Derbyshire Symptom Management Guidance for the last days of life

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If you require medical advice about symptom management contact the Palliative Medicine consultants.

For consultants based in Derby, in working hours call 01332 788794 and the secretary will locate an available consultant. Out of hours call RDH switchboard and ask for the Palliative Medicine consultant on-call.

For consultants based at Ashgate or Chesterfield contact the consultant on-call through the CRH switchboard 01246 568801 & 01246 277271

PRESCRIBING SUBCUTANEOUS OPIOID IN THE LAST DAYS OF LIFE

Note: Morphine = morphine sulphate

Is the patient already taking Morphine or other strong opioids?

YES

Convert from oral opioid to syringe driver

Calculate the 24 hour morphine dose; if not on morphine, refer to Palliative Care Dose Equivalence Guidance (p4) to convert to oral morphine equivalent.

- **Using Morphine syringe driver:** Divide the total ORAL morphine dose by TWO, to get the equivalent dose of S.C. morphine over 24 hours via syringe driver e.g. patient on 90mg Zomorph BD = 180mg oral morphine over 24 hours = 90mg morphine continuous s/c infusion over 24 hours.
- **Using Diamorphine syringe driver:** Divide the total morphine dose by THREE, to get the equivalent dose of diamorphine over 24 hours s/c via syringe driver e.g. patient on 90mg Zomorph BD = 180mg oral Morphine over 24 hours = 60mg diamorphine continuous s/c infusion over 24 hours.

Breakthrough Analgesia (also see pages 3-5):

To calculate the breakthrough dose of:

- **Morphine,** divide the 24 hour dose **of morphine** in the syringe driver by **SIX**, e.g. if the patient is receiving 90mg morphine s/c over 24 hours the breakthrough dose of morphine is 15mg s/c prn.
- **Diamorphine,** divide the 24 hour dose **of diamorphine** in the syringe driver by **SIX**, e.g. if the patient is receiving 60mg Diamorphine s/c over 24 hours the breakthrough dose of Diamorphine is 10mg s/c prn.

- For patients on **DIAMORPHINE syringe driver** needing **MORPHINE** for breakthrough **divide the 24 hour dose by FOUR** e.g. if the patient is receiving 60mg Diamorphine s/c over 24 hours the breakthrough dose of *morphine* is 15mg s/c prn

- **Morphine oral liquid** may be used if the patient is taking sips of fluid. To calculate the equivalent oral Morphine breakthrough dose, multiply **the diamorphine s/c *breakthrough dose* by 3,** e.g. s/c Diamorphine 10mg for breakthrough up to hourly = 30mg **oral morphine** for breakthrough, **or if on morphine S.C. multiply the breakthrough SC dose by 2** eg 5mg SC = 10mg po

Transdermal Fentanyl/Buprenorphine

If the patient is using transdermal opioid but now has uncontrolled pain, ***continue the current patch dose, do not remove***, and use appropriate PRN dose s/c Diamorphine according to patch dose.
See Palliative Care Dose Equivalence Guidance page 4. If considering a syringe driver in addition to transdermal patch seek specialist advice.

NO

Anticipatory Medication

Diamorphine 2.5mg s/c prn hourly OR morphine 2.5 - 5mg s.c prn hourly
AND IF ABLE TO TAKE SIPS
Morphine 5mg orally prn hourly

If a patient requires more than 3 prn doses within 4 hours, consider whether pain is opioid responsive. A medical review of analgesia may be needed.

Reassess after 24 hours.
If persistent pain and pain opioid responsive consider a syringe driver

To calculate subsequent doses of Diamorphine or Morphine over 24 hours:

Review the doses of prn analgesia given in the previous 24 hour period. If more than one dose has been required, other than to pre-empt during care, (e.g. before a dressing etc.) then consider a 30% to 50% increase in the daily subcutaneous or transdermal dose. If this is not controlling the pain or doses need escalating on a daily basis, seek specialist advice.

If renal function is impaired, consider reducing the dose of diamorphine and morphine and increasing the prn dosing interval.
Alfentanil/fentanyl may be more appropriate analgesics - see also page 5.

Note: Morphine = morphine sulphate

DIAMORPHINE AND MORPHINE

The UK is the only country that uses diamorphine for medicinal analgesic purposes. Diamorphine is metabolised to morphine and in terms of analgesic efficacy and effect on mood, it has no clinical advantages over morphine by oral or subcutaneous/intramuscular routes. However, diamorphine is much more water soluble than morphine, and so offers advantages when high dose injections are needed, as smaller volumes can be used.

Morphine injection is cheaper than diamorphine and does not have to be reconstituted. Morphine is not as soluble as diamorphine. The maximum concentration available is 30mg/mL, which may be an issue for patients requiring high doses of subcutaneous morphine, particularly subcutaneous bolus doses for breakthrough pain where the ***volume given should not exceed 2mL***. If volume is an issue, advice should be sought from the palliative care team.

Patients may be prescribed a combination of opioids eg diamorphine in syringe driver and ***morphine*** as breakthrough. For examples of dosing see page 2 and conversion table page 4.

PALLIATIVE CARE DOSE EQUIVALENCE GUIDANCE (1 of 2)

Note: Morphine = morphine sulphate

- These dose equivalents are approximate and may need to be adjusted according to individual response.
- If your patient requires more than the equivalent of 120mg oral morphine a day consider seeking specialist palliative care advice.
- If you are prescribing for a patient with renal failure, refer to next page

Total ORAL* MORPHINE *24 hour	***ORAL* MORPHINE** *Usual maximum* ***hourly prn dose***	***S.C.* MORPHINE** *Usual maximum* ***hourly prn dose****	***S.C.* MORPHINE *OVER 24 hours***	***S.C. Diamorphine*** *Usual maximum* ***hourly prn dose****	***S.C. Diamorphine OVER 24 hours***	***ORAL Oxycodone MR (Oxycontin) twice daily***	***ORAL Oxycodone immediate release (Oxynorm)*** *Usual maximum* ***hourly prn dose***	***S.C. Oxycodone*** *Usual maximum* ***hourly prn dose****	***S.C. Oxycodone OVER 24 hours***	***Fentanyl patch 72 hourly#***	***BU TRANS*** Buprenorphine patch per hour***
20mg	2.5mg	**	10mg	1.25mg	7.5mg	5mg	1mg	**	**	6mcg/h	5mcg/h (Bu Trans)
30mg	5mg	2.5mg	15mg	2.5mg	10mg	5-10mg	2.5mg	**	7.5mg	12 mcg/h	10mcg/h (Bu Trans)
40mg	7.5mg	2.5mg	20mg	2.5mg	15mg	10mg	2.5mg	**	10mg	12 mcg/h	15mcg/h (Bu Trans)
60 mg	10mg	5mg	30mg	5 mg	20 mg	15 mg	5 mg	2.5mg	15 mg	25 mcg/h	20mcg/h (Bu Trans)
90mg	15mg	7.5mg	45mg	5mg	30mg	20mg	7.5mg	4 mg	20mg	25 mcg	Suggest use Fentanyl Patch
120 mg	20 mg	10mg	60mg	7.5mg	40 mg	30 mg	10 mg	5 mg	30mg	50 mcg/h	"
180 mg	30 mg	15mg	90mg	10 mg	60 mg	45 mg	15 mg	7.5 mg	45 mg	50 mcg/h	"
240 mg	40 mg	20mg	120mg	15 mg	80 mg	60 mg	20 mg	10 mg	60 mg	75 mcg/h	"
300 mg	50 mg	25mg	150mg	20 mg	100 mg	75 mg	25mg	12.5 mg	75 mg	75 mcg/h	"
360 mg	60 mg	30mg	180mg	20 mg	120 mg	90 mg	30 mg	15 mg	90mg	100 mcg/h	"

* Maximum **volume** of S.C bolus is **2ml**. As the maximum concentration of **morphine available is 30mg/ml** the maximum dose **morphine s.c bolus is 60mg**
****** Dose too small to be used practically. Consider alternative medication.
 # This guidance is for converting from morphine to fentanyl. If you are considering switching from fentanyl to morphine consider seeking specialist advice J Pain Symptom Manage. 1997 May;13(5):254-61. Transdermal fentanyl versus sustained-release oral morphine in cancer pain: preference, efficacy, and quality of life. The TTS-Fentanyl Comparative Trial Group. Ahmedzai S, Brooks D
*** NOTE Butrans is no longer formulary choice. Buprenorphine patches must always be prescribe by brand as the frequency to prescribe may change between brands

PALLIATIVE CARE DOSE EQUIVALENCE GUIDANCE (2 of 2)

Note: Morphine = morphine sulphate

Breakthrough analgesia
Dose of Opioid should be **1/6th** of the total daily dose (dose over 24 hours).

Conversion guidance for weak Opioids

Tramadol
Tramadol po100mg = Morphine po 10mg
Tramadol po 100mg four times daily (400mg/24 hours) = Morphine po 40mg/24 hours.

Codeine
Codeine po 30mg = Morphine po 3 mg
Codeine po 60mg four times daily (240mg/24 hours) = Morphine po 24mg/24 hours

Opioids in renal impairment

Morphine, diamorphine, codeine, tramadol and oxycodone are metabolised to active metabolites which are excreted by the kidneys. In renal failure, metabolites can accumulate and have the potential to cause opioid toxicity but there is considerable interpersonal variation. Symptoms of opioid toxicity can be reduced in some patients by switching to an alternative opioid such as fentanyl or alfentanil

In the last days of life if renal function is impaired:

1. Consider reducing the dose of diamorphine or morphine and increasing the prn dosing interval.
2. If a patient appears toxic, manage symptoms of toxicity using haloperidol for nausea and hallucinations and midazolam for myoclonus and.consider a switch to alfentanil/fentanyl.
3. For advice about prescribing alfentanil/fentanyl **seek advice from your specialist palliative care team or** refer to Palliative Care Network Guidelines (PANG) https://book.pallcare.info or the Palliative Care Formularly (PCF) (login via subscription to MedicinesComplete or available in print)

RETAINED SECRETIONS IN THE LAST DAYS OF LIFE

My patient does not currently have secretions

Anticipatory Medication

Hyoscine Butylbromide 20mg sc prn hourly *

Usual effective dose 80mg in 24 hour period
Maximum dose 120mg in 24 hour period

*** REASSESS IF A SECOND DOSE IS REQUIRED WITHIN 24 HOURS**

Consider a syringe driver if prn doses helpful:
60mg Hyoscine Butylbromide in 24 hours

Usual effective dose 80mg in 24 hour period
Usual maximum dose 120mg in 24 hour period

My patient currently has secretions

For the patient retained secretions are often not bothersome due to decreased sensitivity of pharynx. Explain to loved ones that secretions are “usually a sign that (your loved one) is comfortable with saliva or mucus collecting that you or I would feel the need to cough up.”

Repositioning may help

If the relatives are concerned or the patient appears distressed:

Hyoscine Butylbromide 20mg sc stat then

Hyoscine Butylbromide 20mg sc prn hourly *

IF SYMPTOMS PERSIST – SEEK SPECIALIST ADVICE FROM YOUR PALLIATIVE CARE TEAM

RESTLESSNESS AND AGITATION IN LAST DAYS OF LIFE

My patient is comfortable at present

Anticipatory Medication

Haloperidol 1.5-3mg sc prn up to hourly (usual maximum 10mg /24 hour period)

Midazolam 2.5mg sc prn up to hourly - if 3 doses needed within 4 hours then seek medical advice

A second line, more sedating antipsychotic is Levomepromazine 6.25 – 12.5mg sc 4 hourly Olanzapine 5mg prn is recommended by NICE second line for delirium and can be given by melt tablet or subcut injection and may be preferred if sedation is not desired.

My patient has symptoms of restlessness and agitation

Consider reversible causes for example

Pain
Retention of urine or faeces
Hypoxia

Delirium

Haloperidol 1.5 - 3mg po/sc stat then

Haloperidol 1.5-3mg po/sc prn hourly (usual maximum 10mg / 24 hour period)

Anxiety

Midazolam 2.5mg sc stat then

Midazolam 2.5mg sc prn hourly - if 3 doses needed within 4 hours then seek medical advice

More able patients may use sublingual lorazepam 0.5mg hourly

Reassess every 24 hours OR SOONER if multiple prn doses are required

Consider a syringe driver if prn doses have been helpful
Dose of medication should be consistent with previous medication use in last 24 hours (usual maximum of haloperidol 10mg /24 hour period; midazolam dose should not be increased by more than 10mg each day without specialist advice). In some cases a combination of an antipsychotic and midazolam may be required.

IF SYMPTOMS PERSIST – SEEK SPECIALIST ADVICE FROM YOUR PALLIATIVE CARE TEAM

NAUSEA IN THE LAST DAYS OF LIFE

My patient is already on an entiemetic

YES

If current antiemetic has been effective, consider administering same antiemetic via syringe driver. If current antiemetic is not controlling nausea consider why:

- What is the cause of nausea?
- Would an alternative antiemetic be better?
- Seek advice if needed

NO

Nausea present

YES

Haloperidol 1.5 – 3mg sc stat.

Haloperidol 1.5 – 3mg sc prn hourly

Usual maximum 10mg / 24 hour

NO

Anticipatory Medication

Haloperidol 1.5 –3mg sc prn hourly (up to a total of 10mg / 24 hour)

Reassess every 24 hours
OR SOONER if multiple prn doses are required

Consider a syringe driver
Dose of medication should be consistent with previous medication use in last 24 hours (usual maximum of haloperidol 10mg / 24 hour)

For persistent nausea consider Levomepromazine 6.25mg sc prn 4 hourly (+/- via syringe driver) as a second line antiemetic

A total of Levomepromazine 50mg / 24 hour – including continuous and prn doses – should not be exceeded without specialist advice

In patients with Parkinsons Disease Cyclizine 25-50mg PRN tds is preferred to Haloperidol or Levomepromazine

IF SYMPTOMS PERSIST – SEEK SPECIALIST ADVICE FROM YOUR PALLIATIVE CARE TEAM

Note: Morphine = morphine sulphate

BREATHLESSNESS IN THE LAST DAYS OF LIFE

My patient is not currently breathless

Anticipatory Medication

Diamorphine 2.5mg or Morphine 2.5 – 5mg (or if on regular opioid dose as per Palliative Care Dose Equivalence Guidance) sc prn hourly for tachypnoea – if 3 doses needed within 4 hours then seek medical advice
AND
Midazolam 2.5-5mg sc prn hourly for anxiety associated with dyspnoea - for a maximum of 3 doses within 24 hours then seek medical advice

If patient is able to take sips of water you may also consider:
Morphine 5mg (adjust dose if on regular opioid) orally prn hourly
AND
Lorazepam 0.5mg hourly sublingual

Reassess every 24 hours OR SOONER if multiple prn doses are required
Consider starting a syringe driver

My patient is currently breathless and distressed

My patient is currently prescribed regular oral opioid or fentanyl patch

NO

Give anticipatory medication as soon as possible

YES

Convert total daily dose of opioid to Diamorphine or morphine sc via syringe driver following Prescribing Subcutaneous Opioid guidance **BUT** consider increasing the Diamorphine or morphine dose equivalent by 30-50% to ease dyspnoea

If using a fentanyl patch, do not remove patch – titrate up the dose of the patch or ADD syringe driver with Diamorphine or morphine at 30-50% 24 hour Diamorphine or morphine dose equivalent. If in doubt seek specialist advice.

Prescribe anticipatory opioid prn hourly based on 1/6th of total daily dose of opioid (don't forget to include fentanyl patch in this calculation if fentanyl in use)

Midazolam 2.5-5mg sc prn hourly for distress associated with dyspnoea - for a maximum of 3 doses then seek medical advice.

If patient has already used prn midazolam with effect consider combination of diamorphine/midazolam or morphine/ midazolam in syringe driver. Midazolam dose based on prn use over 24 hour

AIM for the patient's breathing to be calm and effortless

IF SYMPTOMS PERSIST – SEEK SPECIALIST ADVICE FROM YOUR PALLIATIVE CARE TEAM

GUIDELINES FOR CARE OF DIABETIC PATIENTS IN THE LAST DAYS OF LIFE

Comprehensive guidance about treating diabetes in dying patients is available - https://www.diabetes.org.uk/resources-s3/2018-03/EoL_Guidance_2018_Final.pdf

Practical points:-

1. Ensure any clinical deterioration is not due to reversible hyperglycaemia or hypoglycaemia before making further management decisions particularly if the deterioration is unexpected.

2. Regularly review the patient and their diabetes management plan as their condition changes in the **last year** of life.

3. If your patient is in the **last WEEKS** of life, refer to other guidance.
   Aim of treatment is to avoid symptoms of hyperglycaemia and hypoglycaemia, tight control is not necessary

4. If a patient has been recognised to be dying and believed to be in the **last DAYS** of life, insulin and oral agents can usually be stopped in patients with type 2 diabetes.. https://www.diabetes.org.uk/resources-s3/2018-03/EoL_Guidance_2018_Final.pdf **- see page 23 Algorithm for last days of life**

   a. Blood or urine glucose monitoring should be kept to the minimum necessary and stopped if causing distress to the patient.

   b. If death imminent i.e. expected in less than 24 hours, it may be appropriate to discontinue all monitoring and insulin, usually after discussion with the family.

5. **SEEK SPECIALIST ADVICE IF UNCERTAIN**

- Your local Palliative Care Medical Team (see p1)
- Community Diabetes Specialist Nurse
  Monday to Friday, in office hours, usually 9am to 5pm.Tel 01629 817878 Mobile 07884415168 or 07900584162