NELA Patient Audit Dataset

Version Control

Version	Date	Changes
2.0	24/11/2014	Changes made to dataset for 2nd year.
2.1.1	02/04/2015	Still in hospital at 60 days answer option added to question 7.7
2.1.2	02/07/2015	Wording edited for question 2.9
3.1	01/12/2015	Changes made to dataset for 3rd year.
3.1.1	21/03/2016	Q1.9 wording edited
4.1	01/12/2016	Changes made to dataset for 4th year.
4.1.1	21/12/2016	Question 1.10b modified to include hospital transfers
5.1	01/12/17	Changes made to dataset for 5th year.
6.1	01/12/18	Changes made to dataset for 6th year.
6.1.1	01/04/19	Possum Calculation removed; Q3.2, 3.25, 6.2, 6.23, Q3.1, 6.1 Updated options
7.1.1	01/12/19	Changes made to dataset for Year 7. These should be used from December 1st 2019 Removed: 1.10b, 1.11, 1.12, 2.1, 2.3, 2.4, 2.7a (combined with 2.7), 2.7b, 2.8b, 3.2, 3.5i, 5.3c,6.2, 7.4b, 7.9 Wording changed: 3.1, 6.24, 7.3, New question 3.1a, 5.3, 6.17a

This is the NELA proforma. All data entry will be carried out through an online data collection web tool. The web tool will be accessible via pc, tablets and mobiles

This audit is a continuous prospective audit with real time data collection. It is expected that clinical teams enter the data real time rather than retrospectively.

On the NELA Webtool by default Quality Improvement (QI) questions are enabled. If you do not wish to collect data for one or more QI questions, the questions can be disabled. This is done on the NELA webtool.

For queries, please contact info@nela.org.uk
Web tool for data entry: https://data.nela.org.uk/

This form is for information purposes only.

1.	**Demographics and Admission**	
1.1	NHS Number	
1.2	Pseudo-anonymisation	Computer generated
1.3	Local patient id/hospital number	
1.4	Date of birth	
	Age on arrival	*Age will automatically be calculated on web tool*
1.5	Sex	○ Male / ○ Female
1.6	Forename	
1.7	Surname	
1.8	Postcode	
1.9	Date and time the patient first arrived at the hospital/Emergency department	
1.10	What was the nature of this admission?	○ Elective / ○ Non-elective
1.10b	No Longer Required	
1.11	No Longer Required	
1.12	No Longer Required	
1.13a	Is this patient known to have a Learning Disability?	○ Yes ○ No ○ Unknown
1.13b	Is this patient known to have an Autistic Spectrum Disorder?	○ Yes ○ No ○ Unknown

2	**Pre-op** **If the patient is returning to theatre as an emergency following previous elective surgery, all answers should relate to the emergency laparotomy, not the previous elective surgery.**	
2.1	No Longer Required	
2.2	Date and time that the decision was made to operate *If this is unavailable please enter date and time that this patient was first booked for theatre for emergency laparotomy*	Date_____(DD/MM/YYYY) ○ Date not known Time_____(HH:MM) ○ Time not known

2.3	No Longer Required	
2.4	No Longer Required	
2.5	No Longer Required	
2.6	No Longer Required	
2.7	Was an abdominal CT scan performed in the pre- operative period as part of the diagnostic work-up? If performed, how was this CT reported pre- operatively? *(If CT is reported by a registrar and validated by a consultant **before** surgery, select "in-house consultant". If **not validated** by consultant before surgery, select "registrar")*	○ Yes – reported by in-house consultant ○ Yes – reported by in-house registrar ○ Yes – reported by outsourced service ○ Yes but NOT reported ○ No CT performed ○ Unknown
2.7a	No Longer Required	
2.7b	No Longer Required	
2.7c	Was there a discrepancy between the CT report and surgical findings that altered or delayed either the diagnosis or surgical management?	○ Yes ○ No ○ Unknown
2.8a	No Longer Required	
2.8b	No Longer Required	
2.9	No Longer required	
2.10	What was the date and time of the first dose of antibiotics following presentation to hospital? *(only relevant for non-elective admissions)*	○ In theatre, or Date_____(DD/MM/YYYY) ○ Date not known Time_____(HH:MM) ○ Time not known ○ Not Administered

2.11a	Was sepsis, with a NEWS2 >=5 or >=3 in any one variable or another diagnosis requiring urgent antibiotics e.g. peritonitis / perforation, suspected on admission?	○ Yes ○ No ○ Unknown
2.11b	Was sepsis, with a NEWS2 >=5 or >=3 in any one variable and/or another diagnosis requiring urgent antibiotics e.g. peritonitis / perforation, suspected at the time the decision for surgery was made?	○ Yes ○ No ○ Unknown
2.12	Using the Clinical Frailty Score (see help box), what was the patients pre-admission frailty status assessed as being?	○ (1-3) - not frail ○ 4 - vulnerable ○ 5 - mildly frail ○ 6 - moderately frail ○ 7 - severely frail - completely dependent for personal care ○ 8 - very severely frail ○ 9 - Terminally ill

3	**Pre-op Risk stratification**	
3.1	Prior to surgery, what was the risk of death for the patient that was entered into medical record? *For info, wording of relevant standard "An assessment of mortality risk should be made explicit to the patient and recorded clearly on the consent form and in the medical record."*	○ Lower (<5%) ○ High (>=5%) ○ Not documented
3.1a	If documented, how was risk assessed?	○ Objective clinical score ○ Clinical judgement
3.1b	If patient assessed to be high risk, which **consultants** were involved immediately preoperatively in the assessment, decision making process and care of this patient? This may be either direct or indirect care. *Please mark all that apply.*	○ Consultant Surgeon ○ Consultant Anaesthetist ○ Consultant Intensivist ○ None
3.2	No Longer Required	
3.3	What was the **ASA** score?	○ 1: No systemic disease ○ 2: Mild systemic disease ○ 3: Severe systemic disease, not life-threatening ○ 4: Severe, life-threatening ○ 5: Moribund patient
3.4	What was the most recent pre-operative value for serum Creatinine (micromol/l)	☐ ○ Not performed
3.5	What was the most recent pre-operative value for blood lactate – may be arterial or venous (mmol/l)	☐ ○ Not performed
3.5i	No Longer Required	
3.5ii	What was the most recent pre-operative value for albumin (g/l)?	☐ ○ Not performed
	NELA Risk calculation	
	For questions, 3.6 to 3.22 please enter values closest to time of booking for theatre in order to calculate NELA Risk score. Answers should reflect chronic *and* acute pathophysiology.	

3.6	Serum Sodium concentration (mmol/l)	
3.7	Serum Potassium concentration (mmol/l)	
3.8	Serum Urea concentration (mmol/l)	
3.9	Serum Haemoglobin concentration (g/dl)	
3.10	Serum White cell count (x10∧9 / l)	
3.11	Pulse rate(bpm)	
3.12	Systolic blood pressure (mmHg)	
3.13	Glasgow coma scale	
3.14	Select an option that best describes this patient's **ECG**	○ No abnormalities ○ AF rate 60-90 ○ AF rate >90/ any other abnormal rhythm/paced rhythm/ >5VE/min/ Q, ST or T wave abnormalities
3.15	Select an option that best describes this patient's **cardiac signs** and chest xray appearance	○ No failure ○ Diuretic, digoxin, antianginal or antihypertensive therapy ○ Peripheral oedema, warfarin Therapy or CXR: borderline cardiomegaly ○ Raised jugular venous pressure or CXR: cardiomegaly
3.16	Select an option that best describes this patient's **respiratory history** and chest xray appearance	○ No dyspnoea ○ Dyspnoea on exertion or CXR: mild COAD ○ Dyspnoea limiting exertion to < 1 Flight or CXR: moderate COAD ○ Dyspnoea at rest/rate > 30 at rest or CXR: fibrosis or consolidation
3.16a	No Longer Required	
	Online web tool will automatically calculate Physiology severity score	
3.17	Select the **operative severity** of the intended surgical intervention (see help box for examples)	○ Major ○ Major+
3.18	Including this operation, how many operations has the patient had in the 30 day period prior to this procedure?	○ 1 ○ 2 ○ >2
3.19	Based on your clinical experience of the intended surgery, please estimate the likely ***intra*operative blood loss** (ml)	○ <100 ○101-500 ○ 501-999 ○ >=1000
3.20	Please select a value that best describes the likely degree of **peritoneal soiling**	○ None ○ Serous fluid ○ Localised pus ○ Free bowel content, pus or blood
3.21	What severity of malignancy is anticipated to be present?	○ None ○ Primary only ○ Nodal metastases ○ Distant metastases

3.22	Please select **urgency** of surgical intervention *(see help notes for additional information)*	○ 3. Expedited (>18 hours) ○ 2B. Urgent (6-18 hours) ○ 2A. Urgent (2-6 hours) ○ 1. Immediate (<2 hours)
	Online web tool will automatically calculate Operative severity score	
3.23	No Longer Required	
3.24	No Longer Required	
3.25	Not all investigations available for calculation of NELA Risk	○
3.26	Estimated mortality using NELA risk adjustment model *(Figure only provided if all data available)*	Calculated ☐

4	**Intra-op**	
4.1	Date and time of entry in to operating theatre/anaesthetic room (not theatre suite)	Date_____(DD/MM/YYYY) Time_____(HH:MM) ☐ Time not known
4.2	Senior surgeon grade *(this can include surgeon supervising in theatre but not necessarily scrubbed)*	○ Consultant ○ Post-CCT fellow ○ SAS grade ○ Research Fellow / Clinical Fellow ○ Specialty trainee ○ Other
4.2a	Consultant present/supervising: Name/GMC/specialty of operating or supervising consultant *(If consultant not present, enter name of supervising consultant)*	(Please select consultant - Online)
4.3	Senior anaesthetist present in theatre	○ Consultant ○ Post-CCT fellow ○ SAS grade ○ Research Fellow / Clinical Fellow ○ Specialty trainee ○ Other
4.3a	Consultant present (or supervising) : Name/GMC of anaesthetist *(If consultant not present, enter name of supervising consultant)*	(Please select consultant - Online)
4.4	How did you provide goal directed fluid therapy?	○ Patient recruited to FLO-ELA trial * ○ Not provided ○ Dynamic index e.g. Stroke volume, PPV, SVV ○ Static index e.g. CVP ○ Other, eg bioimpedence

5	Procedure	
5.1	Is this the first surgical procedure of this admission?	○ Yes- First surgical procedure after admission ○ No - Surgery for complication of previous elective general surgical procedure within the same admission ○ No – Previous 'non-abdominal/non-general surgical' procedure within same admission (eg previous hip replacement) ○ Unknown
5.2	What is the indication for surgery? *(Please select all that apply)*	○ Peritonitis ○ Perforation ○ Abdominal abscess ○ Anastomotic leak ○ Intestinal fistula ○ Phlegmon ○ Pneumoperitoneum ○ Necrosis ○ Sepsis ○ Small bowel obstruction ○ Large bowel obstruction ○ Volvulus ○ Internal hernia ○ Pseudo-obstruction ○ Intussusception ○ Incarcerated hernia ○ Obstructing incisional hernia ○ Haemorrhage ○ Hiatus Hernia/para-oesophageal hernia ○ Ischaemia ○ Colitis ○ Abdominal wound dehiscence ○ Abdominal compartment syndrome ○ Acidosis ○ Iatrogenic injury ○ Foreign body ○ Planned relook

5.3.a	Main procedure	○ Abdominal wall closure following dehiscience ○ Abdominal wall reconstruction ○ Adhesiolysis ○ Colectomy: left (including sigmoid colectomy and anterior resection) ○ Colectomy: right (including ileocaecal resection) ○ Colectomy: subtotal or panproctocolectomy ○ Colorectal resection - other ○ Debridement ○ Defunctioning stoma via midline laparotomy ○ Drainage of abscess/collection ○ Enterotomy ○ Evacuation of haematoma ○ Exploratory/relook laparotomy only ○ Gastrectomy: partial or total ○ Gastric surgery - other ○ Haemostasis ○ Hartmann's procedure ○ Intestinal bypass ○ Laparostomy formation ○ Large incisional hernia repair with bowel resection ○ Large incisional hernia repair with division of adhesions ○ Peptic ulcer – oversew of bleed ○ Peptic ulcer – suture or repair of perforation ○ Reduction of volvulus ○ Removal of foreign body ○ Removal of gastric band ○ Repair of intestinal fistula ○ Repair of intestinal perforation ○ Repair of para-oesophageal hernia ○ Repair or revision of anastomosis ○ Resection of Meckel's diverticulum ○ Resection of other intra-abdominal tumour(s) ○ Revision of stoma via midline laparotomy ○ Small bowel resection ○ Splenectomy ○ Stricturoplasty ○ Washout only ○ Not amenable to surgery
5.3.b	Second procedure (at same laparotomy)	

5.3e	Was a stoma formed (by any means)?	○ Yes ○ No
5.4	Procedure approach	○ Open ○ Laparoscopic ○ Laparoscopic assisted ○ Laparoscopic converted to open
5.5	Operative findings: *(Please select all that apply)* *If unsure whether this patient is eligible for NELA please refer to help box*	○ Abscess ○ Anastomotic leak ○ Perforation – peptic ulcer ○ Perforation – small bowel/colonic ○ Diverticulitis ○ Intestinal fistula ○ Adhesions ○ Incarcerated hernia ○ Volvulus ○ Internal hernia ○ Intussusception ○ Stricture ○ Pseudo-obstruction ○ Gallstone ileus ○ Meckel's diverticulum ○ Malignancy – localised ○ Malignancy – disseminated ○ Colorectal cancer ○ Gastric cancer ○ Haemorrhage – peptic ulcer ○ Haemorrhage – intestinal ○ Haemorrhage – postoperative ○ Ulcerative colitis ○ Other colitis ○ Crohn's disease ○ Abdominal compartment syndrome ○ Intestinal ischaemia ○ Necrotising fasciitis ○ Foreign body ○ Stoma complications ○ Abdominal wound dehiscence ○ Normal intra-abdominal findings

5.6	Please describe the peritoneal contamination present *(select all that apply)*	○ None or reactive serous fluid only ○ Free gas from perforation +/- minimal contamination ○ Pus ○ Bile ○ Gastro-duodenal contents ○ Small bowel contents ○ Faeculent fluid ○ Faeces ○ Blood/haematoma
5.7	Please indicate if the contamination was;	○ Localised to a single quadrant of the abdomen ○ More extensive / generalised

6	**Post-op Risk stratification**	
6.1	At the end of surgery, what was the risk of death for the patient that was entered into medical record?	○ Lower (<5%) ○ High (>=5%) ○ Not documented
6.1a	If documented, how was risk assessed?	○ Objective clinical score ○ Clinical judgement
6.2	No Longer Required	
6.3	Blood lactate – may be arterial or venous (mmol/l)	☐ ○ Not performed
	Post-operative NELA Risk calculation Q 6.4 – 6.14 No Longer Required	
	Physiology severity score:	
6.15	What was the operative severity? (see help box for examples)	○ Major ○ Major+
6.16	Including this operation, how many operations has the patient had in the 30 day period prior to this procedure?	○ 1 ○ 2 ○ >2
6.17	Please select this patient's measured/estimated intraoperative blood loss (ml)	○ <100 ○ 101-500 ○ 501-1000 ○ >1000
6.17a	If the patient's blood loss was greater than 500mls, was Tranexamic Acid given?	○ Yes ○ No
6.18	Please select the option that best describes this patient's degree of peritoneal soiling	○ None ○ Serous fluid ○ Local pus ○ Free bowel content, pus or blood
6.19	What was the level of malignancy based on surgical findings	○ None ○ Primary only ○ Nodal metastases ○ Distant metastases
6.20	What was the NCEPOD urgency? *(see help notes for additional information)*	○ 3. Expedited (>18 hours) ○ 2B. Urgent (6-18 hours) ○ 2A. Urgent (2-6 hours) ○ 1. Immediate (<2 hours)
	Online web tool will automatically calculate Operative severity score	

6.21	No Longer Required	
6.22	No Longer Required	
6.23	Not all investigations available for calculation of NELA Risk	○
6.24	Where did the patient go for continued post-operative care following surgery?	○ Ward ○ Critical Care *(includes Level 2 HDU or Level 3 ICU)* ○ Extended recovery area within theatres (eg PACU or OIR) ○ Enhanced care area on a normal ward ○ Died prior to discharge from theatre complex
6.24a	At the end of surgery, was the decision made to place the patient on an end of life pathway?	○ Yes ○ No
6.25	No Longer Required	
6.26	Estimated mortality using NELA risk adjustment model *(Figure only provided if all data available)*	Calculated

7	**Post-op – Some fields will need to be completed on discharge or death**	
7.1	Total length of post-operative critical care stay (rounded up to whole days). *Includes both ICU and HDU stay -see help box for additional information. Do not include LOS in PACU/other enhanced recovery area*	☐ Number required
7.2	No Longer Required	
7.3	For patients aged 65 or older, was the patient assessed by a consultant geriatrician during any part of the perioperative period?	○ Yes ○ No ○ Unknown
7.4	Within this admission, did the patient have an **unplanned or planned** return to theatre in the post-operative period following their initial emergency laparotomy?	○ Yes; unplanned return ○ Yes; planned return ○ Yes; unplanned AND planned return ○ No ○ Unknown
7.4a	What was the main indication for the **unplanned** return to theatre? *(Select most significant reason)*	○ Anastomotic leak ○ Abscess ○ Bleeding or Haematoma ○ Decompression of abdominal compartment syndrome ○ Bowel obstruction ○ Abdominal wall dehiscence ○ Accidental damage to bowel or other organ ○ Stoma viability or retraction ○ Ischaemia/non-viable bowel ○ Sepsis/inadequate source control ○ Deteriorating patient ○ Missed pathology at first laparotomy ○ Other ○ Unknown

7.4b	No Longer Required	
7.5	Did the patient have an unplanned move **from the ward** to a higher level of care within 7 days of surgery? (do not include moves from HDU to ITU, or escalation from other enhanced area/PACU)	○ Yes ○ No ○ Unknown
7.6	No Longer Required	
7.7	Status at discharge	○ Dead ○ Alive ○ Still in hospital at 60 days
7.8	Date discharged from hospital	(DD/MM/YYYY) Date required
7.9	No Longer Required	
	COVID-19 Questions	
7.10	Please indicate the patient's SARS-CoV-2/COVID-19 infection status	○ Infected at time of surgery based on a recent positive RT-PCR antigen (swab) test ○Considered as infected at time of surgery on clinical grounds despite negative (ie false negative) or indeterminate antigen test ○Positive antigen test or clinical diagnosis of COVID-19 during admission but unable to determine whether pre/post-op from the medical record ○Not infected at time of surgery based on clinical presentation AND negative swab but had a new positive antigen test or clinical diagnosis of COVID-19 post-operatively ○Considered to be not infected throughout inpatient stay ○Antigen test not done ○Unable to answer
7.11	Regardless of actual COVID status, was the patient managed as infected with COVID whilst in the theatre suite for their initial emergency laparotomy (this does not mean, was enhanced PPE used only for the AGPs)	○Yes ○No ○Unable to answer
7.12	Please indicate the patient's SARS-CoV-2 antibody status	○Positive ○Negative ○Not tested ○Unable to answer