Perioperative Quality Improvement Programme

PATIENT ID

Case Report Form for ERAS+ sites

Version Control

Version	Date	Changes
2.0	06/03/19	Changes made to dataset. Some question numbers may have changed. New or modified questions highlighted. Question on smoking cessation removed (formerly Q2.31).

Enclosed are the questions for clinicians or researchers to complete for each patient participating in this study. Question numbers may not increment sequentially as some questions may not be applicable to your hospital. You may modify this cover page to include your hospital logo and contact details. We have provided a Standard Operating Procedures (SOP) document to assist in the correct completion of this form. Please ensure that the answers are transferred to the online web-tool as soon as possible and store the booklet in the secure PQIP file at your hospital.

Item	Question	Response
Patient demographics		
1.1	Patient ID number (local):	
1.2	Surname:	
1.3	First name:	
1.4	Date of birth:	__ __ / __ __ / __ __ __ __ (DD/MM/YYY)
1.5	Gender:	☐ Male ☐ Female
Address details		
1.6	Post code:	__ __ __ __ __ __ __ __
1.7	Usual residence:	☐ Own home ☐ Care home
Surgical admission		
1.8	Date of hospital admission:	__ __ / __ __ / __ __ __ __ (DD/MM/YYY)
1.9	Date of surgery:	__ __ / __ __ / __ __ __ __ (DD/MM/YYY)
ID numbers		
1.11-1.12	NHS / CHI number:	(10 digits)
1.13	Height:	(cm)
1.14	Weight:	(kg)
Patient follow-up		
1.20	Patient's preferred method of contact: This should be indicated on the completed consent form.	☐ E-mail: _____ ☐ Telephone: _____ ☐ No preference – provide both
1.20	Would patient like to receive e-mail updates from the PQIP study team?	☐ Yes ☐ No
1.21	Enrolment in other studies:	☐ Yes ☐ No ☐ Not known ☐ ERAS+ ☐ Scottish Head & Neck ☐ PRISM ☐ OPTIMISE II ☐ BALANCED ☐ Prevention-HARP2 ☐ GSK Oesophagectomy study ☐ PREPARE-ABC ☐ Other: _____

Item	Question	Response
Pre-operative data		
2.1	Surgical specialty:	☐ Abdominal – Hepatobiliary ☐ Abdominal – Lower GI ☐ Abdominal – Other ☐ Abdominal – Upper GI ☐ Burns & Plastics ☐ Gynaecology ☐ Head & Neck ☐ Orthopaedics ☐ Spinal ☐ Thoracics ☐ Urology ☐ Vascular
2.2a	Planned operation: Check eligibility with Procedure List on PQIP web site.	
2.2b	Planned mode of procedure: Select all that apply.	☐ Open ☐ Laparoscopic ☐ Robotic ☐ Thoracoscopic
2.2c	Is this surgery part of a multistage procedure?	☐ No ☐ Yes If yes, what was the date of the final stage? __ __ / __ __ / __ __ __ __ (DD/MM/YYY)
2.3	Urgency of surgery:	☐ Elective ☐ Expedited ☐ Urgent ☐ Immediate
2.4	Cancer surgery:	☐ Yes ☐ No
2.5	Enhanced recovery pathway:	☐ Yes ☐ No ☐ Not known

Item	Question	Response
2.6	Pre-operative assessment (before hospital admission):	☐ None ☐ Electronic self-assessment ☐ Telephone assessment with nurse ☐ Telephone assessment with doctor ☐ Face to face: nurse-led ☐ Face to face: surgeon-led ☐ Face to face: anaesthetist-led ☐ Other: _____
2.7	Sodium:	(mmol/L) ☐ Not measured
2.8	Potassium	(mmol/L) ☐ Not measured
2.9	Urea:	(mmol/L) ☐ Not measured
2.10	Creatinine:	(µmol/L) ☐ Not measured
2.11+	Troponin:	(ng/L) ☐ Not measured
2.12	Albumin:	(g/L) ☐ Not measured
2.13	White cell count:	($x10^9$/L) ☐ Not measured
2.14	Haemoglobin:	(g/dL) ☐ Not measured
2.15	Pulse rate:	(bpm)
2.16	Systolic BP:	(mmHg)
2.17	Glasgow Coma Scale: See SOP for details.	(total, out of 15)
2.18	Oxygen saturation:	(%)
2.19	Option which best describes the ECG findings:	☐ No abnormalities ☐ AF rate 60-90 ☐ AF rate >90/any other abnormal rhythm/paced rhythm/ >5VE/min/ Q, ST or T wave abnormalities ☐ Not done
2.20	Option which best describes the cardiac history/findings:	☐ No failure ☐ Diuretic, digoxin, antianginal or antihypertensive ☐ Peripheral oedema, warfarin therapy or borderline cardiomegaly ☐ Raised jugular venous pressure or cardiomegaly
2.21	NYHA heart failure classification: See SOP for details.	☐ I ☐ II ☐ III ☐ IV

Item	Question	Response
2.22	Option which best describes the respiratory history/findings:	☐ No dyspnoea ☐ Dyspnoea on exertion or CXR: mild COPD ☐ Dyspnoea limiting exertion to <1 flight or CXR: moderate COPD ☐ Dyspnoea at rest/rate > 30 at rest or CXR: fibrosis or consolidation
2.23	Respiratory infection in the last month:	☐ Yes ☐ No
2.24	Cerebrovascular disease:	☐ No ☐ Yes – no hemiplegia ☐ Yes – with hemiplegia
2.25	Current cancer diagnosis or in remission for <5 years:	☐ No ☐ Yes - solid tumour; local only ☐ Yes – solid tumour; metastatic disease (including lymph node) ☐ Yes - Lymphoma ☐ Yes – Leukaemia
2.26	Dementia:	☐ Yes ☐ No
2.27	Diabetes:	☐ No ☐ Type 1 ☐ Type 2 (on insulin) ☐ Type 2 (Diet controlled only) ☐ Type 2 (Non-insulin glucose lowering medication)
2.28	HbA1c:	(%) ☐ Not measured Conversion calculator on PQIP web site.
2.29	Liver disease	☐ No ☐ Yes – cirrhosis or Hep B/C WITHOUT portal hypertension ☐ Yes – cirrhosis or Hep B/C WITH portal hypertension
If yes, please specify:		
2.29a	Liver disease type:	☐ Hep B ☐ Hep C ☐ Alcohol-related ☐ Non-alcoholic steatosis
2.29b	Child-Pugh Grade:	☐ A ☐ B ☐ C ☐ Don't know

Item	Question	Response
2.30	ASA grade: See SOP for details.	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
2.31	Was preoperative CPET performed?	☐ No ☐ Yes
If yes:		
2.31a	VO_2 Peak Indexed:	(ml/kg/min)
2.31b	Anaerobic Threshold (AT) Indexed:	(ml/kg/min)
2.31c	VE/VCO_2 at AT:	
2.31d	Max work rate:	(Watt)
2.31e	Max heart rate:	(bpm)
2.31f	Max oxygen pulse:	(ml/beat)
2.31g	FEV_1/FVC:	(%)
2.32	Smoking history:	☐ Never smoked ☐ Ex-smoker > 6 months ☐ Ex-smoker <6 months ☐ Current smoker ☐ Unknown
2.33	Current alcohol consumption:	☐ No alcohol ☐ 0-2 AU/day ☐ 3-4 AU/day ☐ >5 AU/day ☐ Not known
2.34	Documented assessment of perioperative risk:	☐ Yes – Qualitative (e.g. low / medium / high) ☐ Yes – Quantitative (e.g. percentage risk of death / complications) ☐ Both ☐ No
2.35	Planned postoperative destination:	☐ Ward care ☐ Level 1 care ☐ Level 2 care ☐ Level 3 care

Item	Question	Response
Surgical admission		
2.36	Received bowel preparation:	☐ Yes ☐ No ☐ Not applicable
2.37	Preoperative carbohydrates given on day of surgery:	☐ Yes ☐ No ☐ Not known
Chest physio instruction		
2.38+	Patient received specific instruction on chest training and exercise +/- incentive spirometer prior to surgery:	☐ Yes ☐ No ☐ Not known If yes, by whom? ☐ Physio ☐ Doctor ☐ Nurse ☐ Surgery school
Surgery school		
2.39+	Attended surgery school:	☐ None ☐ Group ☐ One to one by ERAS+ nurse ☐ Video/on-line resource
App downloaded for surgery		
2.40+	Patient downloaded an app onto an electronic device to help preparation for surgery:	☐ Yes – ERAS+ app ☐ Yes – another app ☐ Yes – both ERAS+ app and another app ☐ No – but I have a tablet/smartphone device ☐ No – and I do not have a device
Type of activity		
2.41+	Activity undertaken before surgery:	☐ None ☐ Walking regularly ☐ Swimming regularly ☐ Dancing regularly ☐ Gardening ☐ Used step counter to measure steps ☐ Exercise bicycle at home ☐ Other Gym equipment at home ☐ Gym based council programme ☐ Gym private ☐ Hospital supervised programme ☐ Other: _____

Item	Question	Response
Anaemia treatment		
2.43	Anaemia treatment in the last 3 months prior to surgery:	☐ None ☐ Intravenous Iron ☐ Oral Iron ☐ EPO ☐ Blood transfusion ☐ B12 ☐ Folic acid
Frailty score		
2.44	Rockwood Clinical Frailty Score: See SOP for details.	☐ Very fit (1) ☐ Managing Well (3) ☐ Mildly Frail (5) ☐ Severely Frail (7) ☐ Very Severely Frail (8) ☐ Terminally Ill (9) ☐ Not done ☐ Well (2) ☐ Vulnerable (4) ☐ Moderately Frail (6)
Operative data		
3.1	Grade of most senior surgeon physically present in the operating theatre for this procedure:	☐ Consultant (post-CCT or CESR) ☐ Foundation year doctor ☐ Nurse specialist ☐ Physician Assistant / Associate ☐ SAS doctor ☐ Trainee or Trust grade CT1-2 or equivalent ☐ Trainee or Trust grade ST3-7 or equivalent ☐ Other: _____
3.2	Grade of most senior anaesthetist physically present in the operating theatre for this procedure:	☐ Consultant (post-CCT or CESR) ☐ Foundation year doctor ☐ Nurse specialist ☐ Physician Assistant / Associate ☐ SAS doctor ☐ Trainee or Trust grade CT1-2 or equivalent ☐ Trainee or Trust grade ST3-7 or equivalent ☐ Other: _____
3.3	Compliance with induction antibiotic protocol:	☐ Yes (Within 60min of skin incision) ☐ No

Item	Question	Response
3.4	Select which anaesthetic techniques were utilised: Select all that apply.	☐ General ☐ Spinal ☐ Epidural ☐ Combined spinal and epidural ☐ Regional block (incl. paravertebral and TAP blocks) ☐ Local anaesthetic infiltration ☐ Intravenous analgesia
3.4i	If GA:	☐ Inhalational – Desflurane ☐ Inhalational – Isoflurane ☐ Inhalational – Sevoflurane ☐ Inhalational – Other: _____ ☐ Inhalational – Nitrous oxide ☐ IV Propofol infusion ☐ IV remifentanil infusion
3.5	Select intra-operative monitoring (in addition to standard AAGBI monitoring):	☐ Central venous catheter ☐ Arterial line ☐ Cardiac output monitor ☐ Depth of anaesthesia ☐ Temperature probe ☐ Peripheral nerve stimulator ☐ None ☐ Urinary catheter
3.5a+	Patient on mechanical ventilation during surgery:	☐ Yes – Average tidal volume: _____ (ml) ☐ No ☐ Not applicable
3.6	Warming devices:	☐ No warming device ☐ IV fluid warmer ☐ Forced-air warming device ☐ Underbody resistive heating ☐ Missing data ☐ Other: _____
Operative findings		
3.7	Including this procedure, number of operations the patient has had in the past 30 days:	☐ 1 ☐ 2 ☐ >2

Item	Question	Response
3.8	Actual procedure was same as planned procedure:	☐ Yes ☐ No
If not:		
3.9a-b	Actual surgical specialty and operation:	
3.9c	Actual mode of surgery:	☐ Open ☐ Laparoscopic / laparoscopically-assisted ☐ Robotic-assisted ☐ Thoracoscopic
3.10a	Actual procedure (secondary):	
3.10b	Sub-group:	
3.10c	Description:	
3.11	Surgical incision:	☐ Thoracic ☐ Upper abdominal ☐ Lower abdominal ☐ Other / Laparoscopic / Thoracoscopic
3.12	Blood loss:	☐ ≤100ml ☐ 101-500ml ☐ 501-1000ml ☐ ≥1001ml – please give actual amount: _____ (ml) ☐ Missing data
3.13	Intra-abdominal / intra-thoracic findings:	☐ Not applicable ☐ None ☐ Serous fluid ☐ Localised pus ☐ Free bowel content / pus / blood ☐ Missing data
3.14	Duration of surgery and anaesthesia:	☐ <2 hours ☐ 2-3 hours ☐ >3 hours
3.15	Received tranexamic acid intraoperatively:	☐ Yes ☐ No

Item	Question	Response
Postoperative destination		
3.16	Actual postoperative destination:	☐ Ward care ☐ Level 1 care ☐ Level 2 care ☐ Level 3 care
3.17	If different from planned care destination, why?	☐ Not applicable – patient transferred to planned care destination ☐ No higher level care bed available ☐ No lower level care bed available ☐ Operation lower risk than expected ☐ Operation palliative (unexpected) ☐ Other / further information: _____
Postoperative destination		
If the patient is transferred directly to a higher-level care facility postoperatively then the "recovery period" should be regarded as the immediate three hours postoperatively.		
4.1	First core temperature on arrival from theatres ≥36°C:	☐ Yes ☐ No
4.2	Abdominal drain present on arrival from theatres:	☐ Yes ☐ No
4.3	Nasogastric tube present on arrival from theatres:	☐ Yes ☐ No
4.4	Highest pain score during recovery stay:	☐ None ☐ Mild ☐ Moderate ☐ Severe ☐ Unable to ascertain – Sedated ☐ Unable to ascertain – Other: _____
Postoperative visit on day 2 or day 3		
Answer these questions with regard to the patient's status on post-operative day 1 (within 24 hours from completion of surgery). These assess achievement of the enhanced recovery objectives of the CHEERS-DREAM campaign.		
5.1	Maintenance IV fluids discontinued within 24hr of surgery ending:	☐ Yes ☐ No

Item	Question	Response
5.2	Started drinking (free fluids) within 24hr of surgery ending:	☐ Yes ☐ No
5.3	Started eating (at least soft diet) within 24hr of surgery ending:	☐ Yes ☐ No If no, did patient receive supplementary nutrition within 24hr of surgery ending? ☐ Yes ☐ No
5.3i	What type of supplementary nutrition?	☐ Enteral ☐ Parenteral (TPN) ☐ Other
5.4	Mobilising from bed to chair with max assistance of one person within 24hr of surgery ending:	☐ Yes ☐ No
5.5+	Number of times patient used their Incentive Spirometer in first 24hr after surgery:	☐ Not used ☐ Once ☐ Twice ☐ >2
5.6+	Number of times patient brushed their teeth in first 24hr after surgery:	☐ Not applicable – unable to use ☐ None ☐ Once ☐ Twice
5.7+	Number of times patient used mouthwash in first 24hr after surgery:	☐ Not applicable – unable to use ☐ None ☐ Once ☐ Twice
5.8+	Highest level of respiratory support received in first 24hr after end of surgery:	☐ None ☐ Nasal cannulae ☐ High flow Nasal ☐ Venturi mask ☐ High flow Face Mask ☐ CPAP ☐ Non-invasive ventilation ☐ Invasive ventilation ☐ Missing data If applicable, percentage FiO_2: _____ (%)

Item	Question	Response
Day 7 postoperatively		
6.1	Patient still in hospital:	☐ Yes ☐ No
If yes, answer all of the following questions. If no, proceed to answer Q6.14-6.18.		
6.2	Current location:	☐ Ward care ☐ Level 1 care ☐ Level 2 care ☐ Level 3 care ☐ Level 2/3 care
Post-Operative Morbidity Survey		(See SOP for advice on completion)
6.3	Pulmonary	☐ New requirement for O_2 therapy ☐ New requirement for respiratory support ☐ None of the above
6.4	Infection	☐ Currently on IV antibiotics ☐ Temperature >38°C in past 24hr ☐ None of the above
6.5	Gastrointestinal	☐ Unable to tolerate enteral diet (oral / tube feed) ☐ Nausea, vomiting or abdominal distension in past 24hr ☐ None of the above
6.6	Renal	☐ Oliguria (<500ml/24hr) in past 24hr ☐ In past 24hr, serum creatinine >30% of pre-op level ☐ In past 24hr, urethral catheter in-situ (not present pre-op) ☐ None of the above
6.7	Cardiovascular	☐ Hypotension in past 24hr requiring >200ml fluid bolus / pharmacological therapy ☐ New myocardial infarction / ischaemia in past 24hr ☐ Thrombotic event requiring anticoagulation in past 24hr ☐ Arrhythmia in past 24hr ☐ Cardiogenic pulmonary oedema in past 24hr ☐ None of the above
6.8	Neurological	☐ New neurological deficit in past 24hr ☐ Delirium / confusion in past 24hr ☐ Sedative-induced coma in past 24hr ☐ Non-sedative associated coma in past 24hr ☐ None of the above

Item	Question	Response
6.9	Wound	☐ Wound dehiscence requiring surgical exploration in past 24hr ☐ Drainage of pus from operative wound, wound ooze or swab taken in past 24hr ☐ None of the above
6.10	Haematological	☐ Red cell transfusion in past 24hr ☐ Fresh frozen plasma / cryoprecipitate / platelets in past 24hr ☐ None of the above
6.11	Surgical pain in past 24hr significant enough to require:	☐ Parenteral opioids ☐ Regional anaesthesia ☐ None of the above
6.12	In past 24hr patient has returned to baseline level of mobility:	☐ Yes ☐ No
6.13	Reason(s) why still requiring hospital admission:	☐ Medical / nursing care ☐ Mobility issue ☐ Awaiting social package to be set up ☐ Awaiting occupational therapy review ☐ Organisational failure (e.g. transport not booked) ☐ None of the above
6.14+	In last 7 days patient received antibiotic treatment for >24hr (excluding post-op prophylaxis):	☐ None ☐ Yes If yes, what is the infection source? ☐ Not recorded ☐ Chest (incl. LRTI/pneumonia) ☐ Aspiration ☐ Abdominal leak (suspected/confirmed) ☐ Surgical site infection ☐ Urine ☐ Empirical – patient unwell with suspected infection, but source unclear ☐ Other
6.15+	Patient received unplanned respiratory support between 24hr and 7 days of the end of surgery:	☐ None ☐ Mild ☐ Moderate ☐ Severe

Item	Question	Response
6.16+	Excluding regular preoperative medications, patient received additional pharmacological treatment for their breathing:	☐ None ☐ Nebulised bronchodilators ☐ Nebulised saline ☐ Mucolytic (e.g. carbocisteine) ☐ Diuretics ☐ Steroids ☐ Other: _____
6.17+	In the last 7 days, has patient had a troponin measured?	☐ Not measured ☐ Measured - Troponin level: _____ (ng/L) Corresponding creatinine value: _____ (µmol/L) ☐ Creatinine not measured
6.18a	Was creatinine value recorded after surgery (up to 7 days post-operatively)? If yes, what is the highest creatinine value recorded within 7 days after surgery?	☐ Yes ☐ Patient has chronic renal failure with renal replacement therapy (RRT) ☐ Not recorded _____ (µmol/L)
6.18b	Required new renal replacement therapy (RRT) in last 7 days:	☐ No ☐ Yes (exclude patients on chronic RRT)
Death, discharge or withdrawal		
7.1	Discharge destination	☐ Own home ☐ Care home ☐ Died ☐ Withdrawn from study ☐ Rehabilitation facility ☐ Other hospital
7.1a-c	Date of discharge / death / withdrawal:	__ __ / __ __ / __ __ __ __ (DD/MM/YYY)
7.1ai	On discharge from hospital, has patient been prescribed an opioid (including tramadol)?	☐ On opioids preoperatively and has been discharged with an opioid prescription ☐ On opioids preoperatively and has been discharged without an opioid prescription ☐ No opioid prescription (previously opioid naïve) ☐ New opioid prescription (previously opioid naïve)

Item	Question	Response
Clavien-Dindo grade of complication		
7.2	Grade level of complications experienced by the patient: The treatments allowed for Grade I include: analgesic, antipyretic, antiemetic, and antidiarrheal drugs or drugs required for lower urinary tract infection. Grade II includes TPN, blood transfusion and any other drugs not included in Grade I. If the patient experienced multiple complications, please list each grade experienced.	☐ None ☐ I – Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic or radiological interventions. ☐ II – Requiring pharmacological treatment with drugs other than those allowed for Grade I complications. Blood transfusions and Total Parenteral Nutrition (TPN) also included. III – Requiring surgical, endoscopic or radiological intervention: ☐ IIIA – Intervention not under general anaesthesia. ☐ IIIB – Intervention under general anaesthesia. IV – Life threatening complications (including CNS complications) requiring critical care management: ☐ IVA – Single organ dysfunction (including dialysis). ☐ IVB – Multi-organ dysfunction. ☐ V – Death.
If Grade II or above:		
7.2a	Was patient treated for a suspected postoperative infection?	☐ None ☐ Surgical site infection ☐ Chest ☐ Urine / renal tract ☐ Neurological ☐ Empirical – patient unwell with suspected infection, but source unclear
7.2b	Other complications:	☐ None ☐ Cardiovascular ☐ Respiratory ☐ Venous thromboembolism ☐ Gastrointestinal ☐ Stroke ☐ Delirium