

Principle standards reported by the National Emergency Laparotomy Audit (NELA)

Data is collected to report on a variety of standards. The decision over whether to include certain standards is guided by consideration of its role in improving outcomes for patients, quality assurance and quality improvement, balanced against burden of data collection. Advice is also taken from NELA's Clinical Reference Group of stakeholder professionals and lay members.

As used throughout this document, 'immediate surgery' includes any laparotomy undertaken to treat suspected diagnoses such as generalised purulent or faeculent peritonitis, GI perforation or infarction, uncontrolled haemorrhage (GI or intra-abdominal), strangulated hernia, tender small or large bowel obstruction, or sepsis. 'Non-immediate surgery' includes surgery undertaken to treat suspected diagnoses such as non-tender small or large bowel obstruction and infection without sepsis, for example diverticulitis. (derived from [Royal College of Surgeons: the High-Risk General Surgical Patient: Raising the Standard](#) [RCS HRGSP 2018])

Workstream	Standard benchmarked by NELA	Details of the source of standard reported	Source of Standards	Threshold	Associated Process Measures	Registry Questions
CT Scanning and Reporting	Proportion of patients who had a CT scan that was reported by senior radiologist and communicated with the team in the correct time scale before surgery	For patients requiring immediate surgery CT scanning should be undertaken immediately. CT results should be reported by a senior radiologist (ST3 and above) within one hour of being undertaken, regardless of urgency of request.	RCS HRGSP 2018 p33, p50	Green: ≥85% Amber: 55 – 84% Red: <55%	Proportion of patients who receive (or should have received) immediate surgery (as per RCS definitions of immediate surgery) who had a CT scan that was reported by senior radiologist (ST3 or above) within one hour of being undertaken	Indications for surgery [Q3.24] Findings at surgery [Q5.5] Time of CT request [Q2.7a1] Time of CT [Q2.7d] Time of CT report [Q2.7e] Grade of reporter [Q2.7] Details of preoperative communication between radiologist and surgeon [Q2.7g]
		For high-risk general surgery patients being considered for major surgery, there should be joint preoperative discussion between senior surgeon (ST3 and above) and senior radiologist (ST3 and above), either in person or by telephone, followed by postoperative	RCS HRGSP 2018, p33		Proportion of all high-risk emergency laparotomy patients who undergo preop CT scanning and where there is direct communication between radiologist (ST3 and above) and surgeon (ST3 or above), either via phone or in person to discuss CT findings	

		comparison of imaging and operative findings. Best care includes preoperative discussion between a consultant surgeon and an in-house consultant radiologist.				
Infection management	Proportion of patients with suspected infection or sepsis that have antibiotic administration within the correct clinical timeframe	Patients with a suspected "surgical" source of infection and NEWS2 of 1-4 should receive antimicrobials within 3 hours of recorded NEWS2 abnormality.	AoMRC v2 Oct2022 (fig1, p13) RCS HRGSP 2018	Green: ≥85%* Amber: 55 – 84% Red: <55% * aspiration for this to increase to 90% in subsequent years	Proportion of patients with suspected infection at arrival or at decision to operate who receive antibiotics within 3 hours of first recorded NEWS2 abnormality (NEWS2 1-4).	Suspected infection [Q2.11a] Time of suspected infection [Q2.11b] Time of NEWS score for suspected infection [Q2.11bi] Suspected sepsis [Q2.11c] Time of suspected sepsis [Q2.11d] Time of NEWS score for suspected sepsis [Q2.11di] Time of first dose of antibiotics [Q2.10]
		Patients with a suspected "surgical" source of infection and NEWS2 of 5+, or ≥3 in any one variable, should receive antimicrobials within 1 hour of recorded NEWS2 abnormality.	AoMRC v2 Oct2022 (fig1, p13) RCS HRGSP 2018		Proportion of patients with suspected sepsis at arrival or at decision to operate who receive antibiotics within 1 hour of first recorded NEWS2 abnormality of 5+ or ≥3 in any one variable	
Timeliness to theatre	Proportion of patients arriving in theatres according to correct clinical timeframe	Priority of access should be given to emergency patients over elective patients. There should be a clear policy for cancelling elective surgery to enable additional emergency theatre provision.	GPAS 5.1.22	Green: ≥85% Amber: 55 – 84% Red: <55%	Proportion of patients who received (or should have received) immediate surgery (as per RCS definitions of immediate surgery) within 6 hours of arrival in hospital Proportion of all patients where it is recorded that access to theatre was delayed	Indications for surgery [Q3.24] Findings at surgery [Q5.5] Date/time of arrival in hospital [Q1.9] Date/time of entry into operating theatre [Q4.1] Delays to theatre [Q5.8]

					beyond original intended urgency	
Risk Assessment	Proportion of patients in whom a risk assessment was documented preoperatively AND postoperatively	Patients should have their risk of morbidity and mortality recorded in the medical records by a senior surgeon (ST3 or above) within four hours of admission using appropriate risk prediction tools.	RCS HRGSP 2018 P8 NCEPOD Knowing the Risk 2011	Green: ≥85% Amber: 55 – 84% Red: <55	Proportion of patients with a formal preoperative assessment of mortality risk	Preoperative risk score [Q3.1/3.1a] Postoperative risk score [Q6.1/6.1a]
		There should be a documented evaluation of mortality and relevant morbidity risk prior to surgery using a standardised perioperative risk tool. This will inform both clinicians and the patient about decision making and consent.	GPAS 5.6.22, 2022			
		Surgery specific risk assessment tools such as the NELA risk model should be used to risk assess before surgery and guide consent and shared decision-making discussions, including Treatment Escalation Plans.	CPOC Pre op Assessment and optimisation guideline 2021 Section 13.			
		Patients should have their risk of in-hospital mortality reassessed and documented at the end of surgery, using risk	RCS HRGSP p37		Proportion of patients with a mortality risk assessment recorded at the end of surgery	

		prediction tools and clinical judgement. Patients with an end-of-operation risk of death of 5%+, by any measure, should be admitted directly to critical care.				
Consultant-delivered care	Proportion of high-risk patients (risk of death of ≥5%) with consultant surgeon and consultant anaesthetist present in theatre	High-risk patients (5% or above mortality risk) or lower-risk patients undergoing high-risk surgery should receive direct consultant anaesthetist and consultant surgeon delivered care in the operating theatre	GPAS 5.6.25	Green: ≥85% Amber: 55 – 84% Red: <55%	Proportion of preoperative high-risk patients (risk of death of ≥5%)	Preoperative risk assessment [Q3.1] Senior surgeon grade [Q4.2] Senior anaesthetist grade [Q4.3]
		Surgery on high-risk patients should be conducted in the presence of a consultant surgeon and consultant anaesthetist, shown by their names clearly recorded on the operation note. They should be present for the timeout, and sign out.	RCS HRGSP 2018, p27		Proportion of high-risk patients with consultant surgeon present in theatre	
		Ensure senior anaesthetic and surgical input [for frail and high risk patients], particularly for emergency cases given the higher risk of perioperative morbidity and mortality in this patient group	CPOC Frailty p18		Proportion of high-risk patients with consultant anaesthetist present in theatre	

Critical Care	Proportion of high-risk patients admitted directly to critical care postoperatively	Patients should have their risk of in-hospital mortality reassessed and documented at the end of surgery, using risk prediction tools and clinical judgement. Patients with an end-of-operation risk of death of 5%+, by any measure, should be admitted directly to critical care.	RCS HRGSP p37	Green: ≥85% Amber: 55 – 84% Red: <55%	Proportion of postoperative high-risk patients Proportion of postoperative high-risk patients admitted directly to critical care postoperatively	Postoperative risk [Q6.1/6.1a] Postoperative destination [Q6.24]
Elderly Care	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 (CGA)	All hospitals should have a perioperative frailty team with expertise in CGA providing clinical care through the pathway to include <ul style="list-style-type: none"> • Preoperative assessment and optimisation of frailty, cognitive disorders and multimorbidity • Prognostication and shared decision making • Assessment and management of postoperative complications, hospital acquired deconditioning, postoperative cognitive disorders • Rehabilitation, goal setting and discharge planning with onward referral to 	CPOC Frailty Guidance, Sept 2021	Green: ≥85% Amber: 55 – 84% Red: <55%	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 CGA* *NELA team think patients will benefit the most from postop input as opposed to preop input in isolation to patients undergoing emergency laparotomy	Age [Q1.4] CFS [Q2.12] Involvement of periop teams [Q7.3]

		<p>community services</p> <ul style="list-style-type: none"> • Treatment escalation and advance care planning • Effective communication with patients and carers throughout the perioperative pathway • Streamlined care working with other disciplines and specialties. 				
	Proportion of patients aged 65 or older where a formal assessment of frailty was made	Patients aged over 65 years and other patients who appear frail for their age admitted under general surgeon should have their level of frailty assessed and recorded within four hours of admission or transfer	RCS HRGSP 2018 p19	Green: ≥85% Amber: 55 – 84% Red: <55%	Proportion of patients with a formal preoperative assessment of mortality risk	CFS [Q2.12]
Data Quality/Completeness	Case Ascertainment			Green: ≥85% Amber: 55 – 84% Red: <55%		
Outcomes	Mortality			Goal to reduce national 30-day mortality to below 8.7%		
	Length of stay			Goal to reduce national mean length of stay to below 15 days		