

Sedation Safety

At CCH Sector Hospitals

*Learning package for
Registered Nurses*

ANSWERS

Developed By:

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Ω ACTIVITY 2

- **Read:** Australian and New Zealand College of Anaesthetists PS9: '[Guidelines on Sedation and/or Analgesia for Diagnostic and Interventional Medical or Surgical Procedures](#)'. Then complete the table below:

SUGGESTED EQUIPMENT FOR PROCEDURAL SEDATION AND ANALGESIA	
EQUIPMENT	RATIONALE
High-flow oxygen source	
Suction source with large-bore catheters	
Intravenous access equipment	
Airway-management equipment	
Monitoring equipment	
Pulse oximeter	
Blood pressure	
Resuscitation drugs	
Reversal agents (appropriate to drugs being used*)	
Adequate staff for monitoring and documentation	How many staff?
Electrocardiography	
Capnography	

Table 1. Suggested equipment for sedation procedures

- 2) You are required to assist with a sedation procedure in your ward. Noting the equipment required above outline your actions.

STAFFING FOR SEDATION

The ANZCA PS9 describes a minimum standard for staffing during sedation assisted invasive procedures. Having now read the document, please reflect and complete the questions in the activity below.

Ω ACTIVITY 3

1) When administering procedural sedation how many appropriately trained staff should be present?

2) Define each staff member's role.

3) Describe your actions if you were on duty and a non urgent sedation procedure was about to be undertaken without the minimum number of staff required:

4) After the procedure is over, how long do you have to monitor the sedated patient?

COMMON MEDICATIONS USED FOR SEDATION PROCEDURES AT CCH

Ω ACTIVITY 6

Read relevant sections in the MIMS and complete the blanks in the common sedation medication table:

COMMON SEDATION MEDICATIONS ¹⁴					
MEDICATION NAME	DOSING GUIDELINE	TYPE OF AGENT	ONSET, PEAK EFFECT, AND DURATION OF ACTION	ADVERSE DRUG REACTIONS	REVERSAL
Midazolam			Onset: 1- 3 min Peak Effect: 5 -7 min Duration of Action: 20 - 30 min		
Lignocaine spray					
Naloxone					
Thiopental					
Fentanyl		Opiate			
Propofol					Nil- Adverse effects must be treated until the drug is metabolized
Ketamine				Emergence CNS reactions including vivid dreams, hallucinations, and delirium; hypertension, tachycardia; increased ICP; tonic clonic movements; respiratory depression.	
Morphine					
Flumazenil					
Nitrous oxide		Inhalation agent			

Table 4. Common sedation medication

CLINICAL MONITORING

Patients receiving procedural sedation require continuous monitoring and assessment throughout the procedure and the recovery phase. The patient must have supplemental oxygen in place both during the procedure and in the post procedure phase ⁴. Oxygen saturations should be as close as possible to 100% throughout the procedure.

Ω ACTIVITY 7

Read: CCH Guideline: Sedation (Conscious): Nursing Role for adult patients that undergoing procedures that utilise conscious sedation in CCH hospitals. ¹⁵.

1. Document below the minimum requirement of monitoring is for sedation procedures at CCH hospitals.
2. What other types of monitoring may be considered for higher risk patients for example with known cardiovascular or respiratory disease.
3. List some of the advantages and disadvantages of using a sedation scale.

Ω ACTIVITY 8

CASE STUDY ¹⁸:

Mr Smith was transferred to the ward from recovery with PCA (Morphine) in situ. The

ward staff were advised on handover that the patient had required an additional bolus

dose of morphine in recovery. During initial observations after transfer the patient was found to have a respiratory rate of 8/minute. The patient was reviewed by medical staff and required four bolus doses of Naloxone. As the respiratory rate still did not improve (noted to be 5), an anaesthetist was called to review patient. The patient required one to- one care.

1. At What stage of the sedation continuum is Mr Smith, what is the rationale for your assessment?

Ω ACTIVITY 10

Case study¹⁷

You have been sent to work in the endoscopy suite for the day. You are looking after a 79 year-old patient who was admitted for bronchoscopy. Two mg. Midazolam has been administered intravenously. The patient became “like a rag doll” after administration. His Oxygen saturation’s dropped rapidly after the procedure commenced, recorded as 80% for five minutes before dropping to 74%. Oxygen was administered 15 litres by nasal cannula. The doctors (VMO & Registrar) were advised of oxygen saturations throughout. The patient was noted to be poorly saturated and unresponsive at the time the scope was removed. You apply a face mask immediately and put out the arrest call

Write the nursing report for this procedure. Include assessment of sedation level, and vital signs. *(Please use additional paper as required)*

Ω ACTIVITY 11

Mrs Jones has had a transoesophageal echocardiogram in the Cardiology outpatients dept. She had local anaesthetic spray to her larynx and pharynx as part of the procedure and intravenous midazolam. She has now been assessed as ready for discharge.

1. What should Mrs Jones and her carer be advised prior to leaving the unit?

TROUBLESHOOTING

Ω ACTIVITY 12

Please complete the nursing actions in the table below:

TROUBLESHOOTING GUIDE		
CLINICAL SCENARIO	VARIABLES	NURSING ACTION
Low blood pressure	Sedation related- medication side effect	
Prolonged or excessive sedation post procedure	Sedation related- this is a high risk time after the stimulus of the procedure is over.	
Respiratory depression e.g. respiratory rate less than 12 during procedure	Over sedation	
Not enough staff available to assist with procedure	Procedure is non urgent	
Patient aggression	Paradoxical reaction to the midazolam	
Equipment failure- O2 sats machine not working	Intra-procedure	
Hypothermia	Post procedure	

Pain	Intra-procedure	
Persistent low oxygen saturations	Intra procedure	
Day case procedure has no way to get home	Patient wants to drive self home	
Failed cannula	Intra procedure	

Table. 7. Sedation troubleshooting

Ω ACTIVITY 13

QUICK QUIZ

1) During sedation procedures, which of the following should be immediately available?

- a. Defibrillator
- b. Intubation equipment
- c. Anaesthetist
- d. A and B

2) During moderate sedation vital signs must be documented every:

- a. Once
- b. 10 minutes
- c. 30 minutes
- d. 5 minutes

3) The following drug is used to reverse midazolam:

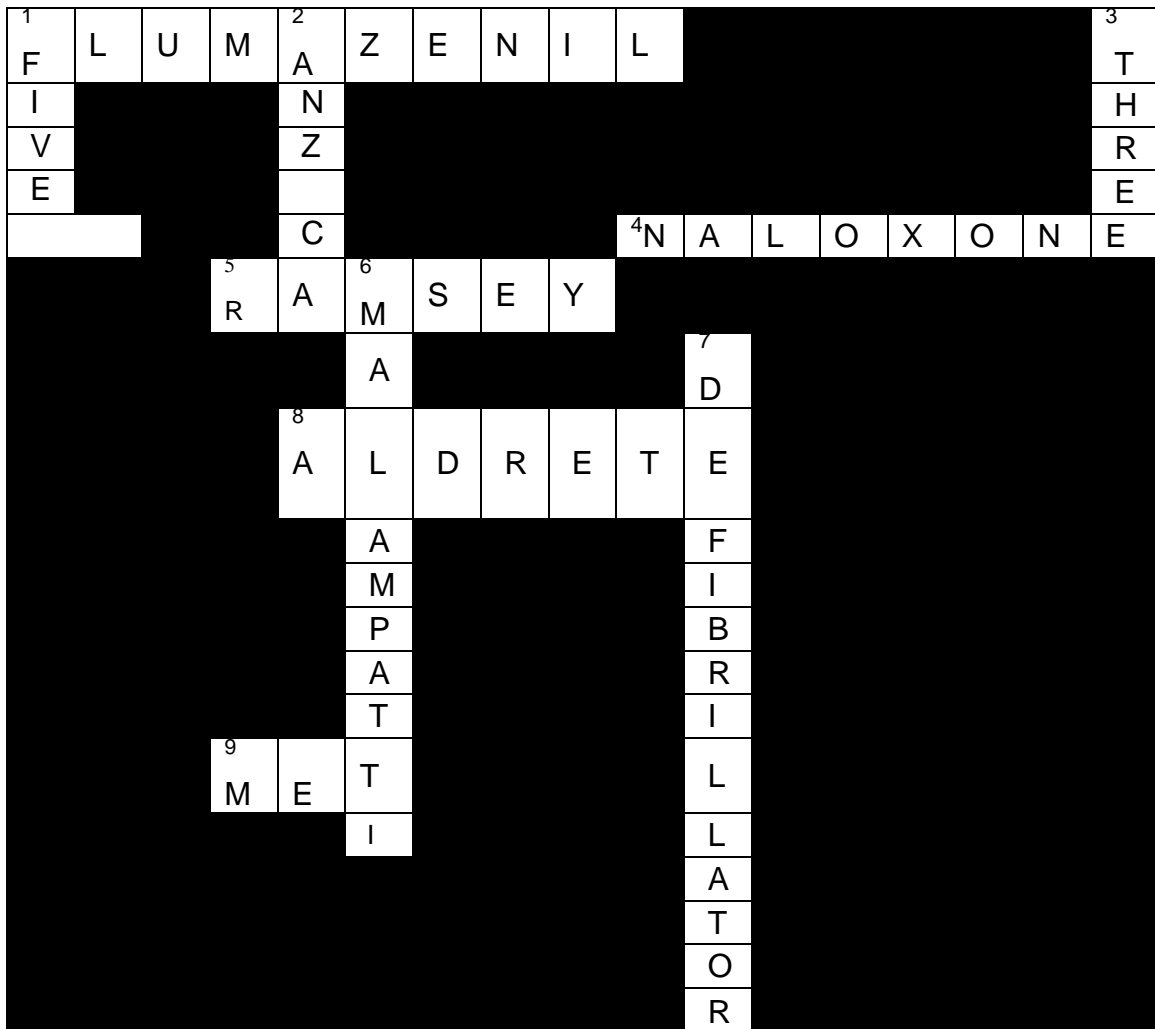
- a. flumazenil
- b. naloxone
- c. diphenhydramine
- c. ampicillin

4) Moderate Sedation is defined as a drug induced depression of consciousness in which the patient retains the ability to:

- a. Maintain spontaneous ventilation
- b. Maintain an unobstructed airway
- c. Respond purposefully to verbal commands
- d. All the above

5) 1 mg. of intravenous midazolam can cause respiratory depression or hypotension in the elderly or compromised patient.

True False



ACROSS

1. Reversal agent for benzodiazapines
4. Reversal agent for opiates
5. Name of CCH sedation scale
8. Recovery assessment scale
9. Emergency team

DOWN

1. Minimum minutely frequency to record vital signs-intraprocedure
2. Governing body for sedation standards in Australia
3. Minimum number of staff present for sedation procedures
6. Airway assessment scale
7. Equipment that should be immediately available for sedation procedures

Ω ACTIVITY 14

Reflective Practice

- Consider where you may use sedation /analgesia to improve care for your patients
- Who would you involve in sedation procedures?
- How could you get further help or advice on sedation procedures?

CONCLUSION²¹

Congratulations on completing this self-directed learning package and evaluation. We trust that this has been a valuable learning experience for you and that it provides you with confidence in providing competent nursing care for those patients receiving procedural/ conscious sedation.

Expectations are that having completed this package and achieving a satisfactory assessment you will maintain a competent standard of nursing practice for yourself and continually review the standard of nursing practice in your unit /ward. Reassessment is by way of ongoing peer review, literature review and reflection on your own practice.

Records will be kept in your Division database.

PRACTICAL ASSESSMENT²¹ **ADVANCED AIRWAY MANAGEMENT**

Airway management forms a vital aspect of nursing practice in the administration and management of sedation. Registered Nurses may wish to arrange to spend some time in the Anaesthesia /Recovery areas to complement their newly gained theoretical knowledge of procedural / conscious sedation.

Recognition of prior learning is available to nursing staff with demonstrated experience in advanced airway management.

GOAL:

To develop airway management skills in order to provide competent nursing care during administration of intravenous sedation.

INTENDED OUTCOMES:

At the completion of this session it is anticipated that the participant will be able to:

- Explain the mechanism of airway management
- Identify Guedel airway and select correct size
- Give a rationale for the use of Guedel airway / nasopharyngeal airway
- Assist with airway management eg. using a resuscitator bag or mouth to mask procedure

- Demonstrate an effective seal using a mask
- Completed CCH Perioperative Services: airway management competency

FUNDAMENTALS OF SEDATION SAFETY EVALUATION FORM

Name:
Ward/Position:
Payroll Number:

1) Was the presentation style appropriate for the material?

Strongly Agree	Agree	Disagree	Strongly Disagree
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2) Was the time allocated appropriate for the material presented?

Strongly Agree	Agree	Disagree	Strongly Disagree
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3) Was the session relevant to my learning needs?

Strongly Agree	Agree	Disagree	Strongly Disagree
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4) Was the information from this module beneficial?

Strongly Agree	Agree	Disagree	Strongly Disagree
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Comments:

Please provide a copy of this evaluation to your Clinical Nurse Educator to ensure that you have been entered into the educational database as completing this module. Thank you.

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