Palliative Care Guidelines

NECN Palliative Care Clinical Group
PALLIATIVE CARE

These guidelines have been developed, by a multi-professional steering group of specialists working in palliative care, to provide advice on the management of common symptoms. A rigorous process of drafting, consultation and review has enabled all palliative care teams across the network to contribute to the final version. Thus, as far as possible, the content represents consensus informed by available evidence.

The guidelines are for clinical staff whose work includes the care of patients with palliative care needs but for whom this work does not comprise the majority of their role. National documents refer to this work as ‘generalist palliative care’.

Guidelines are a place to begin. They cannot replace specialist advice from experienced clinicians. Fundamental to the practice of palliative care is an emphasis on individualised care for the patient.

If symptoms fail to respond to usual measures, or if you are concerned that the recommendations given here may not be appropriate to the clinical situation, please contact your local specialist palliative care team. Contact numbers are listed on the final pages of this booklet.

Thanks are due to all who contributed to the development of these guidelines and in particular to the following people who have been members of the steering group process:

Ms Inga Andrew, Palliative Care Pharmacist, St Benedict’s Hospice
Dr Jane Bentley, Consultant in Palliative Medicine, University Hospital Hartlepool
Mrs Alison Conner, Nurse Consultant in Palliative Care, Hartlepool Hospice
Dr Rosie Finnegan, Associate Specialist, Teesside Hospice
Dr Eleanor Grogan, Consultant and Honorary Clinical Senior Lecturer in Palliative Medicine, North Tyneside General Hospital
Mr Mel McEvoy, Nurse Consultant in Palliative Care, North Tees University Hospital
Dr John McPhee, former Medical Director, Hartlepool Hospice
Dr Alex Nicholson, Consultant in Palliative Medicine, The James Cook University Hospital (Steering group chair)
Dr Norma O’Leary, Consultant in Palliative Medicine, Marie Curie Hospice, Newcastle & Gateshead Health NHS Foundation Trust
Dr Christine Pollitt, formerly SpR in Clinical Genetics, Northern Deanery
Ms Chris Ward, Nurse Consultant in Adult Palliative Care, North Yorkshire and York PCT

Review Date: March 2013

On behalf of everyone who has contributed I hope you find these guidelines both clear and helpful, to the benefit of the patients in your care and to your own practice. Observations or comments which may inform future review of this booklet are welcome and should be directed to me: alex.nicholson@stees.nhs.uk

Dr Alex Nicholson FRCP
Consultant in Palliative Medicine
NECN Palliative Care Clinical Lead
INDEX
Symptom overview and links .................. 3
Approaching the management of pain ........ 4
Using opioids for pain in palliative care ..... 6
Constipation ..................................... 10
Management of nausea and vomiting .......... 12
Guidance on use of corticosteroids in Palliative Care ...... 14
Suspected spinal cord compression ............ 15
Malignant hypercalcaemia .................... 16
Major haemorrhage ............................ 17
Malignant superior vena caval obstruction ... 18
End of life symptom control flowcharts ....... 19
Palliative care service contact information ... 25

FURTHER READING

OTHER REFERENCES
PALLIATIVE CARE

The WHO defines palliative care as:

“the active, holistic care of patients with advanced, progressive illness. Management of pain and other symptoms and provision of psychological, social and spiritual support is paramount. The goal of palliative care is achievement of the best quality of life for patients and their families.”

The principles of palliative care are relevant to patients with both malignant and non-malignant disease and apply to patients early in their disease trajectory. Therefore the palliative care approach should not focus only on cancer patients at the end of life.

The commonest symptoms include:

<table>
<thead>
<tr>
<th>Pain</th>
<th>Anxiety</th>
<th>Fatigue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathlessness</td>
<td>Nausea</td>
<td>Vomiting</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>Depression</td>
<td>Confusion</td>
</tr>
<tr>
<td>Anorexia</td>
<td>Insomnia</td>
<td>Constipation</td>
</tr>
</tbody>
</table>

Key principles of symptom management

Several principles are fundamental to the palliative care approach and its success:

- To conduct detailed assessment with patient and carers
- To diagnose cause and effect of each symptom using knowledge of pathophysiology and disease processes
- To choose appropriate treatment for the individual, balancing benefit against side effect burden, and considering factors such as route of administration
- To avoid making too many changes at once or review will be complex
- To reassess constantly – “review, review, review”
- To anticipate future problems and plan ahead as much as possible.

This guideline booklet does not address every symptom and it is not the intention of the booklet to replace the excellent handbooks of palliative care and symptom control which exist. Its purpose is to provide:

- Concise and accessible information on the management of common symptoms.
- Awareness of the main palliative care emergencies.
- Guidance on the management of five symptoms common in the last days of life.

Further guidelines and useful links can be accessed via the North of England Cancer Network website – www.cancernorth.nhs.uk
APPROACHING THE MANAGEMENT OF PAIN

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. It is a highly subjective phenomenon.
Simple definition: “pain is what the patient says it is”

The concept of TOTAL PAIN is commonly used in Palliative Care to prompt health professionals to consider all possible influences on the pain experience:

When to consider support from the Specialist Palliative Care Team (SPCT)
Specialist Palliative Care Teams are experienced in the management of complex pain. Advice is available on the use of standard, adjuvant and non-drug measures to manage pain. It may be appropriate for you to refer for assessment, treatment and review if:
- Assessment is difficult because of complex or multiple pains
- The pain(s) prove resistant to usual measures
- Adverse effects of medication cause difficulty with choice of treatment(s)
- Pain is associated with more than usual distress, particularly where non-physical factors are involved.

If in doubt, please ask your local SPCT for advice.

Assessment
Careful initial assessment is very important and should include clear documentation of findings. This allows the assessing clinician, and others, to compare progress in management against the early features.
Many pains change with time and frequent reassessment is necessary, especially during and after interventions.
Multiple sites and/or types of pain are common. EACH pain should be assessed, documented, managed and reviewed.
Charts may be used to record site & radiation of pains, and associated clinical findings.
Pain scores or scales, though subjective, may allow the patient to rate the severity of the pain.

Each pain should be assessed for:
- Site, severity, radiation and characteristics of its timing/frequency/variation
- Quality using descriptive terms (e.g. burning, tingling, throbbing, etc)
- Exacerbating and relieving factors including the effects of drug & non-drug interventions
- Associated symptoms and features

Other factors should be determined: patient’s understanding, fears & concerns; previous experience of pain; expectations of treatment; other social, psychological and spiritual issues.
Physical examination should be performed to assist diagnosis of type and cause of pain.
Relevant investigations, appropriate to the patient’s condition, should be considered, e.g. biochemistry (which may influence drug choice) and X-rays/scans.

Prescribing guidance
Use the oral route wherever possible.
Use a non-oral route if necessary, eg dysphagia, vomiting, bowel obstruction, terminal phase.
Prescribe regularly at an interval appropriate to the formulation.
Prescribe “as required” analgesia for pain that may occur despite regular treatment.
Treatment
The WHO analgesic ladder remains the mainstay of our approach to analgesia. Move up to the next step if pain control is not achieved.

<table>
<thead>
<tr>
<th>STEP 1</th>
<th>Paracetamol and/or NSAID (plus adjuvant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEP 2</td>
<td>Paracetamol and/or NSAID PLUS opioid for mild/moderate pain (plus adjuvant)</td>
</tr>
<tr>
<td></td>
<td><em>Opioid for mild/moderate pain = codeine, dihydrocodeine, tramadol</em></td>
</tr>
<tr>
<td>STEP 3</td>
<td>Paracetamol and/or NSAID PLUS opioid for severe pain (plus adjuvant)</td>
</tr>
<tr>
<td></td>
<td><em>Opioid for severe pain = morphine, diamorphine, oxycodone, fentanyl, hydromorphone</em></td>
</tr>
<tr>
<td></td>
<td><em>(for rescue analgesic, use 1/6th daily dose of regular opioid)</em></td>
</tr>
</tbody>
</table>

Adjuvant analgesic drugs (co-analgesics) may be used alongside any step of the ladder. An adjuvant analgesic is a drug whose primary indication is for something other than pain, but which has analgesic effects in some painful conditions. Dose guidance for use of corticosteroids is included in this symptom control handbook. Dose initiation and titration of other drugs must follow BNF guidance supported by specialist advice.

### Common adjuvant analgesic drug groups

<table>
<thead>
<tr>
<th>NSAIDs</th>
<th>Bone pain, soft tissue infiltration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corticosteroids</td>
<td>Raised intracranial pressure, nerve compression, liver capsular pain, soft tissue infiltration</td>
</tr>
<tr>
<td>Antidepressants, Anticonvulsants</td>
<td>Neuropathic pain, tenesmoid pain</td>
</tr>
<tr>
<td>Muscle relaxants (baclofen, benzodiazepines)</td>
<td>Muscle cramp/spasm, myofascial pain</td>
</tr>
<tr>
<td>Bisphosphonates</td>
<td>Bone pain</td>
</tr>
</tbody>
</table>

Adverse effects
Prescribers must know the adverse effects and contraindications of all medications that they prescribe and should consult the BNF if they are unsure. The common adverse effects of opioids are explained on page 6.

**NB:** any combination of NSAID, aspirin, corticosteroid, SSRI and/or anticoagulant will increase substantially the risk of GI toxicity in palliative care patients. The drug regime should be reviewed and a PPI prescribed to reduce this risk.

“Review, review, review”
Success in pain management depends upon regular review of pain and its causes as well as the efficacy and tolerability of treatment.
Morphine is the first line strong opioid analgesic of choice.

1. Using opioid drugs safely

Morphine and other opioids relieve severe pain in patients with advanced malignant and non-malignant disease. These drugs are safe, effective and appropriate provided that:

- cautious starting doses and titration are observed
- the properties and relative potencies of different strong opioids are understood
- opioid-related adverse effects are monitored and managed
- prescribers are aware that some types of pain are poorly responsive to opioids and require other types of analgesics (adjuvant analgesics)

2. Common concerns over the use of morphine and other opioids

Opioids and addiction
Clinical experience suggests that when opioids are titrated against moderate/severe opioid responsive pain, addiction is exceptionally rare. Patients should be reassured that if the pain is removed by some other intervention, the opioid dose may be reduced and the drug discontinued without adverse effect. If increased doses do not improve analgesia this may indicate tolerance or that the pain is poorly opioid responsive - seek specialist advice.

Opioids and respiratory depression
All opioids have the potential to cause respiratory depression. Pain antagonises this effect. Dose titration, clinical judgement and regular review should avoid complications. Used appropriately, opioids are safe for patients with cardio-respiratory disease.

Opioids and renal impairment/failure
Most opioids or their metabolites have the potential to accumulate in patients with impaired renal function. In mild renal impairment doses will therefore need to be reduced, especially if renal function deteriorates further in a patient on a stable dose. Cautious titration, usually involving extended dose intervals, and close monitoring for opioid adverse effects is necessary to avoid complications. Sustained release formulations should be avoided if analgesic requirements or renal function are unstable. Check renal function if a patient previously stable on opioids develops adverse effects. Moderate or severe renal impairment will influence choice of opioid - seek specialist advice.

3. Management of opioid adverse effects

- **constipation** – common and persists during opioid treatment. Prescribe a combined softening/stimulant laxative (e.g. codanthrusate, codanthramer) and review every 2-3 days to achieve a bowel habit acceptable to the patient.
- **nausea/vomiting** – common at initiation of opioid but patients usually become tolerant to this within one week. Prescribe anti-emetic (either haloperidol 1.5mg nocte or metoclopramide 10mg tds) for the first week then discontinue.
- **sedation** – fairly common during first few days of treatment. Tolerance usually develops. Reassure patient initially unless side effect is severe. If persists, reduce dose and re-titrate. Sometimes necessitates change to alternative opioid.
- **dry mouth** – fairly common and can persist.

4. Opioid toxicity

Myoclonic jerks, pin-point pupils (miosis), hallucinations and confusion are signs of potential opioid toxicity. Reduce dose. Check renal function. Consider whether pain is truly opioid responsive. Consider switch to alternative opioid. Seek advice.
5. Opioid titration - morphine is the WHO pain ladder step 3 opioid of choice
   1. Ideally start Normal (or ‘immediate’) Release (NR) morphine 4-hrly
   2. Sometimes titration with Modified Release (MR) morphine is appropriate
   3. Never titrate with transdermal preparations in unstable pain or opioid naïve patients
   4. Always adjust the breakthrough dose if the regular dose is changed (up or down)
   5. Prescribe a laxative and anti-emetic as described in section 3 on previous page
   6. Monitor closely for efficacy, adverse effects and toxicity

Opioid titration sequence – using morphine as the example
(Where MST stated, Zomorph or Morphgesic apply equally)

<table>
<thead>
<tr>
<th>What to do if pain is uncontrolled on WHO step 2 analgesic at full dose (e.g. codeine 60mg qds, dihydrocodeine 60mg qds, tramadol 100mg qds)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Using Normal Release morphine</strong></td>
</tr>
<tr>
<td>Stop WHO step 2 drug</td>
</tr>
<tr>
<td>Start morphine (oramorph liquid or sevredol tablets) 10mg 4-hrly</td>
</tr>
<tr>
<td>(Aim for 5 doses/24hrs; omit dose in night)</td>
</tr>
<tr>
<td>Also prescribe same dose ‘prn’ for breakthrough pain</td>
</tr>
<tr>
<td>Review after 24hrs</td>
</tr>
<tr>
<td>If sedated/toxic, reduce dose</td>
</tr>
<tr>
<td>If pain controlled, continue same doses and review in further 24hrs</td>
</tr>
<tr>
<td>If pain uncontrolled, add up previous 24hr morphine use (regular &amp; prn doses)</td>
</tr>
<tr>
<td>Recalculate 4-hrly requirement and prescribe nearest sensible dose</td>
</tr>
<tr>
<td>Do not increase by more than 50%</td>
</tr>
<tr>
<td>Adjust breakthrough dose</td>
</tr>
<tr>
<td>Review after 24hrs as above</td>
</tr>
<tr>
<td>When pain is controlled convert to MR formulation</td>
</tr>
<tr>
<td>Add up total morphine use in 24hrs, divide by 2 &amp; prescribe nearest sensible dose as MST twice daily</td>
</tr>
<tr>
<td>Prescribe appropriate breakthrough dose</td>
</tr>
</tbody>
</table>

| **Using Modified Release morphine**                                                                                           |
| Stop WHO step 2 drug                                                                                                           |
| Start MST 20mg twice daily                                                                                                    |
| Also prescribe oramorph liquid or sevredol tablets 10mg ‘prn’ for breakthrough pain                                          |
| Review after 24hrs                                                                                                              |
| If sedated/toxic, reduce dose                                                                                                 |
| If pain controlled, continue same doses and review in further 24hrs                                                           |
| If pain uncontrolled, increase the MST taking into account the breakthrough doses given in the previous 24hrs (Adjust the MST to a practical dose) |
| Do not increase by more than 50%                                                                                               |
| Adjust breakthrough dose                                                                                                       |
| Review after 24hrs as above                                                                                                    |
| When pain controlled, continue same doses                                                                                  |
| Arrange ongoing review appropriately                                                                                          |

NB: Use lower starting doses in elderly, frail or renal impairment (e.g. 2.5-5mg prn/4-hrly and 5-10mg MST bd)

6. Breakthrough or rescue doses of opioids
   Treat breakthrough pain with normal/immediate release opioid at a dose which is approximately 1/6th of the total 24hr opioid dose to be given as needed.
   An appropriate breakthrough dose of normal release opioid should have onset of action between 15-30 mins and last 3-4hrs.
Severe, refractory or recurrent pain may need more frequent doses. Under close supervision, a breakthrough dose may be repeated after 60-90 mins. Do not repeat sooner in case delayed absorption results in a double dose with risk of toxicity.

7. Guidance on timing of switches between different routes of administration

- When changing the route of administration and formulation, always use the opioid dose conversion chart guidance (on the next page).
- If the opioid switch is because of opioid toxicity, apply a dose reduction of 50% when calculating the dose of the new opioid.

Oral to subcutaneous infusion
From normal release opioid: start syringe driver immediately.
From 12-hrly modified release opioid: start syringe driver 4 hrs before next oral dose due.

Subcutaneous infusion to oral
When switching to either normal or modified release opioid, stop the syringe driver at the same time as giving the first oral dose.

Oral to patch
From normal release opioid: apply patch when convenient and use oral normal release opioid only as required.
From twice daily modified release opioid: apply patch at same time as last dose of MR oral opioid.
From once daily modified release opioid: apply patch 12 hrs after last dose of MR opioid.
Breakthrough/rescue doses may be needed whilst transdermal absorption is established.

Patch to oral
Remove patch 6 hrs before giving first dose of oral modified release opioid.
For first 24 hrs (i.e. first two doses) give HALF the calculated equivalent dose since the transdermal fentanyl will take time to be cleared from plasma and subcutaneous reservoir.
After 24hrs increase to the calculated equivalent dose if clinically indicated by pain.

Patch to subcutaneous infusion
This does not apply to patients in the dying phase – see page 20
In other situations where a change from patch is required, remove patch and start syringe driver 6 hrs later. For the first 24 hrs use HALF the calculated opioid equivalent dose. After 24hrs adjust according to symptoms.

Subcutaneous infusion to patch
Apply patch. Continue subcutaneous infusion for a further 6 hrs then discontinue syringe driver.

8. Emergency treatment of opioid toxicity is indicated if:
- Respiratory rate (RR) < 8/min AND difficult to rouse, OR
- RR <12/min AND difficult to rouse AND cyanosed, OR
- RR < 12/min AND difficult to rouse AND PaO2 < 90% on pulse oximeter

Action (please follow local guidance where this exists)
- Stop opioid
- Secure i-v access
- Dilute 0.4mg naloxone in 10mls 0.9% saline
- Give 0.5ml (=20mcg naloxone) every 2mins i-v until satisfactory respiratory status
- Review renal function, pain and analgesic requirements

N.B. If long acting opioid (e.g. modified release formulation or methadone) is responsible, may need infusion as the half life of opioid will be longer than that of naloxone. Reversal of buprenorphine toxicity may require large doses of naloxone.
9. Opioid alternatives to morphine (drugs suitable for use on WHO ladder step 3)

<table>
<thead>
<tr>
<th>Oral opioid</th>
<th>Subcutaneous infusion of opioid</th>
<th>Opioid by patch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose in mg per 24 hours</td>
<td>Syringe driver dose in mg per 24hrs</td>
<td>(In mcg/hr 72hrly patches)</td>
</tr>
<tr>
<td>Morphine</td>
<td>Oxycodone</td>
<td>Morphine</td>
</tr>
<tr>
<td>½ oral morphine dose</td>
<td>½ oral morphine dose</td>
<td>½ oral oxycodone dose</td>
</tr>
<tr>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>40</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>90</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>180</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>280</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>360</td>
<td>180</td>
<td>Use alfentanil</td>
</tr>
</tbody>
</table>

Conversion ratios stated between opioids are for guidance only and further dose adjustment, up or down, may be needed.

10. Opioid monographs

**Diamorphine & morphine:** Di-acetylmorphine is metabolised to morphine. It has no clinical advantage over morphine but a practical advantage is high solubility making it ideal for administration by subcutaneous infusion and for combination with other drugs.

**Fentanyl:** *(Durogesic D-trans patch)* Synthetic opioid delivered by transdermal formulation (patch) changed every 72hrs. Advantages of non oral route and compliance. Less constipating than morphine. Note potency – see conversion chart. Time taken to achieve stable dose when applied (and to lose subcutaneous reservoir when removed) causes difficulties with titration. Not suitable for unstable pain.

**Oral Transmucosal Fentanyl Citrate:** Formulations include ‘lozenge’ and buccal preparations relying upon direct absorption across the mucosa and avoiding first pass metabolism. The mouth must be moist for success. Rapid absorption of fentanyl may provide analgesia within 5-10 mins. This is potentially useful in management of movement related and procedure related pain. Various doses are available. You are recommended to seek specialist advice about use and titration.

**Oxycodone:** Semi-synthetic opioid probably active at different opioid receptors from morphine/diamorphine. Alternative opioid if problems with morphine tolerability or toxicity. Alleged to be better in neuropathic pain but this is a conclusion drawn from trials against placebo, not against other opioids.

**Hydromorphone:** Opioid analgesic for severe pain sometimes used as an alternative where morphine intolerance limits use or titration. Manufacturer’s guidance suggests a potency 7.5 times more than morphine. Used as an alternative opioid in renal impairment because, although metabolites accumulate, they are inactive. Limited range of oral formulations means it is inconvenient to use orally. Use via syringe driver is more usual but this is unfamiliar to some areas and specialist advice should be sought before prescribing it.

**Alfentanil:** Synthetic injectable highly potent opioid. An alternative to diamorphine where dose requirements mean volumes of infusion of morphine and oxycodone cause problems. Compatible with other drugs in syringe driver. Has a role in renal failure because no accumulation of neurotoxic metabolites (unlike morphine and diamorphine). This is an unfamiliar opioid to many areas and specialist advice should be sought before prescribing it.

**Buprenorphine:** Transtec 72-hrly patch. Low dose strong opioid (though 12mcg/hr fentanyl patch may also be useful). Stable dose achieved 12-24hrs after applying patch. Safe in renal failure and moderate liver failure. Lower doses may be achieved with Bu-trans patch changed weekly.
## CONSTIPATION

### 1. SYMPTOMS

Hard faeces, which are uncomfortable or difficult to pass; reduced frequency compared with normal pattern.
Sense of incomplete evacuation after defecation; leakage of faecal fluid/incontinence.
Colicky abdominal pain, flatulence, distension.
Nausea, vomiting, anorexia, malaise, headache and halitosis.
Constipation may lead to urinary retention and frequency.

### 2. CAUSES

**Disease related:** Immobility, reduced food intake/low residue diet, intra abdominal and pelvic disease.

**Fluid depletion:** Poor fluid intake/increased fluid loss e.g. vomiting, fever, fistula output and excessively exudative wounds.

**Weakness:** Inability to raise intra-abdominal pressure e.g. paraplegia/general debility.

**Intestinal obstruction:** disease presentation or recurrence, adhesions.

**Medications:** especially opioids, diuretics, phenothiazines, anti-cholinergic drugs (such as tricyclic anti-depressants and hyoscine salts), 5HT3 antagonists.

**Biochemical:** Hypercalcaemia, hypokalaemia.

**Other:** Embarrassment, pain on defaecation.

### 3. MANAGEMENT

Attempt to **increase fluid/fibre intake** (e.g. fruit/prune juice) and **encourage mobility**.

**Environmental measures** – provide privacy, avoid bedpans, assist a patient to the toilet where possible and use raised toilet seats if necessary.

**Anticipatory prescribing** – prescribe a laxative when starting opioids.

**Check bowel function regularly** – direct questions during assessment and review.

Use a **combination of laxatives** – stimulant and softener/osmotic agent.

**Titrate laxative** to achieve optimal stool frequency and consistency.

### 4. THINK CAREFULLY BEFORE USING...

**Stimulant** laxatives if there is a possibility of bowel obstruction.

**Lactulose** as it can cause flatulence and worsen abdominal cramps.

**Bulk** forming laxatives e.g. Fybogel, the volumes of which can be difficult for frail patients to tolerate.

### 5. FAECAL IMPACTION

**Use rectal route:** arachis oil enema to soften faeces and then bisacodyl suppositories or phosphate enema to stimulate evacuation.

**Oral alternative:** use macrogols (eg movicol) for at least 3 days until effective. NB the patient must be able to tolerate the necessary volume of oral fluids for this method to be effective.

Use sedation and analgesia if planning manual removal.

Once constipation alleviated start regular oral measures to prevent recurrence.
6. NEUROGENIC CONSTIPATION

Patients with spinal cord compression or sacral nerve damage who have lost sensation and/or control:
- Avoid oral stimulant laxatives which may cause uncontrolled/unmanageable bowel function.
- Allow the patient to become slightly constipated and use suppositories to evacuate the bowel every 2-3 days depending on comfort and food intake.
- Faecal softeners prevent hard, dry faeces therefore minimising discomfort for the patient.

7. COMMONLY USED LAXATIVES

For further information, including dosages, please refer to BNF or Palliative Care Formulary. Local preferences vary but for general guidance the following suggestions may be helpful.

**First line stimulant**: senna

**First line softener**: docusate sodium

**First line combination softener/stimulant**: co-danthrusate or co-danthramer

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
<th>Description</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osmotic Laxatives</td>
<td>Movicol Idrolax</td>
<td>Osmotic laxatives are not absorbed from the gut and so retain water in the lumen by osmotic action (this action may be partial). This increase in volume will encourage peristalsis and consequent expulsion of faeces.</td>
<td>Start with 1-3 sachets a day. (NB this volume may be difficult for frail patients) Some patients need a combination of stimulant with softener.</td>
</tr>
<tr>
<td>Softeners</td>
<td>Docusate</td>
<td>Act to reduce surface tension and improve water penetration of the stools.</td>
<td>100-200mg bd/tds Capsules preferable to medicine (bitter taste)</td>
</tr>
<tr>
<td>Stimulant Laxatives</td>
<td>Senna</td>
<td>Senna and Bisacodyl both rely on bacterial transformation in the large bowel to produce active derivatives and so have little small intestinal effect.</td>
<td>Senna 2-4 tablet nocte or 10-20-ml nocte</td>
</tr>
<tr>
<td></td>
<td>Bisacodyl</td>
<td></td>
<td>Bisacodyl 5-10mg nocte (10mg PR)</td>
</tr>
<tr>
<td>Combined stimulant and softening laxatives</td>
<td>Co-Dantramer Co-Dantrusate</td>
<td>The dantron component is predominantly stimulant in action with a direct effect in small and large intestine. Dantron is eliminated both in urine (causing an orange discolouration) and faeces and can cause contact skin damage ‘dantron burn’ which is painful.</td>
<td>Starting dose 2 capsules or 10mls nocte Co-danthramer is also available as a strong preparation, which is approximately double the strength. Dantron-containing preps are licensed for use in analgesic induced constipation in terminally ill patients.</td>
</tr>
<tr>
<td>Suppositories</td>
<td>Bisacodyl</td>
<td>Stimulant</td>
<td>10-20 mg</td>
</tr>
<tr>
<td></td>
<td>Glycerin</td>
<td>Mainly softener</td>
<td>1-2 suppositories</td>
</tr>
</tbody>
</table>
MANAGEMENT OF NAUSEA AND VOMITING

1. Attempt to determine cause by appropriate investigation. Treat reversible causes where possible.

Prompts to consider underlying cause – suggestions, not a complete list

| Infection: | UTI, pneumonia, gastro-enteritis, oropharyngeal candidosis, meningitis |
| Metabolic: | renal failure/impairment, hypercalcaemia, tumour toxins |
| Drug-related: | opioids, diuretics, NSAIDs, antibiotics, chemotherapy |
| Gastric stasis: | pyloric tumour/nodes, ascites, hepatomegaly, opioids, anticholinergic drugs, autonomic neuropathy |
| GI disturbance: | constipation, gastritis, ulceration, obstruction, hepatomegaly, ascites |
| Organ damage: | distension, distortion, obstruction, radiotherapy |
| Neurological: | raised intracranial pressure, vestibular disease, motion sickness |
| Psychological: | anxiety, associations of sights/smells |

2. Choose anti-emetic according to cause of nausea/vomiting. (see next page for specific detail about suggested drugs)

<table>
<thead>
<tr>
<th>Probable cause/specific features</th>
<th>Suggested treatment hierarchy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical causes (metabolic, drug, infection, ‘toxins’). Persistent, often severe, nausea unrelieved by vomiting.</td>
<td>First: Haloperidol&lt;br&gt;Then: Levomepromazine</td>
</tr>
<tr>
<td>Gastric stasis. Fullness/regurgitation. Reduced appetite. Nausea relieved by vomiting (often large volume &amp; undigested). Functional obstruction (failure of GI motility). Partial bowel obstruction (eg flatus PR, no colic).</td>
<td>Metoclopramide&lt;br&gt;Domperidone&lt;br&gt;Consider trial of steroids</td>
</tr>
<tr>
<td>Chemotherapy, radiotherapy (useful to distinguish between ‘acute’ and ‘delayed’ phase).</td>
<td>Acute: Ondansetron + steroids (follow local oncology guidelines)&lt;br&gt;Delayed: Aprepitant, Levomepromazine</td>
</tr>
<tr>
<td>‘Organ damage’: harm to thoracic, abdominal or pelvic viscera caused by malignancy or treatment.</td>
<td>Cyclizine</td>
</tr>
<tr>
<td>Bowel obstruction (may be high, low or multiple levels) where surgery is not appropriate. High: regurgitation, forceful vomiting, undigested food Low: colicky pain, large volume vomits, possibly faeculent.</td>
<td>First try Cyclizine OR Haloperidol&lt;br&gt;Then Cyclizine AND Haloperidol&lt;br&gt;Then Levomepromazine&lt;br&gt;Finally anti-secretory (e.g. Hyoscine butylbromide or Octreotide)</td>
</tr>
<tr>
<td>Raised intracranial pressure (possible headache, visual disturbance, other neurological signs), motion sickness.</td>
<td>Cyclizine&lt;br&gt;(Consider steroids if raised ICP)</td>
</tr>
<tr>
<td>Psychological factors, anxiety, fear, anticipation (always consider non-pharmacological management).</td>
<td>Levomepromazine&lt;br&gt;Benzodiazepine</td>
</tr>
<tr>
<td>Cause unknown/terminal phase/patient too ill for investigation.</td>
<td>Either consider Cyclizine (or Haloperidol if chemical cause likely)&lt;br&gt;Or Levomepromazine</td>
</tr>
<tr>
<td>Post operative.</td>
<td>Ondansetron / Granisetron</td>
</tr>
</tbody>
</table>

3. Route and regime
   - Patients with nausea/vomiting absorb drugs poorly by the oral route.
   - Prescribe subcutaneously for at least 24 hours if there is vomiting, obstruction and/or poor symptom control.
   - Prescribe chosen anti-emetic regularly – see drug descriptions on next page for frequency.
   - Prescribe broad-spectrum anti-emetic as required. Some specialists use single agent levomepromazine; others use cyclizine + haloperidol (evidence suggests greater potency).

4. Review – reassess symptom control within 24hrs
   - Review drug choice if symptoms persist or worsen.
   - Review route: consider switch to oral if resolving or to sub-cut if poor control.
   - If cause/symptom resolves, consider whether anti-emetic can be discontinued.
Anti-emetic drug descriptions – see BNF for more detail

APREPITANT – neurokinin receptor antagonist. Recent addition to formularies in some centres. Indicated in conjunction with dexamethasone and 5HT3 antagonists for moderate & highly emetogenic chemotherapy and for the treatment of delayed phase chemotherapy induced nausea/vomiting.

**DOSE:** follow oncology guidelines or ask for specialist palliative care advice.

CYCLIZINE – antihistaminic, anticholinergic anti-emetic. For vagally-mediated nausea/vomiting caused by any distension/compression/disturbance of viscera in thorax, abdomen or pelvis and for brain metastases. Some specialists believe that the anticholinergic effects of cyclizine block the action of metoclopramide and recommend that these drugs are not combined.

**DOSE:** Oral: 50mg tds. Syringe driver: 150mg/24hrs. If subcutaneous use causes skin irritation, increase dilution of infusion with water only or add dexamethasone 1mg to driver.

DEXAMETHASONE – corticosteroid. Potential adjuvant anti-emetic. Standard in chemotherapy induced n&v. Consider in functional and complete bowel obstruction: give subcutaneously but abandon if no obvious effect within 3-7 days. Useful in raised intracranial pressure. Always try to reduce dose to minimum effective aiming to discontinue.

**STARTING DOSE:** Oral/subcutaneous: raised ICP - 16mg; obstruction – 12mg-16mg.

DOMPERIDONE - prokinetic anti-emetic. For nausea/vomiting of gastric stasis, e.g. due to ascites, hepatomegaly, mesenteric nodes, opioids or functional/partial obstruction. Action blocked by anticholinergic effect of cyclizine: do not combine. Domperidone does not cross blood/brain barrier so avoids extrapyramidal effects of metoclopramide.

**DOSE:** Oral: 20mg bd - 20mg qds. Rectal: 30mg tds-qds (30mg PR = 10mg PO).

HALOPERIDOL – centrally acting anti-emetic. For nausea/vomiting induced by drugs/toxins/metabolites (including initiation of opioids). Useful with cyclizine in bowel obstruction. Illogical to combine with metoclopramide because both act by dopamine antagonism.

**DOSE:** Oral: 0.5-5mg nocte. Syringe driver: 1.5mg-10mg/24hrs. Doses >8mg/day risk extrapyramidal effects.

HYOSCINE BUTYLBROMIDE – antimuscarinic. Reduces GI motility (controls colic) and GI secretion (reduces volume of vomit in obstruction). Antimuscarinic (anticholinergic) effect may reduce efficacy of prokinetics. Causes dry mouth. Negligible effect if given by mouth – avoid.

**DOSE:** Syringe driver: 60mg-300mg/24hrs.

LEVOMEPROMAZINE - broad spectrum anti-emetic. Consider for refractory/persistent symptoms. Risk of sedation and hypotension (even at low dose). If prescribed regularly give at night.

**DOSE:** Oral: 6mg-25mg nocte. In clinical practice it is acceptable to use ¼ to ½ of a 25mg tablet at night. Subcutaneously: 6.25mg-25mg/24hrs via syringe driver or stat nocte. Higher doses sedate.

METOCLOPRAMIDE - prokinetic anti-emetic. For nausea/vomiting of gastric stasis, e.g. due to ascites, hepatomegaly, mesenteric nodes, opioids or functional/partial obstruction. Some specialists believe the action of metoclopramide is blocked by cyclizine and recommend that these drugs are not combined. Watch for extrapyramidal side effects due to central dopamine antagonism which also causes a weak central anti-emetic effect (see haloperidol).

**DOSE:** Oral: 10mg tds to 20mg qds. Syringe driver: 30-60mg/24hrs. Higher doses are occasionally used under specialist supervision.


**DOSE:** Give by subcutaneous infusion via syringe driver: 300mcg-1200mcg/24hrs.

ONDANSETRON (and other 5HT3 receptor antagonists) – specific anti-emetic. Not recommended for use beyond license. For nausea/vomiting post-op and in acute phase of chemotherapy/radiotherapy treatment. Side effects: constipation, headache, flushing.

**DOSE:** follow oncology guidelines where available. Available as tablets, melts, syrup, suppositories and injection.
GUIDANCE ON USE OF CORTICOSTEROIDS IN PALLIATIVE CARE

**Drug choice, formulation and indications**
Corticosteroids are used extensively in palliative care. Dexamethasone is the preferred choice due to its relatively high anti-inflammatory potency and lower incidence of fluid retention and biochemical disturbance. (Potency: Dexamethasone 1mg equivalent to Prednisolone 7.5mg).

Route & formulations: 0.5mg and 2mg tablets (water soluble); 2mg/5ml oral solution; dexamethasone injection for SC or IV use: 4mg/ml (1ml & 2 ml ampoules) and 24mg/ml (5ml ampoules).

Oral doses should be given once daily. Subcutaneous injection volumes greater than 2mls (ie 8mg) are painful. Larger doses than this should be given in divided SC doses or infused over 4 hrs via syringe driver.

Standard starting doses for the different indications are not well established and must take account of patient factors.

Clinical response must be reviewed within 7 days. Always titrate to minimum effective dose & aim to stop.

**General well-being and appetite:** Start at 4mg daily. Judge response within 2 weeks. Any enhanced effect often disappears by 4 weeks.

**Adjuvant analgesic:** 8-16mg daily in cancer-related pain (e.g. liver capsular pain, nerve compression).

**Anti-emetic:** for chemotherapy follow Oncology guidelines. Refractory nausea & vomiting: start at 4-8mg daily.

**Spinal cord compression (SCC) and raised intracranial pressure (ICP):** 16mg daily. In SCC after radiotherapy, reduce dose gradually and stop. After radiotherapy for ICP reduce to lowest dose which maintains benefit. Consider trial of dose increase if symptoms recur.

**Tracheal compression/ SVCO/ Lymphangitis carcinomatosis/ Bowel obstruction:** 8 – 16mg daily.

**Hormone therapy:** Prostate cancer no longer responding to hormone antagonism consider Prednisolone 10-20mg daily.

**Adverse effects**

**Insomnia:** To prevent insomnia give as a single dose at 8am or, if divided doses, at 8am and Noon.

**Diabetes mellitus:** Steroids can increase blood sugar levels. Patients should have a urine dipstick, baseline BM and/or venous blood glucose. If BM<8.0 and no glycosuria continue. If BM >8.1 needs regular BM monitoring. If BM>11.1 or known diabetic discuss with diabetic team.

**Dyspepsia:** Give after food. Co-prescribe a PPI if history of peptic ulcer disease or patient is also taking NSAIDs, aspirin, SSRIs and/or anticoagulants.

**Psychiatric disturbance:** depression, mania, psychosis, delirium.

**Change in appearance:** moon face, truncal obesity, negative body image.

**Musculoskeletal problems:** proximal myopathy, osteoporosis, avascular bone necrosis.

**Increased susceptibility to infection:** especially oral/pharyngeal candidosis (examine mouth regularly).

**Skin changes:** thinning, bruising, acne, striae, impaired wound healing.

**Other:** Hypertension, oedema, pancreatitis.

**Drug interactions** (see the BNF)

**Antiepileptics** accelerate steroid metabolism so patients may require higher doses of steroids.

**Warfarin:** steroids alter the metabolism of warfarin increasing INR. INR must be monitored regularly.

**Safe use: monitoring and stopping treatment**

Use the lowest effective dose for the shortest period of time. Close careful monitoring is essential.

**Steroid withdrawal:** if total treatment duration less than 5 days, may stop abruptly.

Reduce gradually if: risk of recurrent severe symptoms, repeated courses have been given, treatment duration has been longer than 5 days. Gradual reduction means reduce by 2mg/day every 5-7 days.

**Steroid treatment card:** Patients on systemic steroids for > 3 weeks must be given a steroid card. The prescriber must take responsibility for steroid monitoring. The patient and other involved professionals must be informed of the indication for steroid use and the plan for dose reduction and monitoring.

**Steroids at end of life:** If prescribed for specific severe or serious symptom, continue at the most convenient subcutaneous dose.

If prescribed for ‘general well-being’ or appetite stimulation, discontinue.
EMERGENCIES - SUSPECTED SPINAL CORD COMPRESSION (SCC)

This guidance applies only to cancer patients

Patients with suspected SCC must be assessed urgently.
Discuss possible cases with the patient’s cancer specialist or oncologist on call.
Consider this possible diagnosis in any cancer patient who goes ‘off legs’.

1. RECOGNITION
Act promptly on clinical suspicion. Plain X-rays are normal in 10-20% cases.
Do not wait for LATE SYMPTOMS/SIGNS to evolve.
Pain, especially with a root or girdle distribution, exacerbated by coughing or straining and not relieved by rest, frequently precedes neurological signs.
Any cancer patient with severe back pain in a root distribution should be considered at risk of spinal cord compression.

Late symptoms/signs:
- Limb weakness, altered gait, unsteadiness, falls
- Urinary retention, dribbling or incontinence; faecal incontinence or constipation
- Altered or reduced sensation

Cauda equina syndrome (tumour pressure below L1/L2):
- Sciatic pain, often bilateral
- Weakness/wasting of gluteal muscles
- Bladder problems including retention, overflow & incontinence
- Sacral (saddle) anaesthesia, loss of anal sphincter tone

2. IMMEDIATE ACTION
- Give dexamethasone 16mg (oral/sc/iv) unless contraindicated.
- Prescribe PPI for gastric protection (esp. if GI pathology, NSAIDs or warfarin).
- Give adequate analgesia to enable comfortable transfer for admission/investigation.
- Nurse flat if mechanical pain or neurological symptoms/signs suggest spinal instability.

3. REFERRAL FOR INVESTIGATION (for patient at home or already in hospital)
- Ideally all patients should be discussed with their cancer specialist.
- This applies especially to patients who present with dense hemiplegia or paraplegia or who may be too frail for definitive treatment.
- When indicated whole spine MRI must be done within 24hrs.
- Patients will need admission via the acute admission system to achieve this.
- If urgent MRI is not available on site, you must refer to a tertiary centre and this must be agreed by a Consultant to Consultant discussion.
- A bed must be retained at the referring hospital for patients who do not require treatment.

4. IF METASTATIC SPINAL CORD COMPRESSION IS DIAGNOSED
- Speak to the patient’s Oncologist or Haematologist (or the on-call Consultant) as a matter of urgency.
- A neurosurgical or spinal surgical opinion may also be required.
- Definitive treatment, where indicated, must begin within 24hrs.

See NICE clinical guideline 75: Metastatic Spinal Cord Compression: www.nice.org.uk
EMERGENCIES – MALIGNANT HYPERCALCAEMIA

This guidance applies only to patients with a known cancer diagnosis

1. RECOGNITION

Exclude in any patient with advanced cancer whose condition deteriorates rapidly. Onset may be insidious and symptoms not evident until corrected calcium well above normal.


Clinical Presentation:
- Confusion, drowsiness, and eventually coma.
- Thirst. Polyuria & dehydration may lead to pre-renal failure.
- Worsening pain or deteriorating pain control.

2. IMMEDIATE ACTION

Assessment
- Check corrected calcium level in venous blood. Normal < 2.65 mmol/L
  
  Corrected calcium = (Serum Calcium) + ((40 - serum albumin g/L) x 0.02)
- If normal but clinical suspicion remains, recheck in 1 week. Also check renal function (U&E).

Management
- Admit to hospital/hospice unless it is agreed that intervention is not appropriate.
- Stop thiazide diuretics – may increase Calcium levels.
- Rehydrate with i-v 0.9% saline. Aim for 2-3L/day. Caution if co-morbidities risk fluid overload.
- After 1-2 litres saline (to prevent renal damage) give i-v bisphosphonate.

Drugs of choice (local guidance applies):
- Zoledronic acid 4mg iv in 100ml saline over 15 minutes
  (Reduce dose if renal impairment – see manufacturer’s SPC for guidance)
- Disodium Pamidronate: 30-90mg i-v in 500ml saline over 2hrs
  (Some sources advise a dose based on corrected calcium. In practice most palliative care physicians give 90mg unless there is renal impairment)

Side-effects: see BNF. Flu-like syndrome/pyrexia is common - treat with paracetamol.
Osteonecrosis of jaw is a rare but significant side effect. Rebound hypocalcaemia may occur.

3. FOLLOW UP

Expect clinical improvement in 24-72 hours. Check for biochemical improvement in 5-7 days. After 7 days, if no clinical/biochemical response consider giving 8 mg Zoledronic acid iv in 200ml of saline.

On discharge ask primary care team to monitor for symptoms and check calcium if clinical suspicion.
Also monitor renal function
Consider prophylaxis with oral bisphosphonate.
Resistant/refractory hypercalcaemia may be an end of life event. If so, treat symptoms appropriately.
1. RECOGNITION

- Bleeding of all types occurs in 14% of patients with advanced disease.
- Haemorrhage causes death in approximately 6% patients.
- Catastrophic external haemorrhage is less common than internal unseen bleeding.

Clinical Presentation

- Cardiovascular compromise – Hypotension, Tachycardia (>100 beats/min = significant recent bleed)
- Identifiable bleeding source, eg haematemesis, melaena, haemoptysis, PV or PR bleeding, haematuria
- Erosion of an artery by a malignant ulcer or superficial/fungating tumour

2. ANTICIPATORY MANAGEMENT

- Massive haemorrhage is often preceded by smaller bleeds. Oral/topical treatment may help (see below).
- Review resuscitation status and document decision.
- Consider stopping warfarin or switching to Low Molecular Weight Heparin.
- Always monitor INR closely if warfarin continues. Correct any coagulation disorder.
- Consider referral for radiotherapy or embolisation if patient has an erosive tumour.
- Try to discuss possibility of haemorrhage with the patient/family. This may enable discussion of options for preferred place of care if haemorrhage occurs or risk of haemorrhage increases.
- Dark towels should be available nearby to reduce the visual impact of blood if haemorrhage occurs.
- Midazolam/Diazepam (see below) should be prescribed and made available.
- Prescription charts for community staff to administer these emergency drugs should be signed.

3. IMMEDIATE ACTION

If a patient is close to death from underlying cancer, it is usually appropriate to regard major haemorrhage as a terminal event and not to intervene with resuscitation measures.

Advance decisions or statements regarding preferred place of care should be observed.

If resuscitation is inappropriate

- Administer Midazolam 10mg IM (IV if in hospital & access available). Buccal midazolam could be used depending on source of bleeding. Rectal Diazepam 10mg is an option but not very practical.
- Stay with the patient, giving as much reassurance/explanation as possible.
- Try to remain calm. This will help a dying patient to achieve a peaceful death.

If resuscitation is appropriate

- Admit as emergency. Secure IV access.
- Start rapid infusion of 0.9% saline.
- Cross match & follow local haemorrhage protocols.
- Apply local pressure to any obvious bleeding.
- Seek specialist help on further management.

4. FOLLOW UP

- Ensure support available for family and staff following experience of haemorrhage.
- If the patient survives the haemorrhage and remains stable for 24-48 hours, consider transfusion.
- To prevent rebleeding: ORAL: Tranexamic acid 1g 8-hrly (avoid in haematuria) or Etamsylate 500mg 6-hrly. TOPICAL: Sucralfate paste applied direct to ulcer under non-adherent dressing; Adrenaline 0.1% (1mg/ml) soaks (10ml on gauze); Tranexamic acid (500mg/5ml of injectable formulation).
- Consider diathermy, radiotherapy or embolisation.
EMERGENCIES – MALIGNANT SUPERIOR VENA CAVAL OBSTRUCTION

This guidance applies only to patients with a known cancer diagnosis

1. RECOGNITION
95% of cases of superior vena caval obstruction (SVCO) are caused by malignant tumour in the mediastinum preventing venous drainage from the head, arms and upper trunk. Commonest in lung cancer. Also occurs in lymphoma and in cancers metastasising to mediastinal lymph nodes. Onset usually over weeks or months, but occasionally occurs rapidly over days.

Clinical Presentation:
- Facial swelling, redness, headache, periorbital oedema, engorged conjunctivae.
- Swelling of the arms, prominent distended veins on neck and chest wall.
- Breathlessness, cough, chest pain, stridor, cyanosis.
- Other symptoms e.g. dysphagia, visual disturbance.

2. IMMEDIATE ACTION

If SVCO suspected in the community setting:
- Give Dexamethasone 16mg stat (oral or iv) and continue 16mg daily as morning dose.
- Give PPI for gastric protection (esp. if GI pathology, NSAIDs or warfarin).
- For severe symptoms/distress consider emergency medical admission.
- If the situation is less urgent, discuss with respiratory physician (or oncologist/haematologist if patient does not have lung cancer) to arrange early assessment – this may avoid unnecessary emergency admission to hospital.
- If the patient presents with features of SVCO towards the end of life and is too unwell for transfer/hospital intervention, or does not wish to be admitted to hospital, consider treatment with dexamethasone and anticoagulation with low molecular weight heparin (therapeutic dose, not prophylactic) at home.

If SVCO suspected in hospital:
- Relieve the acute symptoms with steroids, oxygen and other symptomatic measures.
- Seek specialist opinion – respiratory physician/oncologist/haematologist/radiologist – and arrange the investigations as advised.
- Specialist – with input from relevant MDT – will arrange appropriate intervention.

3. FOLLOW UP
- If the obstruction is resolved by stent insertion or other intervention the dexamethasone should be reduced gradually and stopped. Consider ongoing prophylactic anticoagulation.
- If the obstruction cannot be resolved with intervention, the dexamethasone should be gradually reduced to the lowest dose that helps with symptoms.
- Further opinions should be sought from the patient’s oncologist regarding follow-on treatment with radiotherapy or chemotherapy.
PAIN AT THE END OF LIFE

N.B. If diamorphine is not available, see opioid guideline on page 9 for alternatives

<table>
<thead>
<tr>
<th>YES</th>
<th>Is patient already on opioid drugs?</th>
<th>NO</th>
</tr>
</thead>
</table>

**Patient on morphine sulphate**
- Divide 24 hour total dose of current oral opioid *(regular + prn)* by 3 and prescribe this as diamorphine (mgs) by syringe driver over 24 hours
- Prescribe 1/6th diamorphine syringe driver dose for breakthrough/rescue medication to be given s-c up to hourly if needed
- Start syringe driver 4 hrs before next oral opioid dose would have been due (or immediately if a dose has been missed)
- Discontinue oral opioid

**Scenario 1: “planning ahead”**
**Patient not in pain**
- Prescribe diamorphine 2.5mg s-c hourly if needed
- If patient later develops pain, proceed to next box.

**Scenario 2: “act now”**
**Patient in pain**
- Give diamorphine 2.5mg s-c stat
- If effective prescribe and start diamorphine 10mg/24h by syringe driver
- Prescribe diamorphine 2.5mg s-c for rescue/breakthrough pain to be given up to hourly if needed

**Review within 24hrs**
If extra medication has been needed for pain:
- Increase syringe driver dose by total amount of rescue diamorphine given or by 50%, whichever is less
- Adjust rescue/breakthrough dose to 1/6th of syringe driver diamorphine dose to be given s-c up to hourly if needed

If pain is controlled, make no changes.
Continue to review regularly

**Patient on weak opioid** *(Codeine, Tramadol, Dihydrocodeine)*
- Stop oral weak opioid
- Start diamorphine 10mg/24hrs by syringe driver soon after last oral dose
- Prescribe diamorphine 2.5mg s-c hourly if needed for rescue/breakthrough pain

Review regularly & adjust as above

**Patient with patches for pain relief** *(Fentanyl, Buprenorphine)*
- See page 20 for guidance

**Review within 24hrs**
If extra medication has been needed for pain:
- Increase syringe driver dose by total amount of rescue diamorphine given or by 50%, whichever is less
- Adjust rescue/breakthrough dose to 1/6th of syringe driver diamorphine dose to be given s-c up to hourly if needed

If pain is controlled, make no changes.
Continue to review regularly
Fentanyl patches in the dying/moribund patient
It is recommended to continue fentanyl patches in these patients. Remember to carry on changing the patch(es) every 72hrs – this is sometimes forgotten.
If pain occurs, give rescue doses of diamorphine or whichever injectable opioid has been recommended by the specialist palliative care team.
Consult the chart on page 9 to calculate the correct rescue dose.
If diamorphine is not available seek advice about an alternative injectable opioid.

Adding a syringe driver to a patch
If 2 or more rescue doses are needed in 24hrs, start a syringe driver with diamorphine (or other opioid) and continue the patch(es).
The diamorphine (or other opioid) dose in the syringe driver should equal the total rescue doses given in previous 24hrs up to a maximum of 50% of the existing regular opioid dose.
Continue to apply this rule when reviewing pain control daily.
Remember to use the dose of the patch and the dose in the syringe driver to work out the new rescue dose each time a change is made.

Renal failure/impairment at end of life
Morphine/diamorphine metabolites may accumulate.
Seek specialist advice on opioid choice.
Alternative opioids which may be given by subcutaneous infusion include alfentanil or hydromorphone.
If the pain has been stable a fentanyl patch may be considered.

In circumstances of diamorphine shortage
Seek specialist advice.
Alternative options include morphine, oxycodone, hydromorphone and alfentanil.

Breakthrough or rescue dose calculation for patients on end of life care pathway requiring subcutaneous medication
Patients on Diamorphine, Morphine, Oxycodone or Hydromorphone via syringe driver:
Calculate the breakthrough or rescue dose as 1/6th of the 24hr dose.
For convenience prescribe to the nearest 5mg for doses over 10mg.

Patients on alfentanil via syringe driver:
Calculate the breakthrough or rescue dose as 1/10th of the 24hr dose.

Patients with a fentanyl patch:
Use the opioid dose conversion chart on page 9 to calculate the appropriate dose depending on the opioid being given as required.
NAUSEA AND/OR VOMITING AT THE END OF LIFE

This advice guides management of nausea/vomiting in the last days of life and should be read in conjunction with the general guideline on nausea/vomiting in palliative care.

For patients on oral anti-emetics who enter the terminal phase you change the route of administration of the anti-emetic from oral to sub-cutaneous to ensure continued symptom control.

This may require a drug change (e.g. Domperidone replaced by Metoclopramide; Prochlorperazine replaced by Cyclizine).

New nausea/vomiting at end of life is difficult to investigate and may be multi-factorial. Evidence points to cyclizine + haloperidol in combination as the most effective treatment. To avoid using two drugs, some specialists recommend levomepromazine because of its broad spectrum of action and because its anxiolytic properties may be useful in end stage care.

New nausea/vomiting in a patient not currently using an anti-emetic

ASK: Is a chemical cause possible?

If YES prescribe Haloperidol 1.5-3mg daily by s-c injection (syringe driver if preferred)
Also prescribe Cyclizine 50mg prn s-c maximum 150mg/24hrs

If NO prescribe Cyclizine 150mg/24hrs via syringe driver
Also prescribe Haloperidol 1.5mg s-c prn, maximum 3 doses in 24hrs

REVIEW AFTER 24hrs:
If symptoms are controlled, continue as before.
If either nausea or vomiting persists, seek Specialist Palliative Care advice.

Uncontrolled nausea/vomiting in a patient already on an anti-emetic

Review the possible causes but do not delay changing the anti-emetic regime by arranging burdensome investigations in an end of life case.

If a combination of cyclizine and haloperidol fails to control nausea/vomiting replace them with levomepromazine 12.5mg/24hrs s-c via syringe driver.
Also prescribe levomepromazine 6.25mg s-c prn up to 4 doses/24hrs.

Nausea/vomiting already controlled
Continue existing anti-emetic but switch to the subcutaneous route.
(this will require a change of agent if prochlorperazine or domperidone is in use)
Also prescribe levomepromazine 6.25mg s-c prn up to 4 doses/24hrs.

REVIEW THE SYMPTOM CONTROL ACHIEVED ON A REGULAR BASIS

Notes on Levomepromazine
The effects of this drug may last up to 24hrs – once daily s-c dosing may be an alternative to infusion via syringe driver.
The maximum anti-emetic effect may be achieved at doses of 25-50mg/24hrs.
Doses above 25mg/24h (or lower in patients who are sensitive) have a sedative effect.
The sedative effect may be clinically useful - this drug is also used in the management of terminal agitation and restlessness (see relevant flowchart for more information).
RESTLESSNESS/AGITATION AT END OF LIFE

Consider common causes of restlessness, e.g. urinary retention, faecal impaction and pain. Manage these appropriately. Also consider whether sedation is acceptable or not. Patients on regular or long term benzodiazepines who enter the terminal phase should continue to receive a benzodiazepine as midazolam by subcutaneous infusion to prevent rebound agitation/withdrawal. The doses given here are a guide. If symptoms are problematic, seek specialist advice.

### PATIENT RESTLESS/AGITATED

Consider whether sedation is acceptable or not.  
**Sedative needed** - choose MIDAZOLAM  
**To minimise sedation** - choose HALOPERIDOL

**Immediate management**

**Give medication s-c stat:**  
Midazolam 5mg (2.5mg if thin/elderly)  
**OR**  
Haloperidol 1mg

**Start syringe driver:**  
Midazolam 10-20mg/24h  
(lower range if thin/elderly)  
**OR**  
Haloperidol 2.5mg/24h

**Prescribe rescue doses s-c up to hourly:**  
Midazolam 5mg (2.5mg if thin/elderly)  
**OR**  
Haloperidol 1mg

**Review within 24 hrs**  
**Midazolam:**  
Increase syringe driver dose by the equivalent of the extra doses given.  
**Seek specialist advice if dose increases over 50% appear to be needed.**

Also continue rescue doses of 5mg s-c prn.

If midazolam driver dose > 30mg/24hrs, consider **addition** of levomepromazine or haloperidol.

**Haloperidol:**  
If extra doses are given and effective, increase driver dose by the same amount.  
Consider addition of midazolam if doses need to be increased above 10mg/24hrs or there is limited effect.

### PATIENT NOT RESTLESS/AGITATED

**Plan ahead**  
**Prescribe s-c up to hourly as needed**  
Either Midazolam 5mg (2.5mg if thin/elderly)  
**Or**  
Haloperidol 1mg

**Review within 24 hrs**  
If 2 or more doses needed and are effective, start syringe driver of same drug (see left).

If 2 or more doses tried but are not effective, switch to the other drug or consider levomepromazine (see below)

### Persistent symptoms

Levomepromazine is an effective sedative.  
*It may be added to midazolam (if midazolam partially effective) or used to replace haloperidol or midazolam.*

Start syringe driver at 50mg/24hrs  
Use rescue dose 12.5mg s-c hourly as needed – no limit.  
Sometimes very high doses are needed.  
Seek advice if symptoms difficult to control.
Hyoscine salts are most commonly prescribed to control secretions at the end of life. These are the two forms of hyoscine.

Hyoscine butylbromide is non-sedating and should therefore be considered in a conscious patient. (NB Hyoscine butylbromide is incompatible with cyclizine in a syringe driver).

Hyoscine hydrobromide has sedative effects which may be useful.

Some palliative care services use Glycopyrrolate as the preferred anti-secretory agent to avoid sedation. Consider these details and local experience when deciding what to prescribe.

**SECRETIONS PRESENT**

**General management**
- Give explanation and reassurance to relatives
- Alter position to shift secretions
- Consider stopping parenteral fluids
- Give hourly mouth care

**Specific management – 3 actions**

- **Give stat dose s-c**
  - Either Hyoscine butylbromide 20mg
  - Or Hyoscine hydrobromide 400mcg

- **Start syringe driver**
  - Either Hyoscine butylbromide 60mg/24h
  - Or Hyoscine hydrobromide 1.2mg/24h

- **Ensure rescue doses** up to hourly s-c as needed
  - Either Hyoscine butylbromide 20mg
  - Or Hyoscine hydrobromide 400mcg

**Review after 24hrs or sooner**

- If rescue doses needed, increase 24hr dose
  - Either Hyoscine butylbromide 120mg/24h
  - Or Hyoscine hydrobromide 2.4mg/24h

- Continue rescue medication up to hourly as needed

**SECRETIONS ABSENT**

**Anticipatory prescribing is crucial to allow early and better control of this symptom**

When a patient starts on the end of life pathway always prescribe hyoscine up to hourly s-c as needed.

- Use either Hyoscine butylbromide 20mg or Hyoscine hydrobromide 400mcg

**Review after no longer than 24hrs**

- If 2 or more doses needed, manage as for ‘secretions present’ including a sub-cutaneous infusion.

**Difficult cases**

- In heart failure, pulmonary oedema may cause a rattle. Consider giving diuretic by an appropriate route.

- Do not hesitate to seek specialist advice if needed.
BREATHLESSNESS AT END OF LIFE

**BREATHLESSNESS PRESENT**

**General measures**
- Calm environment
- Reassurance and support
- Gentle air flow with fan
- Cool room
- Give hourly mouth care
- Oxygen if helpful

**Specific management**
In heart failure consider giving a diuretic by appropriate route (s-c or i-v).

**Patient not on opioid for pain**
- Give diamorphine 2.5mg s-c stat
- Prescribe the same hourly as needed
- Start diamorphine 10mg/24hrs by syringe driver

**Patient on opioid already**
- Give midazolam 2.5mg s-c stat
- Prescribe the same hourly as needed
- Start midazolam 10mg/24hrs by syringe driver

**Review within 24hrs**
If 1-2 rescue doses needed in 24hrs, increase syringe driver dose by 50%.
If 3 or more rescue doses needed in 24hrs, double syringe driver dose of drug in use and increase rescue dose to 5mg.
Rescue doses continue hourly as needed.

**RISK OF BREATHLESSNESS**

**Planning ahead**

**Patient not on opioid:** Prescribe diamorphine 2.5mg s-c hourly prn

**Patient on opioid analgesics:** Prescribe midazolam 2.5mg s-c hourly prn

**Review within 24hrs**
If 2 or more doses needed, manage as for breathless patient

If diamorphine unavailable, use alternative opioid (e.g. morphine, oxycodone or hydromorphone). Calculate equivalent doses using chart on page 9.

**SEVERE FRIGHTENING BREATHLESSNESS**

Severe frightening breathlessness is an emergency and may be a terminal situation. Therapeutic sedation is the appropriate treatment in this emergency situation.

Explain that only sufficient sedation to relieve the frightening sensation will be given.

Administer MIDAZOLAM 5mg subcutaneously.
Repeat at 30 minute intervals until the patient is calm (for some this will mean being asleep).

When the patient is calm set up a syringe driver with MIDAZOLAM.
Start at 20mg/24hrs and prescribe 5mg s-c doses every 15-30 mins for frightening symptoms.
Review every few hours and further titration is necessary to maintain good symptom control.
In some patients doses of midazolam up to 100mg/24hrs may be needed.

Treatment with an opioid may also be appropriate to reduce sensation of breathlessness.
# Specialist Palliative Care Services Contact Details

## Cumbria

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlisle &amp; Eden Palliative Care Team</td>
<td></td>
<td>01228 603208</td>
</tr>
<tr>
<td>West Cumbria Specialist Palliative Care Services</td>
<td></td>
<td>01900 705200</td>
</tr>
<tr>
<td>Eden Valley Hospice</td>
<td></td>
<td>01228 810801</td>
</tr>
<tr>
<td>Out of hours advice</td>
<td></td>
<td>01228 810801</td>
</tr>
</tbody>
</table>

## Darlington

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital &amp; Community Team</td>
<td></td>
<td>01325 465564</td>
</tr>
<tr>
<td>St Teresa’s Hospice</td>
<td></td>
<td>01325 254313</td>
</tr>
<tr>
<td>Out of hours advice</td>
<td></td>
<td>01325 254313</td>
</tr>
</tbody>
</table>

## Derwentside

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derwentside Community Team</td>
<td></td>
<td>01207 594608</td>
</tr>
<tr>
<td>Willowburn Hospice (for nursing advice)</td>
<td></td>
<td>01207 529224</td>
</tr>
</tbody>
</table>

## Durham

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Hospital North Durham</td>
<td></td>
<td>0191 333 2338</td>
</tr>
<tr>
<td>Durham &amp; Chester-le-Street Community Team</td>
<td></td>
<td>0191 387 6532</td>
</tr>
<tr>
<td>St Cuthbert’s Hospice</td>
<td></td>
<td>0191 386 1170</td>
</tr>
<tr>
<td>Out of hours advice</td>
<td></td>
<td>0191 569 9195</td>
</tr>
</tbody>
</table>

## Durham Dales & Sedgefield

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Team</td>
<td></td>
<td>01388 607301</td>
</tr>
<tr>
<td>Out of hours advice (Butterwick Hospice)</td>
<td></td>
<td>01642 607742</td>
</tr>
</tbody>
</table>

## Easington

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Macmillan Service</td>
<td></td>
<td>0191 586 2426</td>
</tr>
<tr>
<td>Out of hours advice</td>
<td></td>
<td>01429 855558</td>
</tr>
</tbody>
</table>

## Gateshead

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital &amp; Community Team</td>
<td></td>
<td>0191 445 6403</td>
</tr>
<tr>
<td>Out of hours advice</td>
<td></td>
<td>0191 273 3435</td>
</tr>
</tbody>
</table>

## Hartlepool

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Team</td>
<td></td>
<td>01429 522631</td>
</tr>
<tr>
<td>Community Team</td>
<td></td>
<td>01429 851792</td>
</tr>
<tr>
<td>Hartlepool Hospice</td>
<td></td>
<td>01429 855555</td>
</tr>
<tr>
<td>24hr advice line</td>
<td></td>
<td>01429 855558</td>
</tr>
</tbody>
</table>

## Middlesbrough, Redcar & Cleveland

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Team</td>
<td></td>
<td>01642 854938</td>
</tr>
<tr>
<td>Community Team</td>
<td></td>
<td>01287 639100</td>
</tr>
<tr>
<td>Teesside Hospice</td>
<td></td>
<td>01642 819819</td>
</tr>
<tr>
<td>Out of hours advice</td>
<td></td>
<td>01642 819819</td>
</tr>
</tbody>
</table>

## Newcastle

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>St Oswald’s Hospice</td>
<td></td>
<td>0191 285 0063</td>
</tr>
<tr>
<td>Marie Curie Hospice</td>
<td></td>
<td>0191 219 1000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Name</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Specialist Palliative Care Teams</td>
<td>RVI</td>
<td>0191 282 4019</td>
</tr>
<tr>
<td>Northern Centre for Cancer Care</td>
<td></td>
<td>0191 213 8606</td>
</tr>
<tr>
<td>Freeman Hospital</td>
<td></td>
<td>0191 213 7221</td>
</tr>
<tr>
<td>Community team</td>
<td></td>
<td>0191 226 1315</td>
</tr>
<tr>
<td>Out of hours advice</td>
<td></td>
<td>0191 273 3435</td>
</tr>
</tbody>
</table>
NORTH TEES
Hospital Team ................................................................................................................................. 01642 624548
Community Team ............................................................................................................................ 01642 762517
Butterwick Hospice (Stockton on Tees) .......................................................................................... 01642 607742
Hospice at Home ............................................................................................................................. 07977 217050
Out of hours advice ........................................................................................................................ 01642 607742

NORTHUMBERLAND
Wansbeck Hospital Team .................................................................................................................. 01670 529541
Community Team – Cramlington base .......................................................................................... 01670 396119
Community Team – Alnwick/Berwick ............................................................................................... 01665 626713
Community Team – Hexham ........................................................................................................... 01434 604008
Out of hours advice – (Newcastle Hospices advice line) ............................................................... 0191 273 3435

NORTH TYNESIDE
Hospital & Community ....................................................................................................................... 0191 220 5961
Out of hours advice ........................................................................................................................ 0191 273 3435

SOUTH TYNESIDE
Hospital Team .................................................................................................................................. 0191 202 4105
Community Team ............................................................................................................................. 0191 451 6396
St Clare’s Hospice ............................................................................................................................. 0191 451 6384
Out of hours advice ........................................................................................................................ 0191 451 6384

SUNDERLAND
Hospital Team .................................................................................................................................. 0191 565 6256
Community Team ............................................................................................................................. 0191 569 9987
St Benedict’s Hospice ........................................................................................................................ 0191 569 9195
Out of hours advice ........................................................................................................................ 0191 569 9195

Space for useful numbers