Doncaster & Bassetlaw Cancer Locality

Palliative Care Core Formulary

Approved by Doncaster & Bassetlaw Hospitals NHS Foundation Trust Drugs and Therapeutics Committee.
Introduction

This formulary for pain and symptom management is intended as a brief and simple guide for prescribers in hospital, community and primary care.

The contributors believe that the vast majority of symptoms can be effectively managed within the formulary and that its acceptance and use will enhance the quality and consistency of palliative care for patients.

More detailed prescribing advice can also be found in the Palliative Care Formulary (4th ed) edited by Twycross and Wilcock.

Note at the time of publishing this guidance:
Many drugs listed are recommended for off-label or unlicensed use, and as such, the prescriber takes personal responsibility for prescribing.

Specialist palliative care advice should be sought early to avoid symptom crisis – see contact numbers on page 2.
For further information or advice contact:

**Doncaster**
Hospital Specialist Palliative Care Team (Mon-Fri):
- Macmillan Specialist Palliative Care Nurses  
  Tel: 01302 553142 (8.30am - 4.30pm)
- Medicines Information Department  
  Tel: 01302 553201 (9am – 5pm)
Macmillan Community Palliative Care Clinical Nurse Specialists  
(Monday to Friday) Tel: 01302 796650 (8.30am – 4.30pm)
St John’s Hospice, Doncaster  
Tel: 01302 796666 (9.00am - 5.00pm)

**Bassetlaw**
Hospital Specialist Palliative Care Team (Mon – Fri):
- Macmillan Specialist Palliative Care Nurses  
  Tel: 01909 500990 (8.30 am - 4.30 pm)

Bassetlaw Hospice, Retford  
Tel: 01777 863270 (9.00am - 5.00pm)

Macmillan Community Palliative Care Clinical Nurse Specialists  
(Monday to Friday) Tel: 01777 863312 / 863373 (9am - 5pm)

Consultants in Palliative Medicine  
(Doncaster and Bassetlaw) via DRI switchboard
Dr. Anne-Marie Carey  
Dr. Maurice Fernando

Consultant Pharmacists
Dr Helen Meynell 01302 366666 ext 4306 or bleep 1155  
Lee Wilson 01909 500990 ext 2888 or via switchboard
Management of Pain
Evaluate patient’s total pain
  • Physical
  • Psychological
  • Social
  • Spiritual

WHO Analgesic Ladder

Step 1 + non-opioid

Step 2 weak opioid + non-opioid
  Don’t switch between weak opioids

Step 3 strong opioid + non-opioid
  If pain persists or increases

NB Adjuvant therapy may be integrated into any step.
Oral Medication

**Step 1: Non-opioid**
Paracetamol 1g four times daily (maximum 4g in 24 hours) and/or NSAID e.g. Ibuprofen 400 mg three times daily or Naproxen EC 500mg twice daily

**Step 2: Non-opioid + weak opioid**
e.g. Codeine phosphate 30 to 60mg four times daily or Tramadol 50 to 100mg four times daily
Always prescribe Step One and Two analgesics regularly

**Step 3: Non-opioid + strong opioid**
Use either Scheme One or Scheme Two

**Scheme One**
1. Convert total daily dose (TDD) weak opioid administered to morphine equivalent e.g. Zomorph
2. Divide TDD morphine by 2 and give as modified release preparation twice daily
3. Also prescribe breakthrough pain dose of immediate release morphine
   Breakthrough dose = 1/6th TDD morphine

**Scheme Two**
1. Prescribe 2.5 to 5mg immediate release morphine as required
2. After 24 to 48 hours calculate TDD morphine required to control pain
   TDD morphine = sum of all as required (or PRN) doses given over last 24 hours
3. Convert to modified release preparation (see steps 2 and 3 of Scheme One)

NB Regular Review. Opioid requirements should be reviewed regularly.
If two or more as required doses are required in 24 hours, the regular modified release dose should be increased appropriately.
Always remember to increase breakthrough dose (= 1/6th TDD regular modified release strong opioid) accordingly.
Additional prescribing information

- Co-prescribe laxatives (see constipation section).
- Consider co-prescription of anti-emetics (see nausea and vomiting section).
- See current edition of the BNF for list of preparations available. BNF is available as an app that is updated monthly.

Morphine Intolerance

Before changing from oral morphine remember that only a few patients have genuine morphine intolerance. However, it is worth switching to another opioid if:

- Patients are suffering severe side effects such as nausea, itch, confusion, myoclonic jerks, bronchospasm etc.
- Patients are unable to swallow.
- Patients are in renal failure and therefore are in danger of opioid toxicity. Such patients should be switched to opioids which have inactive metabolites e.g. fentanyl or alfentanil.
- Seek specialist advice if needed.
Fentanyl Transdermal

Do not use in opioid naive patients.

NB Fentanyl 25mcg = 60 to 90mg Morphine daily (i.e. Zomorph 30 to 45mg twice daily).

Contraindicated in unstable pain where rapid titration of opioid is required.

Change patch every 72 hours.

Co-prescribe breakthrough doses of immediate release strong opioid and titrate to pain.

For breakthrough pain dose - see opioid conversion chart on page 10.

Analgesic concentrations are reached in 12 hours.

- 4 hourly opioid – continue to give until pain controlled.
- Modified release opioid – apply patch when last dose of MR opioid given.
- Syringe driver – discontinue driver 12 hours after applying patch.

Disposal of fentanyl patches

Ensure the patches have been folded in half with the sticky sides inwards. Place in the original packet and dispose of in domestic waste / sharps bins away from the reach of children. Wash hands before and after handling fentanyl patches.

Buprenorphine

There are limited therapeutic reasons for buprenorphine usage in palliative care, and fentanyl is preferred. The following is for dosage equivalence information only.

<table>
<thead>
<tr>
<th>Buprenorphine Patch</th>
<th>Equivalence to Morphine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transtec 35mcg/hr</td>
<td>84mg morphine</td>
</tr>
<tr>
<td>Transtec 52.5 mcg/hr</td>
<td>126mg morphine</td>
</tr>
<tr>
<td>Transtec 70 mcg/hr</td>
<td>168mg morphine</td>
</tr>
<tr>
<td>Butrans 5 mcg/hr</td>
<td>12mg morphine</td>
</tr>
<tr>
<td>Butrans 10 mcg/hr</td>
<td>24mg morphine</td>
</tr>
<tr>
<td>Butrans 20 mcg/hr</td>
<td>48mg morphine</td>
</tr>
</tbody>
</table>

There is a generic buprenorphine patch available in the same strengths as TRANSTEC (Hapoctasin), but this patch needs changing every 72 hours as opposed to every 96 hours. It is recommended that buprenorphine patches are prescribed by brand to avoid confusion.
**Subcutaneous route via syringe driver**

**Indications**
- Persistent nausea and vomiting.
- Patient unable to swallow or absorb.
- Terminal phase.

**Treatment of pain using a syringe driver**
1. Morphine sulphate (most cost-effective opioid, compatibility in syringe drivers better).
2. Alfentanil (in renal impairment).
3. Oxycodone.
4. Diamorphine (for very high doses of opioid).
5. Methadone (only if initiated and stabilised by specialist palliative care team).

Dose of opioid to prescribe depends upon previous requirements and patients’ condition. Refer to opioid conversion chart on page 10 for equi-analgesic conversions. (NB all conversions are approximate).

**For opioid naive patients prescribe:**
- Morphine 10 to 20mg in 24 hours
- Alfentanil 0.5 to 1mg in 24 hours
- Diamorphine 5 to 10mg in 24 hours
- Seek specialist advice if needed.

**Converting from oral morphine to subcutaneous opioid**
To convert oral morphine to subcutaneous morphine divide the TDD of oral morphine by 2 e.g. On Zomorph 60mg twice daily = 120mg TDD = 60mg subcutaneous morphine.

To convert oral morphine to subcutaneous diamorphine divide the TDD of oral morphine by 3 e.g. On Zomorph 60mg twice daily = 120mg TDD = 40mg subcutaneous diamorphine.
A guide to equivalent doses for opioid drugs
NB this is to be used as a guide rather than a set of definitive equivalences. Most data on doses is based on single dose studies so is not necessarily applicable in chronic use, also individual patients may metabolise different drugs at varying speeds. Therefore by necessity doses have been rounded up or down to fit in with the preparations available.

<table>
<thead>
<tr>
<th>Oral Morphine</th>
<th>Subcutaneous morphine</th>
<th>Subcutaneous diamorphine</th>
<th>Oral Oxycodone</th>
<th>Subcutaneous oxycodone</th>
<th>Subcutaneous alfentanil</th>
<th>Fentanyl patch</th>
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<tbody>
<tr>
<td>Breakthrough dose (mg)</td>
<td>12hr MR dose (mg)</td>
<td>24hr total dose (mg)</td>
<td>Breakthrough dose (mg)</td>
<td>24hr total dose (mg)</td>
<td>Breakthrough dose (mg)</td>
<td>12hr MR dose (mg)</td>
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<td>360</td>
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<td>240</td>
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</tbody>
</table>

# These fentanyl conversions do not fully reflect the current BNF recommendations up to 100micrograms of fentanyl. The BNF conversions apply to patients that have been stabilised long term on opioids. Doses should be used as a guide only and should be carefully titrated according to clinical response.

*Fentanyl conversions become less reliable as the dose of morphine (or equivalent) increases. Ensure adequate breakthrough doses are prescribed to enable titration. Patients on fentanyl patches over 150microg/hr (or equivalent opioid dose) should receive specialist palliative care input.
Fentanyl Patches in Terminal Care

When initiating a syringe driver in terminal care DO NOT REMOVE PATCH. Continue to change every 72 hours (to maintain existing therapy). Add subcutaneous strong opioid as required and titrate to control pain. If more than 2 breakthrough doses in 24 hours convert to syringe driver.

When using a syringe driver and patch concurrently, remember to include fentanyl dose when calculating breakthrough dose.

Example:
Patient on 100microgram/hr fentanyl patch. Do not remove patch.
Has had 3 x 20mg morphine subcutaneous doses in last 24 hours.
• Start syringe driver with 60mg morphine over 24 hours.
• Add up total morphine equivalence to calculate breakthrough doses.

100microgram/hr fentanyl patch = 180mg subcutaneous morphine + 60mg in driver = 240mg morphine total.
Breakthrough dose is 1/6th of 240mg = 40mg morphine.

Titrate dose to patients need.
Review previous 24 hours breakthrough doses and adjust syringe driver dose accordingly – remember to calculate the appropriate breakthrough dose too at each dose change.
If a greater than 50% increase is required, seek specialist advice.

Breakthrough pain dose = 1/6th 24 hours subcutaneous strong opioid dose.

Adjuvant Analgesics
Consider adjuvant analgesics at all steps of the analgesic ladder:

Bone pain and soft tissue pain
NSAID: Ibuprofen 400mg three times daily
         or Naproxen EC 500mg twice daily
Neuropathic Pain
Amitriptyline 10mg at night. Titrate to maximum 75mg at night.

Gabapentin  300mg at night on Day 1 and then
300mg twice daily increasing gradually up to 600 to 800mg
three times daily (or the lowest effective dose)
(Elderly – start at 100 mg three times daily or lower)

Pregabalin  75mg twice daily
Increase dose on day 3 and 10 if required
Maximum dose 300mg twice daily
(Elderly – start at 25mg twice daily)

For dosing in renal impairment, seek specialist advice.
Patients already taking weak or strong opioids may find the opioid dose can be reduced if there is a good response to adjuvant analgesics.
Seek specialist advice if symptoms uncontrolled or major side effects.
Specialist team may consider drugs like Clonazepam, Ketamine or Methadone. No specific dose information is included here in the formulary for these agents as they should be initiated by the specialist palliative care team only.

Colic
Consider cause e.g. constipation.

Acute spasm: Hyoscine butylbromide (Buscopan) 20mg as required subcutaneously.

Persistent colic: Hyoscine butylbromide 40 to 120mg over 24 hours subcutaneously (via a syringe driver).

Please note: Hyoscine butylbromide is incompatible with cyclizine in a syringe driver.

Liver Pain
Dexamethasone: 4mg twice daily (morning and lunchtime) for 3 days then review.

Raised Intracranial pressure
Dexamethasone: 8mg twice daily (morning and lunchtime) for 3 days then review.
Management of Common Symptoms

Dry Mouth
Ensure good oral hygiene, keep mouth moist, maintain fluid intake where possible, suck pineapple chunks or chew gum, then consider:
• artificial saliva preparations (e.g. Saliva Orthana) or
• as a second line (or on the advice of the specialist palliative care team), an oral mucosal protectant (e.g. Gelclair).

Oral Thrush
Nystatin 100,000 units four times daily (7 days) or Fluconazole 50mg once daily (7 days).
If no improvement after 1 week treatment, consider sending oral swab.
If known oesophageal involvement, use fluconazole.

Constipation
Consider rectal examination.
Consider drug and metabolic causes e.g. antimuscarinics, hypercalcaemia.
Avoid bulking agents.
The aim of laxative therapy is to achieve comfortable defecation rather than any particular frequency of evacuation.
Doses or frequency of administration should be altered to achieve this.
ASSESS WHETHER IMPACTED

IMPACTED

Initially insert Bisacodyl Supp and Glycerine Supp.

Day 1 / 2
Microlax Enema in the evening and the following morning

Day 2 / 3
Movicol up to 8 sachets per day or consider Picolax (seek specialist advice)

Co-prescribe regular oral laxative therapy (option A or B)

NOT IMPACTED

Day 1 / 2
Prescribe option A or B (see below)

Day 3 / 4
Prescribe Movicol sachets 1-3 daily or prescribe high dose option A or B)

Consider rectal treatment (see impacted)

Option A
(Start dose)
Senna 2 nocte
Docusate 100 - 200mg bd

(High dose)
Senna 2 nocte
Docusate 200mg bd

Option B
(Start dose)
Co-danthramer 2 caps daily
or Co-danthramer liquid 10ml daily

(High dose)
Co-danthramer strong 2 caps daily
or Co-danthramer strong liquid 5-10ml daily
Nausea and Vomiting
Exclude bowel obstruction because caution is required with prokinetic agents. Consider subcutaneous route initially, then convert to oral route once symptoms resolve.

Consider the cause:

- **Opioid induced or chemical toxins**
  Haloperidol 1.5mg orally at night or up to 5mg over 24 hours subcutaneously (via a syringe driver).

- **Motion sickness, brain metastases or labrynthitis**
  Cyclizine 50mg three times daily or 150mg over 24 hours subcutaneously (via a syringe driver). Caution in renal impairment or heart failure.

- **Gastrointestinal stasis**
  Metoclopramide 10 to 20mg orally three times daily or 30 to 100mg over 24 hours subcutaneously (via a syringe driver), or domperidone 10 to 20mg orally three times daily. Refer for specialist advice, if required. Do not use metoclopramide or domperidone with cyclizine.

- **Multifactoral or refractory symptoms**
  Consider combination treatment e.g. cyclizine plus haloperidol or levomepromazine 6.25 to 12.5mg orally or subcutaneously at night or 6.25 to 25mg over 24 hours (via a syringe driver).

Uncontrolled nausea and vomiting or bowel obstruction: seek specialist advice.
**Dyspnoea**
Exclude reversible causes and treat if appropriate.

Remember non-drug management e.g. cool draught, fan, reassurance.

**Opioids**  see page 4

- **If already taking regular strong opioid e.g. for pain.**
  - Assess response to administration of breakthrough dose of strong opioid.
  - If effective titrate according to symptoms.
  - Increase regular slow release dose as appropriate.

An equivalent dose of subcutaneous strong opioid can be used if the patient has swallowing difficulties.

Consider lorazepam 0.5mg sublingually as required for associated anxiety.

**Benzodiazepines for dyspnoea**
Lorazepam 0.5mg orally at night (tablet can also be administered sublingually), titrating the dose in 0.5 to 1mg increments to a maximum dose of 4mg in 24 hours.

or

Midazolam 2.5 to 5mg subcutaneously as required (total daily dose required to control symptoms could be administered via a syringe driver).

**Hallucinations**
Consider reversible causes (e.g. brain metastases, opioids).
Haloperidol 0.5 to 1.5mg orally once or twice daily or 2.5 to 5mg subcutaneously as required.
Agitation
Consider reversible causes (e.g. hypercalcaemia, urinary retention, constipation) and non-drug management.
Lorazepam 0.5 to 1mg orally as required (maximum dose: 4mg in 24 hours).
Diazepam 2 to 5mg orally as required (maximum dose: 20mg in 24 hours).
or
Midazolam 2.5 to 5mg as a single subcutaneous dose.
Seek specialist advice if uncontrolled symptoms.

Terminal Agitation
Midazolam 2.5mg to 5mg as a single subcutaneous dose and as required.
Then consider commencing on 10mg in syringe driver over 24 hours, increasing as appropriate.
If requiring more than 30mg of midazolam in 24 hours (including as required), seek specialist advice.

Excessive Respiratory Secretions (Death Rattle)
Stop any subcutaneous or intravenous fluids.
Hyoscine butylbromide.
20mg as a single subcutaneous dose and commence syringe driver 60mg over 24 hours with 20mg as required.
or
Hyoscine hydrobromide
400micrograms as a single subcutaneous dose and commence syringe driver 1200micrograms over 24 hours with 400micrograms as required.
Titrade according to symptoms, if symptoms persist after 12 to 24 hours increase syringe driver to 2000micrograms over 24 hours with 400micrograms as required.