SESLHD GUIDELINE COVER SHEET

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SUMMARY	To standardise best practice guidelines for nursing staff working in the PACU environment across SESLHD and guide clinical decision making practices for the discharge of post-operative patients.

Feedback about this document can be sent to SESLHD-Policy@health.nsw.gov.au

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SESLHD Post Anaesthetic Care Unit (PACU) Discharge Guidelines, Post-Operative Adult and Maternity Patients

Section 1 - Background

Despite an extensive literature review, the body of evidence to guide discharge criteria from Post Anaesthetic Care Unit (PACU) remains limited. The literature examined supports this guideline.

The PACU (also known as phase 1 recovery) is a continuation of care following the completion of an anaesthetic event (sedation, general or regional) with or without surgical intervention (B[8]). Patients emerging from an anaesthetic are extremely vulnerable to post anaesthetic and postoperative complications (particularly cardiopulmonary deterioration) and therefore require vigilant and ongoing monitoring (C[10,12,13]).

While the responsibility for the safe emergence from anaesthesia is primarily the responsibility of the anaesthetic team (B[11,12]), PACU nurses play an essential role in the monitoring and management of the patient emerging from anaesthesia (B[8,]C [10,11,13]). The task of managing the recovery and discharging the patient to the ward or phase 2 recovery is delegated to PACU nursing staff trained in airway, pain management and the early recognition of post anaesthetic and postoperative complications (B[14], C[10]). It is essential that anaesthetic teams and PACU nursing staff communicate effectively to ensure the safe recovery patients in the PACU (10, C[12]).

Section 2 - Principles

Best practice guidelines indicate that an established discharge criteria is essential to guide the safe discharge of the post anaesthetic patient from the phase 1 to phase 2 recovery areas (A[2,3,5,6,]8,B[13],C[8])'.

Evidence demonstrates that the established criteria for discharge from phase 1 recovery must include assessment and documentation of patient's pain, state of consciousness, nausea and vomiting and vital signs at regular intervals prior to the discharge of a patient from the PACU (B[8,9,14]C[10,11,15]). The patient must meet minimum criteria prior to discharge, with exceptions assessed and documented by the primary anaesthetist (or suitable delegate) (1,C[10,11,12]).

This guideline will refer to the use of the Modified Aldrete Discharge Criteria (D[7]) for the purposes of use of an established tool to determine readiness for patient discharge by PACU nursing staff.

Section 3 - Definitions

ASA	American Society of Anaesthesiologists: A system used by an anaesthetist to stratify severity of patient's underlying disease and potential for suffering complications from general anaesthesia (1).
ISBAR	The ISBAR script Introduction, Situation, Background, Assessment and Recommendation/ Request is the structured framework to be used when communicating clinical handover. The ISBAR provides a framework to ensure that relevant information is effectively communicated and transfer of responsibility is undertaken (6).
SAGO	NSW Health Standard Adult General Observation Chart
SMOC	NSW Health Standard Maternity Observation Chart
SPOC	NSW Health Standard Paediatric Observation Chart
PACU	Post Anaesthetic Care Unit
BTF	Between the Flags (electronic documentation of vital signs on eMR2 platform)
Stage 1 PACU/First Stage Recovery	Begins during the emergence phase from anaesthesia and lasts until the patient is awake, protective reflexes have returned, pain is controlled and meets established discharge criteria (AAGBI, 2011 Day Case and Short Stay Surgery).
Stage 2 PACU/Second Stage Recovery	Begins following discharge from stage 1 PACU, and ends when the patient is ready to be discharged from hospital. Patients are commonly discharged using nurse led discharge protocols and criteria (AAGBI, 2011 Day Case and Short Stay Surgery).
Modified Aldrete Discharge Criteria	A scoring system that takes into account an assessment of the patient's airway, breathing, level of consciousness, nausea and/or vomiting status and pain assessment (D^{7}). Used to determine a patient's readiness for discharge from first stage PACU in conjunction with additional discharge criteria.

Section 4 - Responsibilities

Anaesthetists are responsible for:

- Ensuring that the patient recovers safely from surgery and anaesthesia in an area appropriate for that purpose (C[12])
- The care and responsibility for the patient following sedation or anaesthesia is shared with nursing staff and with the practitioner performing the procedure. There must be effective communication between all health professionals responsible for the care of the patient (C[12])
- The anaesthetist is responsible for recognising, managing and documenting adverse effects that may be related to anaesthetic technique which have occurred prior to handover to the PACU. This includes a responsibility to inform patients and/or caregivers of any future health care matters relevant to the conduct of the technique
- The anaesthetist is responsible for responding to concerns identified by the PACU nurse for possible adverse effects related to the anaesthetic technique which were not previously identified.
- The anaesthetist will provide specific advice regarding:
    - Clinical observations and monitoring where special requirements for monitoring above standard monitoring exist
    - Pain relief
    - Management of post-anaesthesia complications, particularly post-operative nausea and vomiting
    - Fluid therapy
    - Respiratory therapy
    - Discharge from PACU in circumstances where PACU discharge criteria are not met or the criteria require modification due to the clinical circumstances
    - Ongoing care related to anaesthesia matters(1, C[12]).
- The anaesthetist must be readily available to deal with any unexpected problems or alternatively ensure that another nominated anaesthetist or other suitably qualified medical practitioner is available and has access to necessary information about the patient
- To ensure there are plans for adequate post-operative care of the patient after discharge from PACU (C[11,12])
- To provide advice to the primary care team after discharge of the patient from PACU if specific advice is required.
- When a patient is to be discharged from medical care on the same day that sedation or anaesthesia has been administered, the anaesthetist must ensure that the patient and/or caregivers are provided with any specific advice if the patient has requirements outside of the usual requirements for post anaesthesia care.

Line Managers are responsible for:

- Ensuring staff compliance with guideline
- Monitor IIMS data relating to patient discharge from the PACU.

Clinical Nurse Educators are responsible for:

- Providing ongoing education of the discharge guidelines to new and existing staff members
- Maintain records of education sessions and attendance.

PACU nursing staff are responsible for:

- Completion of DETECT module from My Health Learning
- Completion of Between the Flags modules from My Health Learning
- Completion of ISBAR module from My Health Learning
- Ensure patients meet established criteria prior to discharge from the PACU
- The PACU nurse shall ensure the safe transfer of the patient to the receiving unit following discharge from the PACU (1, C^5)
- Liaise with anaesthetic and surgical teams when patients fail to meet discharge criteria
- Completion of the Blood Safe PPH module from My Health Learning (if recovering maternity patients).

Section 5 - Expected Outcomes

The anaesthetist is responsible for the safe transport of the patient from the operating theatre or procedure room to the PACU, HDU or ICU (1, C[11,12]).

The PACU nurse will perform a patient assessment and complete all documentation in readiness for discharge on approved methods of NSW Ministry of Health documentation (i.e. SurgiNet iView or approved paper based methods) (C[10]).

The patient will meet the discharge criteria prior to leaving the PACU (A[3,4,5,6,9,]B[13]C[1,10,15]), unless otherwise documented by anaesthetist.

The patient who does not meet the discharge criteria will have clear documentation for the decision making process for discharging the patient from the PACU (1,2,3,5,C[10]).

Clinical handover of the patient being discharged from the PACU will use ISBAR as the framework for handover (1,5,6 C[10]).

The nurse/midwife receiving clinical handover accepts responsibility for ongoing care of the patient and uses the patient's health care record to cross-check all information and assess future care requirements (1,2,3,5,6 C[10,13]).

Clinical handover is documented in each patient's health care record using approved methods of documentation (i.e. pre/post procedure handover form (1, 6)).

Section 6 - Process

6.1 Statement / Rationale

The patient will remain in the PACU until the Modified Aldrete discharge score criteria has been met or discharged as per anaesthetist's documented orders (1, 2,3 B[14] C[10,11,13,15,]D[16]).

The anaesthetist and/or surgeon will identify and communicate which patients they will review prior to discharge (C[11,12]).

The PACU nurse will perform patient A-G assessment (as per DETECT guidelines) and complete all documentation (electronic and/or paper based) in readiness for discharge (1,6, C[10,13]).

Nursing staff may ask for a review of any patient identified at risk of clinical deterioration and/or does not meet the discharge criteria (C[10,11,12]).

6.2 Actions

6.2.1 Modified Aldrete Discharge Criteria

The patient can be discharged from Stage 1 PACU when the discharge score totals eight or above; however, the patient must NOT score a ZERO in any single category (D[7]).

If the discharge score is below eight, the patient can be discharged with an anaesthetic review and signature. The reason for discharge and changes in parameters (on the SAGO/SMOC/BTF chart) must be documented by the medical officer (D[7]). Refer to Section 6.2.2 Other Criteria for Consideration Prior to Discharge (in addition to the Modified Aldrete Score).

Modified Aldrete Discharge Criteria		
Airway		**Score**
Patent		2
Supported		1
Artificial		0
Breathing		**Score**
Good		2
Obstructed/Inadequate		1
Apnoeic		0
Consciousness		**Score**
Fully Awake		2
Rousable		1
Unrousable		0
Pain	**Pain Score**	**Score**
Comfortable	0-3/10	
Moderate	4-6/10	2
Severe	7-10/10	1
		0
Nausea		**Score**
Nil		2
Nausea	(mild/moderate)	1
Vomiting		0

6.2.2 Other Criteria for Consideration Prior to Discharge (in addition to the Modified Aldrete Score)

The patient must have a clinical review by the anaesthetist if their vital signs do not reflect the criteria specified by the NSW Health Standard Observation Chart (1).

If the patient is considered ready for discharge by the anaesthetist but the vital signs are outside the set parameters on the NSW Health Standard Observation Chart, this must be documented in the patient's progress notes. Please refer to SESLHDPR/283 - Patient with Acute Condition for Escalation (PACE): Management of the Deteriorating Adult Maternity Inpatient.

Additional Criteria To Be Met Prior To Discharge	
Intravenous (IV) Access	IV access patent On-going fluid ordered, if required.
Vascular Access	Central lines- if inserted in operating theatres, position must be confirmed by X-Ray prior to discharge from the PACU.
Wound/Dressing	Dry, clean and minimal tension/ooze or swelling
Drains	Drain intact, patent, secure and correct suction insitu.
Arterial Lines	Must be removed prior to discharge to ward area. May remain in for HDU/ICU patients.
Intravenous Inotropes	Discharge to HDU/ICU only.
Epidural Catheter	If not in use, epidural catheter must be removed prior to discharge from the PACU.
Vital Signs	Patient must be haemodynamically stable and in accordance with the SESLHD Clinical Emergency Response System, unless otherwise documented (Altered calling criteria) by anaesthetist. See local clinical business rules for oxygen requirement guidelines.

6.3 Minimum Length of Stay Considerations

The length of stay may vary with each individual patient. The following is the minimum length of stay for specific types of surgery and anaesthesia:

6.3.1 Stage 1 PACU: Minimum Length of Stay Considerations

Type of Anaesthetic	Length of Stay Considerations
Local Anaesthetic	Bypass the PACU. Patient to be transferred directly to the ward or day surgery unit from operating theatres by anaesthetist or instrument nurse, unless surgically compromised.
Sedation	Patient to remain in the PACU for a minimum of 15 minutes.
General	Patient to remain in the PACU for a minimum of 30 minutes.
Spinal/Epidural	A minimum length of stay of 30 minutes in the PACU. If an epidural bolus is given, the patient must have their vitals monitored 10 minutely for 30 minutes prior to discharge. Patients with a motor block of three, according to the Bromage Scale below, must be reviewed by the anaesthetist prior to the transfer to the ward.

	Grade / **Criteria** / **Degree of block (%)** 0 — Free movement of legs and feet — Nil (0) 1 — Just able to flex knees with free movement of feet — Partial (33) 2 — Unable to flex knee, but with free movement of feet — Almost complete (66) 3 — Unable to move legs or feet — Complete (100) Motor block must be documented prior to transfer to the ward (e.g. iView, SMR130.029 Neuraxial Opioid Single Dose (Adult) if morphine used).
Regional Block (not including spinal/epidural)	Patient to remain in the PACU for 15 minutes to monitor for delayed local anaesthetic toxicity.
No IV opioids given less than 20 minutes prior to discharge from PACU.	
Requests may be made for an extended PACU stay by anaesthetists or surgeons for further monitoring or the PACU nursing clinical judgement.	

6.3.2 Stage 2 PACU: Minimum Discharge Criteria

The patient must maintain or improve on the set parameters they meet for discharge from Stage 1 PACU. If the patient deteriorates at any stage in Stage 2 PACU, then a medical review must be attended (1,2,3).

For the patient to be able to be discharged home, the discharge criteria in Stage 2 PACU must be met. The discharge criteria for Stage 2 PACU includes:

Stage 2 Recovery: Minimum Discharge Criteria

Action	Ambulation	Fasting-Feeding	Urine Output
Ready for discharge	Able to stand up and walk straight	Able to tolerate fluids	Has voided
Needs review by in-charge/senior nurse before discharge	Vertigo when erect	Nauseated	Unable to void but comfortable
Needs medical review	Dizziness when supine	Nauseated and vomiting	Unable to void and uncomfortable

6.3.3 Discharge of Maternity Patients from the PACU

Assessment	Discharge Criteria
Fundal Check	Firm and central. *Must be completed prior to transfer from the PACU, any deviations must be reviewed by obstetric/gynaecology medical officer.

PV Loss	Scant or Small. Medium or large amounts of PV loss must be reviewed by obstetric/gynaecology medical officer. *Note: PV blood loss is difficult to estimate, and is often underestimated. If concerned, pads may be weighed to get accurate measurement.

6.3.4 Discharge of Intensive Care Patients from the PACU

Ventilated patients must be transferred from the PACU to ICU accompanied by both a nursing and medical escort. The nursing staff may request an MO to accompany them and the patient to ICU when patient deemed haemodynamically unstable.

6.3.9 Documentation

All nursing documentation for the PACU must be completed on the approved written or Hybrid documentation. This includes (but is not limited to) extra specialty charts e.g. neurovascular assessment, 'per vaginal loss' chart, neurological observation chart and acute pain service charts

The PACU nursing report must include initial assessment, management, evaluation and ongoing care including a record of events.

Ensure all IV fluids, drugs etc. administered in the PACU are recorded and signed for in accordance with NSW Ministry of Health medication policies (1).

Medications (i.e. antibiotics, anticoagulants) or interventions (i.e. medical imaging) related to post-operative clinical outcomes should be charted prior to discharge from the PACU, otherwise the PACU nurse must alert or escalate to the relevant team for follow up. PACU nurses must document the same in the patient's progress notes.

If the patient has had a spinal, epidural or regional anaesthesia the degree of motor and sensory blockade on discharge must be documented before the patient is discharged to the ward (1).

Any altered calling criteria for clinical review or rapid response must be documented for a limited specific time on the SAGO/SMOC/SPOC/BTF chart by the appropriate medical officer (1,2,3 C[10,11,13]).

- eMR SurgiNet Application
- PACU downtime form (if SurgiNet is not available)
- SAGO/SMOC/SPOC/BTF
- Other specialty charts as required
- Patient's Progress Notes

6.3.10 Clinical Handover

The PACU nurse/midwife shall provide a comprehensive verbal handover of the patient being discharged from the PACU to the transport/receiving nurse/midwife (1,6 C[10]). The SESLHD Pre and Post Procedure Handover Form must be co-signed by both the PACU nurse handing over and the nurse receiving the patient on the ward.

Section 7 – References

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- NSW Health (2014) Obstetric Epidural Analgesia
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Revision and Approval History

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September 2017	Draft	Executive Sponsor approved for progression
October 2017	0	Endorsed by Clinical and Quality Council for publishing
September 2020	1	Minor review. Sections 1 and 6.3.1 updated. References and links updated. Approved by Executive Sponsor. To be tabled at October 2020 Quality Use of Medicines Committee.
October 2020	1	Deferred pending clarification of discharge criteria for spinal/epidural anaesthetics under Section 6.3.1.
May 2021	2	Clarification on Motor block scoring 6.3.1. Approved by Executive Sponsor. To be tabled at Quality Use of Medicines Committee.
June 2021	2	Approved by Quality Use of Medicines Committee.