

SESLHD PROCEDURE COVER SHEET



NAME OF DOCUMENT	Sedation: Procedural Sedation (Adults, Ward, Clinic and Imaging areas)
TYPE OF DOCUMENT	Procedure
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EXECUTIVE SPONSOR or EXECUTIVE CLINICAL SPONSOR	Clinical Stream Director, Medicine
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FUNCTIONAL GROUP(S)	Cardiac and Respiratory Care
KEY TERMS	Sedation: Level 3 Procedure; Non-anaesthetist led procedural sedation, Safe sedation.
SUMMARY	<p>This document outlines the process to follow to ensure that every episode of procedural sedation across SESLHD facilities is safely performed.</p> <p>This document also outlines the process for the assessment, administration, monitoring and recovery of patients receiving procedural sedation/ analgesia outside Operating Suites in the absence of an anaesthetist.</p> <p><u>Exclusions:</u> Patients sedated by a qualified anaesthetist; Intubated patients receiving intravenous sedation/ analgesia for diagnostic or therapeutic procedures</p>

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	Paediatric patients < 16 years; It does not include sedation in Intensive Care, Emergency Department or Mental Health Settings.
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1. POLICY STATEMENT

Within SESLHD only minimal and moderate sedation can be administered by non-anaesthetists. Deep sedation requires the involvement of anaesthetic personnel. Intravenous propofol must not be administered by the proceduralist, assistant or airway monitor.

Procedures involving the use of sedation are categorised as **Procedure Safety Checklist level 3** procedures and are required to meet the criteria set out in [NSW Ministry of Health Policy Directive PD2017_032 - Clinical Procedure Safety](#).

This document should be read in conjunction with the following: [Minimum Standards for Safe Procedural Sedation - Agency for Clinical Innovation \(2015\)](#), and [Australian and New Zealand College of Anaesthetists \(ANZCA\) PG09 \(G\) Guideline on procedural sedation 2022](#).

2. BACKGROUND

This procedure outlines the minimum standards required for the delivery of safe procedural sedation outside operating suites in the absence of an anaesthetist.

Sedation involves the use of medications which can affect parts of the brain which control the patient's breathing and circulation. A safe environment for sedation is underpinned by risk stratification, safe medication use and access to life support skills.

The goal of procedural sedation is to depress consciousness, so the patient can tolerate moderately uncomfortable or painful stimuli but still respond purposefully to verbal or light tactile stimulation.

It is important for clinicians to be aware that it is possible for patients to rapidly progress along the continuum of sedation from moderate to deep sedation/anaesthesia. In addition, it is not always possible to predict the effects of sedation as response varies between individuals. Loss of consciousness and loss of protective reflexes may occur rapidly and unexpectedly (ANZCA PG09 (G) 2022, p2).

The therapeutic window for agents used for sedation and anaesthesia is such that inadvertent and unanticipated rapid progression from sedation to general anaesthesia may occur. Transition from complete consciousness through the various levels of sedation to general anaesthesia is a continuum and not a set of discrete, well-defined stages. Loss of consciousness with its attendant risk of loss of protective airway reflexes may occur rapidly and unexpectedly (ANZCA PG09 (G) 2022, p2).

Therefore, clinicians who administer sedation and monitor patients during procedural sedation must:

- be aware of the risks associated with the administration of sedatives
- have the skills to monitor and recognise different levels of sedation
- be able to appropriately respond to patient deterioration.

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3. GLOSSARY

Airway Monitor	A dedicated clinician (who is not the proceduralist) with appropriate competency-based training, whose primary responsibility is to monitor the patient’s level of consciousness, airway and cardio-respiratory status throughout the procedure (NSW Health PD2017_032).																									
Analgesia	An agent that reduces or eliminates the perception of pain. Analgesia can act locally by interfering with nerve conduction or systemically by depressing the pain perception in the central nervous system. This may be achieved by a wide range of medications including methoxyflurane and nitrous oxide (ANZCA PG09 (G) 2022, p18).																									
Anxiolysis	A medication-induced state during which patients respond normally to verbal commands. Although cognitive function and physical coordination may be impaired, airway reflexes, and ventilatory and cardiovascular functions are unaffected. Also known as minimal sedation.																									
Continuum of Sedation	<table border="1" style="width: 100%; text-align: center;"> <tr> <td></td> <td>Minimal sedation</td> <td>Moderate sedation/analgesia</td> <td>Deep sedation/analgesia</td> <td>General anesthesia</td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td>↓</td> <td>↓</td> </tr> <tr> <td>Response</td> <td>Responds normally to verbal commands</td> <td>Responds purposefully to verbal commands/or light touch</td> <td>Responds to pain</td> <td>No response</td> </tr> <tr> <td>Airway</td> <td>Maintained</td> <td>Maintained</td> <td>May require support</td> <td>Requires support</td> </tr> <tr> <td>CV support</td> <td>Not needed</td> <td>Not needed</td> <td>May be needed</td> <td>May be needed</td> </tr> </table> <p>*Cardiovascular (CV)</p>		Minimal sedation	Moderate sedation/analgesia	Deep sedation/analgesia	General anesthesia		↓	↓	↓	↓	Response	Responds normally to verbal commands	Responds purposefully to verbal commands/or light touch	Responds to pain	No response	Airway	Maintained	Maintained	May require support	Requires support	CV support	Not needed	Not needed	May be needed	May be needed
	Minimal sedation	Moderate sedation/analgesia	Deep sedation/analgesia	General anesthesia																						
	↓	↓	↓	↓																						
Response	Responds normally to verbal commands	Responds purposefully to verbal commands/or light touch	Responds to pain	No response																						
Airway	Maintained	Maintained	May require support	Requires support																						
CV support	Not needed	Not needed	May be needed	May be needed																						
Levels of Sedation	<p>Minimal: A drug-induced state of anxiolysis, during which patients respond purposefully to verbal commands or light tactile stimulation. Features of minimal sedation include maintenance of airway patency and reflexes, as well as ventilatory and cardiovascular function, although there may be some reduction in cognition and physical dexterity (ANZCA PG09 (G) 2022, p24).</p> <p>Moderate: A drug-induced state of depressed consciousness during which patients retain the ability to respond purposefully to verbal commands and tactile stimulation. Features of moderate sedation include maintenance of airway patency and reflexes, as well as ventilation and cardiovascular function. However, minimal interventions to maintain airway patency, spontaneous ventilation or cardiovascular function may, be</p>																									

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	<p>required. Moderate sedation offers a margin of safety that is wide enough to render loss of consciousness unlikely (ANZCA PG09 (G) 2022, p24).</p> <p>Deep: A drug-induced state of depressed consciousness during which patients are not easily roused and may respond only to noxious stimulation. Features of deep sedation may be difficult to distinguish from general anaesthesia and include impaired ability to maintain an airway, inadequate spontaneous ventilation and/or impaired cardiovascular function. Deep sedation can readily and rapidly progress to general anaesthesia with onset of unconsciousness and inability to maintain an airway (ANZCA PG09 (G) 2022, p24).</p>
Designated Recovery Area	An area staffed with the appropriate skill mix and staff number equipped with resources to ensure the safe recovery of patients post procedure.
Proceduralist	The clinician who is performing the procedure. There may be more than one proceduralist involved in a procedure. The senior proceduralist takes overall responsibility for the case (NSW Health PD2017_032).
A Level 3 Procedure	<ul style="list-style-type: none"> • Requires at least one proceduralist and a procedural team • Always requires written consent • Involves procedural sedation • Usually performed in formal procedural suites such as operating theatres, endoscopy suites, radiology units and cardiac catheterisation laboratories (NSW Health PD2017_032)

4. RESPONSIBILITIES

4.1 Service Managers / Line Managers will ensure:

- Clinical staff have access to training and education to enable skill development to safely perform their designated clinical role
- Adequate staff numbers with the appropriate skill mix are available to fulfil the role of dedicated airway monitor
- Clinical staff, overseeing the recovery of patients post procedure, have appropriate skills in the management of patients with a decreased level of consciousness
- All necessary monitoring equipment is available and in working order
- Any sedation-related incidents are documented and reviewed at department morbidity and mortality meetings, reported in IMS+ and where required escalated to Special Committee Investigating Deaths Under Anaesthesia (SCIDUA).

4.2 The Proceduralist will ensure:

- Sedation risk assessment is performed prior to the commencement of the procedure. An assessment must be made as to whether an anaesthetist is required to assess and manage the patient. Patients with physical status ASA ≥ 3 should have an anaesthetic consult, ([Minimum Standards for Safe Procedural Sedation - ACI \(2015\)](#) p.11 and

[Australian and New Zealand College of Anaesthetists \(ANZCA\) PG09 \(G\) Guideline on procedural sedation 2022](#), Appendix II). This assessment and decision must be documented in the patient's health care record

- Airway risk assessment is performed prior to the commencement of the procedure. If this assessment indicates a significant airway risk then an anaesthetist must be present before sedation is given. Refer to **Appendix 5** and **Appendix 6** physical assessment specific for airway. This assessment and decision must be documented in the patient's health care record
- Anaesthetic consultation occurs for patients with physical status ASA ≥ 3 including identified with a significant airway risk or who have had previous anaesthetic/ sedation airway difficulties or identified to be high risk due to severe or multiple co-morbidities
- An Airway Monitor is present throughout the procedure
- Target level of Sedation, for the intended procedure, is determined and documented prior to the start of the procedure
- Sedation-related Incidents are documented and reviewed at department morbidity and mortality meetings, reported in IMS+ and where required escalated to Special Committee Investigating Deaths Under Anaesthesia (SCIDUA). See Audit section of this document (Section 9) for suggested audit criteria.

4.3 The Airway monitor will:

- Comply with education requirements (see Section 5)
- Perform the role of dedicated airway monitor
- Monitor the patient's level of consciousness and cardiorespiratory status during the procedure
- Immediately alert the procedural team if the patient enters a deeper level of sedation than intended or if the patient's airway, respiratory or cardiovascular system becomes compromised
- Respond immediately if resuscitation is required including activating a Code Blue (ext. 2222)
- Must remain with the patient throughout the procedure.

5. EDUCATION / TRAINING REQUIREMENTS (refer to Table 1 and Appendix 1)

Airway Monitor:

- Advanced Life Support (ALS level1) training is the recommended minimum training for nursing or medical staff performing the role of airway monitor
- Refer to **Table 1**: Mandatory deteriorating patient training by professional group (Tier 1 and Tier 2 only)
- Understand the pharmacology of sedative medications and reversal agents used (including actions, interactions, and adverse reactions)

Recovery Staff:

- Completion and proficiency in basic life support

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- Have the appropriate training and skill set to detect and respond to patient instability or patient deterioration post sedation. Refer to **Table 1: Mandatory deteriorating patient training by professional group (Tier 1 and Tier 2 only)**
- Understand the pharmacology of any sedative medications (including other options such as Methoxyflurane inhaler or Nitrous Oxide 50%/Oxygen 50% mix) and reversal agents used (including actions, interactions, and adverse reactions).

6. EQUIPMENT

The following monitoring and emergency equipment must be immediately available and functioning:

- Pulse oximetry (with audible patient alarms), cardiac monitor, automated BP machine and a manual sphygmomanometer (in case of machine malfunction and to confirm accuracy of NIBP)
- End tidal carbon dioxide monitoring is recommended for all patients receiving sedation and must be available for use in high-risk patients/environments (i.e. patients with severe or multiple co-morbid disease/illnesses or in situations where there is poor lighting or minimal access to patient i.e. Angiography Suites / Magnetic Resonance Imaging Units)
- A source of high-pressure suction (wall or portable), yankauer suction tip and tubing
- An adequate supply of oxygen and suitable devices for the administration of oxygen to a spontaneously breathing patient (ANZCA PG09 (G) 2022, p7)
- A means of inflating the lungs with oxygen, for example a self-inflating bag and mask (ANZCA PG09 (G) 2022, p7)
- Ready access to a range of equipment for airway management, including Guedel, nasopharyngeal airway, and laryngeal mask (ANZCA PG09 (G) 2022, p7)
- A fully stocked emergency trolley
- Medications for the reversal of benzodiazepines and opioids (ANZCA PG09 (G) 2022, p7)
- A means of summoning emergency assistance such as an accessible phone to activate code blue (ext. 2222) or an emergency buzzer.

7. PROCEDURE:

7.1 PRE-PROCEDURE: PATIENT ASSESSMENT AND RISK STRATIFICATION

Risk Stratification:

- Conduct a comprehensive medical history including, sedation and airway risk assessment. If the patient has a physical status ASA ≥ 3 they must be referred for anaesthetic support. Refer to **Appendix 5** and **Appendix 6** for an example of a physical assessment specific for airway. This assessment and decision must be documented in the patient's health care record
- Basic assessment should include as per ANZCA, PG09 (G) 2022, p8-9:
 - Past medical, surgical, and sedation histories

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- Anatomical, access or physical abnormalities that may impact on the ability to perform the proposed procedure at the level of intended sedation
- Any history of known airway or anaesthesia difficulties
- Obstructive sleep apnoea or complaints of excessive, loud snoring from family members or partner
 - Identifying patients with known chronic diseases such as cardiac, respiratory, severe gastro-oesophageal reflux, chronic aspiration, neuromuscular or metabolic and rare syndromes
 - Recording weight and height
 - History of laryngospasm or presence of upper respiratory tract infection (URTI)
 - Behavioural challenges, history of procedural distress and ability to co-operate
 - Neurodevelopmental conditions such as autism spectrum disorder and attention-deficit/hyperactivity disorder (ADHD)
 - Ability to complete any proposed procedure at the targeted level of minimal or moderate sedation
 - Identifying the need to avoid aortocaval compression when sedating pregnant women
 - Allergies.
- The following are relative contraindications or barriers to be considered and addressed prior to provision of intravenous sedation as per ANZCA, PG09 (G) 2022, p10:
 - Language barriers or other factors preventing effective communication with patients, parents or carers.
 - Previous difficulty with sedation or anaesthesia
 - Allergy to medications
 - Poorly controlled medical conditions where treatment of these will optimise outcomes
 - Old age or frailty
 - The presence of obstructive sleep apnoea.

Consent

- Consent patient as per [NSW Health Consent to Medical and Healthcare Treatment Manual](#).

Patient Preparation

- Ensure all patients undergoing elective procedures with planned sedation fast as per facility preoperative/procedure fasting CBRs
- Ensure the patient has a reliable and patent intravenous access
- Record patient's weight. **NB:** an accurate weight is essential to accurately calculate sedation dose
- For outpatients only - check that arrangements have been made to ensure the patient is accompanied home post procedure with a responsible adult (i.e. capable of summoning help in an emergency) and who will stay with the patient overnight

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Patient Monitoring

- Record baseline respiratory rate, oxygen saturation (on room air), blood pressure, heart rate.
- Confirm the target sedation level and safe limits for vital signs has been documented.

Procedure Safety Checklist level 3, Stage 1 (Sign In)

- Complete sign in, Procedure Safety Checklist Level 3, stage 1 as per [NSW Ministry of Health Policy Directive PD2017_032 - Clinical Procedure Safety](#).

7.2 INTRA PROCEDURE:

Procedure Safety Checklist level 3, Stage 2

- Complete final patient identification and procedure verification immediately before commencing the procedure as per Procedure Safety Checklist, level 3, stage 2 as per [NSW Ministry of Health Policy Directive PD2017_032 - Clinical Procedure Safety](#).

Monitoring

- **Confirm the target sedation level and safe limits for vital signs** has been documented
- **Monitoring equipment:** pulse oximetry, ECG, NIBP and capnography. Ensure alarm limits are appropriately set and audible
- Once sedation has been administered, the airway monitor must **maintain constant visual observation** of the patient and assess level of consciousness (patient's response to verbal commands or light tactile stimulation), airway patency, respirations, oxygen saturation levels, nausea, and pain levels throughout the procedure.
- Maintain verbal contact to ensure the patient is receiving adequate analgesia and is rousable
- **Record vital signs** at least every five minutes throughout the procedure, refer to **Appendix 3**.

Supplemental Oxygen

- Administer supplemental oxygen to maintain the patient's baseline oxygen saturations or as ordered by the proceduralist
- Continue to administer oxygen until the patient has returned to their pre-procedure state of consciousness.

Administration of Sedation and Reversal Agents

- Adhere to all relevant policies, procedures, clinical business rules, medication product information and regulations pertaining to S4D/S8 when prescribing and administering sedative agents
- Calculate sedative/analgesic dose based on the patient's age, weight, and clinical condition
- Constant vigilance is required where combinations of medications are used, due to their synergistic interactions (ANZCA, PG09 (G) 2022, p11)

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- Potentiation of effects leading to unanticipated deeper levels of sedation and prolongation of duration increases as the number of medications with sedative properties administered increases (ANZCA, PG09 (G) 2022, p2 & p6)
- As most complications of sedation are cardiorespiratory, doses of sedative and analgesic medications should be administered in small doses, at appropriate intervals until the desired sedation effect is achieved (ANZCA, PG09 (G) 2022, p11)
- Reversal agents such as naloxone (opioid antagonist) and flumazenil, (benzodiazepine antagonist) must be immediately available
- Document all medications used, dosages and timing of administration on the eMEDS, SESLHD IV Sedation chart SEI130.040, Anaesthetic Record or other department specific forms.

Critical Events and Escalation

- All team members should be aware of the escalation plan to follow, should the patient deteriorate.
- If the patient’s condition deteriorates (see examples of clinical triggers below) the Airway Monitor must escalate this immediately by advising the proceduralist and other members of the procedural team. The procedure must be stopped. All members of the procedural team must devote their entire attention to treating and monitoring the patient until recovery.
- If the procedural team are not able to manage the clinical situation or if the patient breaches Code Blue criteria a Code Blue must be activated (ext. 2222).

<p>NB: Recognise key features of a deteriorating patient (ANZCA PG09 (G) 2022, p 21)</p> <ul style="list-style-type: none"> • Airway obstruction or abnormal breathing • Hypoventilation or apnoea • Aspiration • Oxygen desaturation: clinical observation or by use of age-appropriate oximetry as indicated • Changes to waveform capnography where it is indicated for use • Changes in depth of sedation noted through loss of patient’s response to light tactile stimulation or verbal commands • Heart rate and heart rhythm changes • Blood pressure changes • Allergic reactions and anaphylaxis • Complaints of chest pain or shortness of breath • Agitation
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7.3 POST PROCEDURE: POST PROCEDURE CARE AND DISCHARGE PLANNING

Procedure Safety Check list, Level 3, Stage 3

- Complete sign out, Procedure Safety Checklist level 3, stage 3 before the patient /procedural team leaves the procedural area. Link to [NSW Ministry of Health Policy Directive PD2017 032 - Clinical Procedure Safety.](#)

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Designated Recovery Area

- Recover the patient in a recovery area that has the appropriate staff number and skill mix (i.e. by a RN/RM or MO appropriately trained in the management of patients with a decreased level of consciousness)
- Ensure resources are readily available to ensure the safe recovery of the patient

Handover to Recovery Staff

- Provide a written and verbal handover to recovery staff using ISBAR principles (Introduction/Situation/Background/Assessment/Recommendation). Link to [SESLHDPR/303 - Clinical Handover: Implementation of ISBAR Framework and Key Standard Principles](#).
- Include the type of procedure, name/dose of the medications administered, the patient's cardiorespiratory status during and following the procedure, any complications and post procedure instructions.

Monitoring Requirements

- Monitor vital signs as per post procedure instructions and/or according to the clinical condition of the patient.
- Continue to monitor until the patient has fully recovered according to the following criteria:
 - Ability to maintain own airway
 - Fully conscious and alert. Sedation score should be 0 for a patient who is fully recovered, refer to **Appendix 3**
 - Oxygen saturations returned to baseline levels
 - Respiratory rate > 10 breaths/minute
 - Blood pressure and heart rate within 20% of baseline levels and in Between the Flags.

NB: If the patient is given a reversal agent there is a risk of rebound sedation (due to the half-life of the reversal agent being shorter than the half-life opioid or benzodiazepine medications). Additional monitoring is required for all patients who receives a reversal agent (as per the facility Naloxone or other reversal agent clinical business rule). An extended recovery period maybe required.

Link to [POWH Naloxone Administration for Opioid Induced Respiratory Depression CLIN044](#).

Additional Requirements for Outpatients

- Patient discharge from the recovery area should be authorised by the treating medical team and the patient must meet the unit's discharge criteria, refer to **Appendix 4**
- Outpatients must remain under observation for a minimum of two hours after the last administered dose of reversal medication to ensure that the effects of reversal agents have worn off and there is no rebound sedation prior to discharge, refer to link [Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018 | Anesthesiology | American Society of Anesthesiologists \(asahq.org\)](#), p.465
- Prior to discharge patients should have voided and/or be tolerating oral fluids

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- If a reversal agent was used or a clinical adverse event occurred during the procedure, the MO must be consulted prior to discharging the patient home

Transfer to Higher Level Care

- If the patient remains unresponsive to voice, requires airway support or is hemodynamically unstable, the patient must be assessed to determine if transfer to higher level care is required for ongoing management
- If an unrousable or haemodynamically unstable patient requires transfer, a MO and RN/RM with appropriate advanced life support skills must escort the patient
- Continuously monitor patient's oxygen saturation and heart rate during transfer and intermittent BP monitoring via NIBP
- Ensure appropriate resuscitation equipment i.e. oxygen, suction, resuscitation bag and mask and Guedel airway adjuncts are available throughout the patient's transfer

Handover to Ward/Unit

- Provide a written and verbal handover to the receiving ward/unit, using ISBAR principles, link to [SESLHDPR/303 - Clinical Handover: Implementation of ISBAR Framework and Key Standard Principles](#)
- Include the type of procedure, name/dose of medications administered and patient's cardiorespiratory status during and following the procedure. Ensure any complications and post procedure instructions are communicated to the receiving staff.

Post Sedation Instructions for Day Stay/Outpatients

- Patients should be advised that they may experience drowsiness or dizziness, therefore should not undertake the following within the next 24 hours:
 - Drive a motor vehicle or operate machinery
 - Sign legal documents
 - Consume alcohol
- Advise the patient who to contact in the event of complications
- Provide written and verbal postoperative instructions to both the patient and the accompanying adult.

8. ADVERSE EVENTS/ CRITICAL INCIDENTS REPORTING

- Report any adverse events via IMS+ and if applicable to SCIDUA
 - Link to [IMS+](#)
 - Link to [SCIDUA](#)
- Review at Department's Morbidity and Mortality meetings.

9. AUDIT

Clinical departments that regularly perform procedural sedation must collect data on the following indicators and conduct regular reviews of any adverse outcomes. The results of reviews should be tabled at facility Patient Safety Committees.

- Abandoned procedures
- The need for emergency assistance such as Code Blue

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- Unplanned overnight admission or unplanned admission to ICU/HDU related to over sedation
- Use of reversal agents
- Adverse outcomes including death following sedation.

10. DOCUMENTATION

- SES090.002 Pre and Post Procedural Handover
- Clinical Procedural Checklist Level 3
- Consent patient as per [NSW Health Consent to Medical and Healthcare Treatment Manual](#).
- NIMC /eMEDs / SESLHD IV Sedation chart SEI130.040 or Anaesthetic Record
- Standard Adult General Observation Chart (SAGO) Between the Flag form in eMR2
- Discharge against medical advice

11. REFERENCES

NSW Ministry of Health (MOH) Policy Directives

[NSW Ministry of Health Policy Directive PD2017_032 - Clinical Procedure Safety](#)
[NSW Health Consent to Medical and Healthcare Treatment Manual \(2020\)](#)

Agency for Clinical Innovation Guidelines

[Safe sedation | Agency for Clinical Innovation \(nsw.gov.au\)](#)

Australian and New Zealand College of Anaesthetists College (ANZAC) Guidelines

[PG07 \(A\) 2017 Guideline on pre-anaesthesia consultation and patient preparation](#)

[PG09 \(G\) 2022 Guideline on procedural sedation](#)

[PG15 \(POM\) 2018 Guideline for the perioperative care of patients selected for day stay procedures](#)

[PG18 \(A\) 2017 Guideline on monitoring during anaesthesia](#)

NSW Emergency Care institute

[Emergency Care Institute NSW Procedural Sedation - ED Sedation Procedure](#)

Clinical Excellence Commission

[Deteriorating Patient Education Strategy, Version 3, 2021](#)

SESLHD Procedures / Clinical Business Rules

[SESLHDPR/697 - Management of the deteriorating ADULT inpatient \(excluding maternity\)](#)

[SESLHDPR/705 - Management of the deteriorating MATERNITY woman](#)

[SESLHDPR/303 - Clinical Handover: Implementation of ISBAR Framework and Key Standard Principles](#)

[SESLHDGL/049 - SESLHD Post Anaesthetic Care Unit \(PACU\) Discharge Guidelines, Post-Operative Adult and Maternity](#)

[POWH Naloxone Administration for Opioid Induced Respiratory Depression CLIN044](#)

Other references

[Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018 | Anesthesiology | American Society of Anesthesiologists \(asahq.org\)](#)

The Sydney Children’s Hospitals Network – Procedural Sedation /C/11:9017-01:01

12. VERSION AND APPROVAL HISTORY

Date	Version No.	Author and approval notes
June 2017	Draft	Draft for Comment
October 2017	Draft	Draft for Comment
December 2017	Draft	Processed by Executive Services prior to progression to SESLHD Drug and Quality Use of Medicine Committee
February 2018	Draft	Approved by DQUM Committee and Clinical and Quality Council
March 2019	0	Published following endorsement by DQUM and Clinical and Quality Council
February 2020	1	Executive Sponsor approved Executive Services to facilitate a minor update – specifically the removal of PACE references.
3 August 2023	2	Major review. Extensive revision and update with contributions from Gary Holland – Nurse Educator SGH, Beatrice Kidenya - Clinical Nurse Educator: Safety & Risk POWH, Director Anaesthetics POWH. Approved at SESLHD Drug and Therapeutic Committee and SESLHD Clinical and Quality Council.

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Table 1: Mandatory deteriorating patient training by professional group (Tier 1 and Tier 2 only)

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Training	Course code	Between the Flags and Perinatal Safety Education – Deteriorating Patient Learning Pathways										
		Adult Patients (Medical)	Paediatric Patients (Medical)	Mixed Patients (Medical)	Adult Patients (Nursing)	Paediatric Patients (Nursing)	Mixed Patients (Nursing)	Midwives, Obstetricians & trainees	Adult Patients (Allied Health)	Paediatric Patients (Allied Health)	Mixed Patients (Allied Health)	Paediatric Patients (CFH)
Between the Flags – Tier 1 (eLearning)												
Between the Flags – Tier 1: Awareness, Charts and Escalation (eLearning)	90688727	x	x	x	x	x	x	x	x	x	x	x
Between the Flags – Tier 2 (eLearning)												
Between the Flags – Tier 2: Communication, Teamwork and Documentation	90689128	x	x	x	x	x	x	x	x	x	x	x
Between the Flags – Tier 2: Systematic Assessment (ADULT)	90689601	x		x	x		x		x		x	
Between the Flags – Tier 2: Systematic Assessment (PAEDIATRIC)	99825401		x	x		x				x	x	x
Between the Flags – Tier 2: Case Studies (ADULT)	90690235	x		x	x		x		x		x	
Between the Flags – Tier 2: Case Studies (PAEDIATRIC)	99825657		x	x		x	x					x
Between the Flags – Tier 2 (face-to-face workshop)												
Between the Flags – Tier 2 workshop (ADULT)	91007672	x			x							
Between the Flags – Tier 2 workshop (PAEDIATRIC)	101501905		x			x						
Between the Flags – Tier 2 workshop (MIXED)	102027472			x			x					
Between the Flags – Tier 2 workshop (SENIOR MEDICAL OFFICER)	202629588	SMO*	SMO*									
Between the Flags – Tier 2 workshop (ADULT)	91007943								x			
Between the Flags – Tier 2 workshop (PAEDIATRIC)	101500583									x		
Between the Flags – Tier 2 workshop (MIXED)	101506410										x	
Between the Flags – Tier 2 workshop (PAEDIATRIC)	101501570											x
Perinatal Safety Education Pathways – Tier 2												
Perinatal Safety Education – Fetal Safety Education	Various [‡]								x			
Perinatal Safety Education – Maternal Safety Education	Various [‡]								x			
Optional Training												
Emergency SEPSIS KILLS Program	39941883	x	x		x	x						
Inpatient SEPSIS KILLS Program	49389821	x	x		x	x			x			

* Senior Medical Officer

[‡] See Table 2 and Table 3 for Perinatal Safety Education eLearning and team training course codes

Mandatory deteriorating patient training by professional group refer to Deteriorating Patient Education Strategy Final V3 2021, p 6.

SESLHD PROCEDURE

Sedation: Procedural Sedation (Adults, Ward, Clinic, and Imaging Areas)

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APPENDIX 1: Education / Training Resources

<p>Information regarding Advanced Life Support training is provided through Prince of Wales Hospital Nursing Education, Workforce and Research (NEWR) Phone: 9382 3099.</p> <p>Sydney/Sydney Eye Hospital Nursing Education, Research and Leadership Unit (NERLU) Phone 9382 7403.</p> <p>St George Hospital and The Sutherland Hospital Staff Education (9113 2594)</p>
<p>Training in Intravenous Sedation is provided via Staff Education at SGH. Procedural Sedation Training HETI code CSK 13833. Target: Registered Nurses/Midwives involved in the caring for patients undergoing procedures that require sedation and monitoring/recovery of patients in such procedures. Contact: Education Service St George/Sutherland Hospitals and Health Services STG: 9113 2594 TSH: 9540 8943</p>
<p>POWH Procedural Sedation and Analgesia for Adult patients: Learning Pathway for nursing staff working in areas where procedural sedation is used. Contact: Nursing Education, Workforce and Research Prince of Wales Hospital 9382 3099</p>

Sedation: Procedural Sedation (Adults, Ward, Clinic, and Imaging Areas)

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APPENDIX 2: Assessment of Physical Status

American Society of Anaesthesiologists Classification of <i>Physical Status</i> (ANZCA PG09 (G) 2022, p15)	
ASA 1	A normal healthy patient Healthy with good exercise tolerance – no organic or physiologic disturbances
ASA 2	A patient with mild systemic disease Well-controlled disease of one body system with no functional limitations. Includes controlled hypertension or diabetes without systemic effects, mild obesity, pregnancy.
ASA 3	A patient with severe systemic disease Controlled disease of more than one body system or one major system and with some functional limitation but no immediate danger of death. Includes stable angina, old infarct, controlled congestive cardiac failure, poorly controlled hypertension, chronic renal failure.
ASA 4	A patient with severe systemic disease that is a constant threat to life Poorly controlled or end stage of at least one severe disease and possible risk of death. Includes unstable angina, hepatorenal failure, symptomatic congestive cardiac failure, symptomatic chronic obstructive lung disease.
ASA 5	A moribund patient who is not expected to survive without the operation Not expected to survive more than 24 hours without surgery and imminent risk of death. Includes. Multiorgan failure, sepsis syndrome with haemodynamic instability, hypothermia, poorly controlled coagulopathy.
ASA 6	A declared brain-dead patient whose organs are being removed for donor purposes

* Excerpted from American Society of Anesthesiologists Manual for Anesthesia Department Organization and Management 2007. A copy of the full text can be obtained from ASA, 520 N Northwest Highway, Park Ridge, Illinois 60068-2573.




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APPENDIX 3

University of Michigan Sedation Scale		
Conscious sedation equates to 0-2 Deeper sedation equates to 3 or more		
Levels of Sedation		Score
Awake and alert	Awake and alert	0
Minimally sedated	Tired/sleepy, appropriate response to verbal conversation or sound	1
Moderately sedated	Somnolent/sleeping, easily aroused with light tactile stimulation or a simple verbal command	2
Deeply sedated	Deep sleep, rousable only with significant physical stimulation	3
Unrousable	Unrousable	4

Continuum of Sedation	Minimal sedation	Moderate sedation/analgesia	Deep sedation/analgesia	General anesthesia
				
Response	Responds normally to verbal commands	Responds purposefully to verbal commands/or light touch	Responds to pain	No response
Airway	Maintained	Maintained	May require support	Requires support
CV support	Not needed	Not needed	May be needed	May be needed

*Cardiovascular (CV)

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APPENDIX 4: Example of Discharge Criteria

Ensure that the discharge criteria is used with clinical judgement.

Modified Post – anaesthetic discharge scoring system (PADSS)	
1. Vital signs (BP, P and O2)	Vital signs (BP, P and O2) Vital signs must be stable and consistent with age and preoperative baseline. 2 = Within 20% of preoperative value 1 = 20-40% of preoperative value 0 = > 40% of preoperative value
2. Ambulation	Patient must be able to ambulate at preoperative level. 2 = Steady gait, no dizziness 1 = with assistance 0 = None, dizziness
3. Nausea/vomiting	The patient should have minimal nausea and vomiting before discharge 2 = Minimal: successfully treated with oral medication 1 = Moderate: successfully treated with IM medication 0 = Severe: continues after repeated treatment
4. Pain	The patient should have minimal or no pain before discharge; the level of pain that the patient has should be acceptable to the patient; pain should be controllable by oral analgesics and the location, type, and intensity of pain should be consistent with anticipated postoperative discomfort. 2 = Minimal 1 = Moderate 0 = severe
5. Surgical bleeding	Postoperative bleeding should be consistent with expected blood loss for the procedure. 2 = Minimal: does not require a dressing change 1 = Moderate: up to 2 dressing changes required 0 = Severe: more than 3 dressing changes required.
Each of the criteria is assessed individually and assigned a score from 0–2. The total possible score is 10. Patients must have a score of 2 for the vital signs category and a cumulative score ≥ 9 to be considered fit for discharge.	

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Sedation: Procedural Sedation (Adults, Ward, Clinic, and Imaging Areas)

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APPENDIX 5: Airway assessment

LEMON

- **L:** look externally (anatomy disruption, small mouth, blood etc.)
- **E:** evaluate 3-3-2 rule (mouth opening, mental process to hyoid, hyoid and thyroid notch)
- **M:** mallampati score – refer to Appendix 6
- **O:** obstruction or obesity
- **N:** neck mobility

From tips section of [Anaesthesia - Procedural sedation | Emergency Care Institute \(nsw.gov.au\)](https://www.nsw.gov.au/anaesthesia-procedural-sedation-emergency-care-institute)

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Sedation: Procedural Sedation (Adults, Ward, Clinic, and Imaging Areas)

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APPENDIX 6: Mallampati score

Patient must be seated, head neutral, mouth wide open and tongue protruding



I.	Full visibility of tonsils, uvula and soft palate
II.	Visibility of hard and soft palate, upper portions of tonsils and uvula
III.	Soft and hard palate and base of uvula are visible
IV.	Only hard palate visible

[procedural-sedation-ed-sedation-procedure-0.pdf \(nsw.gov.au\)](https://www.nsw.gov.au/procedural-sedation-ed-sedation-procedure-0.pdf)