Anticipatory Medication Guidelines

Symptoms commonly experienced by patients entering the terminal phase include pain, agitation, nausea, vomiting, breathlessness and excessive chest secretions.

To provide prompt and effective symptom control and to reduce distress and anxiety for patients and their carers, it is advocated that medications used to manage these symptoms are prescribed in anticipation of need. These medications are prescribed in anticipation of patient being unable to swallow their regular symptom control medications, and given by the subcutaneous (SC) route if needed when unable to take by oral route.

The following table and algorithms outline common doses of drugs used to treat the above symptoms and is for use in all settings. They have been designed to be used in conjunction with any local prescribing guidance and authorisation forms.

For further information or if symptoms not managed please consult your local palliative care team or your pharmacist.

For the purposes of this document the dying phase is considered to be a prognosis of less than six weeks, or if ‘phase of illness’ ranking is used then when patient considered to be ‘deteriorating’ or ‘dying’ (further guidance on recognising the dying phase). For community medicines administration please complete the local authorisation form.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Drug</th>
<th>Dose</th>
<th>Route</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain (eGFR &gt;30)</td>
<td>Morphine Sulfate</td>
<td>2.5 - 5mg</td>
<td>Subcutaneous injection</td>
<td>If patient already taking regular morphine the PRN dose is usually 1/6th of the 24 hour opioid dose. For patients receiving alternative opioids please contact the palliative care team or pharmacist for advice.</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>If eGFR &lt;30 consider either opioid switch below, or dose reduction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain (eGFR &lt;30)</td>
<td>See specialist algorithm for either Fentanyl or Alfentanil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agitation</td>
<td>Midazolam</td>
<td>2.5mg - 5mg *(If eGFR &lt;30 dose reduction to 1.25mg – 2.5mg)</td>
<td>Subcutaneous injection</td>
<td>To be given hourly as required. Maximum 60mg in 24hrs. N.B. if eGFR &lt;30 Maximum 30mg in 24hrs</td>
</tr>
<tr>
<td>Nausea and vomiting</td>
<td>Levomepromazine</td>
<td>2.5mg - 5mg</td>
<td>Subcutaneous injection</td>
<td>Four hourly as required. Maximum dose 25mg in 24 hours</td>
</tr>
<tr>
<td>Chest Secretions</td>
<td>Hyoscine butylbromide</td>
<td>20mg</td>
<td>Subcutaneous injection</td>
<td>Two hourly as required. Maximum dose 180mg in 24 hours</td>
</tr>
<tr>
<td>Breathlessness</td>
<td>Morphine Sulphate</td>
<td>2.5-5mg -2.5mg *(If eGFR &lt;30 dose reduction to 1.25mg – 2.5mg)</td>
<td>Subcutaneous injection</td>
<td>Hourly as required</td>
</tr>
</tbody>
</table>
OPIOID CONVERSION: Anticipatory medication

There is no exact equivalent between opioids, starting low and titrating upwards is recommended safe practice.

Approximately equivalent opioid doses for PRN use:

<table>
<thead>
<tr>
<th>Oral morphine</th>
<th>Morphine subcutaneous injection</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 mg</td>
<td>2.5 mg</td>
</tr>
<tr>
<td>10 mg</td>
<td>5 mg</td>
</tr>
</tbody>
</table>

Approximately equivalent opioid doses for starting doses in subcutaneous infusions:

<table>
<thead>
<tr>
<th>Oral morphine in 24 hours</th>
<th>Morphine injection via CSCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 mg</td>
<td>15 mg</td>
</tr>
<tr>
<td>60 mg</td>
<td>30 mg</td>
</tr>
</tbody>
</table>

Opioid choice in pre-existing renal impairment: Morphine is NOT routinely use as continuous infusion in patient with known renal impairment <30) because of the high risk of accumulation and adverse effects.

However it is not necessary to routinely check the renal function of all dying patients who are comfortable on their regular opioid - even if they develop undetected renal impairment, it may not be necessary to convert to an alternative unless they develop side effects or signs of opioid toxicity such as myoclonic jerks; please note drowsiness and reduced consciousness can be part of the dying process and doesn’t necessarily mean the person is opioid toxic. If eGFR <30 see our specialist algorithm for either Fentanyl or Alfentanil, the choice of drug will be locality specific.

Seek Specialist Palliative Care Advice: If converting from alternative strong opioids, if analgesia requirements are escalating, distressing opioid side effects, if clinician is unclear about appropriate choice of opioid or an alternative opioid is prescribed.

Further information:

West Midlands Palliative Care Physicians Symptom Control Guidelines
Algorithm for Pain in patients using Morphine Sulfate SUBCUTANEOUSLY (eGFR >30mls/min)

| Explanation & psychological support for patient/carers /family | Exclude treatable causes for pain e.g. constipation | Consider positioning for comfort |

Pain

Is patient already taking opioids?

Yes

Morphine Sulfate

If able to swallow continue oral medication

If unable to swallow, commence CSCI with subcutaneous morphine sulfate in a dose equivalent to the oral morphine requirements in the preceding 24 hours

Other strong opioids

Contact the Specialist Palliative Care Team for advice

If they are not available & patient unable to swallow use Opioid Conversion Guidance to calculate CSCI equivalent dose

NB. Fentanyl patches should be left in place, seek advice re PRN SC dose

All: Prescribe 1/6th of total 24hr opioid dose SC PRN

No

Morphine sulfate 2.5mg-5mg SC PRN

If two or more doses are required over 24 hours consider starting a CSCI of morphine sulfate over 24 hours

The prn dose should be adjusted to be approx. 1/6th of the new 24-hour dose

Example conversions:

1. To calculate the equivalent total 24 hourly dose of SC morphine, divide total 24 hourly dose of regular oral morphine plus sum total of Oramorph PRNs used by 2 (e.g. 20mg oral morphine = 10mg SC morphine)
2. To calculate the breakthrough dose of morphine sulphate divide total 24-hourly dose of SC morphine by 6 and prescribe this dose, 2 hourly SC PRN (e.g. 15mg SC morphine over 24 hours = 15mg/6 = 2.5mg SC PRN)

Review pain at each assessment - if more than 2 PRN doses used in 24hrs, consider if 24hr CSCI needs to be increased or seek specialist advice.
Algorithm for Agitation

**Explanation & psychological support for patient/carers/family**

**Exclude causes of delirium e.g. constipation, urinary retention, hypercalcemia, nicotine withdrawal**

**Consider environmental modifications & non-drug management**

**Is the patient restless & agitated?**

- **Yes**
  - If symptoms do not resolve with non-drugs management give Midazolam 2.5mg SC PRN*

  **Is it effective?**

    - **Yes**
      - Monitor symptoms & repeat if required
    
    - **No**
      - After 30 minutes give another 2.5mg - 5mg SC Midazolam

- **No**
  - Midazolam 2.5mg-5mg SC PRN* prescribed in anticipation

**Example:**
If patient has required 4 doses of 2.5mg Midazolam to manage restlessness in previous 24 hours then a suitable dose would be 10mg midazolam in CSCI over 24 hours.

*If eGFR <30 dose give reduced dose of Midazolam 1.25mg – 2.5mg
Algorithm for Breathlessness

**Explanation & psychological support for patient/carers/family**

**Consider causes**
- pleural effusion, heart failure
- pneumonia & treat if appropriate

**Check blood oxygen levels**
- consider if oxygen appropriate

**Non pharmacological approaches**
- e.g. positioning, reduce room temperature, cooling the face by using a cool flannel or cloth

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Is the patient breathless?

- **Yes**
  - Are they currently on a strong opioid?
    - **Yes**
      - Give PRN 1/6th of 24 hr opioid SC PRN (see here for conversion chart)
    - **No**
      - Give morphine sulfate 2.5mg-5mg SC

  Reassess after 30 minutes: Is it effective?
    - **Yes**
      - Monitor symptoms & repeat if required
    - **No**
      - Give 2.5mg-5mg SC Midazolam

  Is it effective?
    - **Yes**
    - **No**
      - Contact the Specialist Palliative Care Team for advice

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**Anticipatory Prescribing of PRN medication for people at risk of breathlessness**

- If **not currently** taking regular strong opioid prescribe morphine sulfate 2.5-5mg SC PRN in case patient becomes breathless
- If **currently** taking strong opioid ensure correct PRN dose is prescribed for pain and use this dose for breathlessness
- If a dose is given for breathlessness follow the algorithm for the patient who is breathless
Algorithm for Respiratory Secretions

Explanation & psychological support for patient/carers/family

Exclude causes of fluid overload e.g. ongoing parenteral fluids, chest infection, nasogastric feed, humidified oxygen

Consider repositioning

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Does the patient have secretions?

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Yes

Reposition patient
NB. For comfort avoid suction

Is it effective?

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No

Give hyoscine butyl bromide 20mg SC

If effective and needing more than 2 prn doses in 24 hours consider commencing a CSCI of hyoscine butyl bromide with dose equivalent to PRN doses used in previous 24hrs.

Usual range 60mg-180mg in 24hrs

Yes

Monitor symptoms & treat if required

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Hyoscine butyl bromide 20mg SC
PRN 2 hourly maximum 180mg/24hrs prescribed in anticipation
Algorithm for nausea and vomiting

Explanation & psychological support for patient/carers/family

Exclude treatable causes e.g. constipation, hypercalcemia, bowel obstruction

Consider strategies to keep away triggers e.g. strong smells

Nausea & Vomiting

Present

Is patient already taking anti-emetics?

Yes

Is it effective?

Yes

Continue with antiemetic in equivalent dose via CSCI route. (Seek specialist advice if needed re: appropriate dose)

No

Stop oral anti-emetics

Give levomepromazine 2.5mg-5mg SC

Review
If two or more doses are required over 24 hours consider starting a CSCI of levomepromazine over 24 hours.

No

Give levomepromazine 2.5mg -5mg PRN SC max 25mg/24hrs

Absent