PACU Services at Morriston Hospital within the Cardiac Intensive Care Unit Footprint

The Task and Finish Group on Provision of Critical Care Services in Wales stated that Post Anaesthetic Care Unit (PACU) is an opportunity to provide care to high-risk surgical patients that cannot be delivered safely on a ward in the first 24 - 48hrs post-operatively, for patients that do not require the level of care provided in a critical care setting.

With clear SOP's and agreement this group of patients can be under the care of the peri-operative surgeons and anaesthetists with intensivists only contacted when their expertise is required, freeing intensivists up to care for critically ill patients. This service will reduce cancellations and delayed starting times due to lack of critical care capacity, with loss of theatre resource and potential harm to patients.

Enhanced care at the Morriston Hospital Site is currently located within the Cardiac Intensive Care Unit footprint with beds dedicated to PACU and cardiothoracic surgery. These are managed in a flexible way to ensure cardiac surgery as well as high risk elective surgery can be provided in a timely manner at the Morriston site.

PACU beds provide a pragmatic approach to reducing the risk of cancelling patients who would benefit from higher levels of monitoring or interventions than expected on a routine ward. Currently, there are no facilities of providing enhanced care outside of the critical care and CITU facilities.

The guidelines for provision of enhanced care within PACU will be based upon the "Enhanced Care: guidance on service development in the hospital setting" endorsed by the British Anaesthetic and Recovery Nurses Association, British Thoracic Society, Centre for Perioperative Care, Getting It Right First Time (GIRFT) Programme, Intensive Care Society, Royal College of Anaesthetists, Royal College of Surgeons, Edinburgh, Royal College of Surgeons, England, Society for Acute Medicine UK and Critical Care Nursing Alliance. They will be adapted to suit the working pattern at Morriston Hospital.

Centres around the UK have found that enhanced care should be adopted and the boundaries between level 1, enhanced care and level 2 may be blurred depending on case-mix and staff skill mix. Critical care units are under pressure from emergency admissions. This presents a challenge in terms of protecting the interests of patients having high risk surgery: they may either face the prospect of last-minute cancellation, or they may be treated on normal wards, which are less well set-up to meet their immediate postoperative needs.

At the Morriston site, this will cover elective surgical patients whose care cannot be optimally provided within the general ward settings. Facilities for provision of care within cardiac ITU range from level 0 to level 3. However, for elective non-cardiothoracic surgical patients the care provided will be up to level 2 only.

Information dissemination and implementation
This document will be disseminated to all EPOC / anaesthetic / critical care / theatres and surgical staff via clinical and nursing leads. It will be stored on the COIN intranet site.

Supervision will be provided by both senior nursing and medical staff as appropriate. Training will be given as appropriate either by the education team or clinical representatives as appropriate.

PACU aims and objectives
PACU will aim to deliver holistic, high-quality care to surgical patients having complex elective surgeries by providing safe, efficient and best quality care to this patient group. The aim to:

- Reduce likelihood of last-minute cancellation due to bed pressures.
- Early monitoring and treatment of postoperative complications and improve patient reported outcomes.
- Follow the enhanced recovery guidelines of early mobilisation to reduce length of hospital stay and postop complications.
- Reduce pressure on Acute Critical Care Services.
- PACU length of stay is time limited intervention with the expectation that the majority of patients will be discharged from within 24-48 hours. A small number will need up to 72 hours. Patients requiring higher level of care beyond 72 hours will be discussed with the critical care unit for transfer of care.

Adhering to these principles will improve the efficiency of the service, as length of stay of elective surgery patients is largely predictable.

Patient expectations
Patients considered for admission to PACU should be informed by their parent team as part of preoperative shared decision-making consultation about where postoperative care will be delivered and why they will need PACU facility.

- Outline the reason for proposed admission and the likely interventions to be delivered in PACU.
- Information about the different roles of healthcare professionals involved in their care during their stay in PACU.
- Information on postoperative pain management and discharge planning.

Standard letter of patient information will be drafted and circulated for approval prior to patient distribution.

Patient admission criteria
The patient population at Morriston Hospital most likely to benefit from PACU after elective surgery can be considered in terms of having a predicted risk of mortality within 30 days of surgery of 1-7%, using a validated risk assessment tool based on age, complexity and urgency of the surgical procedure and patient factors such as comorbidities, fitness and frailty. The screening tools used in pre-assessment

services at Morriston Hospital are sufficient. In combination with clinical judgement, objective risk assessment tools can also provide an estimate of patient risk. Patients with higher predicted mortality should be booked with the Critical Care Unit and not proceed without a critical care bed.

The **Guidelines for Enhanced Perioperative Care** state that patients who will benefit include those:

- *Undergoing specific surgical interventions that require enhanced levels of monitoring and therapy input to support early mobilisation.*
- *Requiring enhanced invasive monitoring to facilitate perioperative haemodynamic management or management of epidural related hypotension.*
- *Requiring additional medical support for example, correction of an acute arrhythmia, or treatment of difficult to manage pain.*
- *Requiring safe management of existing comorbidities; for example, obstructive sleep apnoea on CPAP.*

Patients requiring level 3 care should be referred to the Critical Care Unit. These include patients requiring postop intubation and ventilation, renal replacement therapy and multiple inotropes / vasoconstrictor agent.

Admissions based on surgical procedure

- Major vascular surgery.
- Major colorectal surgery that cannot be managed at ERU in Singleton Hospital.
- Hepatobiliary, pancreatic and pancreatic/duodenal resection surgery.
- Complex urological or retroperitoneal surgery.
- Major orthopaedic surgery that cannot be managed at Neath Hospital.
- Major gynaecological surgery that cannot be managed at ERU, Singleton Hospital.
- Major head and neck surgery.

Admissions based on requirement for additional monitoring

- Continuous monitoring (ECG, NIBP, SpO2).
- Arterial line (regular arterial blood gases and arterial lactate measurements).
- Regular electrolyte measurements (severe low or high potassium and sodium).
- 1 hourly or more frequent vital signs observations or free flap observations.
- Conditions such as obstructive sleep apnoea or heart failure.

Admissions based on the requirement for additional treatments/interventions

- Vasopressor infusion.
- Hypotensive infusion (labetalol, GTN).
- Intravenous antiarrhythmic drugs (amiodarone, magnesium sulphate, beta blockers).

- Intravenous infusions for complex pain problems (e.g. ketamine).
- Infusions of concentrated solutions of sodium chloride, potassium and magnesium that require central venous administration under enhanced CVS monitoring.

Patient's physiological status, comorbidities and type of surgery will be also be considered when determining their suitability for PACU admission. Patients with moderate to severe burden of co-morbidities should be seen in the pre-assessment clinic and decision for the need of PACU can be made by the consultant anaesthetist. These would be the ASA3+ patients undergoing elective major surgery.

		Surgical Risk			
		Low risk	Intermediate risk	High risk	Very high risk
Patient Risk	Low risk	Ward care	Ward care	PACU	GITU
	Intermediate risk	Ward care	Ward care	PACU	GITU
	High risk	Prolonged recovery or PACU	PACU	PACU	GITU
	Very high risk	PACU	PACU	GITU	GITU

Surgical risk classification

Low risk	Procedures associated with minimal physiological changes and predicted cardiac risk score 0
	• Superficial procedures • Hernia repair • Endoscopic procedures • Breast surgery • Minor urology and gynaecological surgery
Intermediate risk	Procedures associated with moderate changes in intraoperative haemodynamic and blood loss and predictive cardiac risk score of 1
	• Carotid endarterectomy • ENT surgery without flap or neck dissection • Abdominal surgery without bowel resection • Laparoscopic gynaecological surgery • Laparoscopic urology surgery • TURP and TURBT
High risk	Procedures with significant changes in intraoperative haemodynamic and blood loss and predictive cardiac risk score of 2
	• Colorectal surgery with bowel resection • Major gynae oncology surgery • Major oncologic head and neck surgery • Open prostatectomy and cystectomy

	• Large hernia reduction with potential for postop respiratory compromise
Very high risk	Procedures with major impact on intraoperative haemodynamic, fluid shifts, major blood loss and predictive cardiac risk score of 3 and above
	• Aortic and major vascular surgery

Revised Cardiac Risk Index (RCRI) Risk factors	Points allocated
High risk surgery (intrathoracic, intraperitoneal or supra-inguinal vascular)	1
History of ischemic heart disease	1
History of congestive cardiac failure	1
History of stroke	1
Insulin dependent diabetes	1
Stage 3 CKD	1

Risk of Major Cardiac Events	
Points	Risk%
0	0.40%
1	0.90%
2	6.60%
3 and more	11%

Patients with an elevated cardiac risk score (age>65yrs, RCRI >1 OR age 45-64yrs with significant cardiovascular disease) should have a preoperative BNP or NT-proBNP level checked for further risk stratification. Preoperative elevated concentrations of BNP are an independent biomarker of postoperative cardiac events. Preoperative BNP concentrations <189 pg ml^{-1} identify patients at highest risk. Similarly, preoperative level <100 pg ml^{-1} in patients undergoing peripheral vascular surgery with an ASA grade III or higher are identified at increased risk of a perioperative fatal or non-fatal myocardial infarction.

PACU patient scheduling and bed booking process

A booking system that was designed by the CITU nursing team has been implemented since 2021. All patients requiring a PACU bed for the Morriston site are discussed on the elective surgical planning meeting. This should have CITU nurse and CITU consultant present. Booking forms with incomplete information will be challenged and the parent team asked to provide the relevant missing information. Please provide information on both significant medical as well as psychological problems. This will help the CITU team provide an adequate level of nursing support.

- Bed booking is required ideally 2 weeks in advance. This allows for the PACU to be staffed appropriately by our nursing team.
- Any changes to the planned schedule should be communicated to the PACU team at the earliest opportunity to confirm whether the PACU can accommodate these changes. Shorter notice period due to surgical urgency should be discussed with the CITU consultant for the week by the surgical consultant.
- If for any reason the PACU cannot accommodate the cases booked, then the surgical teams involved need to prioritise which cases will go ahead based on clinical need. Discussion regarding prioritisation should occur with the Deputy Group Medical Director and the CITU consultant.

- General ITU capacity and escalation policy may result in cancellation of PACU patients on CITU. This will be discussed with consultant surgeons, higher management team and general theatres.
- High risk and complex surgical cases should be discussed with the CITU consultant before booking onto PACU, if indicated a General ITU bed should be booked instead.

PACU daily care within the CITU footprint
Patients will be admitted and discharged under the care of the parent consultant to maintain continuity of care in the perioperative period. In order to maintain flow and avoid cancellations, it is essential that patients are reviewed by the parent team early in the morning and decisions made in a timely manner. All patients will be reviewed by the CITU team as per normal CITU working pattern.

The Enhanced Perioperative Care Guidelines (Oct 2020): The parent team should retain responsibility for provision of continuity of individual patient care with advice and support from others as required, e.g. assisting with decisions regarding admission and discharge. Patients deemed fit for discharge should have the time of decision for discharge documented to determine delayed discharges.

Post-operatively, patients will be recovered in theatre recovery as usual and will then transfer to PACU when stable. Data on time of admission to PACU from theatres since 2022 has shown that about 40% of patients are admitted between 08:00-17:00, 30% are admitted between 17:00-20:00 and about 30% are admitted after 20:00.

Patients admitted during working hours (0800-1800) should be handed over to the CITU team- Rota C trainee or the CITU consultant. If the patient is expected to arrive after 1800, the consultant anaesthetist in charge should give a brief handover about the patient and any unexpected intra-operative events. *All Patients in CITU will be discussed with the CITU consultant on call by the Rota C trainee on the evening ward round. Issues raised will be discussed as per routine CITU ward round.*

Please fill out the PACU admission sheet including the preop and intra-operation events.

PACU checklist for admission from Recovery: See Appendix.

On arrival in PACU the recovery nurse will provide the PACU nurse with a patient handover. The patient will be examined by the Rota C trainee.

The patient will be reviewed daily by the parent team as well as the Cardiac ITU team during working hours. During out of hours, the patients will be reviewed by the Rota C trainee and presented to the consultant covering CITU as part of CITU patient review.

The CITU team will consist of consultant anaesthetist/intensivist allocated for the week during normal working hours and cardiac anaesthetists covering out of hours.

The Enhanced Perioperative Care guidelines states that "appropriate senior clinical decision makers must also be clearly identified for each patient to provide oversight of the patient's care over a 24-hour period and to provide support to the MDT on the EPC facility as required e.g. in case of patient deterioration. The grade of senior clinical decision makers should be reflective of an individual organisation's policy but as a minimum should be ST3 or above or equivalent".

Anaesthetic department must ensure that Rota C is staffed with minimum of ST3 equivalent resident doctors to comply with the Enhanced Perioperative Care Guidelines.

The patient will be reviewed by the Rota C resident doctor out of hours and reported to the consultant providing OOH cover for CITU as part of the evening ward round.

Any PACU patient requiring higher level of care (ongoing organ system support, ongoing need for close haemodynamic monitoring or requiring higher level of nursing care due to delirium) that cannot be accommodated on normal wards beyond 72 hours must be discussed with the Critical Care Unit as they no longer fulfil the criteria to be on PACU. The timing of transfer of care will be decided by the CITU consultant i.e. if the patient has deteriorated and is likely to require extended recovery beyond the predicted pathway, discussions can take place at an earlier stage.

PACU discharge criteria to step down ward (Pembroke, Clydach, Ward T)
NEWS score 3 or below. The parent team accepts patient responsibility upon discharge.

- Spontaneously breathing (can be via a tracheostomy or laryngectomy tube with cuff down).
- Respiratory rate within normal range (12-20).
- Can be on oxygen (FiO_2 0.4 or less) usually <4 litres oxygen via NC.
- Blood pressure stable off vasopressors for ≥6 hours (within normal range for patient).
- Lactate ≤2mmol/l.
- GCS 15/15 or same as pre-op GCS for those with noted pre-op deficit.
- Pain well controlled (patient able to deep breathe, cough and mobilise if appropriate).
- Most central lines are removed prior to transfer to ward unless specific reason to keep in-situ (difficult IV access, NBM and require TPN).

A summary of the GPICS definitions regarding levels of care is included as a quick reference guide to decide if the patient can be sent to the normal ward or continues requiring higher level of care and monitoring.

Levels of Care (GPICS Version 2.1 July 2022)

Ward care	• Patients whose needs can be met through normal ward care in an acute hospital. • Patients who have recently been relocated from a higher level of care, but their needs can be met on an acute ward with additional advice and support from the critical care outreach team. • Patients who can be managed on a ward but remain at risk of clinical deterioration
Level 1 care	• Patients requiring more detailed observations or interventions, including basic support for a single organ system and those 'stepping down' from higher levels of care. • Patients requiring interventions to prevent further deterioration or rehabilitation needs which cannot be met on a normal ward. • Patients who require ongoing interventions (other than routine follow-up) from critical care outreach teams to intervene in deterioration or to support escalation of care. • Patients needing a greater degree of observation and monitoring that cannot be safely provided on a ward, judged on the basis of clinical circumstances and ward resources
Level 2 care	• Patients requiring increased levels of observations or interventions (beyond level 1), including basic support for two or more organ systems and those 'stepping down' from higher levels of care. • Patients requiring interventions to prevent further deterioration or to support ongoing rehabilitation needs, beyond that of level 1. • Patients needing two or more basic organ systems monitoring and support. • Patients needing one organ system monitored and supported at an advanced level (other than advanced respiratory support). • Patients needing long-term advanced respiratory support. • Patients who require level 1 care for organ support but who require enhanced nursing for other reasons, in particular maintaining patient safety if severely agitated. • Patients needing extended post-operative care, outside that which can be provided in enhanced care units: extended postoperative observation is required either because of the nature of the procedure and/or the patient's condition and comorbidities.

	• Patients with major uncorrected physiological abnormalities, whose care needs cannot be met elsewhere. • Patients who require nursing and therapies input more frequently than available in level 1 areas.
Level 3 care	• Patients who need advanced respiratory monitoring and support alone. Patients who require monitoring and support for two or more organ systems at an advanced level. • Patients with chronic impairment of one or more organ systems sufficient to restrict daily activities (comorbidity), and who require support for an acute reversible failure of another organ system. • Patients who experience delirium and agitation in addition to requiring level 2 care. • Complex patients requiring support for multiple organ failure; this may not necessarily include advanced respiratory support.

Care of the deteriorating patient on PACU

The Enhanced Perioperative Care guidelines states that:

- Multi-professional, interdisciplinary working is desirable to ensure provision of safe, high-quality care.
- Local policy in terms of frequency of observations, NEWS2 scores and response to the deteriorating patient and escalation should be compliant with NICE CG50, Royal College of Physicians NEWS2 guidance and the unique needs of surgical patients.
- The deteriorating surgical patient on an EPC facility requires timely access to a **senior surgical decision maker** to decide on the need for additional operative intervention or imaging.
- Surgical patients may also develop medical morbidities in the perioperative period e.g. atrial fibrillation, pneumonia. Clear pathways for the EPC clinical team to obtain advice and support from medicine and critical care services need to be developed.
- Input from critical care outreach (CCO) services will facilitate timely escalation of patient care to level 2 or level 3, if required.
- The role of CCO is to ensure a reliable, 24/7, multidisciplinary organisational approach to safe, equitable, quality care for all acutely unwell, critically ill and recovering patients irrespective of location or pathway.
- Effective CCO teams will have the appropriate skills and resources to be able to respond to deteriorating patients, guide initial management, appropriate escalation, communication to relevant teams, and safe transfer to a critical care area when required.

Acutely deteriorating patient during working hours will be reviewed and care escalated by the CITU consultant and consultant surgeon of the relevant specialty.

Acute airway emergencies in maxillofacial and ENT patients will be escalated directly to the consultant surgeon both in hours and out of hours.

Currently, we do not have a 24/7 critical care outreach team at the Morriston site. After discussion with the cardiac anaesthetic consultant group and critical care clinical lead, the decision for a safe pathway will include senior trainee covering GITU for patients who deteriorate from level 1 to level 2 or level 3. **The Health Board should aim to increase the Critical Care Outreach Cover to 24/7 as this is established practice both within Wales and the UK.**

The list of OOH contact for relevant surgical cover will need updating over time. The following is an example of current practice.
Recently appointments of consultant surgeons who will be using PACU facility should introduce themselves to the CITU nursing and medical teams. Their preference of OOH cover and direct phone contact details will be provided in case of emergency.

Surgical Team	Contact Monday-Friday 8-5	Out of hours (after 5pm and weekends)
Colorectal	Evans Davies Harries Khot Taylor Chandrasekran Radwan R Harris Hanratty Ather	On call surgical SpR 23383
Upper GI/Bariatric	Barry Beamish	
HPB (Pancreas)	B Al-Sarireh G Shingler A Kambal M Mortimer N Mowbray	
Urology	Fenn Gill Jefferies Jones Kandaswamy Lewis-Russell Mainwaring Pandit	Urology SpR via Switchboard (on site until 10pm)
Gynae-oncology	Lutchman-Singh Das	On call surgical SpR 23383 Gynaecology Consultant via Singleton Switchboard
Maxillofacial	Kittur/Shah/Jenkinson	23597 (on site junior doctor)

		SpR via switchboard (onsite until 8pm)
ENT	Pope/Marnane/Leopard	25849 (on site junior Doctor) SpR on call via switchboard
T&O Spinal	Kett-White Verghese Boreham Collins O'Malley Soleimon Georgioloulos	On call T&O SpR 23576
Plastics		On site junior Doctor 23856 SpR via switchboard
Vascular	L Fligelstone J Woolgar C Davies A Ruddle A Sharif A Stimpson E Brown K Mohiuddin A Williams	On call surgical Reg 23383 Vascular consultant on call via switchboard

Delegation of care

The appropriate surgical registrar will be the first point of contact for all surgically related problems such as feeding tubes, drain management, suspected haemorrhage, suspected intra-abdominal pathology. All findings will be escalated via them to the relevant consultant surgeons and relevant imaging will be booked. If the patient requires going back to theatre for re-exploration, the surgical team will arrange this via CEPOD.

The Rota C resident will be the first point of contact for following issues: analgesia, respiratory support to correct hypoxia using NIV, cardiovascular support using single strength noradrenaline and oliguria using fluid replacement.

GITU 3rd on call and CEPOD senior resident will be contacted if there is significant deterioration with worsening hypotension and hypoxia not responding to single strength noradrenaline infusion or NIV and the patient requires reintubation + level 3 care. All senior residents will work in a collaborative manner to help stabilise the patient. Extra support from the consultants covering them should be provided accordingly.

In the event of a cardiorespiratory arrest the arrest call will be put out and all teams will respond accordingly.

Clinical Governance of PACU

To be filled in after discussion with Pankaj. Specialist Surgical Services Group will have overarching governance of PACU patients. Individual patient discussions regarding morbidity, mortality and adverse incident reporting will be discussed at the quality and safety meeting of the surgical directorate supported by the PACU/CITU team a. Mortality reviews at service level will be conducted as per the SBUHB learning from mortality review as recommended by the Medical Examiner.

Data collection of PACU patients

Priority should be given to comparable PACU data collection across Wales via ICNARC, as clear governance of the proposed changes is essential and will influence further evolution.

Patients on the PACU will be receiving up to level 2 care and as such it will be a requirement to submit data to ICNARC. The ICNARC data will be collated using the pink and yellow forms currently used for the cardiac patients. These will be inputted into the ICNARC system by the CITU data co-ordinator. Please endeavour to fill in the appropriate forms including time of decision to discharge the patients. Failure to do will compromise our data validity.

References

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Document Ownership: Clinical lead for CITU and PACU (Dr Sameena Ahmed- to be amended as necessary).

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Appendix 1

PACU Booking Form

PACU BOOKING FORM FOR CITU

Name	
Address	

Referring Consultant	
Contact Numbers	
Out of Hours Contact	

Past Medical History		Other: i.e. Nutritional Needs	

Planned Operation		Level of Bed	

Date of Surgery	
Length of Stay	

NB: Length of stay for PACU patients should be 48 hours. Beyond this time, or if patient's clinical need changes during stay, GITU should be considered.

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Appendix 2

PACU Admission from Theatre Recovery Paperwork

CHECKLIST	Tick (if applicable)
PACU admission form completed	
Cardiovascular stable – this may be requiring inotropes, but no surgical cause for concern (i.e. not actively bleeding). (METARAMINOL INFUSION running at higher than 10mls/hr should be CONVERTED TO NORADRENALINE via a central line)	
Respiratory stable (even if requiring therapy including HFNO,CPAP) PO2 ON LAST arterial blood gas if art line is present_____ ON FIO2_____	
Conscious, may still be sleepy but easily rousable. *Maintaining a patent airway normally or* ***via a secured Tracheostomy tube for patients who have had complex head and neck + ENT surgeries***	
Adequate analgesia and analgesia plan documented	
Patent IV access. If the patient is requiring a Metaraminol infusion, there should be a spare IV access	
Time of Last dose of antibiotics + prophylaxis antibiotics prescribed	
VTE prophylaxis prescribed	
NG tube / TRACHEOSTOMY/ CVC Position checked on Chest X-ray.	
Doses of all routine pre-op medications (antihypertensive, antiepileptic, anti-Parkinsons etc.) reviewed and appropriately charted to be given or omitted	
Plans for postop glycaemic control + VRIII charts completed	
HEPMA Medication reviewed	
Time patient ready for discharge from recovery to PACU	
Time patient handed over to PACU	

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PACU ADMISSION PROFORMA

DATE OF SURGERY_____

TIME OF ARRIVAL _____

CONSULTANT _____

ADDRESSOGRAPH

LOWER GI UPPER GI GYNAE UROLOGY MAXFAC ENT PLASTICS

OPERATION

ANTICIPATED ISSUES IN PACU

INTRAOP FLUID _____

INTRAOP BLOOD PRODUCTS _____

EPIDURAL YES/NO

NERVE BLOCK YES/NO _____

PCA YES/NO

FUNCTIONAL STATUS

ALLERGIES

CHECKLIST (ADMISSION WON'T BE ACCEPTED UNTIL COMPLETE)

PAIN CONROLLED

PLAN FOR THROMBOPROPHYLAXIS AND PRESCRIBED

PLAN FOR ANTIBIOTICS AND PRESCRIBED

NG/TRACHEOSTOMY/CVC CXR COMPLETED AND HAPPY WITH POSITION

PLAN FOR ANY EPILEPSY/ PARKINSON'S (IF APPLICABLE)

2 X IV ACCESS

HAEMODYNICALLY STABLE (METARAMINOL/ PHENYLEPHERINE INFUSION CONVERTED TO CVC AND NORADRENALINE)

PO2 ON LAST ABG_____ ON FIO2_____

HANDOVER TO CITU ANAESTHETIST

MEDICATIONS

PAST MEDIAL HISTORY

Signature of Anaesthetist:

Recovery: Informed NIC in CITU of departure ☐ Name of nurse informed _____ Time _____

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ON ARRIVAL TO PACU

CVS	RESPIRATORY
CNS	GI
RENAL	FLUIDS

PLAN

Signature of PACU Team:

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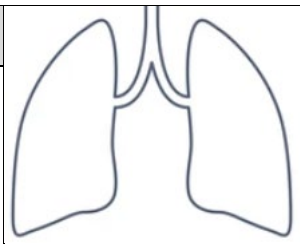
Daily follow up sheet (PACU)	
Date: / /2025. Time: : PO days: Completed by Dr:	

Surgery:……
……

Comorbidities:……
……

Respiratory system			
Airway:	PH:	BE:	
FiO2:	PCo2:	Lactate:	
SpO2: %	PO2:	BM	
RR: B/m	HCO3:		

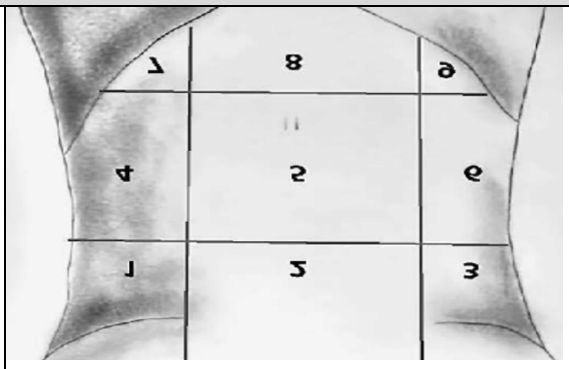
CVS

BP: / HR: B/m CVP:

Vasopressors:

CNS

GCS: /15 Pain score: /10 Pain control:

GIT/ Nutrition		Renal system	Lab results
BS: Y/N BO: Y/N Stool type: Nutrition: Oral intake NG: ml/h TPN: ml/h		Na: K: Ur: Cr: Mg: UOP: ml/h Balance: ml	WBC: HB: Platelets: Bilirubin: Albumin: ALP: ALT:

Antithrombotic		Antibiotic	Day: Temp:

Management plan

1-
……
…….... ……..

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PACU Discharge Form			
Date of discharge: / / 2025			
Time of discharge: :			
Numbers of PACU days:			
Completed by: Dr:			
NEWS score 3 or below			Yes No
Parent team accepts patient responsibility on the ward			Yes No
Spontaneously breathing			Yes No
Normal airway	Tracheostomy Tube	Laryngectomy tube	
Cuff down			Yes No
Respiratory rate is normal (12-20)			Yes No
Oxygen supply (FiO2 ≤0.4)			Yes No
Blood pressure within normal range for patient			Yes No
Vasopressors are off for ≥4 hours			Yes No
Pain well controlled			Yes No
Pain control procedure: Epidural PNB PCA Oral medications			
GCS 15/15			Yes No
Same as pre-op GCS: /15			Yes No
Feeding:	Oral	NG	TPN
BM control:	Oral medications	VRII	Regular insulin
Accepted UOP			Yes No
Lactate ≤2mmol/L			Yes No
central lines in place			Yes No

COIN clinical online information network

Swansea Bay University Health Board

Authorisation Form for Publication onto COIN

PLEASE ENSURE THAT ALL QUESTIONS ARE ANSWERED – IF NOT APPLICABLE PLEASE PUT N/A

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Name of Author.	Dr Sameena Ahmed
Name of Lead Pharmacist.	Not Applicable
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Is the document relevant to the GP Portal.	No
Sign to confirm that the document has been authorised by an approved governance process in a specialty or delivery unit.	Dr Sameena Ahmed
If NICE guidance been considered/referenced when producing this document, please provide the title or reference number.	Not Applicable
Please provide a brief description/abstract of the document.	Guidelines of pathways for patients requiring enhanced postoperative care after complex surgeries and in high-risk surgery patients. These are provided within the cardiac ITU footprint at Morriston Hospital.
Equality Statement. *(All policies and procedures need to comply with CID76 Policy for the Management of Heath Board Wide Policies, Procedures and other Written Control Documents (WCD).*	Yes
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