HYDROmorphone

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM

To ensure the safe prescribing, storage and administration of the different formulations and strengths of HYDROmorphone

2. PATIENT

The adult woman with moderate to severe acute or chronic pain.

3. STAFF

Medical, midwifery and nursing staff
Pharmacy

4. EQUIPMENT

- Appropriate formulation and dosage of HYDROmorphone as prescribed by medical officer.
- Appropriate equipment related to the mode of administration.

5. CLINICAL PRACTICE

Formulations within RHW

- The following formulations of HYDROmorphone may be stored within the following wards.
- No other formulations of HYDROmorphone may be stored other than those specified on this list.
- **HYDROmorphone, Dilaudid-HP Injection, 10mg/1mL is NOT to be stored as ward stock on any ward.**
- The wards must be audited regularly by designated registered nurse/midwife (at least once per week) to identify inappropriately held formulations of HYDROmorphone and pharmacy notified promptly for their removal.

HYDROmorphone cont'd

Location	Drug	Trade Name	Formulation	Strength(s)
Pharmacy	HYDROmorphone	Dilaudid®	Injection	2mg/1mL
	HYDROmorphone	Dilaudid - HP®	Injection	10mg/1mL
	HYDROmorphone	Dilaudid®	Immediate release tablet	2mg
	HYDROmorphone	Dilaudid®	Immediate release tablet	4mg
	HYDROmorphone	Dilaudid®	Immediate release tablet	8mg
	HYDROmorphone	Dilaudid®	Immediate release oral liquid	1mg/1mL
	HYDROmorphone	Jurnista®	Modified release MR Tablet	4mg
	HYDROmorphone	Jurnista®	Modified release MR Tablet	8mg
	HYDROmorphone	Jurnista®	Modified release MR Tablet	16mg
	HYDROmorphone	Jurnista®	Modified release MR Tablet	64mg
Macquarie Ward	HYDROmorphone	Dilaudid®	Injection	2mg/1mL
	HYDROmorphone	Dilaudid®	Immediate release tablet	2mg
	HYDROmorphone	Dilaudid®	Immediate release tablet	8mg
Acute Care Centre	HYDROmorphone	Dilaudid®	Injection	2mg/1mL
Recovery	HYDROmorphone	Dilaudid®	Injection	2mg/1mL

Storage within the ward

- HYDROmorphone must be stored separately from morphine in a different Schedule 8 medication storage unit where possible.
- If there is only one schedule 8 medication storage unit, these medicines must be stored on different shelves
- Each HYDROmorphone formulation must be kept in a separate orange bag with the relevant labelling as seen in APPENDIX 1 (supplied by pharmacy)
- Whenever possible, HYDROmorphone modified release (Jurnista®) and HYDROmorphone (Dilaudid®) should not be stored in the Schedule 8 cupboard at the same time. If this does occur, the product should be stored on separate shelves within the cupboard.
- Jurnista® should only be dispensed on a per patient basis.
- HYDROmorphone should not be stored in clinical areas where use is infrequent. At the end of the patient care episode, a pharmacist must be informed to either destroy or return HYDROmorphone to the pharmacy.

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Dosage

- HYDROmorphone is approximately 5 to 7 times more potent than morphine and care should be exercised in calculating and documenting the dosage.
- At the RHW, HYDROmorphone is prescribed for post-operative acute pain, chronic pain and palliative care related pain.
- HYDROmorphone may be prescribed using a variety of modalities, formulations and dosages. As follows:

Patient Group	Route	Mode	Solution/Dose	Starting Dose	Maximum Dose
Acute Pain	IV	PACU Pain Protocol	2mg in 10mL or 0.2mg/1mL	0.2mg	2mg
Acute/Chronic Pain	IV	PCA	10mg in 100mL sodium chloride 0.9% or 0.1mg per 1mL	0.1mg per bolus with a 5 minute lockout	0.4mg per bolus with a 5 minute lock out
Acute Pain	Subcut	Bolus	1mg in 5mL	1mg	Maximum dose must document for each patient
Chronic Pain	Oral	Tablet	Must be documented for each patient		
Palliative Care	IV	Infusion			
Palliative Care	Oral	tablet			

Prescribing

- HYDROmorphone should only be prescribed by an anaesthetist from the Acute Pain Relief Service, or by a senior medical officer from the Chronic Pain Team or Palliative Care Team.
- Oral formulations of HYDROMORPHONE (liquid, immediate release tablet, modified release tablet) are to be prescribed on the patient's medication chart
- Depending on the mode of delivery, parenteral HYDROmorphone is to be prescribed on medication or pain charts as follows

Area	Route	Mode of Delivery	Where to Prescribe
Acute Pain	IV	PACU Pain Protocol	Patient medication chart (eMEDs)
Acute/Chronic Pain	IV	PCA	NSW State PCA Chart
Palliative Care	IV	Infusion	Fluid Chart

HYDROmorphone contd'd

- When ordering HYDROmorphone, the prescriber must include the:
  - Generic and trade name to identify the intended formulation.
  - Indication, dose, route and frequency
  - For PRN orders, a maximum dose per 24 hours.
- The order must be clear and legible and must indicate the prescriber's full name, role and contact.
- This information is defaulted within the eMEDS program, but must be included on the PCA Chart and NIMC.
- For women admitted who are already on HYDROmorphone, the dose must be confirmed by ensuring a best possible medication history is obtained. This should occur prior to prescribing HYDROmorphone.
- Where possible, a pharmaceutical review should be completed prior to the administration of the first in-patient dose of HYDROmorphone.
- Modified release preparations **must not** be used for initial stabilisation, breakthrough pain management or acute pain.
- Parenteral and oral forms of HYDROmorphone are **not** equivalent and must be charted separately.
- An opioid conversion tool, such as the Opioid Calculator Application by the ANZCA Faculty of Pain Medicine should be used to assist converting opioid doses to or from HYDROmorphone.

Administration

- All staff administering HYDROmorphone must be accredited to administer Schedule 8 medications.
- A second person check is mandatory as NSW Health Policy Directive PD2013_043 Medication Management in NSW Public Health Facilities.
- Care needs to be taken when checking HYDROmorphone. Both parties must individually/independently check and confirm the correct drug, dosage, route, frequency and formulation before each administration.
- Ensure naloxone is available wherever HYDROmorphone is used.
- Discarding is to be in accordance with PD2013 -043
- Staff should not administer HYDROmorphone if the prescribing requirements above are not met.
- Any concerns must be escalated to the prescribing doctor. If this fails to clarify/resolve the issue, concerns must be escalated to the NUM or After Hours Nurse Manager.

HYDROmorphone cont'd

Monitoring and escalation of care

- Perform a full set of vital observations immediately prior to any dose administration.

Mode	Record On	Perform and Record	Frequency
PACU (Pain Protocol)	Observation chart	sedation, respiratory rate, BP, pain score	3-5 mins while on protocol
PCA (Acute Post Op)	PCA Chart	sedation, respiratory rate, pain score	Every hour for six hours then second hourly for duration of PCA
PCA (Chronic)	PCA Chart	sedation, respiratory rate, pain score	One hour after initial dose then second hourly for duration of PCA
SC Bolus	Observation chart	sedation, respiratory rate, pain score	30 minutes after initial dose then fourth hourly if dosing continues
Oral Tablets	Observation chart	sedation, respiratory rate, pain score	One hour after initial dose then fourth hourly if dosing continues
Infusion (Pal. Care)	SESLHD SubCut Syringe Driver Chart	As per Chart	Every four hours

- Patients on the **end of life** pathway – Typically have a lower respiratory rate. Neurological assessments may not be useful since they are often more sedated (which may be preferred). These patients may be excluded from monitoring. The medical officer/prescriber must specify and document in the progress notes if monitoring is required.

Possible complications and their management

Complication	Management
Inadequate analgesia	Review dose, consider alternative, or add another pain medication
Nausea	Ensure anti-emetics are prescribed and offered as frequently as the PRN order permits. If one antiemetic does not work, proceed to alternative or page APRS for advice. Anti-emetics should be ordered in eMEDS. Any patient requiring more than 2 doses of antiemetic will need a regular dose ordered on their medication chart. Identify if the patient is hypotensive and check their fluid balance.
Pruritus (itch)	DO NOT use sedating antihistamines – consider naloxone. Refer to naloxone LOP If persistent, contact APRS

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Respiratory Depression	**If Respiratory Rate 6-10 bpm and/or SpO2 < 90%** • Cease administration of all opioids. • Give oxygen via mask and support airway if necessary • Monitor oxygen saturation • Assess sedation level and if possible encourage patient to breathe deeply • Activate a Rapid Response **If Respiratory Rate ≤ 5** • Cease administration of all opioids including PCA • Give oxygen at 10L/min via Hudson mask and support airway if necessary • Activate a CODE BLUE • Give IV naloxone as prescribed OR as per naloxone LOP
Increased Sedation	**Sedation Score 2** • Cease administration of all opioids. • Give oxygen and monitor oxygen saturation • Check respiratory rate frequently • Activate a Clinical Response **Sedation Score 3 (Difficult to rouse)** • Cease administration of all opioids. • Give oxygen • Check respiratory rate • Activate a Rapid Response • Give naloxone as prescribed OR as per naloxone LOP **Sedation Score 3 (Unresponsive)** • Cease administration of all opioids. • Give oxygen • Check respiratory rate • Activate a CODE BLUE • Give naloxone as prescribed OR as per naloxone LOP
Urinary Retention	Contact the patient's primary care team
Constipation	Prophylactic aperients therapy is beneficial. Contact primary care team

6. DOCUMENTATION

Integrated Clinical Notes
eMEDS
PCA Chart
SAGO Chart
EMR
Relevant Clinical Pathways

7. EDUCATIONAL NOTES

Product Information

Refer to the following resources:

- MIMS
- Therapeutic guidelines
- Australian Medicines Handbook Pty Ltd
- Prescribing Protocol – SESLHDPR/584 HYDROmorphone

HYDROmorphone cont'd

Place in Therapy

Area	Place in Therapy	Who May Prescribe	Alternatives
Acute Pain	2nd or 3rd Line	APRS	Morphine, Fentanyl
Chronic Pain	2rd or 3rd Line	APRS or Chronic Pain Team	Morphine, Fentanyl, Oxycodone
Palliative Care	1st or 2nd line	Palliative Care	

Staff Education

- All prescribing medical officers and nursing staff who are working in Recovery, ACC and Macquarie ward must complete the following educational requirements:
  - ✓ Have read and signed the HYDROmorphone Local Operating Procedure
  - ✓ Attended a HYDROmorphone session facilitated by APRS or CNE using the PPT supplied by the Clinical Excellence Commission
  - ✓ Successfully completed the HETI elearning module (Safe use of HYDROmorphone"

Patient Information

- Patients and/or their carer should be provided with relevant education and written information e.g. NSW Government "Opioids Medicines".
- The patient's family and/or carer should be advised to alert the patient's nurse or a medical officer if they have any concerns.

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- Morphine – Subcutaneous (Non-Maternity)
- Patient Controlled Analgesia (PCA) – Intravenous or Subcutaneous
- Naloxone – Use of Naloxone for the treatment of opioid induced over sedation, respiratory depression, pruritus and nausea.
- Accreditation of staff to give drugs in specific units
- SESLHD – Acute Pain Management in the Post Anaesthetic Care Unit: Intravenous Opioid Pain Protocol for Adults. Fentanyl, HYDROmorphone, Morphine and Oxycodone.
- Medication – Accountable Drugs (Schedule 4D and Schedule 8)
- NSW Health PD2013_043 Medication Handling in NSW Public Health Facilitates. (2013)
- NSWHealthPD2007_036InfectionControl (2012)
- NSWHealthPD2015_029HighRiskMedicationManagement. (2015)
- National Standard for User-Applied Labelling of Injectable Medicines, Fluids and Lines (2015)
- NSW Government – Opioid Medicines (2018)
- Bare Below the Elbows – Hand Hygiene – SESLHDPR/343 (2018)

HYDROmorphone cont'd

9. RISK RATING
Extreme

10. NATIONAL STANDARD
Standard 4 - Medication Safety

11. REFERENCES
1. **Therapeutic Guidelines Limited 2015** November in eTG complete (internet) – HYDROmorphone (Revised February 2010, Amended October 2012)
2. **Australian Medicines handbook Pty Ltd** (Internet) – HYDROmorphone (Last modified January 2016)
3. NSW Health (2011) Safety Alert number 004/11 – HYDROmorphone: High-risk analgesic
4. NSW Health (2017) Safety Alert number 001/17 – HYDROmorphone: High-risk medicine
5. High-Risk Medicines Management – HYDROmorphone policy standard checklist. Clinical Excellence Commission
6. HYDROmorphone – Guidelines for the use of parenteral and oral formulations – Prince of Wales Hospital (2012)
7. Prescribing Protocol – SESLHDPR/584 – Safe use of HYDROmorphone.
8. HYDROmorphone Standard PD 2018

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