SESLHD PROCEDURE COVER SHEET

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FUNCTIONAL GROUP(S)	Cancer and Palliative Care Services Medicine
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SUMMARY	A procedure to guide the safe conversion of opioids in opioid tolerant adults, when changing from one opioid to another to achieve desired pain control.

Opioid conversion for palliative pain management in opioid-tolerant adults

SESLHDPR/772

1. POLICY STATEMENT

A procedure to guide the safe conversion of opioids in opioid tolerant adults, when changing from one opioid to another to achieve desired pain control. An ***opioid-tolerant adult*** is one with a recent history of opioid use; or with a pre-existing condition that requires regular opioid medications (prior to current hospital admission).

This document refers to opioid tolerant adults ONLY

For patients who are completely or relatively opioid naïve, refer to the ANZCA Faculty of Pain Medicine Opioid Calculator
(http://www.opioidcalculator.com.au/opioidsource.html)
OR (eviQ opioid conversion calculator)

2. BACKGROUND

An **opioid-tolerant adult** describes a person who has become less susceptible to the effects of opioid medicines due to a recent history of regular opioid use. The dosing threshold and timeline for developing tolerance can vary from person to person, however the FDA suggests any patient who has been receiving 60mg of oral morphine (or equivalent dose of another opioid) per day for 7 to 10 days should be considered opioid tolerant.

Breakthrough analgesia describes an “as needed” dose of analgesia for sporadic worsening of pain that may occur in between regular analgesic doses. The recommended breakthrough dose is one twelfth to one sixth of the regular daily dose of opioid, or 50% to 100% of the regular 4-hourly opioid dose

3. RESPONSIBILITIES

3.1 Line Managers will:

- Ensure staff are aware of and adhere to the policy as outlined.
- Ensure all staff involved in this procedure undertake the HETI eLearning module ‘Safe Use of Opioids’ which can be accessed via HETI My Health Learning (Course Code 267525641).

3.2 Medical staff will:

- Be familiar with the policies and procedures outlined in this document prior to providing medications to patients.
- Ensure they have completed any competency documents and eLearning modules prior to undertaking conversion of opioids
- Document all actions and conversations in patients eMR progress notes
- Liaise with nursing staff in the medication management of the patient.

3.3 Nursing staff will:

- Be familiar with the policies and procedures outlined in this document prior to providing medications to patients.

- Ensure they have completed any competency documents and eLearning modules prior to undertaking conversion of opioids
- Document all actions and conversations in patients eMR progress notes
- Liaise with medical staff in the medication management of the patient.

4. PROCEDURE

The opioid conversion chart (Appendix 2) may be used to calculate conversion factors in opioid-tolerant adults, in consultation with the palliative care consult team.

Appendix 1 lists the approximate oral morphine equivalents in a table.

Reasons to convert from one opioid to another:

- To change route of administration (e.g. nausea and vomiting, constipation, bowel obstruction etc)
- Opioid rotation (e.g., renal or hepatic impairment, opioid toxicity, inadequate analgesia)
- To start a long acting or a short acting opioid

4.1 Calculations

Incomplete cross-tolerance may occur when converting between opioids, considering a dose reduction of 25% with switching Opioids may be required to ensure safe prescribing when converting to a new opioid agent. The decision to dose reduce may need be individualised in consultation with the specialist palliative care service

Calculating the 24-hour oral morphine daily dose

For example: *Converting 20mg oral morphine to oxycodone*

= 20mg divided by conversion factor of 1.5

*= 13.33 mg oral oxycodone **with** dose reduction of 25% due to class-switching*

= 10mg oral oxycodone/24hr

4.2 Documentation of the opioid conversion process

The MO is to document the following in the clinical notes:

- Current drug, dose and route
- New drug, dose and route
- The mathematical calculations of how the conversion dose was calculated

For example: *Converting 20mg oral morphine to oral oxycodone*

= 20mg divided by conversion factor of 1.5

= 13.33 mg oral oxycodone

4.2.1 Specific requirements when converting to hydromorphone

HYDROmorphone is a potent opioid analgesic and is classified as a High-Risk Medication.

Subcutaneous HYDROmorphone is 5 to 7 times more potent than subcutaneous morphine and 10 times more potent than oral morphine.

Incorrect or inappropriate dosing carries a *very high risk of adverse patient outcomes*. Deaths due to errors in HYDROmorphone prescribing and administration do occur and have occurred within SESLHD healthcare facilities.

Ensuring patient safety MUST be the core priority of all staff involved in HYDROmorphone-related activities.

Please refer to SESLHDPR/669 *HYDROmorphone in Adult Patients in SESLHD acute care facilities - management of*

4.2.2 Specific requirements when converting to methadone

A Methadone conversion is non-linear and can only be initiated under the advice of a palliative care specialist.

4.3 Conversions involving transdermal fentanyl patch

4.3.1 Timing of opioid doses during conversion period

Converting **TO** a fentanyl patch	When fentanyl patch is commenced, continue 4th-hourly opioid for THREE doses. Give the first dose when the patch is applied, and the next two doses at 4th-hourly intervals. The fentanyl patch will take approximately 12 to 16 hours to become effective.
Converting **FROM** a fentanyl patch	Remove the fentanyl patch. Commence 4th-hourly opioid 12 hours after patch removal. Ensure adequate PRN opioid is available to use during this period.

4.3.2 Recommended dose equivalence for conversion between 4th-hourly oral morphine TO a fentanyl patch

NOTE: This conversion table is ONLY to be used for conversions from ORAL MORPHINE TO FENTANYL PATCHES

4th-hourly oral Morphine	Transdermal fentanyl dose every 72 hours
5mg q4hr	12 microg/hr
10-20mg q4hr	25 microg/hr
35mg q4hr	50 microg/hr
50mg q4hr	75 microg/hr
65mg q4hr	100 microg/hr
80mg q4hr	125 microg/hr
95mg q4hr	150 microg/hr
110mg q4hr	175 microg/hr
125mg q4hr	200 microg/hr
140mg q4hr	225 microg/hr
155mg q4hr	250 microg/hr

4.3.3 Recommended dose equivalence for conversion between 24 hourly (total daily) oral morphine and Buprenorphine Transdermal patch as per The ANZCA calculator

Total daily oral morphine dose	Transdermal Buprenorphine (Norspan) dose every 7 days
10mg total daily	5 microg/hr
20mg total daily	10 microg/hr
30mg total daily	15 microg/hr
40 mg total daily	20 microg/hr

4.3.4 Conversions involving Buprenorphine Transdermal patch to an alternative IR Opioid

IMMEDIATE Release to slow-release Buprenorphine Transdermal (Norspan)	Apply Norspan patch and maintain the regular IR Opioid for 24 hours, then cease. Note the Norspan patch takes 24 hours to exhibit their analgesic effect.
Slow-release Buprenorphine Transdermal (Norspan) to IMMEDIATE Release	Give the first dose of IR opioid 24 hours AFTER the Norspan patch is removed. Ensure adequate PRN opioid is available to use during this period.

4.4 Conversions between immediate release (ir) and 12- hourly slow release (sr) oral opioid formulations

IMMEDIATE Release to 12hr SLOW Release	Give the first SR dose at the same time as the last 4th hourly immediate dose. Note that most slow-release opioids take 2 -4 hours to exhibit their analgesic effect.
12hr SLOW Release to IMMEDIATE Release	Give the first dose of IR opioid 12 hours AFTER the last SR opioid dose. Ensure adequate PRN opioid is available to use during this period.

4.5 Converting the route of administration

- When a patient is unable to tolerate an oral dose convert the dose for a subcutaneous route
- All Oral Opioid doses need to be divided by 2 for Subcutaneous administration dose
- When converting from oral TO Subcutaneous route is half of the oral dose

  I.e. Oral to Subcutaneous Opioid dose Ratio is 2:1

5. STAFF EDUCATION

All nursing, pharmacy and medical staff involved in this procedure must undertake the HETI eLearning module 'Safe Use of Opioids' which can be accessed via HETI My Health Learning (Course Code 267525641

6. DOCUMENTATION

Refer to section 4.2 of this procedure for details.

7. REFERENCES

- NSW Ministry of Health Policy Directive PD2022_032 - Medication Handling
- NSW Ministry of Health Guideline GL2021_004 - End-of-Life Care and Decision-Making
- NSW Ministry of Health Policy Directive PD2024_006 - High Risk Medicines Management
- SESLHDPD/308 Terminal Care / End of Life Plan
- SESLHDPR/669 HYDROmorphone in Adult Patients in SESLHD acute care facilities - management of
- SESLHDPD/175 Administration of subcutaneous medications in Palliative Care: a) Intermittent b) Via a syringe driver
- SGH-TSH CLIN117 Schedule 8 and Schedule 4D Drug Procedures
- SGH-TSH CLIN127 Pain Management – Patient Controlled Analgesia (PCA) in adults

8. VERSION AND APPROVAL HISTORY

Date	Version	Version and approval notes
15 July 2024	1.0	TSH-SGH CBR developed into a district procedure. Approved at SESLHD Drug and Therapeutics Committee and SESLHD Clinical and Quality Council.

APPENDIX 1: APPROXIMATE ORAL MORPHINE EQUIVALENCE TABLE

Drug	Oral Dose	Approx. equivalent dose of ORAL MORPHINE
HYDROmorphone	1mg	5mg
Panadeine Forte (paracetamol/codeine 500mg/30mg)	2 tablets	7.5mg
Codeine	30mg	3.75mg
Oxycodone	10mg	15mg
Tramadol	100mg	20mg
Tapentadol (Palexia)	50mg	15mg
Temgesic (Buprenorphine)	200mcg	8mg
NOTE: The advice in this table is approximate only and equianalgesic doses will vary between patients. Incomplete cross-tolerance may occur when converting between opioids, meaning dose reduction with re-titration may be required to ensure safe prescribing when converting to a new opioid agent.		

APPENDIX 2: OPIOID CONVERSION CHART FOR OPIOID-TOLERANT ADULTS

Do NOT use this chart for patients who are NOT opioid-tolerant- refer instead to the ANZCA Faculty of Pain Medicine Opioid Calculator (http://www.opioidcalculator.com.au/opioidsource.html)

For safe conversion ratios in patients who are completely or relatively opioid naïve.

TO / FROM		Codeine	Morphine		HYDROmorphone		Oxycodone	
		ORAL mg/day	ORAL mg/day	SUBCUT mg/day	ORAL mg/day	SUBCUT mg/day	ORAL mg/day	
Codeine	ORAL mg/day		÷ 8	÷ 16	÷ 40	÷ 80	÷ 12	DIVIDE Divide the current total daily opioid dose by conversion factor to get the total daily dose of new drug/route
Morphine	ORAL mg/day	× 8		÷ 2	÷ 5	÷ 10	÷ 1.5	
	SUBCUT mg/day	× 16	× 2		÷ 2	÷ 5	÷ 0.6	
HYDROmorphone	ORAL mg/day	× 40	× 5	× 2		÷ 2	÷ 0.3	MULTIPLY Multiply the current total daily opioid dose by conversion factor to get total daily dose of new drug/route
	SUBCUT mg/day	× 80	× 10	× 5	× 2		÷ 0.15	
Oxycodone	ORAL mg/day	× 12	× 1.5	× 0.6	× 0.3	× 0.15		

NOTE: The advice in this table is approximate only and equianalgesic doses will vary between patients. Incomplete cross-tolerance may occur when converting between opioids, meaning dose reduction with re-titration may be required to ensure safe prescribing when converting to a new opioid agent.