## Subcutaneous levomepromazine for refractory nausea in the palliative care patient and agitation in the terminal phase

### Area where Protocol/Guideline applicable
- SESLHD inpatient settings (including Calvary hospital)

### Indications for use
- Must be under the supervision of a Palliative Care Specialist.
- Refractory nausea and vomiting not responding to first line treatments (metoclopramide, cyclizine or haloperidol)
- Refractory agitation not responding to the following first line treatments in the terminal phase: Midazolam 60-200mg per 24 hours and/or Haloperidol 10mg per 24 hours

### Place in Therapy
- Low dose levomepromazine is considered a second line therapy for refractory nausea and vomiting
- Levomepromazine is considered a second line drug in the management of refractory agitation in the imminently dying with the intention to reduce a patient’s level of consciousness.

### Precautions & Relative Contraindications
- Hepatic & renal Impairment
- Cardiac disease, particularly heart block & known QT interval prolongation/arrhythmia
- Parkinson’s disease
- Dementia
- Epilepsy and seizure activity – lowers seizure threshold
- Encephalopathy

### Drug Interactions
- Caution is advised with the concurrent use of drugs metabolized by CYP2D6 e.g. tricyclic antidepressants, some beta-blockers, as theoretically levomepromazine may cause plasma concentrations to increase, or reduce conversion of pro-drugs to the active metabolite, e.g. codeine to morphine

### Preparations
- Levomepromazine 25mg / mL injection

### Dose conversion for oral to subcutaneous route
- A ratio of 1:1 between oral and subcutaneous routes should be used

### Dosing
- **Refractory nausea and vomiting:**
  - **Low dose only** - 6.25 mg daily and every 2 hours PRN to a maximum of 25mg in 24 hours
- **Terminal agitation:**
  - The usual starting dose is 25mg BD and 25mg every 2 hours PRN to a maximum of 200mg in 24 hours.
<table>
<thead>
<tr>
<th><strong>Administration</strong></th>
<th>Dilute to the largest practical volume</th>
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<tbody>
<tr>
<td><strong>Diluents</strong></td>
<td>Water for Injection (WFI)</td>
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<tr>
<td><strong>Drug Compatibility</strong></td>
<td>Check Syringe driver drug compatibilities in SESLHDPR/175 Administration of subcutaneous medications in Palliative Care (Table 1)</td>
</tr>
</tbody>
</table>
| **Known Adverse Effects** | Drowsiness, sedation  
Postural hypotension  
Extrapyramidal side effects  
Dry mouth |
| **Monitoring requirements** | Monitor level of sedation and titrate dose accordingly.  
Monitor for injection site reactions. If administered via continuous infusion, perform 4 hourly infusion site checks as per Subcutaneous Syringe Driver Inpatient Management form SES130.021 |
| **Practice Points** | Levomepromazine should be diluted as much as is practical to avoid site irritation.  
Protect product, syringes and lines from direct sunlight or heat. Discard if discolouration occurs. |
| **Basis of Protocol/Guideline (including sources of evidence, references)** | Palliative Care Formulary 7th Ed, 2020 p256, 198-200  
Therapeutic Guidelines – Palliative Care eTG, July 2018  
| **Consultation** | St George Palliative Care Team  
SESLHD Palliative Care working party: |

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**GOVERNANCE**

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<td>November 2023</td>
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<tr>
<td>Ratification date by SDSLHD QUM Committee</td>
<td>5 November 2020</td>
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<tr>
<td>Chairperson, QUM Committee</td>
<td>Dr John Shephard</td>
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<td>Version Number</td>
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