Care of the Dying

Early diagnosis of the dying process allows for adequate preparation of the patient, the family and the carers. This clinical guidance covers the prescribing and management of patients who have entered the terminal phase of their illness. The terminal phase can be characterised by:

- day-to-day deterioration of clinical condition
- declining oral intake (difficulty with oral medication)
- profound weakness
- a reduction in the level of consciousness

The aim of this guidance is to provide advice for the prescribing of regular, when required (PRN) and anticipatory medicines for controlling common symptoms encountered in the last hours or days of life. It includes:

- Management of pain with morphine
- Management of pain for patients established on oral oxycodone
- Management of pain for patients established on fentanyl patches
- Management of agitation
- Management of nausea and vomiting
- Management of dyspnoea
- Management of excessive respiratory tract secretions

For dosing in severe renal impairment – see separate guidance for care of the dying in severe renal failure.

General actions for consideration:

- Discontinue inappropriate interventions and medications
- Identify the process for review of patient and carer support
- Prescribe PRN medication as recommended in this guidance

Additional information:

- Syringe driver medication must always be prescribed on designated syringe driver prescription charts available within Wirral University Teaching Hospital, Primary Care and St Johns Hospice.
- In the community if drugs are not available from the patient’s usual community pharmacy please refer to emergency community palliative care stock list.

Useful Numbers / Contacts:

- **St John’s Hospice**
  24 hour Palliative Advice and Information Line (P.A.I.L) 0151 343 9529
- **Arrowe Park Hospital Specialist Palliative Care Team**
  0151 604 7433 / Internal Ext: 2920 Monday – Friday 8.30am – 4.30pm excluding Bank Holidays
- **Community Specialist Palliative Care Team**
  0151 328 0481 Monday - Friday 9am – 5pm
  07825226724 Saturday, Sunday and Bank Holidays 9am – 5pm
Reducing Dosing Errors with Opioid Medicines

The National Patient Safety Agency (NPSA) Rapid Response Report: ‘Reducing Dosing Errors with Opioid Medicines’, was issued due to the increase in number and severity of incidents concerning opioid medicines.

The following guidance must be adhered to when prescribing, dispensing or administering opioid medicines:

• Ensure that naloxone (the antidote to opioid medicines) is available in the clinical area, to treat overdose and reverse unwanted, severe adverse effects. (See Opioid Toxicity; Pain Management Clinical Guidance)

• Confirm any recent opioid dose, formulation, frequency of administration and any other analgesic prescribed for the patient.

• Ensure where a dose increase is intended, that the calculated dose is safe for the patient. Not normally more than 50% higher than the previous dose.

• Check the usual starting dose, frequency of administration, standard dosing increments, symptoms of overdose, and common side effects of that medicine and formulation.

The NPSA Safer Practice Notice 12 recommends the following strengths of opioids are used to prepare doses:

Morphine:
• 10mg in 1mL ampoules available for patients newly commenced on morphine and stat / PRN doses.
• 30mg in 1mL ampoules available for patients already established on morphine who require larger doses via the syringe driver or larger stat / PRN doses.

Oxycodone:
• 10mg in 1mL ampoules available for patients newly commenced on oxycodone and for stat / PRN doses.
• 20mg in 2mL ampoules available for patients established on oxycodone who require larger doses via the syringe driver or larger stat / PRN doses.
• 50mg in 1mL ampoules are restricted to those patients established on very high doses where there are volume problems in the syringe driver or where volume problems arise due to larger stat / PRN doses.

Dose conversion of opioids –see Dose Conversion Chart for Strong Opioids, (Wirral Drug and Therapeutics Committee: Approved March 2010)

Reducing Dosing Errors with Midazolam

The NPSA Rapid Response Report: ‘Reducing risk of Overdose with Midazolam Injection in adults’, was issued in response to reports of the wrong dose of midazolam injection being administered for procedures requiring conscious sedation.

Starting doses of midazolam at the lower end of the range, stated in the “Care of the Dying” guidance should be considered for symptom management in terminally ill patients however with regular review, subsequent daily doses should be proportional to the degree of agitation/ anxiety experienced by the patient during the terminal phase of their disease.

10mg in 2mL ampoules of midazolam are routinely used to prepare doses via syringe drivers.

This NPSA guidance recommends a stock of benzodiazepine antidote, flumazenil, is held in clinical areas where midazolam is used; however the use of this reversing agent is usually inappropriate during the management of the dying patient.

Specific information on dose titration of midazolam in the care of the dying is included in the attached ‘Management of agitation’ (see page 6). Doses should be titrated to the individual patients clinical need in accordance with these guidelines.
Care of the dying management of pain with morphine sulphate

Pain present

1. STAT: Give morphine sulphate 2.5mg to 5mg s/c.
2. COMMENCE SYRINGE DRIVER: Morphine sulphate 5mg to 10mg and haloperidol 2.5mg to 5mg s/c in 24 hours (for anti-emetic effect). [NB if patient is already receiving levomepromazine for nausea and vomiting, or agitation, via a syringe driver then haloperidol should be omitted].
3. PRN: Morphine sulphate 2.5mg s/c 3 to 4 hourly.

Pain absent

Prescribe as below in anticipation of pain

Strong opioid naive

1. STAT: If in pain, give morphine sulphate s/c PRN dose (calculated below) as the syringe driver is commenced.
2. COMMENCE SYRINGE DRIVER: To calculate the 24 hour s/c morphine sulphate dose required:
   \[
   \text{Total 24 hour oral morphine sulphate} = \frac{24 \text{ hour s/c morphine sulphate in syringe driver}}{2}
   \]
3. PRN breakthrough analgesia:
   \[
   \text{24 hour s/c morphine sulphate dose} = \frac{\text{Morphine sulphate s/c 3 to 4 hourly}}{6}
   \]
   NB To calculate subsequent morphine sulphate requirement for the next 24 hours, add all PRN s/c doses received in the last 24 hours to the current dose in the syringe driver (not normally more than 50% higher than the previous dose), and also recalculate a new PRN dose.
   NB If the 24 hour dose of morphine sulphate in the syringe driver exceeds 360mg convert opioid to diamorphine - seek specialist palliative care advice.

Strong opioid established

1. STAT: Give morphine sulphate 2.5mg to 5mg s/c.
2. COMMENCE SYRINGE DRIVER:
   Morphine sulphate 5mg to 10mg and haloperidol 2.5mg to 5mg s/c in 24 hours (for anti-emetic effect). [NB if patient is already receiving levomepromazine for nausea and vomiting, or agitation, via a syringe driver then haloperidol should be omitted].
3. PRN: Morphine sulphate 2.5mg s/c 3 to 4 hourly.

Strong opioid naive

PRN: Prescribe morphine sulphate 2.5mg s/c 3 to 4 hourly.
If 2 or more doses of morphine sulphate are required in 24 hours commence a syringe driver.

Strong opioid established

Obtain specialist palliative care advice if symptoms persist

OBTAIN SPECIALIST PALLIATIVE CARE ADVICE IF SYMPTOMS PERSIST
Care of the dying management of pain for patients established on oral oxycodone

Pain present

STAT: Give oxycodone s/c
PRN dose (calculated below), as the syringe driver is commenced

Pain controlled
Prescribe as below in anticipation of pain

1. COMMENCE SYRINGE DRIVER: To calculate the 24 hour s/c oxycodone dose required:

\[
\text{Total 24 hour oral oxycodone} = \frac{24 \text{ hour s/c oxycodone in syringe driver}}{2}
\]

2. PRN breakthrough analgesia:

\[
\text{24 hour s/c oxycodone dose} = \text{oxycodone s/c 3 to 4 hourly}
\]

NB To calculate subsequent oxycodone requirement for the next 24 hours, add all PRN s/c doses received in the last 24 hours to the current dose in the syringe driver, (not normally more than 50% higher than the previous dose), and also recalculate a new PRN dose.

OBTAIN SPECIALIST PALLIATIVE CARE ADVICE IF SYMPTOMS PERSIST
Care of the dying management of pain for patients established on fentanyl patches

**Pain present**

CONTINUE FENTANYL PATCH AND CHANGE EVERY 72 HOURS

1. **STAT:** Give a stat dose of opioid s/c – see table below.
   
   **NB:** Morphine sulphate should be prescribed as the 1st line PRN s/c opioid unless the patient is already established on oral oxycodone PRN.

2. **PRN:** Opioid s/c 3 to 4 hourly PRN for breakthrough pain. See table below.
   
   **NB:** Morphine should be prescribed as the 1st line PRN s/c opioid unless the patient is already established on oral oxycodone PRN.
   
   If 2 or more PRN doses of opioid are required in 24 hours, commence a syringe driver.

3. **COMMENCE SYRINGE DRIVER:** Add together all s/c doses given in the previous 24 hours and give in addition to the fentanyl patch. Recalculate the new PRN breakthrough dose by seeking specialist palliative care advice.

**Pain controlled**

Prescribe as below in anticipation of pain.

CONTINUE FENTANYL PATCH AND CHANGE EVERY 72 HOURS

**PRN:** Prescribe opioid s/c 3 to 4 hourly PRN for breakthrough pain. See table below.

**NB:** Morphine should be prescribed as the 1st line PRN s/c opioid unless the patient is already established on oral oxycodone PRN.

If patient is taking an alternative strong opioid as breakthrough analgesia, seek specialist palliative care advice.

If 2 or more PRN doses of opioid are required in 24 hours commence a syringe driver.

<table>
<thead>
<tr>
<th>Fentanyl patch strength</th>
<th>3 to 4 hourly morphine sulphate s/c PRN</th>
<th>3 to 4 hourly oxycodone s/c PRN</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 micrograms per hour</td>
<td>2.5mg</td>
<td>1mg</td>
</tr>
<tr>
<td>25 micrograms per hour</td>
<td>5mg</td>
<td>2.5mg</td>
</tr>
<tr>
<td>50 micrograms per hour</td>
<td>10mg</td>
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<td>75 micrograms per hour</td>
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<td>7.5mg</td>
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<td>15mg</td>
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<tr>
<td>200 micrograms per hour</td>
<td>40mg</td>
<td>20mg</td>
</tr>
<tr>
<td>300 micrograms per hour</td>
<td>60mg</td>
<td>30mg</td>
</tr>
</tbody>
</table>

**OBTAIN SPECIALIST PALLIATIVE CARE ADVICE IF SYMPTOMS PERSIST**
Care of the dying management of agitation

Agitation present

1. **STAT:** Give midazolam 2.5mg to 5mg s/c and assess response.

2. **COMMENCE SYRINGE DRIVER:** Midazolam 5mg to 10mg s/c in 24 hours. (Dose of midazolam may be titrated by adding the PRN doses required in the previous 24 hours, to the current midazolam dose in the syringe driver. (Usual dose range for midazolam 5mg to 60mg in 24 hours).

3. **PRN:** An initial dose range for PRN midazolam is 2.5mg to 10mg s/c 1 to 2 hourly. Subsequent PRN doses can be calculated as one sixth of the 24 hour syringe driver dose. **Total maximum daily dose of midazolam is 80mg s/c.**

Partial or no response, or midazolam PRN doses are ineffective

1. **STAT:** Give levomepromazine 12.5mg s/c.

2. **SYRINGE DRIVER:** Reprime and **add** levomepromazine 25mg s/c in 24 hours. (Dose of levomepromazine can be increased up to a maximum of 200mg s/c in 24 hours, but seek specialist palliative care advice at levomepromazine doses above 50mg s/c in 24 hours.)

3. **PRN:** Levomepromazine 12.5mg to 25mg s/c 4 to 6 hourly.

Agitation absent

Prescribe as below in anticipation of agitation

**PRN:** Prescribe midazolam 2.5mg to 5mg s/c 1 to 2 hourly. If 2 or more doses of midazolam are required in 24 hours, commence a syringe driver.

**OBTAIN SPECIALIST PALLIATIVE CARE ADVICE IF SYMPTOMS PERSIST**
Care of the dying management of nausea and vomiting

If patient is already taking an oral anti-emetic seek specialist palliative care advice as to whether this should continue via a syringe driver, or be switched to an alternative anti-emetic.

Nausea and / or vomiting present

1. STAT: Give levomepromazine 6.25mg s/c.
2. COMMENCE SYRINGE DRIVER:
   Levomepromazine 6.25mg to 12.5mg s/c in 24 hours.
3. PRN: Levomepromazine 6.25mg s/c 4 to 6 hourly.
   (Maximum total PRN levomepromazine s/c dose, 25mg in 24 hours).

Nausea and / or vomiting absent

Prescribe as below in anticipation of nausea and vomiting

PRN: Prescribe levomepromazine 6.25mg s/c 4 to 6 hourly.
If 2 or more doses of levomepromazine are required in 24 hours commence a syringe driver.

OBTAIN SPECIALIST PALLIATIVE CARE ADVICE IF SYMPTOMS PERSIST
Care of the dying management of dyspnoea

Dyspnoea present

Strong opioid naive

1. STAT: Give morphine sulphate 1mg to 2.5 mg s/c.

2. COMMENCE SYRINGE DRIVER:
Morphine sulphate 2.5mg to 5mg s/c in 24 hours and haloperidol 2.5mg to 5mg s/c in 24 hours (for anti-emetic effect)

[NB if patient is already receiving levomepromazine for nausea and vomiting, or agitation, via a syringe driver then haloperidol should be omitted].

3. PRN: Morphine sulphate 1mg to 2.5 mg s/c 3 to 4 hourly.

Dyspnoea absent

Prescribe as below in anticipation of dyspnoea

Strong opioid established

PRN: Prescribe morphine Sulphate 1mg to 2.5mg s/c 3 to 4 hourly.

If 2 or more doses of morphine sulphate are required in 24 hours commence a syringe driver.

If patient is established on a strong opioid other than morphine sulphate, seek specialist palliative care advice.

1. STAT: If needed give morphine sulphate s/c PRN dose (calculated below) as the syringe driver is commenced.

2. COMMENCE SYRINGE DRIVER: To calculate the 24 hour s/c morphine sulphate dose required:

\[
\frac{\text{Total 24 hour oral morphine sulphate}}{2} = \text{24 hour s/c morphine sulphate in syringe driver}
\]

3. PRN dose:
\[
\frac{\text{24 hour s/c morphine sulphate dose}}{6} = \text{Morphine sulphate s/c 3 to 4 hourly}
\]

[NB To calculate subsequent morphine sulphate requirement for the next 24 hours add all PRN s/c doses received in the last 24 hours to current dose in syringe driver (not normally more than 50% higher than the previous dose) and also recalculate a new PRN dose.

OBTAIN SPECIALIST PALLIATIVE CARE ADVICE IF SYMPTOMS PERSIST
Care of the dying management of excessive respiratory tract secretions

Excessive respiratory tract secretions present

1. STAT: Give glycopyrronium 200micrograms s/c.

2. COMMENCE SYRINGE DRIVER:
   Glycopyrronium 600micrograms s/c in 24 hours.
   NB This should be started immediately after giving the stat dose.

3. PRN: Glycopyrronium 200micrograms to 400micrograms s/c 4 hourly.
   If PRN dose is required in the initial 24 hours after commencing the syringe driver, increase glycopyrronium dose to 1.2mg s/c in 24 hours.
   NB Total maximum daily dose glycopyrronium 2.4mg s/c in 24 hours.

Excessive respiratory tract secretions absent

Prescribe as below in anticipation of secretions

PRN: Prescribe glycopyrronium 200micrograms to 400micrograms s/c 4 hourly.
   If 2 or more doses of glycopyrronium are required in 24 hours, commence a syringe driver.

OBTAIN SPECIALIST PALLIATIVE CARE ADVICE IF SYMPTOMS PERSIST