# 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.

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## 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

## HYDROmorphone cont'd

- 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.

**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

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## HYDROmorphone cont'd

- 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 |

- 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.<br>If one antiemetic does not work, proceed to alternative or page APRS for advice.<br>Anti-emetics should be ordered in eMEDS.<br>Any patient requiring more than 2 doses of antiemetic will need a regular dose ordered on their medication chart.<br>Identify if the patient is hypotensive and check their fluid balance. |

## HYDROmorphone cont'd

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|---|---|
| **Pruritus (itch)** | DO NOT use sedating antihistamines – consider naloxone. Refer to naloxone LOP<br>If persistent, contact APRS |
| **Respiratory Depression** | **If Respiratory Rate 6-10 bpm and/or SpO2 < 90%**<br>• Cease administration of all opioids.<br>• Give oxygen via mask and support airway if necessary<br>• Monitor oxygen saturation<br>• Assess sedation level and if possible encourage patient to breathe deeply<br>• Activate a PACE Tier 1call<br>• Contact APRS or Anaesthetist<br>**If Respiratory Rate ≤ 5**<br>• Cease administration of all opioids including PCA<br>• Give oxygen at 10L/min via Hudson mask and support airway if necessary<br>• Activate a CODE BLUE<br>• Give IV naloxone as prescribed OR as per naloxone LOP<br>• Contact APRS |
| **Increased Sedation** | **Sedation Score 2**<br>• Cease administration of all opioids.<br>• Give oxygen and monitor oxygen saturation<br>• Check respiratory rate frequently<br>• Activate a PACE Tier 1<br>• Contact APRS<br>**Sedation Score 3 (Difficult to rouse)**<br>• Cease administration of all opioids.<br>• Give oxygen<br>• Check respiratory rate<br>• Activate a PACE Tier 2<br>• Give naloxone as prescribed OR as per naloxone LOP<br>• Contact APRS<br>**Sedation Score 3 (Unresponsive)**<br>• Cease administration of all opioids.<br>• Give oxygen<br>• Check respiratory rate<br>• Activate a CODE BLUE<br>• Give naloxone as prescribed OR as per naloxone LOP<br>• Contact APRS |
| **Urinary Retention** | Contact the patient's primary care team |
| **Constipation** | Prophylactic aperients therapy is beneficial. Contact primary care team |

## HYDROmorphone cont'd

### 6. DOCUMENTATION

Integrated Clinical Notes
eMEDS
PCA Chart
SAGO Chart
HDU Chart
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

**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 regarding HYDROmorphone.
- 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.

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## HYDROmorphone cont'd

### 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) http://www0.health.nsw.gov.au/policies/pd/2013/pdf/PD2013_043.pdf
- NSW Health PD2010_058Hand Hygiene (2010) http://www0.health.nsw.gov.au/policies/pd/2010/pdf/PD2010_058.pdf
- NSWHealthPD2007_036InfectionControl (2007) http://www0.health.nsw.gov.au/policies/pd/2007/pdf/PD2007_036.pdf
- NSWHealthPD2015_029HighRiskMedicationManagement. (2015) http://www0.health.nsw.gov.au/policies/pd/2015/pdf/PD2015_029.pdf
- National Standard for User-Applied Labelling of Injectable Medicines, Fluids and Lines (2015) http://www.safetyandquality.gov.au/wp-content/uploads/2015/09/National-Standard-for-User-Applied-Labelling-August-2015-web-optimised.pdf

### 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

**REVISION & APPROVAL HISTORY**
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