Guidance for the Management of Symptoms in Adults in the Last Days of Life

This Guidance includes management of the following symptoms:

Pain

Nausea and vomiting

Dyspnoea

Noisy chest secretions / Death rattle

Agitation when death is imminent

- Please note that these recommendations should only be used for patients in the last days of life and should not be used outside this context.
- They are a GUIDE, and should be used as such. They may differ from other recommendations but have been chosen to reflect expert opinion, best evidence and safety.
- Users are advised to monitor patients carefully for side effects and response to treatment. Responsibility for the use of these recommendations lies with the healthcare professional(s) managing each patient.
- Seek specialist advice when necessary, especially in patients with complex needs.
- When prescribing drugs, always start with the lowest dose in the range specified in this guide.
- For patients with moderate to severe renal or hepatic impairment in the last days of life please seek specialist advice

Further information on symptom control at the end of life is available from your Hospital Specialist Palliative Care Team, your Trust intranet website, the Palliative Adult Network Guidelines (PANG) Book 2011 and the HSC Guidance “Approximate equivalent doses of opioid analgesics for adult use”
Management of Pain when patient unable to take oral analgesia

Patient currently does not have pain or pain is controlled by current prescription

**No analgesia prescribed or PRN analgesia**
(Anticipatory prescribing)

- Prescribe for PRN use Morphine 2mg – 5mg SC 2-4hourly
- Review after 24hrs. If patient has required 2 or more doses consider prescribing up to this total Morphine dose SC via a syringe pump over 24 hours

**Already on regular “weak” opioid (max dose)**
e.g. Co-codamol 30/500, Dihydrocodeine, Tramadol

- Prescribe Morphine 10mg-15mg SC via syringe pump over 24hrs instead of current oral analgesia.
- Prescribe Morphine 2mg SC 2-4hourly PRN for breakthrough pain*

**Already on Oral Morphine or other opioid (see Table 1)**

- Use conversion Table 1 to change from total daily oral morphine to SC Morphine or other opioid. Prescribe via SC syringe pump over 24hrs.
- Prescribe breakthrough analgesia* i.e. divide total Morphine or other opioid dose by 6 and give 2-4hourly PRN

**Already on Fentanyl (Mezolar), BuTrans or Transtec Patch**

- Continue prescribing patch
- Prescribe SC Morphine for breakthrough pain* 2-4 hourly.
  (use conversion Table 2 for Fentanyl Patch. Seek specialist advice for other opioid patches)

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**Patient currently experiencing pain**

**No regular analgesia prescribed**

- Give stat SC PRN dose of Morphine 2mg– 5mg as above
- Prescribe Morphine 5mg – 10mg as a SC infusion via syringe pump over 24 hours
- Prescribe Morphine 2mg – 5mg SC 2-4hourly PRN for breakthrough pain*
  (This can be given more frequently with medical discussion and/or palliative care input)

**Already on Oral Morphine or other opioid (See Table 1)**

- Use Table 1 to change from total daily oral opioid dose to SC opioid. Give SC via syringe pump over 24 hours
- Prescribe for breakthrough pain* SC 2-4 hourly PRN i.e. divide new total daily SC opioid dose by 6. Give a stat dose.
- Review regularly
- If two or more PRN doses given in 24 hours increase syringe pump dose by 30% to 50% to control pain.

**Already on Fentanyl Patch (Mezolar), BuTrans or Transtec Patch**

- Give stat morphine sulphate SC PRN dose (use conversion Table 2)
- Continue prescribing patch
- Add additional Morphine (or other opioid) for uncontrolled pain as a SC infusion via syringe pump (equivalent of 2 breakthrough doses* of Morphine)
- Prescribe SC Morphine for breakthrough pain* (1/6th of total 24 hour opioid dose) and give 2-4hourly PRN
- Seek specialist advice for other opioid patches.

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* Breakthrough analgesia is usually worked out as 1/6th of the total 24 hour opioid dose, but can also be given as 1/10th of the total 24 hour opioid dose. Refer to BNF “Prescribing in Palliative Care” section.

If symptoms persist contact the Specialist Palliative Care Team in your area
Table 1 Opioid Conversions (Refer also to HSC Medicine Governance “Northern Ireland Guidelines on Converting Opioid Analgesics”)  

<table>
<thead>
<tr>
<th>Oral Codeine /Dihydrocodeine /Tramadol</th>
<th>To: Oral Morphine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula:</td>
<td>Divide total 24 hour dose by 10</td>
</tr>
<tr>
<td>Example:</td>
<td>Oral codeine 60mg QDS = 240mg codeine = 24mg Oral Morphine</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oral Morphine</th>
<th>To: SC Morphine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula:</td>
<td>Divide total 24 hour dose of Oral Morphine by 2</td>
</tr>
<tr>
<td>Example:</td>
<td>Oral Morphine e.g. 60mg BD = 120mg/24hrs = SC Morphine 60mg/24hrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oral Morphine</th>
<th>To: SC Diamorphine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula:</td>
<td>Divide total 24 hour dose of Oral Morphine by 3</td>
</tr>
<tr>
<td>Example:</td>
<td>Oral Morphine e.g. 60mg BD = 120mg/24hrs = SC Diamorphine 40mg/24hrs</td>
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<table>
<thead>
<tr>
<th>Oral Morphine</th>
<th>To: Oral Oxycodone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula:</td>
<td>Divide total 24 hour Dose of Oral Morphine by 2</td>
</tr>
<tr>
<td>Example:</td>
<td>Oral Morphine (MST)60mg BD = 120mg/24hrs = Oral Oxycodone 30mg BD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oral Oxycodone</th>
<th>To: SC Oxycodone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula:</td>
<td>Divide total 24 hour dose of Oxycodone by 2</td>
</tr>
<tr>
<td>Example:</td>
<td>Oral Oxycodone 10mg BD = 20mg/24hrs = SC Oxycodone 10mg/24hrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oral Morphin</th>
<th>To: SC Alfentanil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfentanil may be used in patients with severe renal impairment; seek specialist advice when necessary</td>
<td></td>
</tr>
<tr>
<td>Formula:</td>
<td>Divide total 24 hour dose of Oral Morphine by 30</td>
</tr>
<tr>
<td>Example:</td>
<td>Oral Morphine (MST) 60mg BD = 120mg/24hrs = SC Alfentanil 4mg/24hrs</td>
</tr>
</tbody>
</table>

Table 2 Patient on Fentanyl Patch (Mezolar) requiring 2-4 hourly PRN Morphine for Breakthrough Pain  
(Refer to HSC Guidance “Approximate equivalent doses of opioid analgesics for adult use” for oral morphine equivalent doses for Mezolar, BuTrans and Transtec patches)

<table>
<thead>
<tr>
<th>Fentanyl Patch (Mezolar) Strength (micrograms/hr)</th>
<th>Breakthrough Pain Subcutaneous Morphine 2-4 hourly PRN dose (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘12’ patch</td>
<td>2 mg</td>
</tr>
<tr>
<td>‘25’ patch</td>
<td>5 mg</td>
</tr>
<tr>
<td>‘37’ patch</td>
<td>7 mg</td>
</tr>
<tr>
<td>‘50’ patch</td>
<td>10 mg</td>
</tr>
<tr>
<td>‘62’ patch</td>
<td>12 mg</td>
</tr>
<tr>
<td>‘75’ patch</td>
<td>15 mg</td>
</tr>
<tr>
<td>‘100’ patch</td>
<td>20 mg</td>
</tr>
<tr>
<td>‘125’ patch</td>
<td>25 mg</td>
</tr>
<tr>
<td>‘150’ patch</td>
<td>30 mg</td>
</tr>
<tr>
<td>‘175’ patch</td>
<td>35 mg</td>
</tr>
<tr>
<td>‘200’ patch</td>
<td>40 mg</td>
</tr>
</tbody>
</table>

If symptoms persist contact the Specialist Palliative Care Team in your area
Management of Nausea/ Vomiting
(When the patient is unable to take oral anti-emetics)

No symptoms at present

Symptoms

(Anticipatory prescribing)
Oral antiemetics not currently prescribed.

Prescribe cyclizine SC PRN
(see Table 3 below)

Already on regular oral antiemetics.
(i.e. symptoms controlled by current prescription)

Stop oral antiemetics
Prescribe current antiemetic via SC 24hr syringe pump

Plus suitable SC antiemetic for breakthrough symptoms.

Review every 24 hours

If nausea and vomiting not controlled go to ‘Symptoms’ column

Give stat dose of suitable SC antiemetic. (see Table 1 below)

Plus
start 24 hour SC infusion via syringe pump

Plus
SC antiemetic for breakthrough symptoms

If nausea / vomiting persist use maximum dose of current antiemetic

If Nausea/ vomiting still persists, replace antiemetic drugs in syringe pump with Levomepromazine
(A combination of Cyclizine and Haloperidol may also be used)

Plus
Prescribe Levomepromazine PRN SC for breakthrough nausea

Table 3  Choice of antiemetic

<table>
<thead>
<tr>
<th>Drug</th>
<th>Indications for Use</th>
<th>SC stat prn dose</th>
<th>SC 24 hour dose range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclizine</td>
<td>Motion sickness. Mechanical bowel obstruction. Raised intracranial pressure.</td>
<td>50mg</td>
<td>100mg – 150mg</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>Chemical/Metabolic causes.</td>
<td>500 micrograms – 1mg</td>
<td>1.5mg – 5mg*</td>
</tr>
<tr>
<td>Metoclopramide</td>
<td>Gastric irritation / stasis (discontinue if colic develops) Prokinetic antiemetic</td>
<td>10mg</td>
<td>30mg – 60mg*</td>
</tr>
<tr>
<td>Levomepromazine</td>
<td>Broad spectrum antiemetic (can cause sedation at high doses)</td>
<td>5mg</td>
<td>5mg – 25mg</td>
</tr>
<tr>
<td>Ondansetron</td>
<td>Surgery/Chemotherapy/ Radiotherapy induced. Intractable vomiting due to chemical, abdominal and cerebral causes when above approaches have failed</td>
<td>4mg – 8mg</td>
<td>8mg – 24mg</td>
</tr>
</tbody>
</table>

* Higher doses may be used in specialist practice. Contact the Hospital Palliative Care team for advice.

If symptoms persist contact the Specialist Palliative Care Team in your area
Management of Dyspnoea

Intermittent symptoms or distress

Is patient already taking regular morphine?

No

Anticipatory prescribing:
Prescribe morphine sulphate 1mg-2mg SC 4 hourly PRN for dyspnoea.

Yes

Anticipatory prescribing:
Prescribe morphine sulphate PRN at a dose of \( \frac{1}{4} \) to \( \frac{1}{2} \) of 4 hourly breakthrough analgesic dose

Persistent symptoms or distress

Is patient already taking regular morphine?

No

Prescribe morphine sulphate 5mg by syringe pump over 24 hours and morphine sulphate 1mg-2mg SC 4 hourly PRN for dyspnoea

Yes

Prescribe equivalent doses of morphine sulphate via a syringe pump and titrate to patient's individual needs according to severity of dyspnoea.

Prescribe morphine sulphate PRN at a dose of \( \frac{1}{4} \) to \( \frac{1}{2} \) of 4 hourly breakthrough analgesic dose

If patient is breathless AND anxious, consider midazolam 2mg SC PRN and/or adding midazolam 5mg-10mg SC via syringe pump over 24 hours. If able to tolerate oral medications consider using Lorazepam 500 micrograms sublingually 4-6 hourly PRN.

- Non pharmacological measures such as positioning and the use of a fan should be considered
- Consider reducing the drug, dose and frequency for patients who are elderly, frail or in renal failure
- For patients who are conscious and can tolerate oral medicines consider oral morphine sulphate in a dose equivalent to the SC doses recommended above
- For patients on other opioids use Table 1 for opioid conversions and use guidance as above

If symptoms persist contact the Specialist Palliative Care Team in your area
Management of Noisy Chest Secretions

(Review the use of intravenous or subcutaneous fluids and decrease or discontinue if appropriate. Repositioning the patient may also help dislodge chest secretions)

No symptoms at present

Symptoms

(Anticipatory Prescribing)

Prescribe Glycopyrronium 200 micrograms SC 4-6hourly PRN

If two or more doses of PRN Glycopyrronium required in 24 hours

Give stat dose Glycopyrronium 200 micrograms SC

AND

Prescribe Glycopyrronium 600 micrograms SC over 24 hours via syringe pump

Prescribe Glycopyrronium 200 micrograms SC 4-6hourly PRN for breakthrough symptoms

If symptoms persist, increase total 24 hour dose to 1200 micrograms (1.2mg)

If 1200 micrograms in 24 hours not effective, consider changing to Hyoscine Butylbromide 60mg or Hyoscine Hydrobromide 2.4 mg SC over 24 hours via syringe pump*

*Hyoscine Hydrobromide may cause sedation and paradoxical agitation

If symptoms persist contact the Specialist Palliative Care Team in your area
Management of Agitation When Death is Imminent

(Assess the patient first to exclude potentially reversible and treatable causes such as pain, drug withdrawal including nicotine, urinary retention or severe constipation)

No symptoms at present

- Prescribe Midazolam 2mg – 5mg SC 4hourly PRN
- If two or more doses required PRN

Symptoms

- Prescribe Midazolam 2mg – 5mg SC and assess response after 30 mins
- If effective:
  - Prescribe Midazolam 5mg - 10mg via syringe pump over 24 hrs
  - AND
  - Continue to give PRN dose as required

  Re-assess regularly. If symptoms persist add up to total SC PRN dose over 24 hours to current syringe pump dose (increase breakthrough dose accordingly)

  If poor response to increasing dose of Midazolam re-assess cause of agitation. Consider prescribing stat dose of Levomepromazine 5mg - 15mg SC

  Assess response and if effective add Levomepromazine 10mg - 25mg SC via syringe pump over 24 hrs

If symptoms persist contact the Specialist Palliative Care Team in your area