Safety Alert number 004/11

HYDROmorphone: High-risk analgesic

**Background**

Serious incidents continue to occur in NSW hospitals surrounding use of this medicine. Because of its high potency, any level of mistake in administration may result in serious adverse patient outcomes. HYDROmorphone hydrochloride is an opioid analgesic of approximately five times the potency of morphine. It is used to manage moderate-to-severe acute or chronic pain. Relative potency can be demonstrated by the following:

- HYDROmorphone 1.5–2 mg SC/IM = 10 mg morphine SC/IM
- HYDROmorphone 6–7.5 mg oral = 30 mg morphine oral
- HYDROmorphone 6–7.5 mg oral = 1.5–2 mg HYDROmorphone SC/IM

Mistakes can arise from:

- Confusion between look-alike, sound-alike names of HYDROmorphone and morphine salts
- Selection error: Both HYDROmorphone and morphine products stored together in a Schedule 8 drug safe in clinical areas.
- Complexity of branded products. Both drug groups are available in multiple strengths and dose forms, injectable and oral, immediate and sustained release.
- Use of fractional doses, often necessary due to the high potency of HYDROmorphone, leading to ten times overdoses due to incorrect use of decimal points.

**Immediate action:**

1. Drug and Therapeutics Committees must undertake a risk assessment of use of HYDROmorphone in each clinical unit where it is or may potentially be used:
   a. Review all local protocols to ensure clarity in dose selection, monitoring and avoidance of cumulative effects with other therapy.
   b. Appropriately restrict prescribing. To ensure prescribing competencies match the ability and availability of staff to safely prescribe HYDROmorphone.

2. Review storage.
   a. Set appropriate minimum stock levels in each clinical S8 safe. In situations of irregular use, individually issue the required product per patient and return to pharmacy at the end of the patient care episode. Use specified after-hours access arrangements for late admissions.
   b. Separate HYDROmorphone and morphine products within the S8 safe.
   c. Ensure naloxone is available wherever HYDROmorphone may be used.

3. Ensure all staff carry out a fully independent double check on all HYDROmorphone doses as legally required prior to administration, including correct patient ID, drug, dose form, correct dose, its preparation, strength, route and witnessed administration.

4. Prioritise pharmaceutical review and medication reconciliation for patients on HYDROmorphone.

**Drug and Therapeutics Committees also should consider:**

- In addition to generic name in prescribing (noting current policy requiring generic prescribing), encourage use of brand name as well to define specific HYDROmorphone products.
- Increasing frequency of observations for all patients newly prescribed or having a dose increase of HYDROMorphine with immediate escalation of care if respiratory depression is evident.
- Use of TALLman lettering by capitalising the distinctive component of the drug name to distinguish HYDROmorphone from similar drugs e.g. morphine.
- Add distinctive labelling to further define HYDROmorphone ensuring that the original product text is not obscured.

**References:**


**Action required by Local Health Networks**

1. Distribute this safety alert to all relevant clinical staff
2. Ensure the matter is considered by the Drug and Therapeutics Committee with actions and risk assessment results reported to the Director of Clinical Governance for referral to LHN Clinical Council.
3. Schedule short education sessions on this subject in a case study context in key clinical discussion fora e.g. at Grand Rounds.
4. Ensure all new staff receive orientation to the risks associated with HYDROmorphone therapy.

**Distributed to:**

- LHN Chief Executives
- LHN Directors of Clinical Governance
- LHN Directors of Clinical Operations

**Action required by:**

- LHN Directors of Clinical Governance
- Drug and Therapeutics Committees

**For response by:**

- LHN Directors of Clinical Governance

**We recommend you also inform:**

- Directors of Surgery
- Directors of Anaesthetics
- Directors of Intensive Care/Critical Care
- LHN Directors of Nursing and Midwifery
- Medical staff
- Directors of Palliative Care
- Directors of Pharmacy
- Directors of Oncology and Cancer Care
- Nursing Unit Managers
- Midwifery Unit Managers
- Intensive Care Nurses
- Oncology and Cancer Care Nurses
- Palliative Care Nurses

**Deadline for completion of action**

29 April 2011

**Clinical Safety, Quality and Governance Branch**

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