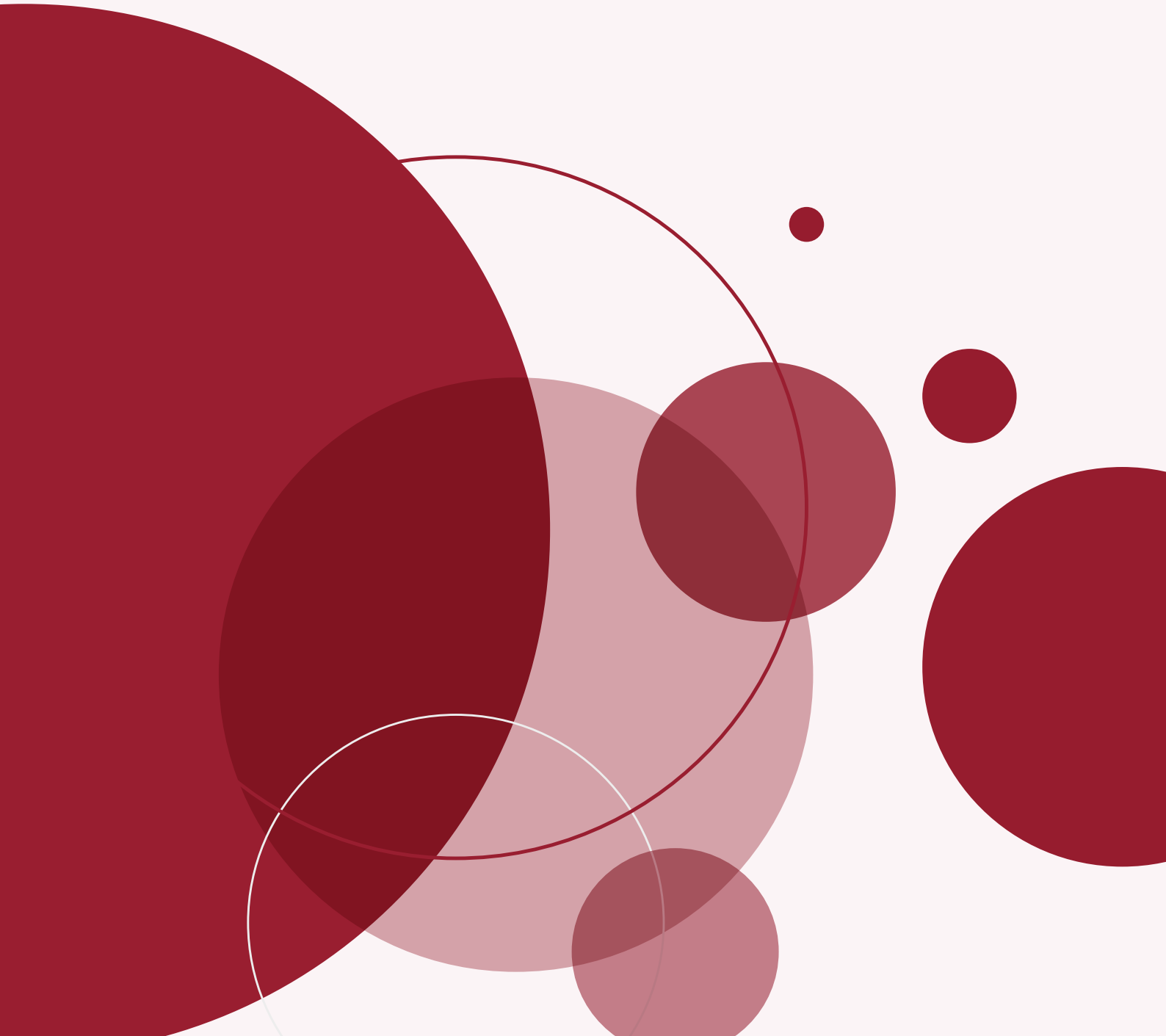
NELA+

RCoA Royal College of Anaesthetists | CR&I Centre for Research and Improvement | Royal College of Surgeons of England | HQIP Healthcare Quality Improvement Partnership

Tenth Patient Report of the National Emergency Laparotomy Audit

April 2023 to April 2024



Contents

ISBN: 978-1-900936-39-2

NELA Project Team. Tenth Patient Report of the National Emergency Laparotomy Audit.
Royal College of Anaesthetists (RCoA) London 2025.

The National Emergency Laparotomy Audit is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and funded by NHS England and the Governments of Wales, Northern Ireland and the Isle of Man as part of the National Clinical Audit and Patient Outcomes Programme.

All enquiries in regard to this document should be addressed to: The National Emergency Laparotomy Audit, Royal College of Anaesthetists, Churchill House, 35 Red Lion Square, London WC1R 4SG
020 7092 1676 | nela@rcoa.ac.uk

Report compiled by the project team of NELA, and in particular:

Mr Aiman Al-Eryani, RCoA Senior Data Analyst
Dr David Saunders, Consultant Anaesthetist and National Anaesthetic Lead for NELA
Ms Christine Taylor, RCoA NELA Project Manager

National Emergency Laparotomy Audit (NELA)

Royal College of Anaesthetists, Churchill House, 35 Red Lion Square, London WC1R 4SG

data.nela.org.uk

Information correct as at September 2025.

Design and layout by the Royal College of Anaesthetists.

Back to Contents >

1 OVERVIEW

This is the tenth annual report of the National Emergency Laparotomy Audit (NELA) and it examines care received by 23,560 NHS patients in 176 hospitals across England and Wales admitted for emergency laparotomy (emergency bowel surgery, EmLap) between 1 April 2023 and 23 April 2024.

The report shows that clinical teams in many different hospitals were able to provide high quality care against a challenging background, with demand for access to emergency care frequently exceeding capacity.[1] **30-day mortality fell to the lowest level in ten years of audit (8.1% compared to 11.7% in Year 1), and postoperative length of hospital stay fell back to a median of 10 days (compared to 11 days in Year 9**). This reduction in mortality represents around 1,150 fewer deaths per year amongst the estimated 32,000 patients who undergo emergency laparotomy, whilst a fall in median length of stay of one day could represent potential annual financial savings of more than £10million.[2]

There was evidence of wide variation between hospitals in both processes and outcomes of healthcare: more remains to be done to reduce disparity and ensure all patients benefit from the highest standards of practice. Key messages and specific recommendations are within the Line-of-Sight table and Executive Summary.

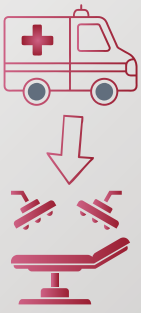
DIAGNOSTIC IMAGING

22,024 (93.5%) patients had a CT scan preoperatively (see Table 7.3). Of **16,538** with the most time-critical suspected pathologies, **98.7%** had a CT report delivered by a senior radiologist and around half of these had a CT report within an hour of the scan (see Table 7.1). In **24.7%** of patients, direct communication took place between referring and reporting teams. **12.4%** of patients had a CT scan and report that met all three sub-components of best practice (see Table 7.1).

INFECTION MANAGEMENT

Only **15.4%** of patients with suspected sepsis, and **36.8%** of patients with suspected infection received antibiotics within timeliness targets of one or three hours, respectively. In both groups, **around 25%** of patients **waited more than 5.8 hours** until they first received any antibiotics (see Table 10.1).

TIMELINESS OF ARRIVING IN THEATRE FROM ARRIVING AT HOSPITAL



Only **1,381 (8.4%)** patients with the most time-critical suspected pathologies arrived in theatre within the six-hour target. **75% waited** more than **10.2 hours** before arriving in theatre (see Table 9.1.1).

RISK ASSESSMENT

19,160 (81.3%) patients had a formal risk assessment preoperatively, and **16,328 (69.3%)** had a further evaluation of mortality risk at the end of surgery.

CONSULTANT DELIVERED CARE

12,456 (52.9%) patients were high-risk. Consultant surgeon presence in theatre for these patients was **96.4%** and presence of a consultant anaesthetist was **92.3%** (see Table 6.2).

CRITICAL CARE FOR HIGH-RISK PATIENTS

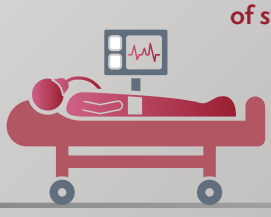
77.6% of high-risk patients were admitted directly to critical care postoperatively (see Table 11.1).

SPECIALIST CARE FOR OLDER PATIENTS AND THOSE LIVING WITH FRAILTY

5,918 patients were aged 80 or older, or 65 or older and living with frailty. **35.5%** of these received specialist postoperative input into their care (see Table 12.2), which is associated with both a reduction in mortality, and, when delivered in hospitals with sufficient resources to provide this service to the majority of older patients, a reduction in length of stay.

POSTOPERATIVE LENGTH OF STAY

8.1% of patients died within 30 days of surgery and median **postoperative length of stay** for survivors was **10 days**.



Churchill House, 35 Red Lion Square, London WC1R 4SG
020 7092 1676 nela@rcoa.ac.uk data.nela.org.uk @NELANews

RCoA Royal College of Anaesthetists | CR&I Centre for Research and Improvement | Royal College of Surgeons of England | HQIP Healthcare Quality Improvement Partnership

2 Introduction

An overview of the audit methodology can be found here.

Important changes made for Year 10

- NELA standards of care were reviewed and updated prior to the commencement of the audit year.
- Guidance from the Royal College of Surgeons of England (RCS)[3] categorises emergency patients by potential clinical urgency (Table 2.1 below). Our analysis has focussed mainly on the 'RCS Immediate' group when assessing standards for CT scanning and reporting, and timeliness of definitive surgery. A complete grouping of indications and findings that comprise each metric can be found here.
- NELA updated the Parsimonious Risk Score (PRS) algorithm in 2023. The PRS uses 13 variables rather than the previous 22 and shows good correlation with observed mortality risk.[4]
- In April 2023, NHS England amended the Emergency Laparotomy Best Practice Tariff to financially incentivise improvements for older patients and those living with frailty following emergency laparotomy.

Table 2.1 Categorisation of diagnostic and management urgency according to NELA-relevant suspected abdominal pathology at the time of arrival at hospital. Adapted from the Royal College of Surgeons High-Risk General Surgical Patient 2018[3]

RCS Immediate		RCS Non-Immediate		RCS Non-Operative
■ Haemorrhage ■ Tender small or large bowel obstruction ■ Incarcerated/ strangulated hernia ■ Pneumoperitoneum ■ Sepsis ■ Iatrogenic injury ■ Anastomotic leak ■ Peritonitis ■ GI perforation	■ Necrosis ■ Ischaemia/ infarction ■ Acidosis	■ Abdominal wound dehiscence ■ Abdominal compartment syndrome ■ Planned relook ■ Non-tender small or large bowel obstruction ■ Gastric outlet obstruction ■ Hiatus hernia/para-oesophageal hernia ■ Volvulus ■ Internal hernia	■ Pseudo-obstruction ■ Intussusception ■ Obstructing incisional hernia ■ Foreign body ■ Phlegmon ■ Abdominal abscess ■ Intestinal fistula ■ Colitis	■ Self-limiting lower GI bleeding ■ Some more seriously ill patients who due to extremes of co-morbidity, frailty or sickness severity would not benefit from surgery ('NoLap' group)

3 Key messages and recommendations

Key Message 1a: Timeliness of diagnostic pathway following arrival at hospital

The urgency with which a patient needs initial assessment and management depends upon the pathology with which they present. The diagnostic pathway is complex, and patients usually present with symptoms and signs that are non-specific, with a wide differential diagnosis. Many patients experience prolonged delays during the initial part of their admission (median interval between arriving at hospital and arriving in theatre is almost 22 hours, and 75% of those with the most time-critical pathologies wait more than 10 hours to arrive in theatre). Until proven otherwise, patients with even minor derangements of physiology, combined with symptoms and signs compatible with common surgical diagnoses such as intra-abdominal sepsis, bowel perforation, ischaemia or obstruction, should be assumed to have an urgent need for definitive management including surgery.

Key Message 1b: Timeliness of antibiotic administration in patients with suspected infection and sepsis of surgical origin following arrival at hospital

Patients with sepsis or infection should receive antibiotics within 1 or 3 hours of recognition, respectively. Only about a third of patients with suspected infection received antibiotics within 3 hours (25% waited at least 5.8 hours). For those with suspected sepsis or septic shock, only 15.3% met the target of 1 hour (25% waited more than 5.8 hours). For either clinical condition, performance varied widely between hospitals.

Recommendation 1:
Royal College of Anaesthetists, Royal College of Emergency Medicine, Royal College of Nursing, Royal College of Radiologists, and Royal College of Surgeons of England – should continue to work together to update and develop consensus pathways of care for patients who might require emergency abdominal surgery. Pathways should contain statements around seniority of key decision makers and ideal timeliness of key steps including antibiotic administration and timing of definitive surgery.

Key Message 2: Direct communications between requesting and reporting teams around CT scanning

Direct communication by telephone or in person between requesting clinician and reporting radiologist following urgent CT scanning should happen if the findings have clinical implications for key decisions such as urgency of surgery. 98.7% of 16,538 'RCS Immediate' patients had a CT report delivered by a senior radiologist, but in only 4,077 (24.7%) of these was there evidence of direct communication between requesting clinician and reporter. All involved in requesting or reporting urgent CT scans need to remain cognisant of the importance of two-way discussions, especially when the patient's condition or the CT predicted findings suggest the patient has developed time-critical pathology.

Recommendation 2:
Royal College of Anaesthetists, Royal College of Emergency Medicine, Royal College of Radiologists, Royal College of Surgeons of England – should highlight current guidelines around the need for effective two-way direct communication between referrer and reporter whenever the patient's condition or CT predicted findings suggest the patient has developed time-critical pathology.

Key Message 3: Critical care bed capacity

High-risk patients are not always admitted to critical care following surgery. 16.5% of high-risk patients received standard ward level care following surgery and 4.3% of these died in hospital. Current guidance states that patients at high risk of dying after surgery should be admitted and observed in a critical care unit. There are about 61 NELA cases per 100,000 adult population per year, and over half are high-risk. Thus 30 to 40 critical care admissions related to emergency laparotomy per 100,000 adult population per year should be anticipated by hospitals and commissioners.

Research is needed to understand why admission rates to critical care vary between hospitals and whether alternative and cost-effective enhanced care models might provide sufficient support for certain patients.

Recommendations:
3a: NHS England, Integrated Care Boards, and Welsh Health Boards – should evaluate variations in critical care bed capacity for patients undergoing emergency laparotomy, factoring a predicted need of 30-40 EmLap-related critical care admissions per year per 100,000 adult population served.

3b: National Institute for Health and Care Research – should consider commissioning research into optimum placement and management of patients at the margins of risk categories to better understand potential early interventions that could mitigate the risk of dying after surgery.

Key Message 4: Specialist care for older patients, Best Practice Tariff, and incentivising better postoperative care for older patients

Specialist care for older patients and those living with frailty is associated with a reduction in mortality after surgery. In addition, where hospitals can provide reliable expert care for older patients, there was an association with a shorter length of postoperative stay. The NHS England Emergency Laparotomy Best Practice Tariff financially incentivises more comprehensive provision of specialist care, but demand for such expertise in many hospitals often exceeds capacity.

Recommendation 4:
Royal College of Anaesthetists, Royal College of Nursing, Royal College of Physicians, Royal College of Surgeons of England and British Geriatrics Society – should work together across the blended workforce to develop common competency-based training and education around optimising perioperative care for older patients and those living with frailty, such that the unmet need for specialist care can be more reliably delivered.

Key Message 5: Variation in processes and outcomes of care

Widespread variation in delivery of key processes of care for emergency laparotomy patients is seen in different hospitals across both England and Wales. Challenges and potential solutions will likely vary between units.

Key Message 6: Apparent differences in timeliness of care for female and male patients

Whilst standards of care around CT scanning, consultant-delivered care in theatre and admission to critical care after surgery appear to be unaffected by the biological sex of the patient, there is an association between female sex and longer delays from arriving at hospital and arriving in theatre. Reasons for this apparent association are not clear and warrant further enquiry.

4 Who has an emergency laparotomy?

Year 10 data is available for 23,560 patients who underwent emergency surgery having been admitted between 1 April 2023 and 23 April 2024. 51.5% were female. 54.5% were aged 65 or over. 52.9% were high-risk patients at the time of surgery, as defined by frailty status, clinical judgment, missing risk assessment, or calculated risk score (Table 4.1).

5 Case ascertainment

Of 179 hospitals identified as performing at least 10 eligible operations, 172 (96.1%) submitted data to NELA. Overall case ascertainment was 72.5% (Table 5.1.1). There are around 62 NELA-eligible episodes of care per 100,000 adult population (Table 5.1).

Run charts showing historic and contemporaneous data, including case ascertainment, are available at hospital- and national-level on the NELA standards metrics and the NELA annual RAG table and are shown in Figure 5.1.

6 Main findings

NELA-adopted standards of care are available here, alongside the calculations used to determine compliance with the relevant metrics. Summary data for these main standards of care are shown in Table 6.1. This report does not explore in depth the metric of consultant presence in theatre as this is now well established; findings can be found in Table 6.2, however. Individual hospital performance indicators rated Red, Amber, Green (RAG) are available here.

QI suggestion: Widespread variation in delivery of key processes of care for emergency laparotomy patients is seen in different hospitals across both England and Wales. Challenges and potential solutions will likely vary between units. Driving local service development requires strong engagement with NELA, which in turn requires locally funded clinical leadership time.

7 Radiology

Audit Standard: Proportion of patients requiring immediate surgery who had a CT scan that was reported by a senior radiologist within one hour and communicated with the surgical team before surgery.

12.4% of patients met this composite standard. 98.7% of patients with suspected 'RCS Immediate' pathology had a preoperative CT scan reported by a senior radiologist, but there is poor compliance around direct communications of CT findings between referring and reporting teams (Table 7.1 on next page).

Direct communications are a clear recommendation from the RCS (see text box below) but take place more commonly following in-house reporting of CT scans compared to outsourced scans (Table 7.2). A breakdown of subspecialty interest and seniority of reporting radiologist is shown in Table 7.3.

For high-risk general surgery patients being considered for major surgery, there should be joint preoperative discussion between senior surgeon and senior radiologist (ST3 and above), either in person or by telephone, followed by postoperative comparison of imaging and operative findings. Best care includes preoperative discussion between a consultant surgeon and an in-house consultant radiologist (RCS The High-Risk General Surgical Patient, 2018).

QI suggestion: Surgical, medical, emergency medicine and radiology teams should ensure effective communication between requesting and reporting teams takes place, rather than relying on availability of written reports in isolation. Requesting teams must remain cognisant of the need to seek prompt expert radiology opinion following urgent CT scanning whenever there is an apparent mismatch between a patient's clinical condition and the CT report, especially when this information is critical to whether surgery should be undertaken.

QI suggestion: If there has been direct communication between referring and reporting teams, this should be included in the text of the CT report, ensuring documentation of best practice.

Table 7.1 Compliance with CT scanning standard among 'RCS Immediate' patients

Urgency categorisation	CT report by ST3+ radiologist, including consultant or outsourced service Number (%)	CT report within one hour of CT scan Number (%)	Direct communication by phone or in person between referring clinician and reporting radiologist Number (%)	All 3 subcomponents of composite measure met Number (%)
'RCS Immediate' (n=16,538)	16,316 (98.7 %)	8,111 (49.0%)	4,077 (24.7%)	2,058 (12.4%)

Excludes patients who did not have a CT, or who had a CT prior to admission.

8 Risk assessment

Audit Standard: Proportion of patients in whom a risk assessment was documented preoperatively AND postoperatively.

81.3% of patients had a formal risk assessment preoperatively, and 69.3% had a further evaluation of mortality risk postoperatively. There was wide variation between hospitals in compliance with this standard (Figure 8.1).

Other conditions that may confer additional risk not included in the NELA Parsimonious Risk Score (PRS) (eg nutrition, respiratory or neurological disorders) should be considered by clinical teams. Patients can be categorised as 'high-risk' after clinical assessment irrespective of PRS.

QI suggestion: Local teams should quality-assure recorded ASA grades for all NELA patients. An inappropriately low or high ASA grade in the PRS may result in under- or overestimation of mortality risk and as such, patients may not receive appropriate levels of postoperative care.

A formal assessment of frailty is an adopted standard of care for all patients aged 65 or older.[3] 73.6% of patients aged 65 or over had a formal assessment of frailty recorded preoperatively. Patients living with mild frailty (as defined by a Rockwood Clinical Frailty Scale [CFS] of 5 or more) should be categorised as high-risk, regardless of the PRS.

Mortality risk and observed in-hospital mortality both rise with age and CFS (see Table 8.1 and Section 12).

A lack of risk assessment does not correlate with a lack of clinical risk,[5,6] and similarly, a lack of frailty assessment also does not correlate with a lack of clinical risk. Observed mortality in patients without a formal assessment of frailty was 11.2%: more than double that of 'non-frail' patients.

9 Timeliness of arrival in theatre

Audit Standard: Proportion of patients with 'RCS Immediate' pathology arriving in theatres within 6 hours of arrival at the hospital/Emergency Department.

NELA uses two sources of data to categorise patients as 'RCS Immediate': predicted pathology based on CT and clinical assessment, and surgical findings. 16,521 (70.1%) patients were predicted to have 'RCS Immediate' pathology at the time of risk-assessment using clinical and radiological judgements; this fell to 8,869 (37.6%) based on surgical findings. When auditing timeliness of arriving in theatre from time of arriving at hospital, NELA uses the former predicted indications list to derive the denominator group.

Only 1,381 (8.4%) 'RCS Immediate' patients arrived in theatre within 6 hours of arrival at hospital, and 75% of patients spent more than 10.2 hours between arriving at hospital and arriving in theatre (Table 9.1.1). This metric proved difficult for all hospitals to achieve in Year 10 (Figure 9.1).

Most 'RCS Immediate' patients are admitted under the care of general surgery, but for the 8.1% admitted under the care of general medicine, there was an increased delay to arrival in theatre (Table 9.1 below and Table 9.1.1).

QI suggestion: Sites should review the appropriateness of EmLap cases admitted under medicine and investigate any potential avoidable delays in the time to theatre from time of arrival in hospital.

Table 9.1 Median delays between arriving at hospital, CT scanning and arrival in theatre by admitting specialty for patients with predicted 'RCS Immediate' pathology. Full findings by admitting specialty can be found in Table 9.1.1

Specialty	Count	Arrival until CT Report Median [IQR] (hours)	Arrival until theatre Median [IQR] (hours)
General surgery	13,966	6.6 [4.5–10.2]	19.0 [9.5–46]
General medicine	1,343	27.8 [10.1–91.5]	66.2 [26.8–150.0]

Only includes non-elective admissions.

Table 9.2 shows that by National Confidential Enquiry into Patient Outcome and Death (NCEPOD) urgency categorisation from time of decision to operate, most patients arrived in theatre within the stated timescales as in previous years.[5,6] Across all NCEPOD categories, around 5% of cases were delayed beyond the original intended urgency (Table 9.3).

10 Management of patients with intra-abdominal infection

Audit Standard: Proportion of patients with suspected infection or sepsis who have antibiotic administration within the correct clinical timeframe.

As per national guidelines,[3,7] patients with sepsis or infection should receive antibiotics within 1 or 3 hours of recognition, respectively. Only about a third of patients with suspected infection received antibiotics within 3 hours (25% waited at least 5.8 hours). For those with suspected sepsis or septic shock, only 15.3% met the target of 1 hour (25% waited more than 5.8 hours) (Table 10.1). For either clinical condition, performance between hospitals varied widely (Figure 10.1, Figure 10.2).

Surgical source control (for infection/sepsis/septic shock) is an essential step in patient management and should be underway within 6 hours of arrival at hospital.[3,7] This 6-hour target for those with suspected infection or sepsis at time of arrival at hospital is met in only 12.5% and 15.3% of RCS 'immediate' patients respectively (Table 10.2 below). As seen in Figure 10.3 and Figure 10.4, performance varies widely between hospitals.

Table 10.2 Intervals between arriving at hospital and arriving in theatre for RCS 'immediate' patients with suspected infection, sepsis or septic shock

Category at time of arrival at hospital	Median [IQR] interval between arriving at hospital and arriving in theatre (hours)	Proportion of patients meeting 6-hour target. Number (%)
Suspected infection (n=7,389)	16.0 [8.2-45.0]	923 (12.5)
Suspected sepsis (n=4,051)	15.5 [7.8-52.8]	618 (15.3)
Suspected septic shock (n=1,199)	12.8 [6.2-46.5]	268 (22.4)

11 Postoperative admission to critical care

Audit Standard: Proportion of high-risk patients admitted directly to critical care postoperatively.

There is wide variation between hospitals in the proportion of high-risk patients admitted to critical care (CC) (Figure 11.1). Overall, 77.6% of high-risk patients (Table 11.1) were admitted directly to CC postoperatively.

High-risk patients who were discharged to the ward had an observed mortality rate of 4.6% (Table 11.2). Figure 11.2 shows how placement decisions vary by risk profile. This variation could represent nuanced and complex decision making by clinical teams balancing demand and supply of CC resources.

The UK has fewer CC beds than in comparable countries.[8] Ratios of CC to ward beds vary between hospitals and are usually greater in larger hospitals that provide highly specialised services such as neurosciences.[8] As there is competition for these resources between high-risk elective and emergency surgery patients, as well as critically ill patients from other specialties, making judgements about which patients should be admitted to CC can be difficult. Hence, NELA recommend formal assessments of mortality risk using the PRS and CFS as important steps in recognising the high-risk nature of the proposed surgery and the presence of, or potential for, critical illness.

A small number of patients (257) immediately received end of life care following surgery (Table 11.3). For 155 patients admitted to CC, median CC length of stay was 2 days.

Median CC length of stay (LOS) is shown in Table 11.4. NELA does not collect data around interventions provided to patients in CC, but it is possible that the median CC LOS for low-risk patients of 3 days is influenced by limited capacity of step-down ward beds.

12 Care of older patients and those living with frailty

Audit standard: Proportion of patients aged 65 or older and frail, or aged 80 and older who receive postoperative assessment and management by a member of a perioperative team with expertise in comprehensive geriatric assessment.

Of 12,839 patients aged 65 or older, 9,451 (73.6%) had a formal assessment of frailty recorded following admission. 3,393 (35.9%) had a CFS of ≥5 and a further 16.5% had a CFS of 4 (Table 12.1). The presence of frailty (or a vulnerability to frailty) was associated with an increased risk of dying following surgery (Table 12.1). Those patients aged 65 or older who did not have a frailty assessment recorded had a mortality rate of 11.2%, almost double those without frailty (CFS 1–3).

Of 5,918 patients aged 65 or older and living with frailty, or over 80 regardless of frailty status, 2,102 (35.5%) received specialist input following surgery from a member of the perioperative frailty team, usually by a geriatrician-led service (Table 12.2 below). As demonstrated in previous NELA analysis, this specialist input was associated with reduced mortality, with an increasingly clear association as age and frailty increased (Table 12.3). The ability of hospitals to provide specialist care varies greatly (Figure 12.1).

Table 12.2 Specialist postoperative frailty review for patients 65 or older and living with frailty, or patients 80 or older

Specialist review	Number of patients	Proportion of all relevant patients (%)
Geriatrics service team-member	1,841	31.1
Perioperative medicine service team-member with established referral pathway to geriatrics	261	4.4
No specialist review	3,816	64.5

Previous NELA analysis[6] has shown an apparent association between specialist input and increased postoperative length of stay (LOS). Causative factors for this are not known, eg complex medical needs or discharge planning processes. In Year 10, we have examined postoperative LOS in those hospitals that reliably provide expert care for older patients compared to those with more reactive services. Median postoperative LOS is shorter for patients in hospitals with high systematic rates of review compared to those who cannot offer this service, regardless of whether or not the patient is seen by a specialist (Table 12.4).

13 Outcomes

Length of Stay

The median postoperative LOS for patients who survived to hospital discharge was 10 days, but this varies between hospitals (Figure 13.1). As shown previously, postoperative LOS varies by age, frailty scale, risk profile, findings in theatre and presence of absence of complications (Table 13.1).

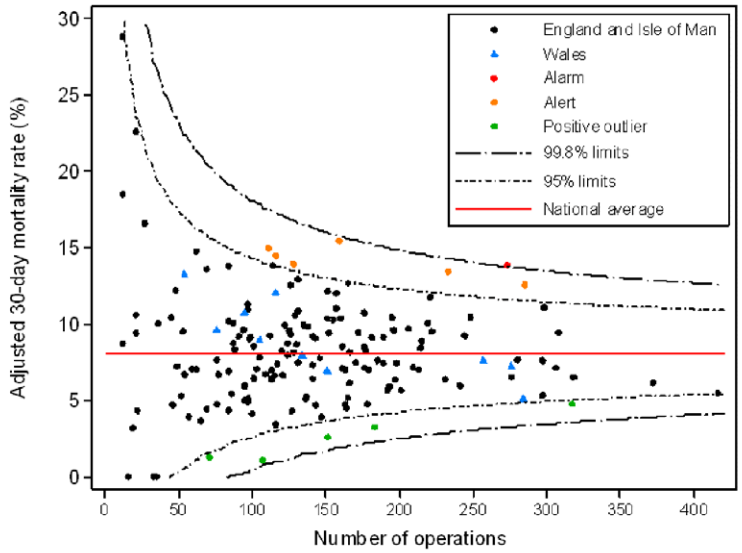
Mortality

30-day mortality was 8.1% (9.0% in Year 9). The decrease from Year 9 to Year 10 was statistically significant (adjusted odds ratio: 1.103; 95% confidence interval: 1.028–1.184). Figure 13.2 shows the change in mortality since NELA's inception.

Outlier analysis

The funnel plot for outlier identification was based on 167 hospitals in England, Wales, and the Isle of Man who submitted data on at least 10 operations. Nine hospitals with fewer than 10 reported operations were excluded from this analysis. The funnel plot using hospitals' risk-adjusted mortality rates is shown in Figure 13.3 below.

Figure 13.3 Funnel plot of risk-adjusted 30-day mortality in year 10 according to number of operations



Hospital level mortality

The NELA outlier policy defines three different categories of potential outliers based on mortality:

- Alert-level: hospitals with a risk-adjusted mortality rate above the 95% control limit
- Alarm-level: hospitals with a risk-adjusted mortality rate above the 99.8% control limit
- Double-alert level: hospitals flagged as alert for the current year, and also an alert or alarm in either of the previous two consecutive reporting cycles.

Hospitals that trigger alarm- or double-alert status are required to undergo formal review of performance. In NELA Year 10, of the 167 hospitals included in the outlier identification analysis (funnel plot), five hospitals triggered alert status, one triggered double-alerts status, and one triggered alarm status. All of these hospitals were in England. The hospitals that triggered alarm- and double-alert status undertook a review of their cases. After review, outlier status was confirmed for both hospitals. All hospitals that triggered alerts have been notified in advance of publication of this report and in accordance with NELA's outlier policy. Individual hospital outcomes are publicly available on the NELA website.

Alarm-Level Outlier

- Hull Royal Infirmary.

Double-Alert-Level Outlier

- Pinderfields Hospital.

Hospitals with the best outcomes

There were five hospitals with a risk-adjusted mortality between the lower 95% and 99.8% control limits. All five were located in England. NELA considers those hospitals with both a case ascertainment greater than 90% and a risk-adjusted mortality below the 95% control limit to be positive outliers. In NELA Year 10, Norfolk and Norwich University Hospital and Stepping Hill Hospital met these criteria, indicating that these hospitals have some of the best outcomes in England and Wales.

14 Health inequalities (deprivation and biological sex)

As part of the analysis for Year 10, we have examined key processes of care by sex. We found no evidence of differences by sex for CT scanning and reporting (Table 14.1) or consultant surgeon and anaesthetist presence in theatre (Table 14.2). Slightly more high-risk male patients were admitted to critical care than female high-risk patients (Table 14.3 and Table 14.4). Female patients of all age groups appear to have a more prolonged pathway of care between arrival at hospital and decision-to-operate (Table 14.5 and Table 14.6 below, Table 14.7, Table 14.8, Table 14.9 and Figure 14.1). Deprivation analyses can be found in Figure 14.2 (risk assessment), Figure 14.3 (CT scanning), Figure 14.4 (antibiotics-infection), Figure 14.5 (antibiotics-sepsis/shock), Figure 14.6 (consultant presence in theatre), Figure 14.7 (frailty assessment), Figure 14.8 (critical care admission), Figure 14.9 (geriatrician input) and Figure 14.10 (in-hospital mortality). As deprivation quintiles are not directly comparable between nations, analysis has been performed separately. In both England and in Wales, there was no apparent disparity in processes or outcomes of care for patients of varying deprivation quintiles.

Table 14.5 Time to theatre for 'RCS Immediate' patients by sex

Sex	Median preoperative time	Denominator
Female	23 hours [11–60.7]	8,062
Male	20.1 hours [9.4–52.8]	7,514

Table 14.6 Proportion of non-elective and 'RCS Immediate' patients meeting Timeliness to Theatre standard by sex

Sex	Denominator	n (%)
Female	8,534	590 (6.9)
Male	7,987	791 (9.9)

National Emergency Laparotomy Audit (NELA)
Royal College of Anaesthetists, Churchill House, 35 Red Lion Square, London WC1R 4SG

data.nela.org.uk

Information correct as at September 2025

Design and layout by the Royal College of Anaesthetists