part of a formal risk assessment.

(Audience/s: ED, Surgical and Anaesthetic Clinical Teams; local NELA teams)

Recommendation 4.2: Ensure geriatric medicine services have adequate job planned capacity to work with local NELA leads in the delivery of consistent consultant geriatrician input for older emergency laparotomy patients. (Audience/s: Medical Directors).

KEY MESSAGE 5

A small proportion of patients have a 'negative' emergency laparotomy which has no benefit to their treatment or diagnosis. These patients may have undergone unnecessary major surgery. The detrimental effect on all aspects of these patient's lives may be significant, and they have a high 30-day mortality at 13.7% (Chapter 5.2).

Recommendation 5.1:

- Audit 'negative' laparotomies quarterly and record a review of the rationale for surgery, and outcomes for these patients
- Feedback data and clinical learning points through departmental governance and quality improvement processes.

(Audience/s: Local surgical teams; local NELA leads)

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