 

Case Report Form

PATIENT ID

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.

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| **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 | Biological sex of patient: |  Male Female Intersex Prefer not to say |
| **Address details** |
| 1.6 | Post code: |   |
| 1.7 | Usual residence: |  Own your home outright Own it with help of a mortgage or loan Pay part rent and part mortgage (shared ownership) Rent it Live there rent free (including rent free in a relativeor friend’s property (excluding squatting) Prefer not to say Care home Not Known |
| 1.8 | Date of consent: |  / / (DD/MM/YYY) |
| **Surgical admission** |
| 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 methodof contact: | c E-mail: Telephone: |

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|  | This should be indicated on the completed consent form. | c No preference – provide both |
| 1.21.a | Would patient like to receive e-mail updates from the PQIP study team? |  Yes No |
| **VITAL Study** |
| 1.22 | Has the participant consented to taking part in VITAL? |  Yes No |
| 1.22.a | Date of consent to VITAL |  / / (DD/MM/YYY) |
| 1.22.b | Has the patient passed all the VITAL acceptance criteria? |  Yes No |
| 1.22.c | Randomisation confirmation code | (5 digits) |
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| **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 |

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| 2.2c | Is this surgery part of a multistage procedure? |  No YesIf 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 | 1. T:  1  2  3  4a  4b  Not known
2. N:  0  1  2a  2b  2c  3

 Not known1. M:  0  1  Not known
 |
| 2.4b | Neoadjuvant chemotherapy |  Yes  No  Not known |
| 2.5 | Enhanced recovery: |  Yes  No  Not known |

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| **Item** | **Question** | **Response** |
| 2.6 | Pre-operative assessment (before hospital admission): |  No pre-admission preoperative assessment Electronic self-assessment Telephone / Video Face to face: nurse or anaesthetist led Face to face: surgeon-led Other: |
| 2.7 | Sodium: | (mmol/L)  Not measured |
| 2.8 | Creatinine: | (µmol/L)  Not measured |
| 2.10 | Albumin: | (g/L)  Not measured |
| 2.11 | Anaemia treatment in the last 3 months prior to surgery: |  None  Intravenous Iron  Oral Iron EPO  B12  Folic acid Blood transfusion of packed red blood cells |
| 2.12 | Haemoglobin: | (g/dL)  Not measured |
| 2.12a | Was this Hb measurement before, during or post- anaemia treatment? |  Not applicable (not treated for anaemia) Before anaemia treatment During or after anaemia treatment Don’t know |

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| 2.13 | Ferritin: | (micrograms/L)  Not measured |
| 2.13a | Is this Ferritin measurement before, during or post- anaemia treatment? |  Not applicable (not treated for anaemia) Pre-anaemia treatment During or after anaemia treatment Don’t know |
| 2.14 | Pulse rate: | (bpm) |
| 2.15 | Systolic BP: | (mmHg) |
| 2.16 | Oxygen saturation: | (%) |
| 2.17 | Does the patient have heart failure? |  Yes  No |
| 2.18 | NYHA heart failure classification:See SOP for details. |  I II III IV |

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| 2.19 | Cerebrovascular disease:**ANSWER OPTIONS COLLAPSED** |  Yes No |
| 2.20 | 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 |
| 2.21 | Dementia: |  Yes No |
| 2.22 | Diabetes: |  No Type 1 Type 2 (on insulin) Type 2 (Diet controlled only) Type 2 (Non-insulin glucose lowering medication) |
| 2.22a | HbA1c: | (%)  Not measuredConversion calculator on PQIP web site. |
| 2.24 | ASA grade: | c 1 2 3 |

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|  | See SOP for details. | c 4 5 |
| 2.25 | Was preoperative CPET performed? |  No Yes |
| If yes: |
| 2.25a | VO2 Peak Indexed: | (ml/kg/min) |
| 2.25b | Anaerobic Threshold (AT) Indexed: | (ml/kg/min) |
| 2.25c | VE/VCO2 at AT: |  |
| 2.25d | Max work rate: | (Watt) |
| 2.25e | Max heart rate: | (bpm) |
| 2.25f | Max oxygen pulse: | (ml/beat) |
| 2.25g | FEV1/FVC: | (%) |
| 2.26 | Smoking history: |  Never smoked Ex-smoker > 6 months Ex-smoker <6 months Current smoker Unknown |
| 2.27 | Documented individualised assessment of perioperative risk: |  Yes – Qualitative (e.g. low / medium / high) Yes – Quantitative (e.g. percentage risk of death / complications) Both No |
| 2.28 | Planned postoperative destination: |  Ward care Level 1 care/ Enhanced care Level 2 care Level 3 care |

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| **Item** | **Question** | **Response** |
| **Surgical admission** |
| 2.29 | Received bowel preparation: |  Yes  No  Not applicablei. If yes, please specify:  Mechanical Antibiotic  Antibiotic and mechanical |
| 2.30 | Preoperative carbohydrates given on day of surgery: |  Yes No Not known |
| **Frailty score** |
| 2.35 | Rockwood Clinical Frailty Score: |  Very fit (1) Managing Well (3) |  Well (2) Vulnerable (4) |
|  |  |  Mildly Frail (5) |  Moderately Frail (6) |
|  | See SOP for details. |  Severely Frail (7) (8) |  Very Severely Frail |
|  |  |  Terminally Ill (9) |  Not done |
| **COVID-19** |
| 2.36 | Has the patient had suspected or confirmed COVID-19 infection before this hospital admission?See SOP for details. |  No – confirmed No – presumed Yes Suspected |
| If yes/suspected: |
| 2.36a | Please state or estimate the date of symptom onset: |  / / (DD/MM/YYYY) |
| If yes: |
| 2.36b | What level of treatment did the patient have? |  Home care only Hospitalised – O2 only Hospitalised – CPAP/NIV/HFNO Hospitalised – mechanical ventilation |
| 2.37 | Has the patient had a COVID19 vaccine? |  No Yes – one dose Yes – two doses Yes – >2 doses |
| 2.37a | If yes, date of most recent vaccination |  / / (DD/MM/YYYY) |

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| **Item** | **Question** | **Response** |
| **Operative data** |
| 3.1 | Select which anaesthetic techniques were used: |  General Anaesthesia Spinal  Epidural |
|  |  |  Combined spinal and epidural |
|  | Select all that apply. |  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 ketamine |
|  |  |  IV dexmedetomidine  IV lignocaine |
|  |  |  Intravenous analgesia |
| 3.1i | If GA: |  Inhalational – Desflurane Inhalational – Isoflurane Inhalational – Sevoflurane Inhalational – Other:  Inhalational – Nitrous oxide IV Propofol infusion IV remifentanil infusion |
| 3.2 | 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 |
| 3.3 | Warming devices: |  No warming device IV fluid warmer Forced-air warming device Underbody resistive heating Missing data Other:  |

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| **Item** | **Question** | **Response** |
| **Operative findings** |
| 3.4 | Including this procedure, number of operations the patient has had in the past 30 days: |  1 >1 |
| 3.5 | Actual procedure was same as planned procedure: |  Yes No |
| If no: |
| 3.6a-b | Actual surgical specialty and operation: |  |
| 3.6c | Actual mode of surgery: |  |
| 3.7a | Actual procedure (secondary): |  |
| 3.7b | Sub-group: |  |
| 3.7c | Description: |  |
| 3.8 | Surgical incision: |  Thoracic Upper abdominal  Lower abdominal Other / Laparoscopic / Thoracoscopic |
| 3.9 | Blood loss: |  100ml  101-500ml  501-1000ml 1001ml – please give estimated amount: (ml) Missing data |
| 3.10 | Duration of surgery and anaesthesia: |  <2 hours  2:01-3 hours  3:01-4 hours 4:01-6 hours  >6:01 hours |
| 3.11 | Did the patient receive any of the following treatments during anaesthesia and surgery? | 1. Tranexamic acid:  Yes  No
2. Bolus vasopressor / inotrope:  Yes  No
3. Infusion of vasopressor / inotrope (for any duration):  Yes  No
4. Transfusion of packed red blood cells:

 Yes  No |
| **Item** | **Question** | **Response** |
| **Postoperative destination** |
| 3.12 | Actual postoperative destination: |  Ward care Level 1 care/Enhanced care |

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|  |  | c Level 2 care Level 3 care |
| 3.13 | 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: |
| **VITAL Study Questions** |
| 3.V.1 | Was IV anaesthestic used for induction of anaesthesia? |  Yes No |
| 3.V.1.a | If 'Yes', what IV anaesthetic was used for induction of anaesthesia? *(Please select all that apply)* |  Propofol Other (specify) |
| 3.V.1.a.i | Other (specify) |  |
| 3.V.2 | Was IV anaesthetic used for maintenance of anaesthesia? |  Yes No |
| 3.V.2.a | If 'Yes', what IV anaesthetic was used for maintenance of anaesthesia?*(Please select all that apply)* |  Propofol Other (specify) |
| 3.V.2.a.i | Other (specify) |  |
| 3.V.3 | Was volatile anaesthetic used for induction of anaesthesia? |  Yes No |
| 3.V.3.a | If 'Yes', what volatile anaesthetic was used for induction?*(Please select all that apply)* |  Sevoflurane Other (specify) |
| 3.V.3.a.i | Other (specify) |  |
| 3.V.4 | Was volatile anaesthetic used for maintenance of anaesthesia? |  Yes No |

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| 3.V.4.a | If ‘Yes’, what volatile anaesthetic was used for maintenance?*(Please select all that apply)* |  Sevoflurane Isoflurane Desflurane Other (specify) |
| 3.V.4.a.i | Other (specify) |  |
| 3.V.5 | Was muscle relaxant given? |  Yes No |
| 3.V.5.a | If 'Yes', were additional doses of muscle relaxant given after initial dose at induction? |  Yes No |
| 3.V.6 | Was reversal for neuromuscular blockade given? |  Yes No |
| 3.V.6.a | If 'Yes', what was given? |  Sugammadex Neostigmine |
| 3.V.7 | Was intravenous dexamethasone given? |  Yes No |
| 3.V.8 | Was any regional anaesthesia technique used? |  Yes No |
| 3.V.8.a | If 'Yes', what regional anaesthesia technique was used? |  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 |
| 3.V.9 | Was depth of anaesthesia monitoring used? |  Yes No |
| 3.V.10 | Start time of anaesthesia |  / (HH/MM) |
| 3.V.11 | Start time of surgery (knife to skin) |  / (HH/MM) |
| 3.V.12 | End of surgery (closure) |  / (HH/MM) |
| 3.V.13 | End time of anaesthesia |  / (HH/MM) |
| 3.V.14 | Time into recovery |  / (HH/MM) |

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| 3.V.15 | Time out of recovery |  / (HH/MM) |
| 3.V.16 | Was Dexmedetomidine infusion used for maintenance of anaesthesia? |  Yes No |
| 3.V.17 | Was Remifentanil infusion used for maintenance of anaesthesia? |  Yes No |
| 3.V.18 | Was Alfentanil infusion used for maintenance of anaesthesia? |  Yes No |
| 3.V.19 | Was Nitrous oxide used for maintenance of anaesthesia? |  Yes No |
| **Recovery 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 | Drain present on arrival from theatres: | c Yes – abdominal Yes – thoracic c Yes – neck Yes – rectal Yes – spinal Yes – joint Yes – other No drain present |
| 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: |

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| **Item** | **Question** | **Response** |

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| **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). |
| 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 NoIf 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 |
| **Day 7 postoperatively** |
| 6.1 | Patient still in hospital: |  Yes  No |
| If yes, answer all of the following questions. If no, proceed to answer Q6.18. |
| 6.2 | If yes, Current location: |  Ward care  Level 1 care/Enhanced care Level 2 care  Level 3 care  Level 2/3 care |
| **Item** | **Question** | **Response** |
| **Post-Operative Morbidity Survey** (See SOP for advice on completion) |
| 6.3 | Pulmonary |  New requirement for O2 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 |

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|  |  |  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 24hrc 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 |

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|  |  |  Organisational failure (e.g. transport not booked) None of the above |
| **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 Gastrograffin (or similar) swallow undertaken? |  YesIf yes, what date? / / (DD/MM/YYY) No |
| **Death, discharge, or withdrawal** |
| 7.1 | Discharge destination: |  Own home  Care home Died  Withdrawn from study Rehabilitation facility  Other hospital Live with relatives or friends  Other |
| 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) |

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| **Item** | **Question** | **Response** |
| **Clavien-Dindo grade of complication** |
| 7.2 | Grade level of complications experienced by the patient:The treatments allowed for Grade Iinclude: analgesic, antipyretic, antiemetic, and antidiarrheal drugs or drugs required for lower urinary tractinfection. 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.1. – Requiring surgical, endoscopic or radiological intervention:

 IIIA – Intervention not under general anaesthesia. IIIB – Intervention under general anaesthesia.1. – 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 |

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|  |  | c Delirium Renal replacement therapy |
| **Item** | **Question** | **Response** |
| **COVID-19 status** |
| 7.3 | Please indicate the patient’s SARS-CoV-2 / COVID-19 infection status for this admission.Choose one option only. |  Confirmed Covid positive at time of surgery Suspected Covid positive at time of surgery Covid positive during hospitalisation; indeterminate timing of infection Covid positive assumed nosocomial infection Covid negative Covid status unknown Unable to answer |
| **Post-operative blood transfusion** |
| 7.4 | Did the patient receive any transfusions of packed red blood cells postoperatively? |  Yes No |
| **Vital Study** |
| 7.V.1.1 | Total number of days on a ward/Level 1 following surgery |  |
| 7.V.1.2. | Was patient admitted for higher levels of care following surgery? |  Yes No |
| 7.V.1.2.a | If admitted to Level 3, total number of days at Level 3 following surgery? |  |
| 7.V.1.2.b | If admitted to Level 2, total number of days at Level 2 following surgery? |  |
| 7.V.1.2.a | If admitted to enhanced care/PACU, total number of days in enhanced care/PACU following surgery? |  |
| **Day 30 status questions** |
| 7.V.2.1 | Were you able to successfully speak to the participant? |  Yes No |

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| 7.V.2.1.a | If ‘Yes’ date you spoke toparticipant |  / / (DD/MM/YYY) |
| 7.V.2.1.b | If 'No', date data obtained from records |  / / (DD/MM/YYY) |
| 7.V.2.2 | Has the patient died since last follow up? If deceased, please complete a Notification of Death Form and send to CTU team. |  Yes No |
| 7.V.2.3 | Has the patient been readmitted to hospital since their discharge? |  Yes No |
| 7.V.2.3.a | If 'Yes', in total, how many additional days did the patient spend as an in- patient in hospital since their original discharge? |  |
| 7.V.2.4 | In the 30 days following their surgery, did the patient suffer any of the following post operative complications at grade ll or above? |  Yes |
| 7.V.2.4.a | If ‘Yes’, please tick the boxof complications. |  5. Acute cardiac events 6. Acute Kidney Injury (KDIGO Stage 3) 7. Infectious Complications 8. Post-Operative Pulmonary complications 9. Stroke |
| **Day 90 status questions** |
| 7.V.3.1 | Date data obtained |  / / (DD/MM/YYY) |
| 7.V.3.2 | Has the patient died since the last follow up? |  Yes No |
| 7.V.3.2.a | If 'No', date verified still alive |  / / (DD/MM/YYY) |
| 7.V.3.3 | Has the patient been readmitted to hospital since their Day 30 follow up? |  Yes No |

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| 7.V.3.3.a | If 'Yes', in total, how many additional days did the patient spend as an in- patient in hospital since Day 30? |  |
| **6 month status questions** |
| 7.V.4.1 | Date data obtained |  / / (DD/MM/YYY) |
| 7.V.4.2 | Has the participant died since the last follow up? |  Yes No |
| 7.V.4.2.a | If 'No', date verified still alive |  / / (DD/MM/YYY) |