Procedural Sedation – Emergency Department Clinical Practice Standard

1. Purpose

The purpose of this policy is to establish minimum practice standards for procedural sedation throughout WA Country Health Service (WACHS) emergency departments

Removing unwanted variation in clinical practice and following best practice guidelines has been found to reduce inappropriate care (overuse, misuse and underuse) thus improving health outcomes, reducing preventable harm and decreasing wastage.

This policy is to be used in conjunction with with ANZCA - PS09 Guidelines on Sedation and/or Analgesia for Diagnostic and Interventional Medical, Dental or Surgical Procedures.

Additional information is also available for paediatric patients from the endorsed Perth Children's Hospital Practice Manuals:

- Oral Conscious Sedation – Non-Anaesthetic Personnel Guideline
- Conscious Sedation and Anxiolysis Policy

Staff should also check for WACHS local/regional procedures and guidelines related to sedation for paediatric patients.

Further information relating to other specialty areas including Women and Newborn Health Services (WHNS) can be found via HealthPoint if not covered in this policy.

2. Scope

All medical and nursing staff working within WACHS Emergency Departments.

Procedural sedation administered and managed in the perioperative setting is not covered in this policy document. Staff are to refer to local processes and documentation for procedural sedation in perioperative areas.

All health care professionals are to work within their scope of practice appropriate to their level of training and responsibility.

Further information may be found via HealthPoint or the Australian Health Practitioner Regulation Agency.

3. Considerations

Specific staffing and facilities and equipment are required for procedural sedation (refer to linked sections for specific information) in addition to the information below

Procedural sedation should not be performed between 2200hs – 0800hs unless there is neurovascular compromise or haemodynamic instability.

1. All WACHS Emergency Departments where procedures requiring sedation are performed are to use the MR12 WACHS Emergency Department Procedural Sedation Record
2. An appropriately credentialed Nurse/Assistant should be with the patient throughout the procedure and until the patient has met all discharge criteria.
3. Patients undergoing procedural sedation must have consciousness assessed and documented[1]. Refer to the patient monitoring and post procedure sections

4. General Information

There are two levels of sedation that are relevant to procedural sedation in the emergency department:

Conscious sedation[1]

- Is a drug-induced depression of consciousness during which patients are able to respond purposefully to verbal commands or light tactile stimulation.
- Interventions to maintain a patent airway, spontaneous ventilation or cardiovascular function may, in exceptional situations, be required.
- Conscious sedation may be achieved by a wide variety of drugs including midazolam, and may accompany local anaesthesia.
- All conscious sedation techniques should provide a margin of safety that is wide enough to render loss of consciousness unlikely.

Deeper sedation[1]

- Is characterised by depression of consciousness that can readily progress to the point where consciousness is lost and patients respond only to painful stimulation.
- It is associated with loss of the ability to maintain a patent airway, inadequate spontaneous ventilation and/or impaired cardiovascular function, and has similar risks to general anaesthesia, requiring an equivalent level of care.

The depth and level of sedation required for a procedure may vary according to patient response to medication and procedural intervention, therefore a range of sedation levels may be needed to achieve safe pain free completion of required treatment.

5. Causes for Concern with Procedural Sedation

Those patients at increased risk of cardiovascular, respiratory or airway compromise during procedural sedation and/or analgesia, which include[1]:

- all children less than 2 years of age
- the elderly
- those with severely limiting heart, cerebrovascular, lung, liver or renal disease
- morbid obesity
- significant obstructive sleep apnoea
- known or suspected difficult endotracheal intubation
- acute gastrointestinal bleeding particularly with cardiovascular compromise or shock, severe anaemia
- the potential for aspiration of stomach contents (which may necessitate endotracheal intubation)
- previous adverse events due to sedation, analgesia or anaesthesia
- patients in ASA Grades P 4-5 (ANZCA PS09 - Appendix 1):
    - P4 - A patient with severe systemic disease that is a constant threat to life
    - P 5 - A moribund patient who is not expected to survive without the operation

6. Clinical Communication

Clinical Handover

Information exchange is to adhere to the WA Health Clinical Handover Policy using the iSoBAR framework.

Critical Information

Critical information, concerns or risks about a patient are communicated in a timely manner to clinicians who can make decisions about the care.

Documentation

An individualised management plan is to be documented in the patient's health records as soon as practicable, in regard to this CPS.

The MR12 WACHS Emergency Department Procedural Sedation Record is used for procedural sedation in conjunction with an age appropriate observation and response chart and appropriate hospital medication chart.

Refer also to the WACHS Documentation CPS.

Consumer Information

As per section 3.1 of ANZCA - PS09 Guidelines on Sedation and/or Analgesia for Diagnostic and Interventional Medical, Dental or Surgical Procedures.

The proceduralist or other suitable person should provide the patient, or their carer/family, with written information, where possible, which includes:

- the nature and risks of the procedure,
- what to expect during the immediate and longer term recovery period, including after discharge

7. Staffing Requirements

This section to be read in conjunction with the ANZCA PS09 Guidelines on Sedation and/ or Analgesia for Diagnostic and Interventional Medical, Dental or Surgical Procedures.

Information relating to the personnel requirements for procedural sedation can be located in Appendix 3 of the PS09.

With the exception of very light conscious sedation and/or analgesic techniques, there must be a **minimum** of three appropriately trained staff present.[1]

- There must be a dedicated airway doctor – the airway doctor must be competent in procedural sedation. Locums must not undertake unless FACEM present or they are an appropriately trained airway doctor (endorsed via local site processes)
- The proceduralist must be a separate practitioner
- One additional staff member with advanced life support currency to provide assistance to the above (most commonly a nurse)

Additional information on the role of the third staff member is dependent on the type of sedation/anaesthesia being given and may be clarified by referring to ANZCA PS09 (Appendix 3).

Consideration should be given to a fourth appropriately trained staff member to assist the proceduralist as required (if available at site).

The practitioner administering procedural sedation and/or analgesia must:

- Understand the actions of all agents given and be able to modify technique proportional to body weight, age, coexisting morbidities and drug therapy
- Monitor patient's level of consciousness and cardiorespiratory status
- Detect and manage complications arising from sedation
- Be skilled in airway management and cardiopulmonary resuscitation (refer to the WACHS Resuscitation, Education and Competency Assessment Policy)

8. Facilities and Equipment Requirements

General information:

- Equipment must be appropriate for the age/size of the patient.
- Specific sites may have pre-prepared equipment packs where contents may vary.
- Equipment must be checked, serviced and calibrated in accordance with manufacturer's recommendations to ensure reliability and accuracy.
- Staff must follow the manufacturer's operating instructions.

Specific information:
Procedural sedation in the emergency department must be performed in a location which is adequate in size and staffed and equipped to deal with a cardiopulmonary emergency. The facilities and equipment must be sufficient to maintain basic life support until more specialised help, equipment and drugs become available[1].

At a minimum, this must include:

- Operating table or trolley which can be tilted head down
- Adequate suction sources/catheters & hand piece
- Oxygen supply and suitable devices to administer oxygen to a spontaneously breathing patient
- A means of inflating the lungs with oxygen [e.g. a self-inflating bag and mask] with ready access to a range of equipment for advanced airway management
- Appropriate drugs for cardiopulmonary resuscitation and a range of intravenous equipment and fluids including drugs for reversal of benzodiazepines and opiates (refer to next section 'Emergency medications')
- Pulse oximeter
- Sphygmomanometer
- Ready access to ECG/Defibrillator
- 3 lead monitoring/telemetry
- A means to summon emergency assistance
- Within the facility there should be access to devices for measuring expired carbon dioxide
- Adequate access throughout the facility to allow the patient to be transported easily and safely

Emergency medications[1]:
Emergency medicines and supplies should include at least the following:

- adrenaline
- atropine
- dextrose 50%
- lignocaine
- naloxone
- portable emergency oxygen supply
- Hartmann's or Normal Saline and 5% Dextrose solution if there are any concerns regarding low blood glucose levels

9. Procedure / Key Principles

Pre Procedure

- The Nurse responsible for monitoring the patient is to be involved with the practitioners in the preparation and planning of the procedure to take place – **prior to commencement** of the procedure
- Awareness of any restriction to intervention associated with advanced health directives (AHD) or similar

- Refer to WACHS Pre and Post Procedural Management Clinical Practice Standard and the WACHS Pre Anaesthetic Fasting – Paediatrics Procedure as appropriate
- Completion of pre-procedural aspects of the MR12 WACHS Emergency Department Procedural Sedation Record
- Ensure procedure room/clinical area is clear of obstructions and all equipment is easily accessible and does not restrict access to the patient
- A reliable, patent intravenous access device to be insitu (insertion and management as per the WACHS Peripheral Intravenous Cannulae (PIVC) Management Clinical Practice Standard. Where non-IV sedation is used, the reason for not placing a PIVC should be documented in the health record
- Doses of sedative agents are to be the minimum required for patient comfort [Most complications of procedural sedation are cardiorespiratory]
- Depth of sedation must be continuously assessed [Loss of response to stimulation or verbal commands indicate possible loss of airway reflexes and potential cardiorespiratory depression requiring treatment[1]]
- Continual pulse oximetry must be used in all patients undergoing procedural sedation or analgesia, capnography for sedation – if available is required[1]
- Oxygen supplementation as required
- Staff are to comply with the specific requirements for hand hygiene, aseptic technique and personal protective equipment as per the WACHS Infection Prevention and Control Policy.
- Patient privacy and dignity are to be maintained
- Offer the presence of a chaperone where appropriate to patient and clinician requirements
- Provide the opportunity for an accredited interpreter and/ or Aboriginal Liaison Officer where appropriate to the patient's language or communication requirements (see WA Health Language Services Policy)

Potential Problems During or Post-Procedure

- Respiratory depression leading to inadequate spontaneous ventilation or arrest with decreased oxygen saturation/hypoxia, hypoxaemia
- Inadequate cardiac function-hypotension/rhythm disturbances
- Confusion
- Agitation
- Unconsciousness
- Adverse drug reaction, including anaphylaxis

Intra Procedure Monitoring

- The Nurse responsible for monitoring the patient is not to leave the patient unattended or be given other responsibilities which may distract them and compromise continuous monitoring[3]
- Maintain a clear view of the patient's face throughout the procedure to assist in unobstructed monitoring of the patient's consciousness level[3]
- Apply continuous pulse oximetry prior to administration of procedural sedation, with identified appropriate audible patient alarms[3]

- Apply 3 lead monitoring and non-invasive capnography monitoring (the capnography waveform indicates effective breathing)
- Monitor respiratory rate, blood pressure, pulse and consciousness level at 5-minutely intervals throughout the procedure[3]
- IV procedural sedation medication is to be administered as prescribed and titrated according to patient response and as directed by MO. Reversal agent may be required. [3]
- Inform Proceduralist if there are[3]:
    - Changes in consciousness level
    - Haemodynamic observations outside baseline observations

Post Procedure

- Record all observations on the age appropriate Observation and Response Chart [ORC] (as per the MR12 WACHS Emergency Department Procedural Sedation Record). Observations include oxygen saturation, blood pressure, respiratory rate, heart rate and consciousness level
- Following completion of a procedure, patients should be recovered in an area which is equipped with oxygen, suction and access to emergency advance life support facilities
- Give consideration to the pharmacology and action/duration of the medications administered and any reversal agents. If reversal agents used, patient to be assessed and oxygen saturation monitored continuously for a minimum of 1 hour post administration of the agent[3]
- Escalation is as per the age appropriate ORC and local escalation plan (refer to WACHS Clinical escalation of acute physiological deterioration including medical emergency response policy)
- Ongoing observations may be needed as documented by proceduralist/ sedation provider
- Refer to WACHS Pre and Post Procedural Management Clinical Practice Standard and WACHS Admission, Discharge and Intra-hospital Transfer Clinical Practice Standard for transfer requirements
- Suitability for discharge home: As clinically appropriate, discharge may be considered if observations are stable and within the prescribed criteria in the absence of pharmacological support and without stimulation. The patient needs to demonstrate spontaneous rousability prior to being left unattended (refer to Appendix 1: Guideline for Discharge Home Post-Procedural Sedation)
- For patients who choose to leave the hospital and / or are removed by their parent / carer/ responsible person before the completion of treatment against the advice of the treating clinician, or those who leave prior to receiving advice or refuse to wait to receive advice – refer to WACHS Discharge Against Medical Advice Policy and the MR36 Discharge Against Medical Advice Form.

Patient education post procedure[3]

Provide appropriate post-procedural information including:

- Written discharge instructions
  - Ensure both patient and carer are present and understand the instructions
- Contact details for any queries if appropriate
- Instructions for patient to contact their primary care provider in the event of non-life threatening post-procedural complications
- Utilise Emergency Discharge Information Sheet, WA Health if appropriate

Ensure a follow-up plan has been formulated and documented.

Advise patient **NOT** to drive/ride a vehicle, operate heavy machinery, consume alcohol/non-prescribed medications or make important decisions **for 24 hours post-procedure**[3]

Sedatives may impair a person's cognitive ability and reaction time for a number of hours following administration and alcohol or other drugs may precipitate unexpected adverse effects.

10. Compliance Monitoring

Evaluation, audit and feedback processes are to be in place locally to monitor compliance.

Failure to comply with this policy document may constitute a breach of the WA Health system MP0031/16 Code of Conduct (Code). The Code is part of the Employment Policy Framework issued pursuant to section 26 of the *Health Services Act 2016* (WA) and is binding on all WACHS staff which for this purpose includes trainees, students, volunteers, researchers, contractors for service (including all visiting health professionals and agency staff) and persons delivering training or education within WACHS.

WACHS staff are reminded that compliance with all policies is mandatory.

11. Relevant Legislation

(Accessible via: Western Australian Legislation or ComLaw) sites)

- *Health Practitioner Regulation National Law (WA) Act 2010*
- *Occupational Safety and Health Act 1984*
- Occupational Safety and Health Regulations 1996
- *Pharmacy Act 1964*
- *Medicines and Poisons Act 2014*
- *Medicines and Poisons Regulations 2016*
- *Privacy Act 1988*
- *State Records Act 2000*

12. Relevant Standards

National Safety and Quality Healthcare Standards
Medication Safety Standard: 4.2 and 4.4
Recognising and Responding to Acute Deterioration Standard: 8.4, 8.6 and 8.10

13. Related WA Health System Policies

- MP0053/17 Clinical Alert (Med Alert) Policy
- MP0095/18 Clinical Handover Policy
- MP0086/18 Recognising and Responding to Acute Deterioration Policy
- OD0657/16 Consent to Treatment Policy
- MP0051/17 Language Services Policy

14. Relevant WACHS documents

- Admission, Discharge and Intra-hospital Transfer Clinical Practice Standard
- Clinical Escalation of Acute Physiological Deterioration Including Medical Emergency Response Policy
- Clinical Observations and Assessments (physiological, neurovascular, neurological and fluid balance) Clinical Practice Standard
- Discharge Against Medical Advice Policy
- Documentation Clinical Practice Standard
- Infection Prevention and Control Policy.
- MR12 WACHS Emergency Department Procedural Sedation Record
- MR36 Discharge Against Medical Advice Form.
- Peripheral Intravenous Cannulae (PIVC) Management Clinical Practice Standard
- Pre and Post Procedural Management Clinical Practice Standard
- Pre Anaesthetic Fasting – Paediatrics Procedure
- Resuscitation, Education and Competency Assessment Policy.

15. WA Health Policy Framework

Public Health

16. Acknowledgement

Acknowledgment is made of the previous SMHS / WACHS site endorsed work used to compile this Procedural Sedation Clinical Practice Standard.

17. References

1. Australian and New Zealand College of Anaesthetists (ANZCA), Faculty of Pain Medicine. Guidelines on sedation and/or analgesia for diagnostic and interventional medical, dental or surgical procedures (PS09-2014) 2014 [Accessed via Internet: 6 February 2019]
2. Australian and New Zealand College of Anaesthetists. PS02 Statement on Credentialing and Defining the Scope of Clinical Practice in Anaesthesia [Internet] 2016. [Accessed: 6 February 2019]
3. Royal Perth Bentley Group, Nursing Practice Standard. Nurse Assisted Procedural Sedation (2016) [Accessed via Internet: 5 February 2019]
4. Australian and New Zealand College of Anaesthetists. PS08 Statement on the Assistant for the Anaesthetist [Internet] 2012. [Accessed: 6 February 2019]
5. Dawson R, von Fintel N, Nairn S. Sedation assessment using the Ramsay scale. *Emergency Nurse*. 2010;18(3):18-20.

18. Appendix

This document can be made available in alternative formats on request for a person with a disability

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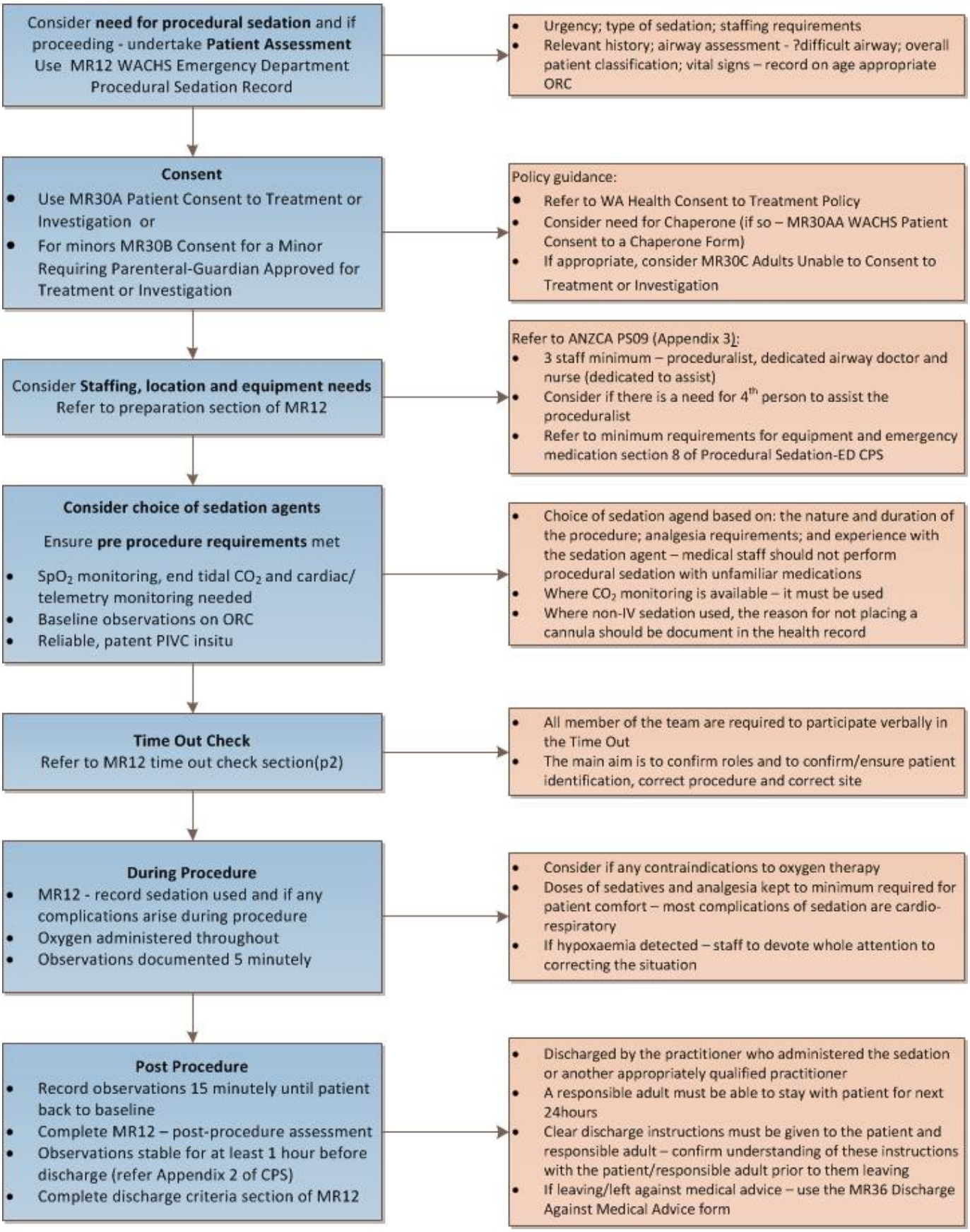
Appendix 1: Procedural Sedation Flowchart



Appendix 2: Guideline for Discharge Home Post-Procedural Sedation[3]

To meet discharge criteria, observations must be stable and within the prescribed criteria in the absence of pharmacological support and without stimulation.

1. Confirm patient will be discharged post-procedure into the care of a responsible adult or liaise with MO/multidisciplinary team for discharge plan

2. **Airway and breathing**: Must be able to maintain own airway
    a. Saturations equal or greater than 95% on room air (consider past medical history e.g. respiratory limitations)
    b. Breathing regular without difficulty
    c. Respiration rate to be within 10% of pre-procedure status and stable for at least 1 hour

3. **Consciousness level**: Returned to pre sedation level of consciousness
    A = Awake, alert
    V = Mildly drowsy/easy to rouse to voice
    P = Difficult to rouse/rousable to pain/stimulus
    U = Unconscious/unrousable/unresponsive

4. **Haemodynamic:** Ensure observations stable for at least 1 hour
    a. Heart rate within 10% of pre-procedure status
    b. New dysrhythmias evaluated and a management plan in place
    c. Systolic BP maintained over 10 minutes at 45 degrees elevation unless position contraindicated and to be within 20% of pre-procedure status
    d. Ensure patients at risk of urinary retention have passed urine
    e. Normothermic

5. **Post-operative nausea and/or vomiting**: Assessed as minimal
    a. Controlled by outpatient management techniques (if applicable)
    b. Tolerating diet and fluids prior to discharge

6. **Pain management**: Assessed to be minimal
    a. Controlled by outpatient management techniques (if applicable)

7. **Position/ mobility:**
    a. Walk with usual aids (as applicable)
    b. Returned to pre sedation level

8. **Surgical/ procedural**:
    a. Post procedure management plan formulated and documented
    b. Discharge instructions, written and/or verbal, specific to the procedure and sedation, provided to patient (refer to Patient education post procedure section)
    c. Remove IV access

9. **Documentation**
    a. Document care on appropriate chart(s)