NELA
National Emergency Laparotomy Audit

Eighth Patient Report of the National Emergency Laparotomy Audit

December 2020 to November 2021

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 (NELA) 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 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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Executive Summary

NELA National Emergency Laparotomy Audit

Results from 2020–2021 – the Eighth Year of the National Emergency Laparotomy Audit

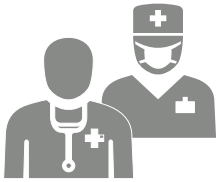
Principal performance statistics are available here.

1. **22,132** patients who had **emergency bowel surgery** in England and Wales were included in the Year 8 audit **from 173 hospitals**

2. Improvements in mortality have levelled off – **in-hospital mortality was 9.2%** compared to **9.1% in Year 7** and **9.6% in Year 6**

3. **86.8% of patients** received **a preoperative assessment of risk** (up from 85% last year, and 56% in Year 1)

4. **86.4% of patients with a high documented risk** had **consultant surgeon** input before surgery

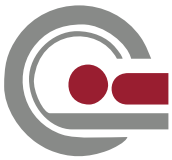


71.5% of patients with a high documented risk had **consultant anaesthetist** input before surgery

5. Patients with **sepsis suspected at time of arrival in hospital** waited a median of **15.6 hours from time of admission** until surgery

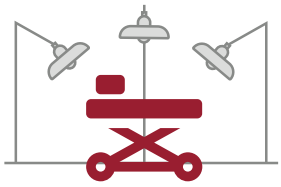
6. **Median time to antibiotics in patients with suspected sepsis** was **3.0 hours** from arrival in hospital

7. **91.8% of patients** received a preoperative CT scan (92.5% in Year 7)



26.3% of patients had their scan reporting outsourced (19.1% in Year 7 and 17.8% in Year 6)

8. Presence of both **anaesthetic and surgical consultants during surgery** in high-risk patients was **91.3% (90.2% in Year 7)**



9. **79.1% of high-risk patients** were admitted to critical care postoperatively (82.3% in Year 7); **15.7% of high-risk patients** were admitted to a normal ward

10. **55.3% of patients** were over the age of 65 and **17.7% of patients** were over the age of 80. **Only 31.8% of patients** 80 or over, or 65 and frail, had geriatrician input (26.8% in Year 7)

11. **Median length of stay** was **highest for those with an unplanned return to theatre** – 29 days – compared to 10 days for all patients

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on behalf of members of the National Emergency Laparotomy Audit Project Team on behalf of the Royal College of Anaesthetists. The members of the project team at the time of writing and data collection were:

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1 NELA Key Messages and Recommendations

KEY MESSAGE 1

In Year 8 of the audit, 22,132 adults required emergency laparotomy (emergency bowel surgery) in England and Wales.

- Over half were aged over 60
- Half were assessed as high-risk (with a 30-day mortality risk of 5% or greater)
- Half were assessed as requiring surgery within six hours of decision to operate
- A quarter were assessed as having sepsis on arrival at hospital, rising to a third at the time of decision to operate
- More than half received postoperative critical care
- 9.2% of patients died in hospital. Median length of stay amongst survivors was 10 days

Recommendations

1.1 Hospitals should continue to engage further with NELA data collection. In particular, make use of real-time data and resources available from NELA to drive clinical and service quality improvement. These include quarterly hospital, regional and national data reports; excellence and exception case-reporting tools; and process measure and mortality monitoring tools available via the NELA website.

1.2 Funded time within consultant job plans should be available to support invaluable work and contributions by members of clinical teams in collecting data, and coordination and service improvement overseen by NELA surgical, anaesthetic, radiology and emergency medicine local clinical leads. This requires trust/health board recognition of the value of this work.

1.3 Trusts and health boards should support NELA data collection and analysis with funded audit and governance assistance.

(Audience/s: Trust Boards; Medical Directors; Clinical Directors; hospital clinical audit departments; and consultants in anaesthesia, critical care, surgery, radiology, emergency medicine, and elderly care)

KEY MESSAGE 2

Most patients (91.8%) who underwent emergency laparotomy (emergency bowel surgery) benefitted from preoperative computerised tomography (CT) scanning. A significant proportion (26.3%) of scans were reported using outsourced radiology expertise – this has been highlighted previously as increasing the risk of discrepancy between CT reports and findings at surgery.

Recommendations

2.1 Ensure NELA leads for radiology are appointed in each department, with specific job planned time to facilitate coordination of multidisciplinary review meetings and radiology events and learning meetings (REALM). Conclusions should be shared where applicable with providers of outsourced reporting services.

(Audience/s: Medical Directors and Clinical Directors of radiology and surgery)

KEY MESSAGE 3

Patients experienced long delays from time of arrival at hospital to time of surgery, including those with sepsis suspected at arrival in hospital (median 15.6 hours to theatre). Delays were largely during the assessment, diagnostic and decision-making pathways rather than following decision to operate.

Recommendations

3.1 Multidisciplinary teams in emergency, surgical, perioperative, acute and critical care should work to produce and implement locally agreed optimised pathways of care, with the aim of streamlining diagnosis with as little delay for patients as possible.

(Audience/s: Clinical Directors; consultant surgeons, emergency physicians, radiologists, anaesthetists and intensivists, together with senior nursing colleagues in their respective departments and with support from their respective management teams)

KEY MESSAGE 4

Many patients (77.7%) with suspected sepsis on arrival did not receive antibiotics within an hour of arrival in hospital. There was wide variation between hospitals in delays before antibiotics were given – median time to administer antibiotics in this group of patients was 3.0 hours [interquartile range: 1.2–6.8 hours].

Recommendations

4.1 Clinical teams should be supported by management teams to work together to identify where and why existing standards around antibiotic administration are not being met.

4.2 Clinical teams should establish and introduce locally agreed pathways for administration of antibiotics preoperatively for those with suspected intra-abdominal infection or sepsis, following guidance around timeliness from the Academy of Medical Royal Colleges and the Surviving Sepsis Campaign.

4.3 Clinical/nursing teams should ensure that locally agreed pathways support the administration of antibiotics, without delay, at the time of prescribing.

(Audience/s: Clinical Directors; consultant surgeons, emergency and general physicians; microbiologists, anaesthetists and intensivists, together with senior and specialist nursing colleagues, and with support from their respective management and prescribing/pharmacy teams)

KEY MESSAGE 5

One in five high-risk patients did not receive postoperative care in a critical care unit.

Recommendations

5.1 Surgeons, anaesthetists and intensivists should ensure a formal assessment of mortality risk has been performed around the time of decision to operate, taking into account the significant impact of frailty.

5.2 Clinical teams should not hesitate to refer a high-risk patient for postoperative monitoring in critical care, even if not currently critically ill.

5.3 Trusts/health boards should ensure critical care capacity is able to meet demand. Any critical care capacity shortfall should be reviewed as part of departmental and hospital-level clinical governance.

(Audience/s: Executive Boards; Medical Directors; Clinical Directors; consultant and training grade surgeons, anaesthetists and intensivists, together with their respective management teams and senior nursing colleagues)

KEY MESSAGE 6

Frailty doubled the risk of mortality amongst those patients aged 65 and over (13.0% vs 5.9%). However, review by a member of the elderly care team was associated with a significant reduction in mortality (5.9% vs 9.5% amongst non-frail patients, and 13.0% vs 22.3% amongst frail patients). Despite some units showing excellent performance, elderly care involvement in the care of elderly and frail patients following emergency laparotomy is not routine practice in many hospitals.

Recommendations

6.1 A formal assessment of frailty should be performed for all patients aged 65 or over.

6.2 Surgeons, anaesthetists and intensivists should ensure frailty has been taken into account when assessing the mortality risk of their patients as the NELA risk score does not take frailty into account.

6.3 Trusts/health boards should work towards improving capacity for experts in elderly care to review all elderly, frail and vulnerable patients postoperatively. This liaison work on surgical wards should happen on a systematic and consistent basis rather than in an ad hoc manner. In many hospitals this goal is likely to require specific trust/health board support and funding.

(Audience/s: Executive Boards; Medical Directors; Clinical Directors in surgery and elderly care; geriatricians, surgeons and anaesthetists, together with their respective management and senior nursing colleagues)

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