SESLHD PROCEDURE COVER SHEET

NAME OF DOCUMENT	Acute Pain Management in the Post Anaesthetic Care Unit: Intravenous Opioid Pain Protocol for **Adults** Fentanyl, HYDROmorphone, Morphine and Oxycodone
TYPE OF DOCUMENT	Procedure
DOCUMENT NUMBER	SESLHDPR/501
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LEVEL OF EVIDENCE	National Safety and Quality Health Service Standard: Standard 4 – Medication Safety
REVIEW DATE	October 2021
FORMER REFERENCE(S)	St George Hospital PACU (Adult) Intravenous Opioid Pain Protocol. Clinical Workplace Instruction. Immediate post-operative pain in the PACU: intravenous opioid pain protocol. Prince of Wales Hospital Clinical Business Rules.
EXECUTIVE SPONSOR or EXECUTIVE CLINICAL SPONSOR	Dr Greg Keogh SESLHD Clinical Stream Director Surgery, Anaesthetics & Perioperative Services
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KEY TERMS	Pain Protocol
SUMMARY	To align with finalisation of anaesthetic care and deliver effective pain relief management in the immediate postoperative phase that occurs in the SESLHD Post-Operative Care Units (PACU). To provide timely, efficient and safe patient care. The procedure is restricted to use in the Post Anaesthetic Care Unit (PACU). Registered Nurses' administering medications outlined in this procedure must meet the approved training and assessment requirements [4], B[7], C[12] of the PACU in the SESLHD facility where they work.

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Acute Pain Management in the Post Anaesthetic Care Unit: Intravenous Opioid Pain Protocol for Adults Fentanyl, HYDROmorphone, Morphine and Oxycodone

SESLHDPR/501

1. POLICY STATEMENT

The Post Anaesthetic Care Unit (PACU) intravenous (IV) Opioid Pain Protocol requires the administration of IV bolus doses (aliquots) of **opioid as ordered** at minimum intervals of three – five minutes.

Opioid administered as per the **PACU IV Opioid Pain Protocol Flow Chart** enables the patient to experience rapid relief of pain through the use of controlled, incremental IV (B[7]) doses of opioid.

The PACU IV Opioid Pain Protocol is prescribed by the treating anaesthetic Medical Officer (MO) and administered by the PACU Nurse (C[12]) to relieve acute pain in the immediate postoperative phase of the surgical patient's healthcare journey.

2. BACKGROUND

Pain assessment and management is a vital element (B[7]) of the surgical patient's care in PACU, (C[11] D[15]). Accurate pain assessment with timely management will directly influence patient comfort, surgical outcomes and satisfaction (C[12]) following surgery.

Patient care is impacted when there is delay in delivery of pain management through administration of analgesia; potentially this delay leads to increases in the:

- severity of pain experienced by the post-operative patient
- time for the PACU nurse to establish a therapeutic level of analgesia
- length of stay in PACU and hospital admissions (B [7] C [12] C [13]).
- Risk of developing chronic pain (B[7]).

Definitions:

Definition of NHMRC grades of recommendations

Grade of Recommendation	Description
A	Body of evidence can be trusted to guide practice
B	Body of evidence can be trusted to guide practice in most situations
C	Body of evidence provides some support for recommendation(s) but care should be taken in its application
D	Body of evidence is weak and recommendation must be applied with caution

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aliquot	Measured part of a whole volume
ANTT	Antiseptic Non Touch Technique
CBR	Clinical Business Rule
S8	Schedule 8 Drug
eMR	Electronic Medical Record
Intravenous	IV
IIMS	Incident Information Management System
iVIEW	electronic patient care record and observation chart
KPI	Key Performance Indicator
MAR	Medication administration record (within eMR)
MO	Medical Officer
MoH	Ministry of Health
NIMC	National Inpatient Medication Chart
PACU	Post Anaesthetic Care Unit
PD	Policy Directive

3. RESPONSIBILITIES

3.1 PACU STAFF:

Nurses working in the PACU will (C[12])

- safely administer the PACU IV Opioid Pain Protocol (as per the PACU IV Opioid Pain Protocol Flow Chart) so that the patient's pain is controlled (**this may mean the pain is not completely alleviated**)
- successfully complete the SESLHD Learning Package Acute Pain Management of Adults in the post Anaesthetic Care Unit: IV Opioid Pain Protocol successfully complete competency requirements associated with this procedure ([1, 6,] C[12])
- complete additional education requirements where required by the facility's education team.

3.2 Education staff will:

- ensure all nurses working in the PACU complete the learning package SESLHD Acute Pain Management of Adults in the post Anaesthetic Care Unit: IV Opioid Pain Protocol
- ensure appropriate support and education is provided to PACU nurses to develop and maintain required knowledge and skill associated with this procedure
- complete competency assessments of the PACU nurses related to the procedure
- maintain records for evidence of education and assessment processes.

3.3 Line Managers will:

- ensure all nurses working in the PACU will receive appropriate training (C12)
- ensure all nurses working in the PACU have read the Acute Pain Management in the Post Anaesthetic Care Unit: Intravenous Opioid Pain Protocol for Adults Fentanyl, HYDROmorphone, Morphine and Oxycodone SESLHD procedure
- review IIMS data relevant to this procedure.

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3.4 District Managers/Service Managers will:

- review existing procedure annually
- present audit results and IIMS data [1, 6] relevant to this procedure to the SESLHD Surgical Stream Committee and Anaesthetic Directors.

3.5 Medical staff will:

Prescribe 'Pain Protocol' on the NIMC or MAR. The prescription must include:

- opioid of choice that is available within each facility eg, fentanyl. Note: when prescribing Hydromorphone, best practice indicates the written order should include the trade name eg, Hydromorphone (Dilaudid) [6 (p.10)]
- maximum dose to be administered[1] as guided by PACU IV Opioid Pain Protocol (see Appendix 1)
- any variation to the PACU IV Opioid Pain Protocol (see Appendix 1)[1] aliquot prescription.

4. PROCEDURE

4.1 Patient assessment

As per the PACU IV Opioid Pain Protocol Flow Chart, pain assessment must occur immediately prior to any administered dose and no more than three - five minutes after each administered dose of IV medication (B^{7}).

With the absence of objective measures of pain (B^{7}), self-reporting of pain is acknowledged to be best practice globally ($B^{7,}$ [8] D [11]$C^{16,}$).

Each pain assessment must be accompanied by documented evidence of sedation, respiratory and pain scores in the approved PACU patient healthcare record. Either iVIEW (eMR) or PACU observation chart.

The below pain scales are commonly used and reliable references (B^{7}) for the PACU nurse in determining the appropriate dose of prescribed opioid to be administered at any one time. Pain assessment in the PACU should include opportunity for the patient to self-report at rest and on movement (B^{7}). Movement in the post-operative patient is recommended to take the form of sitting, coughing or movement of the affected area ($B^{7,}$ [p114]D^{11}).

Verbal Numerical Pain Scales rates pain from 0 for 'no pain' to 10 'worst possible' or excruciating pain (B^{7} [8] D^{11}). This tool can be utilised verbally or written (B^{7}) as below.

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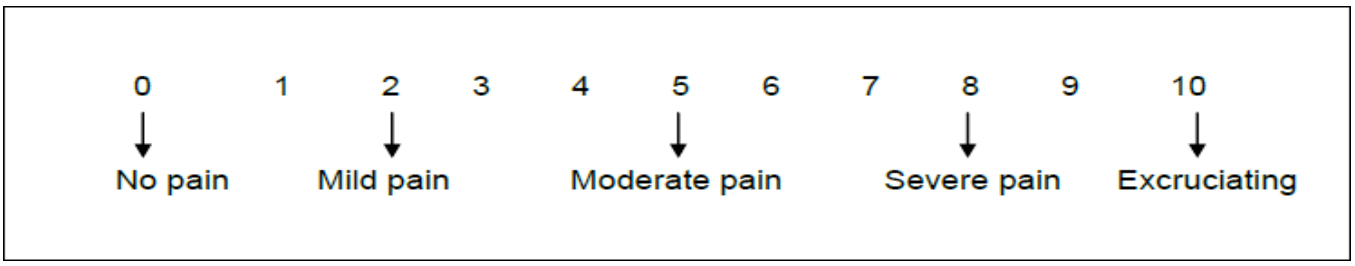
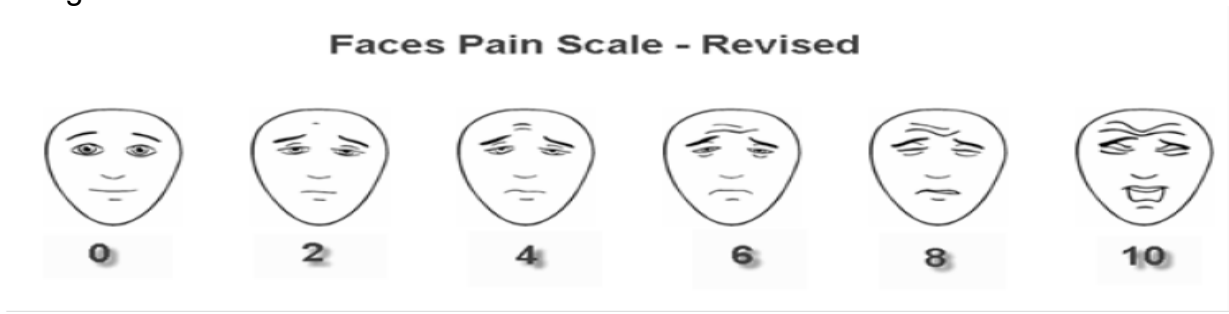


The **verbal descriptor scale** describes pain as none, mild, moderate, severe and worst possible or excruciating pain (B[7 8]).

For patients with barriers to communication the **Faces Pain Scale** (B[7,8] D[11]) provides a recognised assessment tool.



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Cognitive Impairment

Regardless of a patient's cognition, self-reporting of pain remains the preferred option for the PACU nurse when assessing a patients' pain score. Despite the evidence supporting this statement, the ABBEY and Pain Assessment in Advanced Dementia (PAINAD) tools are the most appropriate pain scales available to assist the PACU nurse with pain assessment where patients have known cognitive impairment (B[7,8] D[11]C[16]). Both the ABBEY and PAINAD pain scales are available on iview.

4.2 Medication Preparation

All medications must be prepared in accordance with NSW Ministry of Health Policy Directives; PD2013_043 - Medication Handling in NSW Public Health Facilitates, PD2017_013 - Infection Prevention and Control Policy and National Standard for User-Applied Labelling of Injectable Medicines, Fluids and Lines.

4.3 Medication Administration

4.3.1 All medications must be handled and administered in accordance with NSW Ministry of Health Policy Directives; PD2013_043 - Medication Handling in NSW Public Health Facilitates (C[12]) and PD2017_013 - Infection Prevention and Control Policy.

- Confirm prescription order
- Check Patient Identification

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- Check Allergies
- Check drug dosage according to PACU IV opioid pain protocol flow chart (appendix 1)
- Confirm patency of IV cannula[5]
- Ensure compatibility of fluid in progress with opioid medication to be administered
- Swab needleless IV access port with alcohol swab[5]
- Temporarily occlude flow of fluid in tubing above level of access port
- Inject opioid as a slow push
- Re-establish patency of IV fluid flow
- Ensure administration of a flush following each administration
- Replace blunt drawing up needle on syringe end placing in a clean receptacle to maintain ANTT between doses.
- Observe IV site and patient for adverse reactions[5].
- It is the responsibility of the accredited PACU RN for safe storage of the remaining S8 medication between each aliquot. It must be stored in a clean receptacle, at the patient's bedside and must remain in full view of the administering PACU RN.

4.4 Patient Pain, Management

4.4.1 Continue to administer PACU IV Opioid Pain Protocol as per PACU IV opioid pain protocol flow chart (appendix 1) until patient comfort is achieved; **this may not equate to being totally pain free** ($B^{7,}$ C^{12} C^{13} D^{11} D^{14}).

4.4.2 All patients receiving the PACU IV Opioid Pain Protocol must remain in the PACU for a minimum of twenty (20) minutes after the last administered dose of IV opioid.

4.4.3 The local minimum discharge criteria must also be met (C^{12}).

4.5 Sedation and Respiration – adverse events

4.5.1. Assessment of sedation in the PACU IV Opioid Pain Protocol Flow Chart refers to the modified Aldrete Discharge Scoring Criteria as referenced by the SESLHD PACU documentation requirements.

4.5.2. When titrating opioids for pain management in the PACU, sedation levels, respiratory rate and effort and pain score must be assessed prior to each administration of IV opioid as per PACU IV opioid pain protocol flow chart (appendix 1) ($B^{7}C^{12}D^{11}$).

4.5.3 If adverse events occur, the anaesthetist must be contacted for immediate patient review.

4.5.4. All PACU nurses competent to administer the PACU IV Opioid Pain Protocol Flow Chart must be familiar with the preparation and administration of naloxone ($B^{7}C^{12}D^{11}$).

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4.5.5. When naloxone is administered for reversal of opioid adverse events this must be documented on the MAR or NIMC.

4.5.6. Any patients administered naloxone must have an anaesthetic review prior to discharge from PACU.

4.6 Medication Documentation [1]

4.6.1 Document administration of PACU IV Opioid Pain Protocol on the 'Once Only'/ PRN section of the NIMC or MAR.

4.6.2 Administration of, and patient response to, opioid must be documented as per the local facility's PACU documentation requirements; either hardcopy or eMR.

4.6.3 The witness to a Schedule 8 medication transaction must be a person who is fully amiliar with Schedule 8 medication handling and recording procedures [1]. This would include a registered nurse or registered midwife, an authorised prescriber, a registered pharmacist, and any other person authorised by the registered nurse/midwife in charge of the patient care area to complete this task, such as an enrolled nurse[1] without notation.

Witnessing occurs and is documented at the following steps:

Removal of the medication from the Schedule 8 medication storage Unit and the recording in the Schedule 8 drug register,[1]

Preparation of the medication (as applicable), such as drawing up into a syringe, and labelling, transfer to the patient and first dose administration [1, 6]

Discarding and rendering as unusable any unused portion of the medication and recorded in the Schedule 8 drug register [1].
Where possible, witnessing occurs at every subsequent aliquot administration as per pain protocol flow chart during the immediate post-operative period in the Post Anaesthetic Care Unit.

5. DOCUMENTATION

Anaesthetic record
National Inpatient Medication Chart (NIMC)
Medication administration record (MAR) within eMR
iView within eMR
PACU chart
Education records
Clinical competency records

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6. AUDIT

Schedule 8 Drug Register - monthly
Medical Key Performance Indicators (KPIs) – monthly
Organisation mandatory training records - annually
Local facility compliance audits
IIMS data

7. REFERENCES

1. NSW Ministry of Health Policy Directive PD2013_043 - Medication Handling in NSW Public Health Facilitates

2. NSW Ministry of Health Policy Directive PD2010_058 - Hand Hygiene rescinded by PD2017_013 – Infection Prevention and Control Policy

3. NSW Ministry of Health Policy Directive PD2017_013 - Infection Prevention and Control Policy

4. NSW Ministry of Health Policy Directive PD2019_058 - High Risk Medication Management Policy

5. NSW Ministry of Health Policy Directive PD2019_040 - Intravascular Access Devices (IVAD) – Infection Prevention and Control

6. National Standard for User-Applied Labelling of Injectable Medicines, Fluids and Lines

7. Schug SA, Palmer GM, Scott DA, Halliwell R, Trinca J APM:SE Working Group of the Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine 2015, *Acute pain Management: Scientific Evidence*, (4th edition), ANZCA and FPM, Melbourne

8. POWH CBR; Pain Assessment and Measurement Guidelines (2015)

9. POWH CBR; Immediate post-operative pain management in the PACU: intravenous opioid pain protocol

10. St George Hospital and Community Health Service PACU Policy and Procedure Manual. (2015).PACU Intravenous Opioid Pain Protocol for Adults Clinical Work Instruction

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8. REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
March 2016	0	CNC, Randwick Campus Operating Suite, Prince of Wales Hospital NUM, PACU St George Hospital SESLHD PACU IV Pain Protocol Working Party
May 2016	0	Draft for Comment
June 2016	0	Submitted to DQUM Committee for endorsement
August 2016	1	Approved by DQUM
August 2016	1	Approved by Clinical and Quality Council
April 2018	1	SESLHDPR/501 – underwent review and no changes made. Processed by Executive Services prior to publishing.
September 2020	2	Minor review. Section 4.1 Cognitive Impairment paragraph updated. Links and References updated. Approved by Executive Sponsor. To be tabled at October 2020 Quality Use of Medicines Committee.
October 2020	2	Approved at Quality Use of Medicines Committee. Published by Executive Services.

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Appendix 1- PACU Intravenous Opioid Pain Protocol Flow Chart

Definitions

Pain	Level of Consciousness	Drug Preparation
1-3 Very Mild **4** Mild **5-7** Moderate **8-10** Severe	**0** Unrousable **1** Rousable to verbal stimuli **2** Fully Awake	Dilute with sodium chloride 0.9% to total 10mL

STEP 1: CHECK VITALS

Sedation score <1
Respiratory rate <10
Blood pressure 20% of baseline

→ **DO NOT USE THIS PROTOCOL FURTHER. GET ADVICE FROM ANAESTHETIST.**

STEP 2: VITALS OK: PAIN SCORE & DOSAGE

1-3 Very Mild	4 Mild	5-7 Moderate	8-10 Severe
Morphine 10 mg/10 mL			
No further dosage	Age≤70: 1 mL IV Age>70: 0.5 mL IV	Age≤70: 2 mL IV Age>70: 1 mL IV	Age≤70: 2- 4 mL IV Age>70: 1- 2 mL IV
OR			
Fentanyl 100 microg/10 mL			
No further dosage	Age≤70: 1 mL IV Age>70: 0.5 mL IV	Age≤70: 2 mL IV Age>70: 1 mL IV	Age≤70: 2- 4 mL IV Age>70: 1- 2 mL IV
OR			
HYDROmorphone 2 mg/10 mL			
No further dosage	Age≤70: 1 mL IV Age>70: 0.5 mL IV	Age≤70: 2 mL IV Age>70: 1 mL IV	Age≤70: 2 mL IV Age>70: 1 mL IV
OR			
Oxycodone 10 mg/10 mL			
No further dosage	Age≤70: 1 mL IV Age>70: 0.5 mL IV	Age≤70: 2 mL IV Age>70: 1 mL IV	Age≤70: 2 mL IV Age>70: 1 mL IV

Step 3: Pain assessment at 3-5 MINUTES. RETURN TO STEP 1

- If pain is still severe after the administration of the prescribed maximum dose, contact anaesthetist for review ([5],D[11] C[12])
- Has a multimodal approach for pain management been considered and implemented? (B[7]D[11]C[13])

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