

PQIP Perioperative Quality Improvement Programme



STANDARD OPERATING PROCEDURES

CONTENTS

| | |
|---|-----------|
| Introduction | 2 |
| Patient Demographics | 3 |
| Address Details | 3 |
| Surgical admission | 3 |
| ID Numbers | 3 |
| Linked data..... | 4 |
| Patient follow-up..... | 4 |
| study data | 4 |
| Pre-Operative Data | 5 |
| Surgical Admission..... | 8 |
| Operative Data | 9 |
| Operative findings | 9 |
| Post-operative destination..... | 10 |
| Recovery Data | 11 |
| Post-Operative visit on Day 2 or 3..... | 12 |
| Post-Operative visit on day 7..... | 13 |
| On death or discharge from hospital..... | 16 |
| | |
| Appendix 1 – ELIGIBLE PROCEDURES | 17 |
| Appendix 2 – GLASGOW COMA SCALE | 22 |
| Appendix 3 – ASA-PS SCORE | 23 |

INTRODUCTION

The Perioperative Quality Improvement Programme (PQIP) was set up in 2016 by the National Institute of Academic Anaesthesia and the Health Services Research Centre working on behalf of the Royal College of Anaesthetists. Our aim is to improve the outcomes of patients undergoing major non-cardiac surgery. PQIP will measure complications, risk-adjusted mortality and patient reported outcomes on a random sample of five cases per week so we can try to reduce complication rates, improve patient experience and quality of life after surgery.

We have constructed a dataset which we would like you to complete for each patient participating in this study. As there can be many interpretations of questions we have provided this document, a standard operating procedure (SOP) for the PQIP dataset, to provide guidance on correct completion of the form.

Please note that this SOP refers only to the questions that are to be completed by the clinicians or researchers and not by patients themselves.

As you complete the questions in the web-tool, the menu bar will change colour to highlight your progress: blue for empty or unsaved sections; red for sections with errors; orange for incomplete sections requiring further data entry; green for fully completed sections.

Important: Patients should only be recruited **once** into the study. This is to prevent questionnaire-fatigue and complications with data linkage. If a patient is already entered in the webtool, you will not be able to open a new record for them.

If you have any questions please contact the PQIP team at pqip@rcoa.ac.uk

Thank you for your support.

PATIENT DEMOGRAPHICS

- 1.1 Enter the patient's **local hospital ID number**.
- 1.2 Enter the patient's **surname**.
- 1.3 Enter the patient's **first name** as registered on the hospital system.
- 1.4 Enter the patient's **date of birth** in the format 'DD/MM/YYYY'.
- 1.5 Select the patient's current **gender**.

ADDRESS DETAILS

- 1.6 Enter the patient's **current postcode** – enter the outward code (1st part) in the first box and the inward code (2nd part) in the second box.
- 1.7 Select **one** of the two options that best describes the patient's usual residence:
 - Own home – private residence either owned or rented. This would include sheltered accommodation.
 - Care home – residential or nursing home where assisted living is provided.

SURGICAL ADMISSION

- 1.8 Enter the patient's **date of admission** to hospital for this procedure in the format 'DD/MM/YYYY'.
- 1.9 Enter the patient's **date of surgery** in the format 'DD/MM/YYYY'.
- 1.10 The patient's age at the time of surgery will be automatically filled in by the web-tool.

ID NUMBERS

1.11–1.12

For **Scottish hospitals**, enter the patient's **CHI number**. For hospitals in the rest of the U.K. enter the patient's **NHS number**.

- 1.13 Enter the patient's **height** in centimetres (cm).
- 1.14 Enter the patient's **weight** in kilograms (kg).

1.15–1.17

The patient's body surface area, body mass index and ideal body weight will be calculated automatically by the web-tool.

LINKED DATA

1.18–1.19

Linked data on mortality and re-admission will be automatically filled in by the web tool as these data become available.

PATIENT FOLLOW-UP

1.20 Enter how the patient would like to be **contacted in 6 and 12 months'** time to complete the follow-up questionnaire. This should be indicated on the completed consent form.

STUDY DATA

1.21 Enter if the patient is **enrolled** in any other studies. If yes, please note the study.

PRE-OPERATIVE DATA

Several of these questions form part of the P-POSSUM risk scoring tool which assigns increasing weight as you descend the tick box options or as a numeric value changes. Some questions have pre-defined wording and criteria which cannot be adjusted. Where this occurs we have provided further explanation below in an attempt to remove any ambiguity.

2.1-2.2

Select the **surgical speciality** and **planned procedure** from the lists provided. The specialties and procedures to be included are listed in **Appendix 1**.

The magnitude of surgery will be automatically generated from the choices made in questions 2.1–2.2. Surgical magnitude is determined using the AXA-PPP schedule of procedures and is the same as that used in the Surgical Outcome Risk Tool (SORT) (www.sortsurgery.com).

2.2b

Please select all that apply to the mode of surgery for this operation: open; laparoscopic; robotic; thoracoscopic.

2.3

PQIP is currently only collecting data on patients having planned surgery. Choose from the following:

- **Expedited** – Patient requiring early treatment where the condition is **not** an immediate threat to life, limb or organ survival. Normally within days of decision to operate. This might include urgent cancer surgery for example.
- **Elective** – Intervention planned or booked in advance of routine admission to hospital. Timing to suit patient, hospital and staff.

2.4

Select if the patient is on an **enhanced recovery pathway**. This includes any protocolised pathway aimed at improving patient outcome and reducing length of stay.

2.5

Select one or more options from the list which best describe the form of **preoperative assessment** undertaken **prior to hospital admission**. Options include: no pre-admission preoperative assessment; electronic self-assessment; telephone assessment either with a nurse or a doctor; face-to-face assessment in clinic by a pre-assessment nurse, anaesthetist or surgeon (common in Cardiothoracic Surgery). Free text available if 'other' chosen. For the purposes of PQIP, assessment on the morning of surgery or an admission clerking would **not** be considered pre-admission pre-operative assessment.

2.6

Enter the patient's most recent serum **sodium** prior to surgery in mmol/L.

2.7

Enter the patient's most recent serum **potassium** prior to surgery in mmol/L (to one decimal place).

2.8

Enter the patient's most recent serum **urea** prior to surgery in mmol/L (to one decimal place). Maximum limit 30 mmol/L.

- 2.9** Enter the patient's most recent serum **creatinine** prior to surgery in $\mu\text{mol/L}$.
- 2.10** Enter the patient's most recent serum **albumin** prior to surgery in g/L.
- 2.11** Enter the patient's most recent **white cell count** prior to surgery in $\times 10^9/\text{L}$ (to one decimal place). Maximum limit $30 \times 10^9/\text{L}$.
- 2.12** Enter the patient's most recent **haemoglobin** prior to surgery in g/dL (to one decimal place).
- 2.13** Enter the patient's **pulse rate** in beats per minute (bpm).
- 2.14** Enter the patient's **systolic blood pressure** in mmHg.
- 2.15** Enter the patient's **Glasgow Coma Scale** total, ranging from 3–15 (see **Appendix 2**).
- 2.16** Enter the patient's **oxygen saturations (%)** measured in the supine position and after resting for one minute. If the patient is on supplemental oxygen please remove for 10 minutes and then measure oxygen saturations at rest.
- 2.17** Select **one** option that best describes the patient's **pre-operative ECG**.
- 2.18** Select **one** option that best describes the patient's current **cardiac history/findings**.

This question enquires about the presence and severity of **cardiac failure**. The answers can be based on patient history, examination or chest x-ray findings. The criteria in the second and third tick boxes apply only if the patient is being treated for cardiac failure. Anti-anginals for ischaemic heart disease or antihypertensives without a diagnosis of cardiac failure would not be scored here. Cardiac failure is not always clearly documented and if there is ambiguity it may require a review of documented examination findings and echocardiogram reports.

- 2.19** Select **one** option that best describes the patient's current **heart failure status** according to the **New York Heart Association (NYHA) Functional Classification**:
- **I - No limitation of physical activity.** Ordinary physical activity does not cause undue fatigue, palpitation, dyspnoea
 - **II - Slight limitation of physical activity.** Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnoea
 - **III - Marked limitation of physical activity.** Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnoea
 - **IV - Unable to carry on any physical activity without discomfort.** Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases.

Whereas the P-POSSUM (2.18) uses the presence of medications and clinical signs (oedema, cardiomegaly), the NYHA Functional Classification is a tool for scoring severity of cardiac failure based on **clinical symptoms** and the degree to which a patient is **limited during physical exertion**.

- 2.20** Select **one** option that best describes the patient's current **respiratory history/findings**.
- 2.21** Select if the patient has had an acute upper or lower **respiratory tract infection** in the month prior to surgery.
- 2.22** Select **one** option provided as to the patient's history of **cerebrovascular disease**:
- No.
 - Yes – no hemiplegia: history of TIA or stroke with no or minor sequelae.
 - Yes – with hemiplegia: stroke with hemiplegia.
- 2.23** Select one or more of the **cancer diagnosis** options that are current or have been in remission for less than five years:
- No.
 - Yes – solid tumour: local only (exclude if > 5 years from diagnosis).
 - Yes – solid tumour: metastatic disease (including lymph node).
 - Yes – Lymphoma (NHL, Hodgkin's, Waldenström, multiple myeloma).
 - Yes – Leukaemia (acute or chronic).
- 2.24** Select if the patient has a **chronic cognitive deficit** (dementia is defined as per ICD-10).
- 2.25** Select if the patient has **diabetes mellitus**. If on oral medication and insulin- enter as on insulin. End organ damage includes retinopathy, neuropathy and nephropathy. If the patient is type 2 diabetic please select the option of how the diabetes is controlled.
- 2.26** Enter the patient's most recent **HbA1c** prior to surgery as a **%** (to one decimal place) if they are being treated for diabetes mellitus. A conversion calculator from mmol/mol or mmol/L can be accessed through the web tool.
- 2.27** Select **one** of the options if the patient has **liver disease**. Cirrhosis can either be diagnosed radiologically, histologically or grossly.
- 2.28** Grade the patient's risk according to the American Society of Anesthesiologists physical status (ASA-PS) classification (see **Appendix 3**).
- 2.29** Select if the patient has had preoperative **cardiopulmonary exercise testing**. If so, **enter the results**, if available, in the form provided (entering CPET data is optional).
- 2.30** Select **one** option which best describes the patient's **smoking history**. Smoking includes all forms of inhaled tobacco (but not electronic cigarettes or other nicotine delivery systems, e.g. chewing gum).
- 2.31** Select if the patient was referred to a **smoking cessation service**, regardless of attendance. (This question only appears if "current smoker" chosen on question 2.31)
- 2.32** Select **one** option which best describes the patient's **current daily alcohol consumption**. One alcohol unit equals 10ml or 8g of pure alcohol which equals one 25ml single measure

of whiskey (ABV 40%), or a third of a pint of beer (ABV 5-6%), or half a standard (175ml) glass of red wine (ABV12%).

- 2.33** Select the type of **perioperative risk assessment**, if any, that was recorded in the notes or consent form. This should convey risk of mortality or morbidity arising from the surgery, **individualised** to the patient. This does not include population risks of anaesthesia-related procedures. All forms of risk stratification accepted: Qualitative (e.g. low / medium / high); Qualitative (e.g. percentage risk of death or complications, e.g. using P-POSSUM/SORT).
- 2.34** Select the patient's **planned post-operative destination**.
- **Level 0 (ward)** – Patients whose needs can be met through normal ward care in an acute hospital.
 - **Level 1** – Patients at risk of their condition deteriorating, or those recently relocated from higher levels of care, whose needs can be met on an acute ward with additional advice and support from the critical care team.
 - **Level 2** – Patients requiring more detailed observation or intervention including support for a single failing organ system or post-operative care and those 'stepping down' from higher levels of care.
 - **Level 3** – Patients requiring advanced respiratory support alone or basic respiratory support together with support of at least two organ systems. This level includes all complex patients requiring support for multi-organ failure.

SURGICAL ADMISSION

- 2.35** Select if the patient received oral mechanical **bowel preparation**.
- 2.36** Select if the patient received a clear **carbohydrate drink** approximately 2 hours prior to surgery.

OPERATIVE DATA

- 3.1** Select the grade of the most **senior surgeon** that was physically **present** in the operating theatre.
- 3.2** Select the grade of the most **senior anaesthetist** that was physically **present** in the operating theatre.
- 3.3** Select if **appropriate prophylactic antibiotics** were given within 60 minutes of skin incision. “Appropriate antibiotic prophylaxis” is compliance with local protocols. If no antibiotics are required according to local protocols and none were given, this constitutes appropriate antibiotic prophylaxis.
- 3.4** Select the **type of anaesthesia** that the patient received and then the **form(s) of intraoperative analgesia** they received (i.e. intravenous analgesia, local infiltration, regional block or neuroaxial block).
- 3.5** Select any **additional intraoperative monitoring** that the patient had in addition to the standard monitoring for all operations.
- Standard AAGBI monitoring includes: pulse oximeter, non-invasive blood pressure, electrocardiograph, airway pressure and airway gases (oxygen, carbon dioxide, anaesthetic agent)
 - Cardiac output monitoring includes any device that was inserted or used to assess the fluid responsiveness of the patient during the surgical procedure. It includes Oesophageal Doppler, Pleth Variability Index (PVI), echocardiogram, arterial pulse contour analysis, pulmonary artery catheter, partial non-rebreathing systems, thoracic bio impedance, endotracheal cardiac output monitor.
- 3.6** Select type of **warming** device, if any, was used on the patient. Select all options that apply.

OPERATIVE FINDINGS

- 3.7** Including the present procedure, select the **number of operations** the patient has had in the previous **30 days**.
- 3.8-3.10** Select if the **actual procedure** was the same as the overall planned procedure. If different, select the actual procedure performed from the lists available. Refer to sections 2.1–2.3. For question **3.9b**, **please select all that apply** (for example if the operation proceeded from laparoscopic assisted to open, please tick both)
- 3.11** Select which **surgical incision** was performed. If more than one incision, please **choose the higher ranking incision**: intra-thoracic > upper abdominal > lower abdominal > other/laparoscopic/thoracoscopic.

- 3.12 Select the range of estimated total **blood loss** for the procedure.
- 3.13 In cases where the abdominal cavity was entered, select the option which best describes the degree of **peritoneal soiling**.
- 3.14 Select the **length of time** that the patient was under general anaesthesia for the procedure.

POST-OPERATIVE DESTINATION

- 3.15 Select the patient's **actual postoperative destination**.
- 3.16 If the actual destination is **different** from that planned (see question 2.36) please select the **reason why**. Choose from the options listed or type in the free text box.

RECOVERY DATA

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 Select yes if the **first core temperature** taken in recovery is greater than or equal to 36°C.
- 4.2 Select yes if an **abdominal drain** is present on arrival from theatre.
- 4.3 Select yes if a **nasogastric tube** is present on arrival from theatre.
- 4.4 Select the patient’s **highest recorded pain score** during their stay in recovery.
We would suggest converting numerical pain scales as follows:
 - 0-3 scale:
 - 0 = None
 - 1 = Mild
 - 2 = Moderate
 - 3 = Severe
 - 0-10 scale:
 - 0 = None
 - 1-3 = Mild
 - 4-6 = Moderate
 - 7-10 = Severe

POST-OPERATIVE VISIT ON DAY 2 OR 3

Answer these questions with regard to the patient's status on **post-operative day 1**. The day of surgery is regarded as day 0. These assess achievement of the enhanced recovery objectives of the CHEERS-DREAM campaign (www.cheers-dream.com).

- 5.1 Select yes if **IV maintenance fluids** were **discontinued** within 24 hours after completion of surgery.
- 5.2 Select yes if the patient was tolerating **free fluids** within 24 hours after completion of surgery. No minimum volume currently specified. See web tool for links to recent guidelines.
- 5.3 Select yes if the patient **restarted oral diet** (at least soft diet e.g. yoghurt, porridge, fruit) within 24 hours of completion of surgery and tolerated it. This does not have to be full normal diet.
- 5.4 Select yes if the patient **mobilised from bed to chair** with maximum assistance of one person within 24 hours of completion of surgery.

POST-OPERATIVE VISIT ON DAY 7

6.1–6.2

Select yes if the patient is **currently in hospital** on day 7. The day of surgery is regarded as day 0. If yes, select the patient's current location from the options listed.

The following questions form the Post-Operative Morbidity Survey (POMS), an 18-item survey addressing nine domains of postoperative morbidity. In answering them you should consider the patient's status on **day 7 post-operatively**.

6.3 Pulmonary – Select all options that apply.

If the patient has been receiving long-term oxygen therapy and has recovered back to their original level of oxygen requirement prior to surgery, please select **“None of the above”**.

If the patient is receiving any advanced respiratory (including non-invasive ventilation or high flow nasal cannula) support that was not present before surgery, please select **“New requirement for ventilator”**.

6.4 Infectious – Select all options that apply.

Select if the patient is on **IV antibiotics** – this does not include oral antibiotics.

Select if the patient has had a **temperature of 38°C** or greater during the 24 hours preceding the time point at which the day 7 data is being collected.

6.5 Gastrointestinal – Select all options that apply.

Select **“Unable to tolerate enteral nutrition”** if:

- receiving TPN
- nil by mouth
- clear fluids only
- free fluids only
- soft diet only
- NG tube on free drainage or high NG aspirates
- NG fed but not tolerating full prescribed amount and therefore needs to remain in hospital

Select **“Nausea, vomiting or abdominal distention”** if the patient is unable to return to their previous normal diet for the above reasons, this includes paralytic ileus and patients who are requiring anti-emetics.

Select **“None of the above”** if the patient is unable to eat their full normal diet because their appetite has not fully returned.

6.6 Renal – Select all options that apply.

Select **“Oliguria”** if the urine output was **less than 500ml** during the 24 hours preceding the time point at which the day 7 data is being collected. Do not select this option if the urine output is greater than or equal to 500ml in the preceding 24 hours, if the urine output is not recorded or the fluid balance is inexact.

Select **“Creatinine 30% greater than pre-operative level”** if the serum creatinine during the 24 hours preceding the time-point at which the day 7 data is being collected is 30% greater than the pre-operative value. This should not be selected if less than 30% increase or if not measured in the preceding 24 hours. Use the pre-operative creatinine value closest to the date of surgery as the baseline value.

Select **“Urinary catheter in-situ”** if the patient has a urethral or supra-pubic catheter in-situ that was not present prior to surgery.

6.7 Cardiovascular – Select all options that apply.

Select **“Hypotension”** if, during the 24 hours preceding the time point at which the day 7 data is being collected, the patient has required >200ml of fluid resuscitation or has required a mini-jet or infusion of adrenaline or noradrenaline. This does not include GTN infusion for pulmonary oedema.

Select **“New myocardial infarction or ischaemia”** if, during the 24 hours preceding the time point at which the day 7 data is being collected, the patient has had a serum troponin sample taken, an ECG, echocardiogram, thrombolysis, a stent, PCI or if they require GTN spray or infusion for chest pain or ischaemic changes. This does not include routine post-operative ECGs.

Select **“Thrombotic event requiring anticoagulation”** if, at present or during the 24 hours preceding the time point at which the day 7 data is being collected, the patient required warfarin, heparin, treatment-dose low molecular weight heparin, or other anticoagulation. This does not include prophylactic anticoagulation, return to treatment dose anticoagulation if the patient was on anticoagulation prior to hospital admission, clopidogrel or aspirin.

Select **“Arrhythmias”** if, during the 24 hours preceding the time point at which the day 7 data is being collected, the ECG shows any dysrhythmia or if the patient had a non-routine ECG (unless this is for diagnosis of MI in which case “New myocardial infarction or ischemia” should be selected).

Select **“Cardiogenic pulmonary oedema”** if at present or during the 24 hrs preceding the time point at which the 7 day data is being collected, the patient has been started on GTN or furosemide for pulmonary oedema.

6.8 Neurological – Select all options that apply.

Select **“New neurological deficit”** if, at present or during the 24 hours preceding the time point at which the day 7 data is being collected, the patient has a new focal neurological deficit that was not present pre-operatively.

Select **“Delirium or confusion”** if, at present or during the 24 hours preceding the time point at which the day 7 data is being collected, the patient’s family or nursing staff report the patient’s behavior is not normal (new confusion or delirium that was not present pre-operatively, or if the patient has pre-existing confusion or delirium that is worse compared to their pre operative state).

Select “**Sedative-induced coma**” if the patient is in a sedative-induced coma.

6.9 Wound – Select all options that apply.

Select if the patient has required surgical exploration of a dehiscenced surgical wound, drainage of pus from the operation wound, oozing from the surgical wound, if a swab is sent to a laboratory or if a VAC drain is in situ.

6.10 Haematological – Select all options that apply.

Select “**Red cell transfusion**” if the patient has received a red blood cell transfusion during the 24 hours preceding the time point at which the day 7 data is being collected.

Select “**Fresh frozen plasma/cryoprecipitate/platelets**” if any were given at any point during the 24 hours preceding the time point at which the day 7 data is being collected.

6.11 Pain – Select all options that apply.

Select if the patient has received parenteral opioids or regional anaesthesia during the 24 hours preceding the time point at which the day 7 data is being collected. This includes PCA, epidural, IV or IM pain relief. This does not include oral analgesia or using transdermal patches.

6.12 Select yes if the patient has returned to their **baseline level of mobility** during the 24 hours preceding the time point at which the day 7 data is being collected.

6.13 Select all the reasons that explain why the patient **still requires admission on day 7** post-operatively.

ON DEATH OR DISCHARGE FROM HOSPITAL

7.1 Enter the **date of discharge, death or withdrawal** in the format 'DD/MM/YYYY'

Select the **discharge destination** or if patient has died prior to discharge or withdrawal from study.

7.2 Select the **grade of complication** experienced by the patient during their primary admission for surgery. If the patient experienced multiple complications please list each relevant level of complication.

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.

APPENDIX 1 – ELIGIBLE PROCEDURES

Abdominal - Hepatobiliary:

Exploratory laparotomy

Hemihepatectomy (left/right)

Partial hepatectomy (+/- ablation)

Pancreatectomy (partial/distal)

Pancreatectomy (total)

Pancreaticoduodenectomy (Whipple procedure)

Radiofrequency thermocoagulation of the liver with scapel resection

Resection of lesion(s) of liver

Splenectomy (partial/total)

Abdominal - Lower GI:

Abdominal revision of restorative proctocolectomy

Abdominoperineal (AP) resection with anastamosis (+/- pouch)

Abdominoperineal (AP) resection with end colostomy

Anterior resection

Colectomy and colostomy with preservation of rectum

Colectomy (total) and ileorectal anastamosis

Completion proctectomy

Complex restoration of intestinal continuity

Excision of retroperitoneal tumour (+/- ureterolysis)

Exploratory laparotomy

Intestinal failure reconstruction

Ileo-caecal resection (with anastamosis or ileostomy formation)

Hartmann's procedure

Restoration of intestinal continuity

Laparotomy for enterocutaneous fistula

Left hemicolectomy (with anastomosis/colostomy)

Panproctocolectomy and ileostomy

Resection of duodenal tumour

Resection of small bowel (+/- tumour)

Reversal of Hartmann's procedure

Right hemicolectomy (with anastomosis/ileostomy)

Sigmoid colectomy

Abdominal - other:

Abdominal wall reconstruction

Adrenalectomy (unilateral/bilateral)

Excision of retroperitoneal tumour (+/- ureterolysis)

Exploratory laparotomy

Laparotomy + excision of sarcoma tumour

Retroperitoneal lymph node dissection

Pelvic exenteration

Abdominal - Upper GI:

Exploratory laparotomy

Partial gastrectomy (+/- excision of surrounding tissue)

Total gastrectomy (+/- excision of surrounding tissue)

Bypass of oesophagus

Complex restoration of intestinal continuity

Ileo-caecal resection (with anastomosis or ileostomy formation)

Intestinal failure reconstruction

Laparotomy for enterocutaneous fistula

Oesophagectomy (partial)

Oesophagectomy (total)/Oesophagogastrectomy

Pancreatectomy (partial/distal)

Pancreatectomy (total)

Pancreaticoduodenectomy (Whipple procedure)

Partial excision of bile duct and anastomosis of bile duct to duodenum/jejunum

Resection of duodenal tumour

Resection of small bowel (+/- tumour)

Splenectomy (partial/total)

All major **Head and Neck** resections including:

Craniofacial resection (+/- reconstruction)

Extensive excision of mandible (+/- reconstruction)

Glossectomy (total)

Laryngectomy (partial)

Laryngectomy (subtotal)

Laryngectomy (total)

Laryngotracheal reconstruction following PLO

Maxillectomy (partial/hemi for malignancy +/- reconstruction)

Mediastinal thyroidectomy/parathyroidectomy with sternotomy

VATS excision of mediastinal tumour (including thymectomy)

Partial excision of trachea and reconstruction

Pharyngectomy (partial)

Pharyngectomy (total)

Pharyngolaryngo-oesophagectomy (PLO)

Radical dissection of cervical lymph nodes +/-:

- local myocutaneous flap reconstruction
 - distant myocutaneous flap reconstruction
- Selective dissection of cervical lymph nodes +/-:
- local myocutaneous flap reconstruction
 - distant myocutaneous flap reconstruction

Thoracics:

- VATS bullectomy (unilateral/bilateral)
- VATS excision of mediastinal tumour (including thymectomy)
- VATS lobectomy
- VATS lung volume reduction (unilateral/bilateral)
- VATS metastasectomy
- VATS pleurodesis/pleurectomy
- VATS pneumonectomy
- VATS wedge resection of lung
- Carinal resection +/- pneumonectomy
- Decortication of pleura of the lung
- Excision of chest wall tumour (+/- reconstruction)
- Lung resection with excision of chest wall
- Open excision of lesion of lung
- Open pneumonectomy
- Open resection of mediastinal tumour
- Partial excision of trachea and reconstruction
- Pulmonary lobectomy including segmental resection
- Thoracotomy and closure of bronchopleural fistula
- Thoracotomy and bullectomy (unilateral/bilateral)
- Thoracotomy and lung volume reduction

Thoracotomy and pleurectomy/pleurodesis (+/- ligation of bullae)

Urology

Pelvic exenteration

Radical prostatectomy

Retroperitoneal lymph node dissection

Total cystectomy (with construction of intestinal conduit or neobladder)

Total nephrectomy (non-transplant)

APPENDIX 2 – GLASGOW COMA SCALE

| Eye opening | | Best verbal response | | Best motor response | |
|-------------|---|----------------------|---|--------------------------|---|
| Spontaneous | 4 | Orientated | 5 | Obeys commands | 6 |
| To sound | 3 | Confused | 4 | Localises pain | 5 |
| To pressure | 2 | Words | 3 | Normal flexion to pain | 4 |
| None | 1 | Sounds | 2 | Abnormal flexion to pain | 3 |
| | | None | 1 | Extension to pain | 2 |
| | | | | None | 1 |

APPENDIX 3 – ASA-PS SCORE

| ASA grade | Definition | Further explanation |
|----------------|---|--|
| ASA I | A normal healthy patient | Healthy, non-smoking, no or minimal alcohol use |
| ASA II | A patient with mild systemic disease | Mild diseases only without substantive functional limitations. Examples include (but not limited to): current smoker, social alcohol drinker, pregnancy, obesity (30 < BMI < 40), well-controlled DM/HTN, mild lung disease |
| ASA III | A patient with severe systemic disease | Substantive functional limitations: one or more moderate to severe diseases. Examples include (but not limited to): poorly controlled DM or HTN, COPD, morbid obesity (BMI ≥40), active hepatitis, alcohol dependence or abuse, implanted pacemaker, moderate reduction of ejection fraction, ESRD undergoing regularly scheduled dialysis, premature infant PCA < 60 weeks, history (>3 months) of MI, CVA, TIA, or CAD/stents. |
| ASA IV | A patient with severe systemic disease that is a constant threat to life | Examples include (but not limited to): recent (< 3 months) MI, CVA, TIA, or CAD/stents, ongoing cardiac ischemia or severe valve dysfunction, severe reduction of ejection fraction, sepsis, DIC, ARD or ESRD not undergoing regularly scheduled dialysis |
| ASA V | A moribund patient who is not expected to survive without the operation | Examples include (but not limited to): ruptured abdominal/thoracic aneurysm, massive trauma, intracranial bleed with mass effect, ischemic bowel in the face of significant cardiac pathology or multiple organ/system dysfunction |
| ASA VI | A declared brain-dead patient whose organs are being removed for donor purposes | |