

| PATIENT ID |
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Case Report Form for ERAS+ sites

Version Control

| Version | Date | Changes | |
|---------|----------|--|--|
| 2.2 | 17/02/20 | N0 and M0 options added to 2.4a. | |
| 2.1 | 11/02/20 | Changes made to dataset. Some question numbers may have changed. | |
| | | New/altered questions: 1.8; 2.4a; 2.4b; 2.34; 2.35; 3.2; 3.13; 6.18; 6.19; 7.2. | |
| | | Questions removed: 3.1; 3.2. | |
| 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 |
| Antalananan | 19. | Female Female |
| Address de | | |
| 1.6 | Post code: | |
| 1.7 | Usual residence: | Own home Care home |
| 1.8 | Date of consent: | /(DD/MM/YYY) |
| Surgical ac | Imission | |
| 1.9 | Date of hospital admission: | /(DD/MM/YYY) |
| 1.10 | Date of surgery: | /(DD/MM/YYY) |
| ID numbers | : | |
| 1.12-1.13 | NHS / CHI / H&C number: | (10 digits) |
| 1.14 | Height: | (cm) |
| 1.15 | Weight: | (kg) |
| Patient follow-up | | |
| 1.21 | Patient's preferred method of contact: | ☐ E-mail: |
| | | Telephone: |
| | This should be indicated on the completed consent form. | No preference – provide both |
| 1.21 | Would patient like to receive e-mail updates from the PQIP study team? | ☐ Yes ☐ No |
| 1.22 | Enrolment in other studies: | Yes No Not known ERAS+ PRISM OPTIMISE II GSK Oesophagectomy study Prevention-HARP2 PREPARE-ABC Other: Other: |



| Item | Question | Response | | | |
|------------|--|--|--|--|--|
| Pre-operat | 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 If yes, answer Q2.4a-b No If no, proceed to Q2.5 | | | |
| 2.4a | Preoperative TNM staging | i. T: | | | |
| 2.4b | Neoadjuvant chemotherapy | Yes No Not known | | | |
| 2.5 | Enhanced recovery: | Yes No Not known | | | |



| Item | Question | Response |
|------|---|--|
| 2.6 | Pre-operative assessment (before hospital admission): | None Electronic Telephone Face to face: nurse or anaesthetist led Face to face: surgeon-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 |
| 2.12 | Albumin: | (g/L) Not measured |
| 2.13 | White cell count: | (x10°/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. | |



| 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, pleas | se 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: | <u></u> 1 |
| | | 2 |
| | | □3 |
| | | 4 |
| | See SOP for details. | 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: | |
| | CONSOMPHON. | 0-2 AU/day 3-4 AU/day |
| | | >5 AU/day |
| | | Not known |
| 2.34 | Documented | Yes – Qualitative (e.g. low / medium / high) |
| | individualised assessment | Yes – Quantitative (e.g. percentage risk of death / |
| | of perioperative risk: | complications) |
| | | □Both |
| | | □No |
| 2.35 | Planned postoperative | ☐ Ward care |
| | destination: | Level 1 care |
| | | Enhanced care |
| | | Level 2 care Level 3 care |
| | | □ revera care |



| Item | Question | Response |
|-------------|--|--|
| Surgical ac | Imission | |
| 2.36 | Received bowel preparation: | Yes No Not applicable |
| | | i. If yes, please specify: Mechanical Antibiotic Antibiotic and mechanical |
| 2.37 | Preoperative carbohydrates given on day of surgery: | ☐ Yes☐ No☐ Not known |
| Chest phys | io instruction | |
| 2.38+ | Patient received specific instruction on chest training and exercise +/-incentive spirometer prior to surgery: | ☐ Yes If yes, by whom? ☐ Physio ☐ Doctor ☐ Nurse ☐ Surgery school ☐ No ☐ Not known |
| Surgery scl | nool | |
| 2.39+ | Attended surgery school: | None☐ Group☐ One to one by ERAS+ nurse☐ Video/on-line resource |
| App downl | oaded 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 act | livity | |
| 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 tı | reatment | |
| 2.42 | Anaemia treatment in the last 3 months prior to surgery: | None ☐ Intravenous Iron ☐ Oral Iron ☐ EPO ☐ Blood transfusion ☐ B12 ☐ Folic acid |
| Frailty score | e | |
| 2.43 | Rockwood Clinical Frailty Score: See SOP for details. | □ Very fit (1) □ Well (2) □ Managing Well (3) □ Vulnerable (4) □ Mildly Frail (5) □ Moderately Frail (6) □ Severely Frail (7) □ Very Severely Frail (8) |
| | | ☐ Terminally III (9) ☐ Not done |
| Operative | data | |
| 3.1 | Compliance with induction antibiotic protocol: | Yes (within 60min of skin incision) |
| 3.2 | Select which anaesthetic techniques were utilised: Select all that apply. | General Anaesthesia Spinal Epidural Combined spinal and epidural Single shot regional block(s) [including paravertebral & TAP] Wound catheter infiltration (to continue post-op) Local anaesthetic infiltration to wound Oral gabapentinoids IV paracetamol IV NSAID IV opioids IV dexmedetomidine IV dexmedetomidine IV lignocaine Intravenous analgesia |
| 3.2i | If GA: | ☐ Inhalational – Desflurane ☐ Inhalational – Isoflurane ☐ Inhalational – Sevoflurane ☐ Inhalational – Other: ☐ Inhalational – Nitrous oxide ☐ IV Propofol infusion ☐ IV remifentanil infusion |



| Item | Question | Response |
|-------------|---|---|
| 3.3 | 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 |
| 3.3a+ | Patient on mechanical ventilation during surgery: | ☐ Yes – Average tidal volume: (ml) ☐ No ☐ Not applicable |
| 3.4 | Warming devices: | No warming device IV fluid warmer Forced-air warming device Underbody resistive heating Missing data Other: |
| Operative : | findings | |
| 3.5 | Including this procedure, number of operations the patient has had in the past 30 days: | □ 1 □ 2 □ >2 |
| 3.6 | Actual procedure was same as planned procedure: | ☐ Yes ☐ No |
| If no: | | |
| 3.7a-b | Actual surgical specialty and operation: | |
| 3.7c | Actual mode of surgery: | |
| 3.8a. | Actual procedure (secondary): | |
| 3.8b | Sub-group: | |
| 3.8c | Description: | |
| 3.9 | Surgical incision: | ☐ Thoracic ☐ Upper abdominal ☐ Lower abdominal ☐ Other / Laparoscopic / Thoracoscopic |



| Item | Question | Response |
|------------|--|---|
| 3.10 | Blood loss: | |
| 3.11 | Intra-abdominal / intra- thoracic findings: | Not applicable None Serous fluid Localised pus Free bowel content / pus / blood Missing data |
| 3.12 | Duration of surgery and anaesthesia: | |
| 3.13 | Did the patient receive any of the following treatments during anaesthesia and surgery? | i. Tranexamic acid: Yes No ii. Bolus vasopressor / inotrope: Yes No iii. Infusion of vasopressor / inotrope (for any duration): Yes No |
| Postoperat | ive destination | |
| 3.14 | Actual postoperative destination: | Ward careLevel 1 careEnhanced careLevel 2 careLevel 3 care |
| 3.15 | 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 higher risk than expected Operation palliative (unexpected) Other / further information: |



| Item | Question | Response | |
|--|--|---|--|
| Recovery o | care | | |
| · · | 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: | |
| Postoperati | ive visit on day 2 or day 3 | | |
| 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 | |
| 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 | |



| Item | Question | Response |
|--------------|--|--|
| 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 useNoneOnceTwice |
| 5.7+ | Number of times patient used mouthwash in first 24hr after surgery: | Not applicable – unable to useNoneOnceTwice |
| 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 FiO₂: |
| Day 7 post | operatively | |
| 6.1 | Patient still in hospital: | ☐ Yes ☐ No |
| If yes, answ | ver all of the following question | ns. If no, proceed to answer Q6.18. |
| 6.2 | If yes, Current location: | □ Ward care□ Level 1 care□ Enhanced care□ Level 2 care□ Level 3 care□ Level 2/3 care |
| Post-Opera | ative Morbidity Survey | (See SOP for advice on completion) |
| 6.3 | Pulmonary | New requirement for O₂ therapyNew requirement for respiratory supportNone of the above |
| 6.4 | Infection | ☐ Currently on IV antibiotics ☐ Temperature >38°C in past 24hr ☐ None of the above |
| | | |



| Item | Question | Response |
|------|--|--|
| 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 |
| 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 |



| Item | Question | Response |
|-------|--|---|
| 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 Aspiration 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: | NoneMildModerateSevere |
| 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 |



| Item | Question | Response |
|-------------|---|--|
| 6.18a | Was creatinine value recorded after surgery (up to 7 days post-operatively)? | ☐ Yes ☐ Patient has chronic renal failure with renal replacement therapy (RRT) ☐ Not recorded |
| 6.18i | If yes, what is the highest creatinine value recorded within 7 days after surgery? | (µmol/L) |
| 6.18b | Required new renal replacement therapy (RRT) in last 7 days: | ☐ No ☐ Yes (exclude patients on chronic RRT) |
| 6.19 | For Oesophagectomies only: Was a Gastrografin (or similar) swallow undertaken? | ☐ Yes If yes, what date? / (DD/MM/YYY) ☐ No |
| Death, disc | harge 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: | ☐ None ☐ I – Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic or radiological interventions. | | |
| | 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. | □ 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 GA. □ IIIB – Intervention under GA. 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 - please specify: Mild Moderate Severe Venous thromboembolism Gastrointestinal Stroke □ Delirium Renal replacement therapy | | |

