PACU: Discharge Criteria

Site Applicability

PHC: SPH, MSJ Post Anesthetic Care Units (PACU) and

PHSA: BC Cancer Post Anesthetic Care Units (PACU)

Practice Level

Specialized:

- *PACU Registered Nurses.*

Requirements

Registered Nurses who work in a PHC/BC Cancer Post Anesthesia Care Unit (PACU) may discharge patients from PACU Phase I or from PACU Phase II (BC Cancer only) when the patient consistently meets the defined discharge criteria listed below. Patients who do not meet the established criteria will require assessment by anesthesia; the anesthetist will be responsible for discharge of the patient to the next level of care (i.e. ward, SDC, home) or a plan for continued intensive monitoring. A written order from the anesthetist responsible for discharge is required.

Need to Know

Discharge criteria is a standard or assessment by which to judge or decide if a PACU patient is ready for discharge and cared for in a less intensive nursing environment.

Discharge criteria are applied when a patient is admitted to PACU and routinely as part of the nursing assessment. It can also be applied when a patient is ready to leave the operating room to determine eligibility for fast tracking (PHC) to surgical daycare (bypassing Phase I recovery) by anesthesia.

The purpose of discharge criteria ensures the same standard of care for all patients and allows the PACU nurse to act on behalf of the anesthetist in their absence. At the discretion of anesthesia a request for re-assessment by anesthesia prior to discharge can be made. Once patient meets established criteria anesthesia will re-assess the patient. For any patient requiring continued care in critical care or the high acuity unit, discharge criteria will not be used and transfer will occur at receiving unit and anesthesia discretion.

A current assessment (within the last 15 minutes) will be documented in the patient's record prior to patient leaving the unit.

Protocol

Assessment	Criteria
Neurological Function	• Orientated to person, place and time or orientation equivalent to patient's preoperative status. • Obeys commands. • Easy to rouse with a sedation score equal to or less than 2. • Adequate skeletal muscle tone as evidenced by: head lift sustained for minimum 5 seconds and moderate to strong handgrips (or preoperative equivalent). • Full movement and sensation to extremities following general anesthesia or preoperative equivalent.
Respiratory Function	• Intact protective airway reflexes: gag, swallow, cough, ability to clear secretions and no artificial airway in place. • Maintains patent airway independently for minimum 30 minutes post-extubation in PACU. • Spontaneous, regular, respirations at a rate 10 to 24/minute. • Maintains SpO_2 at 92% or greater on room air for a minimum of 15 minutes. • Oxygen order from anesthesia is required if patient is unable to maintain oxygen saturation at or above 92% on room air. • No O_2 adjustments for at least 15 minutes prior to discharge. **Exception: any patient with known or exhibiting signs of OSA will require assessment by anesthesia prior to discharge.**
Cardiovascular Function	• Blood pressure and heart rate are stable for 3 consecutive 15 minute assessments and within ± 20% of preoperative values. • Cardiac rhythm stable and equivalent to preoperative rhythm (if known). • Extremities warm with evidence of adequate tissue perfusion (or preoperative equivalent).
Thermoregulation	• Independently maintains temperature at minimum 36°C – if warming patient using Forced Air Warmer, ensure that this is removed 15 minutes prior to discharge and that patient can maintain normothermia (recheck temperature prior to discharge)Temperatures exceeding 38.5°C require consultation with anesthesia prior to discharge.
Gastrointestinal	• Post operative nausea is absent or at a tolerable level to the patient following use of rescue anti-emetics/treatment. • If nasogastric tube present, tube is secure, patent and returns are appropriate, i.e. color, consistency and amount within expectation of surgery.

Urinary/Bladder	• Bladder non-distended or scanned bladder volume is less than 400 mL and no voiced complaints of bladder discomfort. • When urinary catheter in situ, minimum urine output 0.5 mL/kg/hr or as specified by anesthesia. • If urinary catheter present ensure ongoing need and secured with appropriate device. • Continuous bladder irrigation: ensure catheter is secured, patent, infusing correct solution and returns are prompt and appropriate. • If patient returning home with urinary catheter in situ – ensure that physician's orders/follow up in place and that CBI is discontinued if ordered and as per timed orders
Surgical Parameters	• Dressings and visible incisions are dry and intact with no evidence of active bleeding. • Drainage tubes are patent and secured with appropriate device. • Surgery specific parameters are consistent with surgery, anesthesia and patient's preoperative status (e.g. neurological/neurovascular function satisfactory, wound drainage appropriate, flap/graft perfusion adequate, etc.).
Brachytherapy Parameters ***Applicable only at BC Cancer***	• Following cervical brachytherapy procedure, the patient must remain flat without moving while applicator is in place. These applicators are assessed to ensure they are aligned with the markings. Ensuring the applicators are aligned with the markings confirms there has been no movement and the applicators remain in place. • Following high dose radiation treatment, the applicator will be removed prior to the patient being discharged home.
Comfort and Safety	• Pain is at a level acceptable to the patient, preferably at a pain score of 5 or less at rest on a scale of 0 to 10. • Insensate (blocked) limbs are secured in appropriate alignment and positioning.
Neuraxial (spinal and epidural)	• Able to tolerate head of bed at 30 degrees without hypotension or headache. • Motor block is at a score of 1 using Bromage scale – able to demonstrate knee bend and able to reposition self upright or to side for airway protection. • Spinal – sensory block is at T10 or lower **and** has regressed at least 2 dermatomes from the intraoperative state. • Epidural – sensory block is appropriate to location i.e. lumbar, thoracic and operative site.

Lines	Peripheral IV • Site satisfactory and dressing intact. • Patent with ordered IV fluid and rate infusing. • IV solution and new IV tubing labelled with date. • Extra IV sites removed if not needed. Note: 16 gauge IV's must be infusing fluid and cannot be saline locked. 14 gauge IV's must be removed prior to transfer to the ward. Central Line • Site satisfactory and dressing intact. • Site secured with sutures, Statlock or SecurAcath. • Chest X-ray for line placement and order verifying tip placement and use by anesthesia (new insertions). • All lumens have needleless connector and infusing ordered IV fluid and rate or capped when not in use. • An order to remove a central line is required, when removing, monitor for 30 minutes following to ensure hemostasis is achieved. • For patients on anticoagulant therapy or with coagulation abnormality, review relevant lab results or speak with anesthesia for review (i.e. platelets, INR) prior to removal. • Instruct patient to remain in bed supine or flat if possible for a minimum of 15 minutes post removal. Note: Percutaneous sheath catheters (size 14 ga./8Fr. or larger) must be removed prior to transfer to ward. **Arterial Line** • Must be removed prior to transfer to the ward. • Once removed monitor for 30 minutes to ensure hemostasis is achieved. • Assess and document CWMS to extremity distal to site and presence of pulses post removal.
Blood and Blood Products	Blood products administered for volume or factor replacement: • Blood product(s) transfusion completed • Vital signs stable for 3 consecutive 15 minutes assessments and no evidence of transfusion reaction noted. • Repeat blood work completed and reviewed by anesthesia when applicable. Blood products administered for hemoglobin replacement: • Vital signs stable for 3 consecutive 15 minutes assessments following initiation of transfusion. • No evidence of transfusion reaction noted.

<table>
<tr><td>Physician Orders</td><td>

Stat and PACU orders processed.
Blood work, ECG, chest X-ray and/or other diagnostic tests ordered for PACU are completed and reviewed by physician.
For all admitted patients, medication reconciliation orders (on admission/transfer) or equivalent are completed.

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<tr><td>Medications</td><td>
The following length of stays must be considered in context with peak effect, duration, effects of cumulative doses and desired outcome for individual drugs. When administering medications to treat a specific condition, the patient will be monitored for an appropriate time beyond the anticipated peak to determine stability of the effect.
<table>
<tr><th>Route</th><th>Minimum PACU Stay</th></tr>
<tr><td>Oral/PR</td><td>No minimum stay</td></tr>
<tr><td>Intramuscular</td><td>45 minutes following injection</td></tr>
<tr><td>Subcutaneous</td><td>30 minutes following injection</td></tr>
<tr><td>Transdermal</td><td>Previously received same medication transdermally:
30 minutes following application.
First time receiving medication transdermally:
1 hour following application.</td></tr>
<tr><td>Intravenous</td><td>Following initial dose of any medication:
30 minutes following injection.
Following additional dose of medication:
15 minutes following injection.
Following lidocaine infusion:
1 hour following initiation in PACU.</td></tr>
<tr><td>Perineural</td><td>Following bolus dose administered by anesthesia:
30 minutes following injection.
Following initiation of infusion:
No minimum stay required.
Provided no symptoms of local anesthetic systemic toxicity are present.</td></tr>
<tr><td>Epidural</td><td>Following initiation of infusion:
1 hour following continuous infusion.
Following bolus dose by anesthesia:
1 hour following ‘top-up’ dose.
Provided no symptoms of local anesthetic systemic toxicity.</td></tr>
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Required length of stay Minimums:

The following surgery specific, procedures or patient conditions require extended intensive monitoring.

Surgery/Patient Condition	Minimum PACU Stay
• Carotid Endarterectomy • Vascular Bypass Graft • Renal Transplant	• Minimum 4 hour stay and reassessment (clearance) by anesthesia and surgery (nephrology for renal transplant). • May require continued intensive monitoring in PACU overnight or the high acuity unit.
• Thyroidectomy	• Minimum 4 hour stay total for Day Care patients – patient to meet Phase I discharge criteria in PACU and remaining stay in Surgical Day Care and reassessment (clearance) by general surgery required before discharge home. Inpatients can be sent to ward once they meet minimum Phase I discharge criteria.
• Aortic Aneurysm Repair	• Require continued intensive monitoring in either PACU overnight or the high acuity unit.
• Obstructive Sleep Apnea	• Any patient with known mild or moderate OSA or exhibiting signs of OSA such as: snoring, gasping, periods of apnea, decreased O_2 saturation (hypopnea), elevated $EtCO_2$, pain-sedation mismatch (high pain scores + high levels of sedation simultaneously), will be monitored in PACU for 1 hour after above discharge criteria met. The 1 hour extended stay may be waived by anesthesia if the patient falls into the low baseline risk category. • If a patient continues to have respiratory events they will require continued monitoring in PACU for 1 hour past each event. • All OSA patients will require reassessment and order for discharge by anesthesia. Discharge criteria for obstructive sleep apnea monitoring power plan must be fulfilled
• Tracheostomy	Will stay in PACU or HAU until meets established criteria: • Minimal pulmonary secretions (suctioning every 2 hours or less). • Alert and orientated to person, place and time (able to call for help). • Airway leak present. • Smallest tracheostomy tube size as appropriate to patient. • No active bleeding.
• Caesarean Section	• Minimum 1 hour stay. • Patient may be recovered in maternity unit provided adequate staffing levels and determined appropriate by anesthesia and obstetrician.

• CSF Drains	• CSF drains following thoracic aortic aneurysm repair will remain in critical care until catheter is removed. • CSF drains following ENT surgery will remain in PACU or surgical HAU when to gravity. • CSF drains connected to pump regulated drainage will be monitored for an additional 2 hours following initiation of pump regulation.
• Malignant Hyperthermia Susceptible	• Monitor for 2 hours following uneventful anesthetic course without the use of triggering agents.
• Lidocaine (Intravenous) Short term Infusion - Intermediate Dose	• 30 minutes following completion of infusion provided no ongoing concerns of local anesthetic toxicity.

Report

- A completed Transport Ticket/Handover Tool (BC Cancer) will be sent with the patient to the ward for all inpatient transfers. A telephone report will be provided for SDC and any ward transfers. Review Floor orders with receiving nurse – check VTE prophylaxis, analgesia, Admission Medication Reconciliation is complete and up to date:
- Handoff Tool in patient's EHR to be used to document that report/handoff was completed.
- A face to face (verbal) report will be provided for all critical care patients.

Discharge Procedure

- Confirm patient's condition meets established criteria and document same on PACU patient record.
- Measure and empty any drains (Hemovac, urinary catheter, NG, etc.) and record fluid balance, including fluid intake.
- Ensure patient position is appropriate for transfer considering airway protection, ability to turn self, and limbs supported, free of pressure, and in correct alignment for residual nerve block.
- Secure all drainage devices.
- Ensure appropriate emergency equipment accompanies patient on transfer (e.g. wire cutters, suture scissors, chest tube equipment, etc.).
- Ensure side rails are upright.
- Implement comfort measures such as: mouth care, clean patient gown secured at back, bed linen is clean and dry, covered with warm blankets as necessary, offer patient analgesia as required.
- Ask porter to retrieve patient belongings if needed.

RN to accompany on transfer

- New chest tube: accompany patient with safety equipment (2 non-toothed forceps, 250 mL sterile water, petroleum impregnated gauze and 4x4 gauze).
- Tracheostomy: accompany with safety equipment, portable suction and Respiratory Therapist.
- Jaw wiring: accompany with portable suction and wire cutters (if necessary).
- Cardiac: accompany any patient requiring class I Telemetry with a cardiac monitor.

Site Specific Practices ***BC Cancer Only***

Phase II to Extended Observation phase (extended care facility, inpatient unit or home)

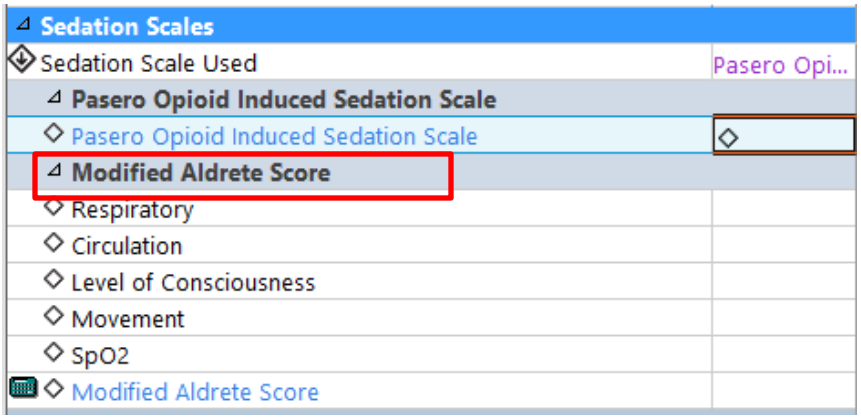
<table>
<tr><th>Assessment</th><th>Criteria</th></tr>
<tr><td>Post-Anesthesia Discharge Scoring System (PADSS)</td><td>
A minimum score of 9 (out of a total of 10 and/or near return to pre-anesthesia status) is achieved prior to discharge home or transfer to inpatient unit.
Post Anesthetic Discharge Scoring System
<table>
<tr><th>Category</th><th>Status</th><th>PADDS Score</th></tr>
<tr><td>Vital Signs</td><td>Within 20% range of pre-op value
20-40% range of pre-op value
>40% range of pre-op value</td><td>2
1
0</td></tr>
<tr><td>Ambulation</td><td>Steady gait/no dizziness
Ambulates with assistance
Not ambulating/dizziness</td><td>2
1
0</td></tr>
<tr><td>Nausea & Vomiting</td><td>Minimal, treated with PO meds
Moderate, treated with parenteral meds
Continues after repeated treatments</td><td>2
1
0</td></tr>
<tr><td>Pain</td><td>Acceptable to patient (PO meds)
Acceptable to patient (parenteral meds)
Pain not controlled/not acceptable</td><td>2
1
0</td></tr>
<tr><td>Surgical Bleeding</td><td>Minimal/no dressing changes required
Moderate bleeding
Severe bleeding</td><td>2
1
0</td></tr>
</table>
</td></tr>
</table>

Sedation Score

BC Cancer

Cerner Sites

- Modified Aldrete Score



Non-Cerner Sites

- Patients must have 2 consecutive scores of equal to or greater than 9 AND patient must have a score of 2 ("able to breathe and cough" in respiratory component

PAR SCORE

Category	Description of Status	Aldrete Score
Respirations	Able to deep breathe and cough	2
	Dyspnea/Limited or shallow breathing	1
	Apnea	0
Skin Colour	Normal	2
	Pale dusky/blotchy, etc.	1
	Cyanotic	0
Circulation	BP +/-20mmHg pre-anesthetic level	2
	BP +/-20-50mmHG pre-anesthetic level	1
	BP +/- 50mmHg pre-anesthetic level	0
LOC	Fully awake	2
	Arousable	1
	Not responding	0
Muscle Strength	Strong	2
	Weak	1
	Nil	0

<table>
<tr><td>Bromage Scale</td><td>

Bromage scale following neuraxial/regional anesthesia must be assessed

Lower limb regional anesthesia, spinal, epidural – sensory block must no longer be present, return of sensory and motor abilities, normal sensation and full movement, is able to ambulate (to preoperative level of functioning) and Bromage score of 0
Upper limb regional <u>anesthesia</u> – upper limb sensory and motor function must have partially returned (i.e. able to wiggle fingers, have tingling in fingers and hand prior to discharge home)

Cerner Sites (BC Cancer)
<table>
<tr><th>Single Dose Upper Motor Assessment</th><th></th></tr>
<tr><td>Modified Bromage Scale, Left UE</td><td></td></tr>
<tr><td>Modified Bromage Scale, Right UE</td><td></td></tr>
<tr><td>Modified Bromage Scale, Bilateral UE</td><td></td></tr>
</table>
Non-Cerner Sites (BC Cancer)
Motor Assessment Using Bromage Scale
<table>
<tr><th>Score</th><th>Motor Assessment</th></tr>
<tr><td>0</td><td>No residual Motor Block;
Free movement of legs & feet, can straight leg raise against gravity</td></tr>
<tr><td>1</td><td>Partial Block Remains;
Just able to flex knees with free movement of feed</td></tr>
<tr><td>2</td><td>Almost Complete Block;
Only able to move feet; unable to flex knees</td></tr>
<tr><td>3</td><td>Complete Motor Block
Unable to move legs or feet</td></tr>
</table>
</td></tr>
<tr><td>Oxygenation/ Circulation</td><td>

Oxygen saturation greater than or equal to92% on room air

</td></tr>
<tr><td>Drains, Tubes, Lines</td><td>

If patient is to be discharged home, their intravenous (IV) will be discontinued.
If patient is to be transferred to a hospital unit, peripheral IV shall either be saline locked, TKVO or as per anesthesia. If infusions are running, this shall be via an infusion pump.

All drains and tubes will be secure and patent.

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</table>

Voiding	• No bladder distention shall be present.
	• Patients must void a minimum of 250-300mlin 1-3 attempts prior to discharge.
	  ○ Attempts shall be made every 30-60 minutes
	• Bladder volume to be measured using a bladder scanner
	  ○ If less than 200cc, encourage fluid intake when able
	  ○ If greater than 500cc, contact Radiation oncologist.
	  ○ If 200cc-500cc in bladder, encourage patient to void when able.
	• If patient has an in-dwelling catheter:
	  ○ Urine output shall be a minimum of 30cc/hour if discharging to hospital unit.
	  ○ If patient to be discharged home with catheter, ensure catheter is secure, education has been provided, and appointment has been scheduled for catheter removal.

Fluid Intake	• Fluid intake must be assessed and tolerated by patient.
Physician Orders	• All post-operative and stat orders will have been completed. • Specific procedures/patient characteristics may have additional requirements for discharge. Verify physician's orders for these additional requirements.
Patient Teaching	• The patient shall receive verbal and written discharge instructions and prescriptions where indicated, including emergency contact information should the patient require. • Client and/or family member understanding of instructions will be assessed.
Medications	• Patients will be observed for adverse responses and/or possible cumulative effects of medications for a period of time determined by the medication and route of administration. Please refer to appropriate drug manuals for relevant drug information, including onset, peak action, and duration of action of medications administered. • Patients must be observed for a minimum of 2 hours following administration of a reversal agent (i.e. naloxone, flumazenil). This may necessitate transferring the patient to an inpatient ward for further monitoring.

If patients do not meet discharge criteria, the decision for discharge must be made by the anesthesiologist in collaboration with the surgeon and/or nursing

**Patients who have received general anesthesia, monitored anesthesia care, or any regional anesthesia, must have a responsible adult to accompany them home and stay with the patient overnight.*
***Exception:** if no sedation medication was administered AND the patient meets the PACU score criteria, the patient may be discharged unaccompanied**

Documentation

Document all assessments and interventions using the following tools on PowerChart CST Cerner:

- PACU Patient Electronic Health Record – Interactive View and I&O
- Medication Administration Record
- Document handoff in "Periop Safety Departure".
- Discontinue "ANES Post Anesthesia Care Unit (PACU) – Inpatient" Orders and any Pre-Op orders
- Finalize document in Perioperative Doc.
- BC Cancer Regional Brachytherapy PARR Clinical Record

Patient and Family Education

Provide verbal and written information to patients/family as needed

References

1. American Society of Anesthesiologists. (2013). Practice Guidelines for Postanesthetic Care: An Updated Report by the American Society of Anesthesiologists Task Force on Postanesthetic Care. *Anesthesiology, 118,* 291-307.
2. American Society of PeriAnesthesia Nurses. (2014). *2015-2017 Perianesthesia Nursing Standards, Practice Recommendations and Interpretive Statements*. Cherry Hill, NJ: Author.
3. Beetstra, J., & Peterson, L. (2016). Clinical Practice Document: Discharge of the Post Anesthetic patient – Phase I. *PolicyNet – Vancouver Acute*. Vancouver Coastal Health.
4. National Association of PeriAnesthesia Nurses of Canada (2014). *Standards for Practice* (3rd ed.). Oakville, Ont: Author.
5. Quinn, D.M.D. & Schick, L. (Eds.). (2004). *PeriAnesthesia Nursing Core Curriculum: Preoperative, Phase I and Phase II PACU Nursing*. St. Louis, MO: Elsevier.
6. Surgical Services Shared Work Team and Clinical Policy Office. (2014). Clinical Protocol: Post Anesthetic Care Unit Discharge Criteria. *Acute Care Standard.* Fraser Health Authority.

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