

# Palliative and end of life care guidelines

for cancer and  
non-cancer patients

## FOREWORD

These guidelines have been written for clinical staff who provide palliative and end of life care to patients within their usual role – this work is often referred to as ‘generalist palliative care’. The guidelines do not attempt to cover ‘specialist palliative care’ for which much more comprehensive texts and resources exist.

We hope that this concise guideline booklet will provide clear and accessible information for use in the patient’s home, in the surgery and on the ward.

The 3rd edition has been redrafted and updated by wide consultation across the Network, including partners in regional groups beyond palliative care. The result is content that, as far as possible, represents a consensus informed by available evidence. It is in the nature of the specialty that research in some areas is limited and much established practice is based upon evolving expert opinion and expanding clinical experience.

Importantly, the guideline information is relevant to all palliative care patients *regardless of diagnosis*. Where specific guidance applies, this is highlighted in the text.

The use of drugs beyond licence (“off-label”) in palliative care and pain management practice is currently both necessary and common and should be seen as a legitimate aspect of clinical practice. (APM/BPS 2008)

**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 have contributed to the development of these guidelines.

All contributors 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 the NECN coordinator: [ann.bassom@necn.nhs.uk](mailto:ann.bassom@necn.nhs.uk)

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**IMPORTANT NOTE:**

The most significant change in this revised edition is that **MORPHINE** is the recommended first line subcutaneous opioid, *replacing diamorphine*.

This applies for doses of subcutaneous morphine up to 360mg/24hrs.

If the calculated subcutaneous morphine dose requirement exceeds 360mg/24hrs it will be necessary to switch to an alternative opioid because of resulting volume constraints in the rescue dose. You should seek specialist advice in this situation.

For further information see pages 5 to 9.

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For the most part, dose guidance included in these guidelines is in line with the British National Formulary (BNF). Where the guidance differs and follows the Palliative Care Formulary 4th Edition (PCF4), this is highlighted in the text.

**KEY RESOURCES** (further references are listed on the final page)

- Dickman A. (2011) The syringe driver. Oxford University Press, Oxford
- Regnard C & Dean M. (2010) A guide to symptom relief in palliative care. 6th edition. Radcliffe Press, Oxford.
- Twycross R, Wilcock A (2011) Palliative Care Formulary. 4th Edition. Palliativedrugs.com Ltd., Nottingham.
- Watson M, Lucas C, Hoy A & Back I. (2005) Oxford Handbook of Palliative Care. Oxford University Press, Oxford.
- BNF 62 (September 2011) BMJ Group and Pharmaceutical Press, London.

## 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 may be relevant to patients early in their disease trajectory. Therefore the principles of palliative care should not be applied solely to cancer patients at the end of life.

The commonest symptoms include:

<b>Pain</b>	<b>Anxiety</b>	<b>Fatigue</b>
<b>Breathlessness</b>	<b>Nausea</b>	<b>Vomiting</b>
<b>Diarrhoea</b>	<b>Depression</b>	<b>Confusion</b>
<b>Anorexia</b>	<b>Insomnia</b>	<b>Constipation</b>

### Key principles of symptom management

Several principles are fundamental to the palliative care approach:

- Conduct a detailed assessment in partnership with patient and carers
- Diagnose cause of symptom(s) using knowledge of pathophysiology and disease processes
- Choose appropriate treatment for the individual balancing benefit against side effect burden and considering factors such as route of administration
- Avoid making too many changes at once or review will be complex
- Constantly reassess: “review, review, review”
- 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:

- convenient and accessible information on management of common symptoms
- key points in management of the main palliative care emergencies
- guidance on management of symptoms in the last days of life
- guidance on managing diabetes in palliative care (follow local service guidelines where these are in place)

Further guidelines and useful links can be accessed via the North of England Cancer Network website - [www.cancernorth.nhs.uk](http://www.cancernorth.nhs.uk)

## 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 hurts"

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)

SPCTs are experienced in the management of complex pain and will offer advice on the use of standard, adjuvant and non-drug measures to manage pain or will be happy to see the patient for assessment, treatment and review. The following situations warrant referral:

- Complex or multiple pains where assessment is difficult
- Pains that appear resistant to usual measures
- Difficulty with management caused by adverse effects of medication
- Pain associated with more than usual distress, particularly where non-physical factors are involved.

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

### Assessment – it is essential to try to determine the CAUSE of the pain to guide management

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, 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

Patient's understanding, fears & concerns, previous experience of pain and expectations of treatment, and other aspects relevant to social, psychological and spiritual, should be determined.

Clinical examination should be performed to assist in determining the likely type and cause. Relevant investigation, appropriate to the patient's condition, should be considered. This might include 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, e.g. dysphagia, vomiting, bowel obstruction, terminal phase.
- Prescribe regularly at a dosing interval appropriate to the formulation.
- Prescribe "as required" analgesia for pain that may occur despite regular treatment.

## Treatment

The **WHO analgesic ladder** provides a framework for palliative pain management  
**Move up to the next step if pain control is not achieved.**

<b>STEP 1</b> <b>Non-opioid (Paracetamol and/or NSAID) +/- adjuvant</b>
<b>STEP 2</b> <b>Opioid for mild to moderate pain +/- non-opioid (Paracetamol and/or NSAID) +/- adjuvant</b> <i>Opioid for mild/moderate pain = codeine, dihydrocodeine, tramadol</i>
<b>STEP 3</b> <b>Opioid for moderate to severe pain +/- non-opioid (Paracetamol and/or NSAID) +/- adjuvant</b> <i>Opioid for severe pain = morphine, diamorphine, oxycodone, fentanyl, hydromorphone</i> <b>(for rescue analgesic, use 1/6th daily dose of regular opioid)</b>

### N.B. Use NSAIDs with great care in this patient group

**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 on p.14.

Common adjuvant analgesic drug groups	Indications
Corticosteroids	Raised intracranial pressure, nerve compression, liver capsular pain, soft tissue infiltration
Antidepressants, Anticonvulsants	Neuropathic pain, tenesmoid pain
Muscle relaxants (e.g. baclofen, benzodiazepines)	Muscle cramp/spasm, myofascial pain
Bisphosphonates	Bone pain
Antispasmodic (e.g. hyoscine butylbromide)	Bowel colic, bladder spasm

**Additional approaches** to pain relief will be dictated by clinical circumstances:

- **Interventional methods** - spinal analgesia, nerve block, radiotherapy, orthopaedic or spinal surgical stabilisation.
- **Non-drug measures** - TENS, acupuncture, massage, complementary therapies, CBT
- **Rehabilitative support** - physiotherapy, occupational therapy

### 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. Common adverse effects of opioids are explained on page 5.

**NB: Combinations of certain drugs (e.g. NSAIDs, corticosteroids, SSRIs and anticoagulants) increase substantially the risk of GI bleeding. Co-prescription of a PPI and close monitoring is essential.**

### “Review, review, review”

Success in pain management depends upon regular review of pain and its causes, and the effectiveness of the treatment and its acceptability to the patient.

## USING OPIOIDS FOR PAIN IN PALLIATIVE CARE

### Using opioid drugs safely

Morphine and other opioids are valuable drugs for the relief of 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 respond poorly to opioids and require other types of analgesics (adjuvant analgesics)

### Common concerns over the use of morphine and other opioids

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

**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** – Please see BNF section '*prescribing in renal impairment*' for guidance relating eGFR to degrees of impairment. Many opioids and their active metabolites have the potential to accumulate in patients with impaired renal function. Doses may need to be reduced and there should be close monitoring in case of further deterioration in renal function. Cautious titration usually with extended dose intervals is recommended. If a patient on a stable dose of opioid develops adverse effects, always check the renal function. In a patient with moderate or severe renal impairment particular opioids are recommended. Tramadol, buprenorphine, fentanyl, alfentanil and methadone are suitable opioids for these patients. You are strongly advised to seek specialist advice in this situation. Methadone must **only** be used under specialist supervision due to complex pharmacology.

### Management of common opioid adverse effects

- **Constipation** – common, persistent, worse with increased doses. Prescribe stimulant laxative (e.g.senna) adding a softener if needed. (See *Constipation* on p.10).
- **Nausea/vomiting** – common when starting opioid, usually settles within 1 week. Prescribe anti-emetic 'as required' (e.g. haloperidol 1.5mg nocte or metoclopramide 10mg tds) for the first week.
- **Sedation** – fairly common during first few days of treatment. Tolerance usually develops. Reassure patient unless effect is severe. If persists, reduce dose, re-titrate and seek advice.
- **Dry mouth** – common and persistent. Ensure good oral hygiene and offer saliva stimulants or artificial saliva replacement.

## Opioid toxicity

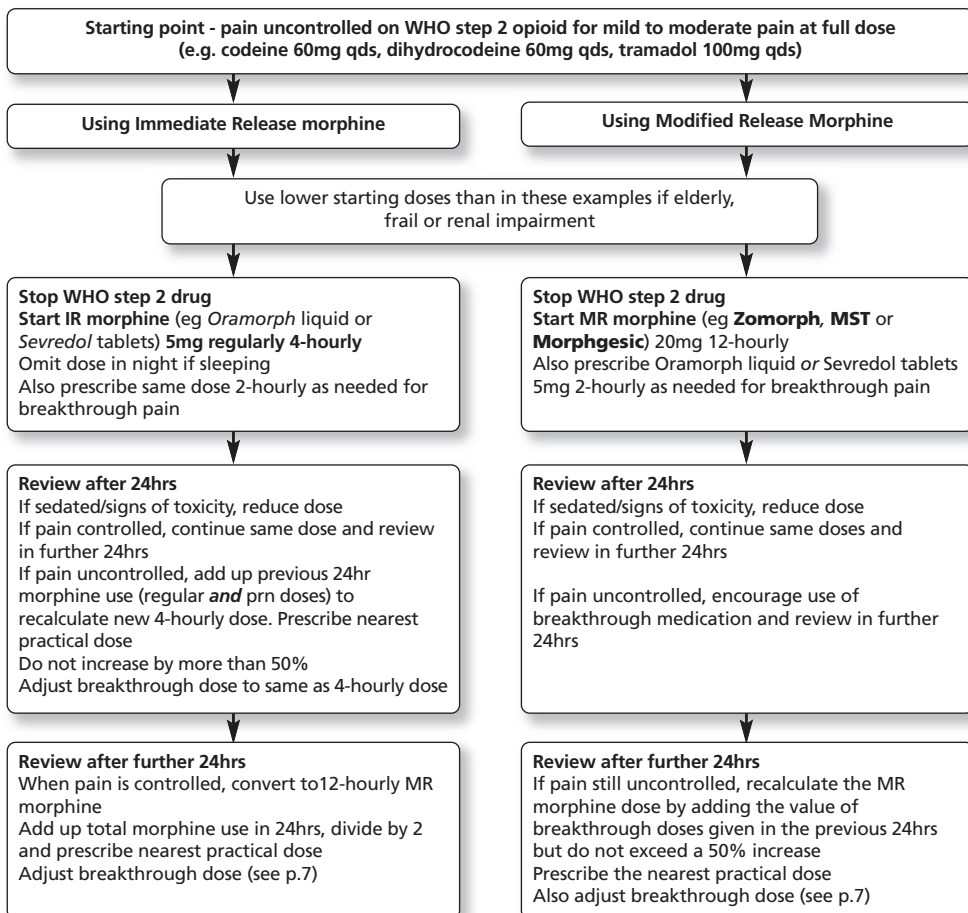
Myoclonic jerks, pin-point pupils (miosis), hallucination and confusion are signs of potential opioid toxicity. Reduce dose. Check renal function. Consider whether pain is truly opioid responsive. Consider switch to alternative opioid. **Seek advice.**

### Opioid titration: **Morphine is the first line WHO step 3 opioid of choice**

- Initiation and titration may use Immediate Release (IR) or Modified Release (MR) formulations
- Only use MR formulations in patients with constant pain
- Never titrate with transdermal preparations in unstable pain or opioid naïve patients
- Always adjust the breakthrough dose if the regular dose is changed (up or down)
- Prescribe regular laxative (ongoing) and regular or 'prn' anti-emetic (for 1 week)
- Monitor closely for efficacy, adverse effects and toxicity

If the pain is severe and rapid dose titration seems necessary, seek specialist advice.  
For safety, do not increase regular doses of MR opioid by more than 30-50% every 2 days

### ALGORITHM FOR OPIOID TITRATION USING MORPHINE





## Breakthrough or rescue doses of opioids

Pain occurring despite regular opioid (breakthrough pain) is treated with an immediate release (IR) formulation of the same opioid where possible. The breakthrough dose is usually between 1/10th and 1/6th of the total 24hr dose. A common starting point is to prescribe 1/6th of the total 24hr dose (using a practical dose, rounding down rather than up) to be given 2-hourly as needed and adjusted according to benefit and tolerability. Doses of IR opioids usually have onset of action at 15-30 minutes and duration of 3-4 hours.

Severe, refractory or recurrent pain may require higher and/or more frequent doses. In this situation repeat the breakthrough dose after 60 minutes. Avoid repeating sooner in case delayed absorption results in toxicity. Specialist advice is recommended in these difficult situations and the patient monitored closely for opioid toxicity.

## 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 page 9).**
- **If the opioid switch is because of opioid toxicity, check the eGFR and seek specialist advice on opioid choice and dose.**
- **Breakthrough doses may be needed to cover transition periods.**

### Oral to subcutaneous infusion

From IR opioid: start syringe driver (SD) immediately.

From 12-hourly MR opioid: start SD 4 hours before next oral dose due.

### Subcutaneous infusion to oral

Switching to either IR or MR opioid, stop the SD and give first oral dose at the same time.

### Oral to patch

From IR opioid: apply patch when convenient and use oral IR opioid as required.

From twice daily MR opioid: apply patch at same time as last dose of MR oral opioid.

(From once daily MR opioid: apply patch 12 hours after last dose of MR opioid).

### Patch to oral

Remove patch 6 hours before giving first dose of oral MR opioid.

For first 24 hours (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 24 hours increase to the calculated equivalent dose if clinically indicated by pain.

### Patch to subcutaneous infusion (NB For patients in the last days of life see page 25)

In other situations where a change from patch is required, remove patch and start SD 6 hrs later using HALF the calculated opioid equivalent dose for the first 24 hours then adjust according to symptoms.

### Subcutaneous infusion to patch

Apply patch. Continue subcutaneous infusion for a further 6 hours then discontinue SD.

### 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 oxygen saturation < 90% on pulse oximeter

**Action (please follow local guidance where this exists)****Aim is to reverse respiratory compromise whilst maintaining adequate analgesia**

- Stop opioid.
- Secure i-v access.
- Dilute 400 micrograms naloxone in 10mls 0.9% saline.
- Give 0.5ml (20 micrograms naloxone) every 2mins i-v until satisfactory respiratory status.
- Review renal function, pain and analgesic requirements.

**N.B.** Long acting opioids require reversal by naloxone infusion. Reversal of buprenorphine toxicity may require large doses of naloxone.

**The National Poisons Information Service (0844 892 0111) will provide specialist advice on management of opioid toxicity 24hrs a day.**

**Parenteral morphine and strong opioid alternatives to morphine** – see also dose conversion chart on following page.

**Morphine:** Has replaced diamorphine as first line injectable strong opioid of choice where 24hrly doses are less than 360mg/24hrs. Greater doses than this cause problems with volume of the corresponding breakthrough dose. The maximum subcutaneous bolus dose tolerated is 2mls and this should be administered slowly to reduce pain at injection site. Injectable morphine is available in 1ml and 2 ml ampoules of the following strengths: 10mg/ml, 15mg/ml, 20mg/ml and 30mg/ml. Where doses are escalating and morphine doses reach hundreds of milligrams, seek specialist advice.

**Diamorphine:** Di-acetylmorphine (diamorphine) is rapidly metabolised to morphine. It has no clinical advantage over morphine but is much more soluble therefore recommended for use where opioid dose requirement exceeds morphine 360mg/24hrs by SC infusion.

**Oxycodone:** Semi-synthetic opioid. Alternative opioid if morphine intolerability or toxicity occurs. There is debate about the relative potency of morphine and oxycodone, and of oxycodone given by different routes. See notes on p.9 for more detail but it is best to seek specialist advice.

**Fentanyl:** Synthetic opioid delivered by transdermal patch changed every 72hrs. Indicated for stable pain in patients unable to take oral medication and in renal failure. May be an option to improve patient concordance. Less constipating than morphine. Highly potent (see p.9 chart) and characteristics often poorly understood resulting in potential for serious adverse drug events. Time taken to achieve stable dose when applied (and to lose subcutaneous reservoir when removed) causes difficulties with titration. Not suitable for unstable pain.

**Transmucosal Fentanyl Citrate:** formulated for administration by buccal (lozenge and tablet), sublingual (tablet) and intranasal (spray) routes. Potential role in short-lasting movement or procedure related pain. Seek specialist advice on use.

**Alfentanil:** Synthetic injectable highly potent opioid. Used in preference to morphine in renal failure because no accumulation of neurotoxic metabolites. Also useful where volumes of infusion of morphine and oxycodone cause problems. Compatible with other drugs in syringe driver. This is an unfamiliar opioid and must be used with specialist advice and support.

**Buprenorphine:** Low dose strong opioid. Stable dose achieved 12-24hrs after applying patch. Safe in renal failure and moderate liver failure. Formulations include transdermal patches (one form changed twice weekly, the other once weekly).

**Strong opioids used as alternatives to morphine (i.e. WHO ladder step 3) - nearest practicable doses are given**

Dose conversion ratios are used when switching between opioids but these changes require clinical judgment as well as a calculator.

When the opioid is changed because of poor pain control or unacceptable side-effects, start with a dose *lower than the calculation* and adjust the dose according to patient response. Read the notes below the table before deciding on the new opioid dose.

**Specialist advice is strongly advised when switching between opioids and you should follow the guidance of your local experts.**

Opioid	Oral opioid Dose in mg per 24 hours		Subcutaneous opioid infusion Morphine is first line injectable opioid of choice - Doses are for medication in syringe driver in mg given over 24hrs				Opioid by patch (micrograms/hr patches)	
	Morphine	Oxycodone	Morphine	Diamorphine	Oxycodone	Alfentanil	Fentanyl (72hrly)	Buprenorphine
Conversion calculation rule		Divide oral morphine dose by 1.5 (Note a)	Divide oral morphine dose by 2	Divide oral morphine dose by 3	Divide oral oxycodone dose by 2: (Note b)	1/30th oral morphine equivalent dose	(Note c)	(Note d)
	20	~15	10		7.5	0.5	N/A	10 (7 day)
	30	20	15		10	1	12	15 (7 day)
	60	40	30		20	2	25	35 (4 day)
	120	80	60		40	4	50	70 (4 day)
	180	120	90		60	6	75	105 (4 day)
	240	160	120		80	8	100	140 (4 day)
	300	200	150		100	10	125	
	360	240	180		120	12	150	
	480	320	240		160	16	200	
	600	400	300		200	20	250	
	720	480	360		240	24	300	
	840	560	Use diamorphine		280	28	350	

**Note (a):** Morphine and Oxycodone. Latest evidence (graded 'strong': EAPC 2012) advises a ratio of morphine : oxycodone = 1.5 : 1 (as in table above). In practice: **switching FROM morphine TO oxycodone divide the morphine dose by 2** to derive the oxycodone dose, and titrate according to patient response. When **switching FROM oxycodone TO morphine, multiply the oxycodone dose by 1.5** to derive the morphine dose and titrate.

**Note (b):** When changing oxycodone route from oral to subcutaneous, PCF4 advises oral:subcut = 1.5:1 (manufacturer suggests oral:subcut = 2:1). The switch is likely to be because the oral absorption has been poor, so in practice you should halve the dose when switching to subcutaneous (these doses are in the table).

**Note (c):** PCF4 advises morphine:fentanyl = 100:1 based on extensive clinical experience & consensus. (BNF states 150:1). To follow PCF4 conversion multiply 24hr oral morphine dose in mg by 10 to derive the 24hr fentanyl dose in micrograms. Divide this figure by 24 to derive the micrograms/hr patch strength.

**Note (d):** Detail in PCF4 reflects differing opinions on relative potency of fentanyl and buprenorphine. Doses in the table are based on buprenorphine being less potent than fentanyl.

## 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; faecal incontinence.
- Colicky abdominal pain, abdominal distension, flatulence.
- Nausea, vomiting, anorexia, malaise, headache and halitosis.
- Constipation may lead to urinary frequency and retention.

### 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, sweating, fistulae, excessively exuding wounds.

**Weakness:** inability to raise intra-abdominal pressure e.g. paraplegia, general debility, cardiac failure.

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

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

**Biochemical:** hypercalcaemia, hypokalaemia.

**Other:** pain on defecation, lack of privacy, diverticulitis.

### 3. MANAGEMENT

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

Attempt to **increase fluid/fibre intake** e.g. fruit/prune juice.

Encourage mobility.

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

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

**Stop/change** constipating drugs where appropriate.

Consider using a **combination of laxatives** e.g. stimulant and softener/osmotic agent.

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

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

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

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

**Bulk forming** laxatives (e.g. Fybogel) or **osmotic** laxatives (e.g. Movicol/Laxido) the volumes of which can be difficult for some patients to tolerate.

### 5. FAECAL IMPACTION

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

**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 is alleviated, start regular oral laxatives to **prevent recurrence**.

## 6. NEUROGENIC CONSTIPATION

In 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.
- oral faecal softeners will prevent faeces from becoming hard and dry, therefore minimising discomfort for the patient.
- allow the patient to become slightly constipated and use stimulant suppositories to evacuate the bowel every 1-3 days, depending on comfort and food intake.

## 7. COMMONLY USED LAXATIVES

For further information, including dosages, please refer to BNF or PCF.

Local preferences vary but the following suggestions may be helpful:

**First line stimulant:** senna

**First line softener:** docusate sodium

(Either can be used for prophylaxis/treatment of opioid induced constipation)

Category	Examples	Description	Dosage
Stimulant Laxatives	<b>Senna</b> <b>Bisacodyl</b>	Senna and Bisacodyl both rely on bacterial transformation in the large bowel to produce active derivatives and so have little small intestinal effect	Senna 2-4 tablets nocte or 10-20ml nocte  Bisacodyl 5-10mg nocte (or 10mg PR)
Softeners	<b>Docusate</b>	Act to reduce surface tension and improve water penetration of the stools	100-200mg bd/tds Capsules preferable to liquid (bitter taste)
Combined stimulant and softening laxatives	<b>Co-Danthramer</b> <b>Co-Danthrusate</b>	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 painful skin damage ('dantron burn'). Avoid using if incontinent of faeces and/or urine. Poloxamer/docusate act as softeners.	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 only licensed for use in analgesic induced constipation in terminally ill patients.
Osmotic Laxatives	<b>Movicol</b>	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.	Start with 1-3 sachets daily  NB This volume may be difficult for some patients, especially those with poor oral intake.
Suppositories	<b>Bisacodyl</b>  <b>Glycerin</b>	Stimulant  Mainly softener	10-20 mg PR  1-2 suppositories PR

## NAUSEA AND VOMITING

### 1. Attempt to determine cause by careful evaluation and appropriate investigation.

Treat reversible causes where possible.

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

**Infection:** UTI, pneumonia, gastro-enteritis, oropharyngeal candidiasis, 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)

Probable cause/specific features	Suggested treatment hierarchy
Chemical causes (metabolic, drug, infection, 'toxins'). Persistent, often severe, nausea unrelieved by vomiting.	First: Haloperidol Then: Levomepromazine
Gastric stasis. Fullness/regurgitation. Reduced appetite. Nausea relieved by vomiting (often large volume & undigested). Functional obstruction (failure of GI motility). Partial bowel obstruction (eg flatus PR, no colic).	Metoclopramide or Domperidone Consider trial of steroids
Chemotherapy, radiotherapy (useful to distinguish between 'acute' and 'delayed' phase).	Acute: Follow oncology guidelines for Ondansetron, corticosteroids & Aprepitant Delayed: Levomepromazine
'Organ damage': harm to thoracic, abdominal or pelvic viscera caused by malignancy or treatment.	Cyclizine
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.	First: Cyclizine <b>or</b> Haloperidol Then: Cyclizine <b>and</b> Haloperidol in combination Then: Levomepromazine Finally anti-secretory (e.g. Hyoscine butylbromide or Octreotide)
Raised intracranial pressure (possible headache, visual disturbance, other neurological signs), motion sickness	Cyclizine (Consider steroids if raised ICP)
Psychological factors, anxiety, fear, anticipation (always consider non-pharmacological management)	Levomepromazine Benzodiazepine
Cause unknown, terminal phase or patient too ill for investigation	Consider Cyclizine (or Haloperidol if chemical cause most likely) Or Levomepromazine
Post operative	Ondansetron / Granisetron

### 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 next page for frequency.
- Prescribe broad-spectrum anti-emetic (i.e. levomepromazine) as required for 'rescue' or 'breakthrough' use. Evidence suggests cyclizine + haloperidol is more potent.

### 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.

**Commonly used anti-emetic drugs (see BNF & PCF4 for more detail)**

**APREPITANT** – neurokinin receptor antagonist. Follow oncology advice. Indicated for moderate and highly emetogenic chemotherapy to prevent delayed chemotherapy induced nausea/vomiting.

**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 two drugs are not combined.

**DOSE:** Oral: 50mg tds. SD: 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. See p.14.

**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 central dopamine antagonism.

**DOSE:** Oral: 0.5-3mg nocte. Syringe driver: 1.5mg-5mg/24hrs.

**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. Limited efficacy give by mouth – avoid.

**DOSE:** Syringe driver: 60mg-120mg/24hrs.

**LEVOMEPRMAZINE** - 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: 5mg-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 (also haloperidol).

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

**OCTREOTIDE** – somatostatin analogue. Increases water, sodium and chloride absorption from GI tract. Reduces GI blood flow, gastric acid and gastric, pancreatic & small intestinal secretions. Costly. Useful adjunct in management of complete mechanical bowel obstruction. Short half-life.

**DOSE:** Give by s-c infusion: 300mcg-1200mcg/24hrs.

**OLANZAPINE** – centrally active broadspectrum antiemetic. May be useful in those patients intolerant to haloperidol and/or levomepromazine. Use only with specialist advice.

**ONDANSETRON** (and other 5HT<sub>3</sub> receptor antagonists e.g. Granisetron) – specific anti-emetic. Not recommended for empirical use outside licensed indications. For nausea/vomiting post-op and in acute phase of chemotherapy/radiotherapy treatment. Side effects: constipation, headache, flushing.

**DOSE:** follow oncology guidelines where available. Come as tablet, melts, syrup, PR supps and injection.

## 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 ~ 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).

Subcutaneous injection volumes greater than 2mls (ie 8mg) are painful. Larger doses than this should be given in divided SC doses.

Standard starting doses for the different indications are not well established and must take account of patient factors. Daily doses are stated. If daily dose is divided, ensure total dose is administered before noon.

Clinical response must be reviewed within 7 days. Titrates down to minimum effective dose.

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

**Adjuvant analgesic:** 8 -16mg 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 carcinomatosa, Bowel obstruction:** 8 – 16mg.

**Prostate cancer refractory to hormone control:** consider Prednisolone 10-20mg daily (seek Oncology advice).

### Adverse effects

**Glucose metabolism:** Steroids can increase blood sugar levels. **See detailed guidance on next page.**

**Insomnia:** Give single or divided daily dose before noon to prevent insomnia.

**Dyspepsia:** Give after food. Co-prescribe PPI if history of peptic ulcer disease or patient also taking Aspirin, NSAIDs, SSRIs or is anti-coagulated with Warfarin, LMWH or other agent.

**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 BNF.

**Anti-epileptics** accelerate steroid metabolism so patients may require higher doses of steroids.

**Warfarin:** steroids alter the metabolism of warfarin increasing INR. Monitor INR more 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, stop without tapering dose.

**Gradual dose reduction** (reduce by 2mg/day every 5-7 days) in the following situations: risk of recurrent severe symptoms, repeated courses have been given, total steroid treatment duration longer than 5 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.

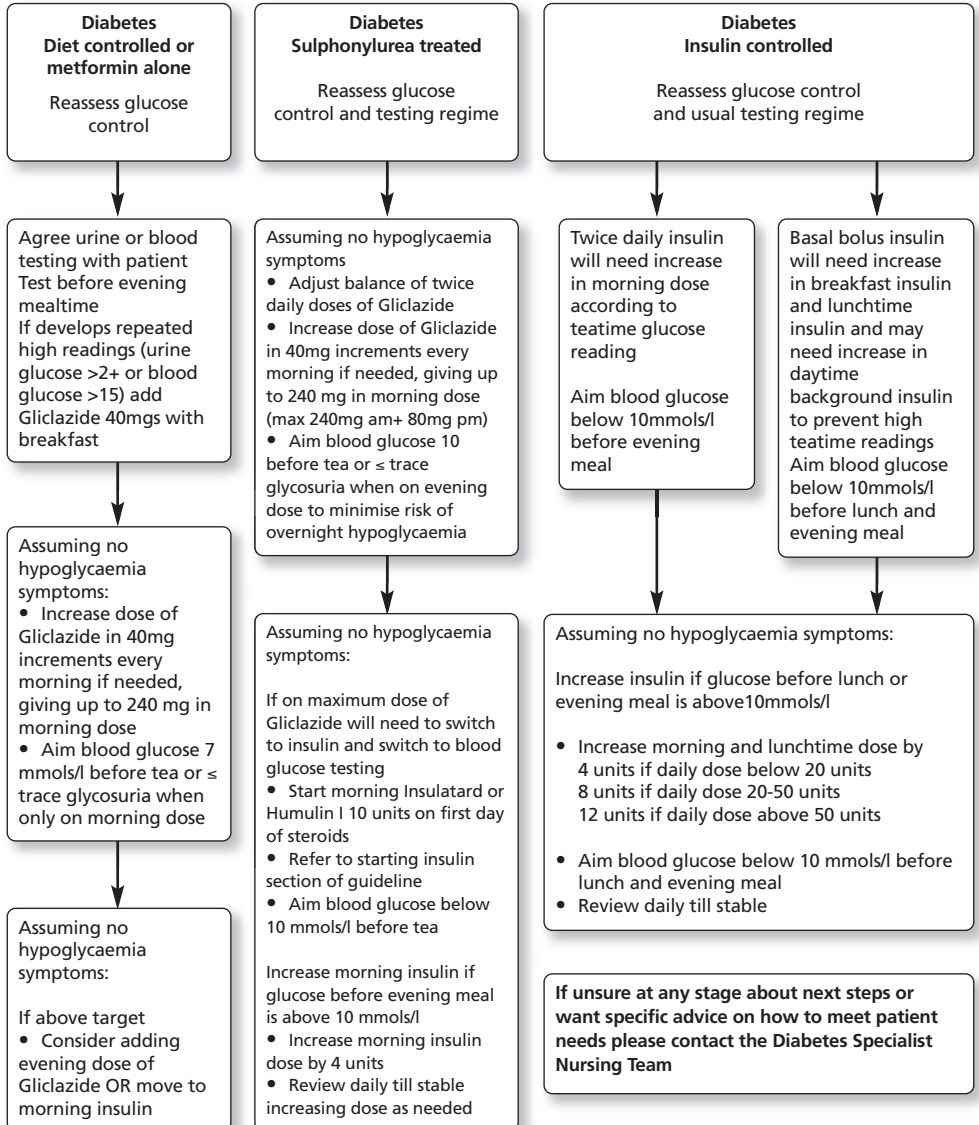
If prescribed for general sense of well-being or appetite stimulation, discontinue.



## CONTROL OF GLUCOSE IN PATIENTS ON CORTICOSTEROIDS

### No known diabetes

- Check glucose before starting on steroids. Random capillary blood glucose over 8 needs further checking with venous blood samples for laboratory glucose to identify those at risk of new diabetes.
- Fasting laboratory glucose >6.1 OR random >7.8 means at risk of developing diabetes with steroids
- Fasting laboratory glucose  $\geq 7$  or random  $\geq 11$  needs second check to confirm pre-existing diabetes



## DEPRESSION AND ANXIETY

- Depression and anxiety disorders are common in patients with advanced disease. Prevalence of these disorders rises to 50% in patients with advanced cancer (NICE 2004) and is often undiagnosed. Similar prevalence occurs in other long term conditions.
- It is therefore important to be aware of the possibility of depression and anxiety and be alert to cues.
- It is good practice to screen all patients with life-limiting illness regularly as outlined below.

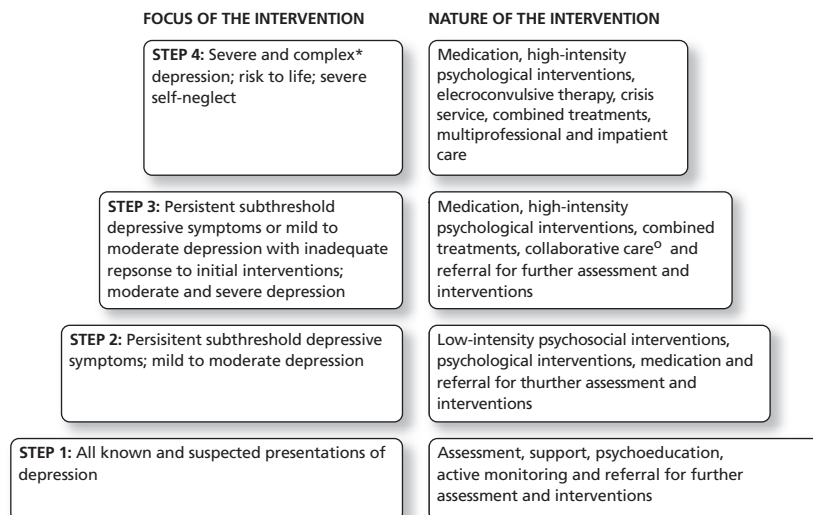
### Depression (Based on NICE clinical guideline 91)

- Be alert to depression, especially in people with a past history of depression or a chronic physical health problem, and screen using these two specific questions:

- During the past month, have you often been bothered by
  - feeling down, depressed or hopeless?
  - having little interest or pleasure in doing things?

- If the patient answers “yes” to either question, the patient should be referred to a practitioner competent to perform a mental health assessment (e.g. GP, palliative care physician, psychologist). The patient’s GP should be informed of the referral.
- This practitioner should assess the patient’s mental state and associated functional, interpersonal and social problems.
- Management should follow NICE clinical guideline 91 based on the stepped care model below:

Figure 1 - The stepped-care model



\* Complex depression includes depression that shows an inadequate response to multiple treatments, is complicated by psychotic symptoms, and/or is associated with significant psychiatric comorbidity or psychosocial factors.

<sup>o</sup> Only for depression where the patient also has chronic physical health problem and associated functional impairment

**Anxiety (Based on NICE clinical guideline 123)**

- Be alert to possible anxiety disorders, especially in people with a past history of anxiety disorder, or who have experienced a recent traumatic event, and screen using the 2-item **Generalised Anxiety Disorder Scale (GAD-2)**:

- Over the last 2 weeks, how often have you been bothered by the following problems?

**Feeling nervous, anxious or on edge**

Not at all	Several days	More than half the days	Nearly every day
0	1	2	3

**Not being able to stop worrying**

Not at all	Several days	More than half the days	Nearly every day
0	1	2	3

- If the patient scores 3 or more, consider an anxiety disorder, and further assessment by a practitioner competent to perform a mental health assessment (as above) The patient's GP should be informed of the referral.
- If the patient scores less than 3, but you still have concerns, ask the following:  
*"Do you find yourself avoiding places or activities and does this cause you a problem?"*
- If the questions indicate possible anxiety, a competent practitioner should review the patient's mental state, and associated functional, interpersonal and social difficulties.

**Management**

- Management will depend on specific diagnosis and severity and should be in line with NICE clinical guideline 123.

## EMERGENCIES - METASTATIC SPINAL CORD COMPRESSION (MSCC)

*This guidance applies only to cancer patients*

Patients with suspected SCC must be assessed **as a priority**.

If you suspect MSCC contact the ACUTE ONCOLOGY SERVICE urgently.

Consider this possible diagnosis in any cancer patient who goes 'off legs'.

### 1. RECOGNITION

Act promptly on clinical grounds.

Do not be reassured by X-rays as these are normal in 10-20% cases.

**DO NOT WAIT FOR LATE SYMPTOMS/SIGNS TO APPEAR.**

Pain – severe, recent onset or worsening, felt as a band around the body or radiating down arm(s) or leg(s), exacerbated by coughing or straining, not relieved by rest. Often precedes neurological signs. The diagnosis of spinal cord compression should be considered in any cancer patient with severe back pain in a nerve root distribution.

Late symptoms/signs include

- 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 – may present with

- Sciatic pain, often bilateral
- Weakness/wasting of gluteal muscles
- Bladder problems including retention, overflow and incontinence
- Sacral (saddle) anaesthesia, loss of anal sphincter tone

### 2. IMMEDIATE ACTION

- Give dexamethasone 16mg (oral/iv) unless contraindicated (this dose volume is too large to be tolerated as a single subcutaneous injection). Do not delay giving in order to get i-v in community.
- 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)

- All patients with suspected MSCC must be discussed with the Acute Oncology Service at either of the two regional cancer centres (NCCC or JCUH)
- This applies especially to patients who present with severe weakness/paralysis 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**
- In case patients transferred for MRI do not require treatment, a bed must be retained at the referring hospital

### 4. If Metastatic Spinal Cord Compression is diagnosed

- Urgently contact the Acute Oncology Service to ensure the patient is managed on the correct pathway
- Definitive treatment, where indicated, must begin within 24hrs

See NICE clinical guideline 75: Metastatic Spinal Cord Compression: [www.nice.org.uk](http://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.

Commonest paraneoplastic syndrome in patients with advanced cancer - 10% cancer patients. May occur in the absence of bone metastases. Strongly associated with breast, lung, haematological and genito-urinary tract malignancies.

Reflects poor prognosis. Median survival 3-4 months, worse if resistant to treatment.

#### Clinical Presentation:

- Confusion, drowsiness, and eventually coma.
- Thirst & polyuria. Dehydration may lead to pre-renal failure.
- Nausea & vomiting. Constipation.
- Worsening pain or pain responding poorly to treatment.

### 2. IMMEDIATE ACTION

#### Assessment

- Check corrected calcium level in venous blood. Normal < 2.60 mmol/L  
Corrected calcium = {serum calcium} + {(40 - serum albumin g/L) x 0.025}
- 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 2-4L/day. Caution if co-morbidities risk fluid overload.
- After 1-2 litres saline (to prevent renal damage) give iv bisphosphonate

#### Drugs of choice (local guidance applies):

**First Episode:** Disodium Pamidronate: 30-90mg i-v in 500ml saline over 2hrs

If effective, this can be repeated for subsequent episodes.

**If ineffective or improvement short-lived:** Consider a higher dose of Pamidronate or Zoledronic acid 4mg iv in 100ml saline over 15 minutes

(Reduce dose if renal impairment – see manufacturer's SPC for guidance)

**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 4-7 days.

After 7 days, if no clinical/biochemical response consider giving further 4 mg Zoledronic acid IV in 100ml 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.

## EMERGENCIES – MAJOR HAEMORRHAGE

*This guidance applies only to cancer patients*

### 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 anticoagulants.
- Always monitor INR closely if warfarin continues. Correct any coagulation disorder if possible.
- 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.
- Although confident reassurance and support is most helpful in a crisis like this, it can be useful to have midazolam available (10mg IV/IM/buccal/sublingual) with appropriate prescription authorisation.

### 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 (e.g. regarding preferred place of death) should be observed.***

#### If resuscitation is inappropriate

- Try to remain calm. This will help a dying patient to achieve a peaceful death.
- Stay with the patient, giving as much reassurance/explanation as possible to patient and family.
- Use dark towels to absorb blood loss.

#### 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).
- Discuss with the local Acute Oncology Team urgently, unless the following applies
- 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 at treatment dose, at home.
- Also see guidelines on breathlessness (p29 & 30) and agitation (p27).

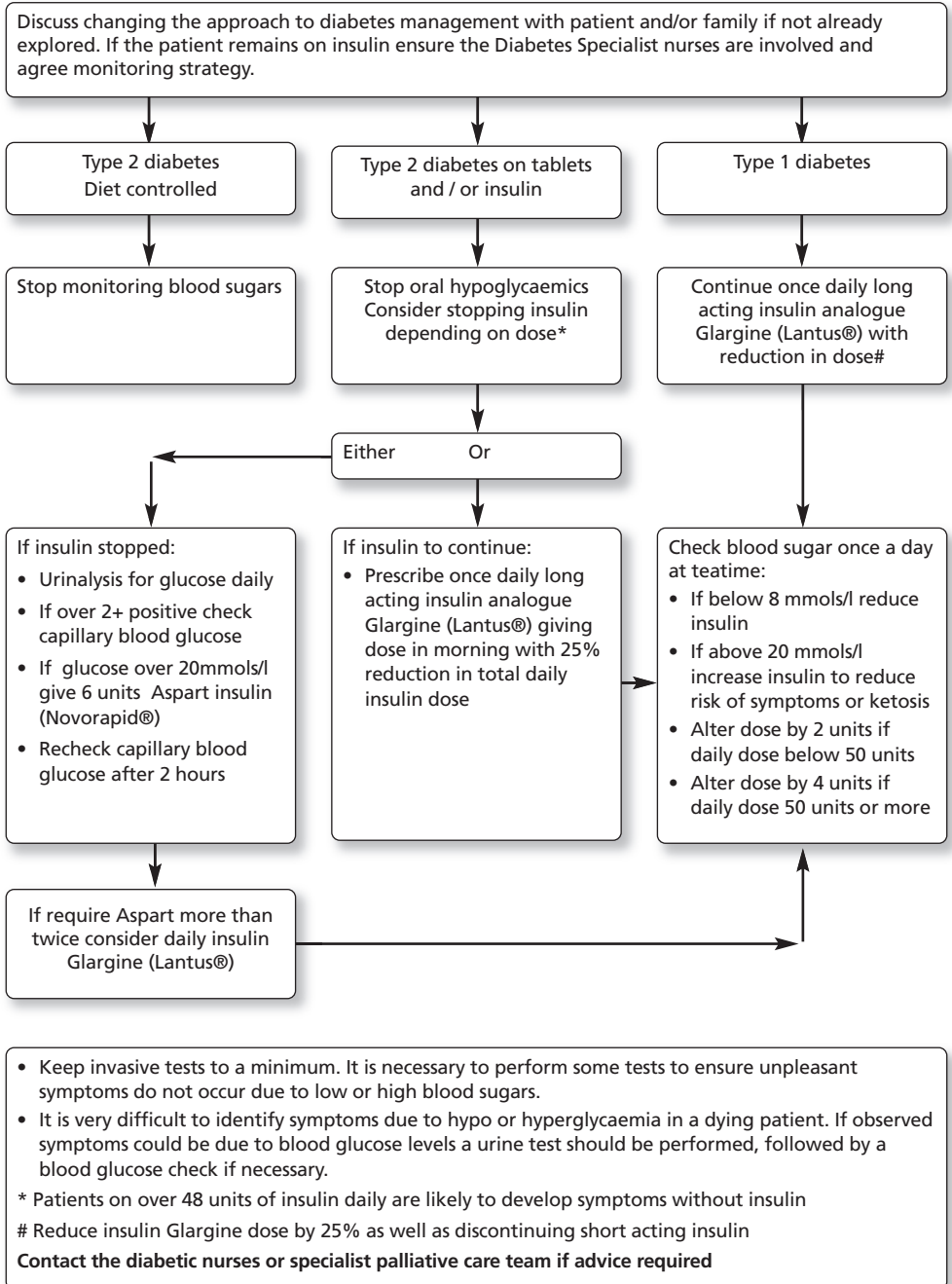
#### If SVCO suspected in hospital:

- Relieve the acute symptoms with steroids, oxygen and other symptomatic measures.
- Seek specialist opinion from the Acute Oncology Team who will arrange appropriate management.

### 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.

## DIABETES MANAGEMENT AT THE END OF LIFE



- Keep invasive tests to a minimum. It is necessary to perform some tests to ensure unpleasant symptoms do not occur due to low or high blood sugars.
- It is very difficult to identify symptoms due to hypo or hyperglycaemia in a dying patient. If observed symptoms could be due to blood glucose levels a urine test should be performed, followed by a blood glucose check if necessary.

\* Patients on over 48 units of insulin daily are likely to develop symptoms without insulin

# Reduce insulin Glargine dose by 25% as well as discontinuing short acting insulin

**Contact the diabetic nurses or specialist palliative care team if advice required**



## PAIN AT THE END OF LIFE

(for patients with severe renal failure (eGFR<30) see page 24)

Unless specifically indicated, morphine is the injectable first-line opioid of choice.  
Other opioids are indicated in renal failure and previous morphine intolerance.  
Seek specialist advice if you consider that an alternative may be indicated.

	<b>YES</b>	<b>Is patient already on opioid drugs?</b>	<b>NO</b>	
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For patient on morphine, follow guidance below.  
For patients on other opioids, seek advice

### Patient on morphine sulphate

- Divide 24 hour total dose of current oral opioid (**regular + prn**) by 2 and prescribe this as morphine (mgs) by syringe driver over 24 hours
- Prescribe 1/6th morphine 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

### Review within 24hrs

**If extra medication has been needed for pain:**

- Increase syringe driver dose by total amount of rescue morphine given or by 50%, whichever is less
- Adjust rescue/breakthrough dose to 1/6th of syringe driver morphine 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 morphine 20mg/24hrs by syringe driver soon after last oral dose
- Prescribe morphine 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 9 & 25 for guidance

### Scenario 1: "planning ahead"

**Patient not in pain**

- Prescribe morphine 5mg s-c hourly if needed
- If patient later develops pain, proceed to next box

### Scenario 2: "act now"

**Patient in pain**

- Give morphine 5mg s-c stat
- If effective prescribe and start morphine 20mg/24h by syringe driver
- Prescribe morphine 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 medication given or to 30mg/24hrs, whichever is less
- Increase rescue/breakthrough dose of morphine to 5mg s-c to be given up to hourly if needed

### Review within 24hrs

**If extra medication has been needed for pain:**

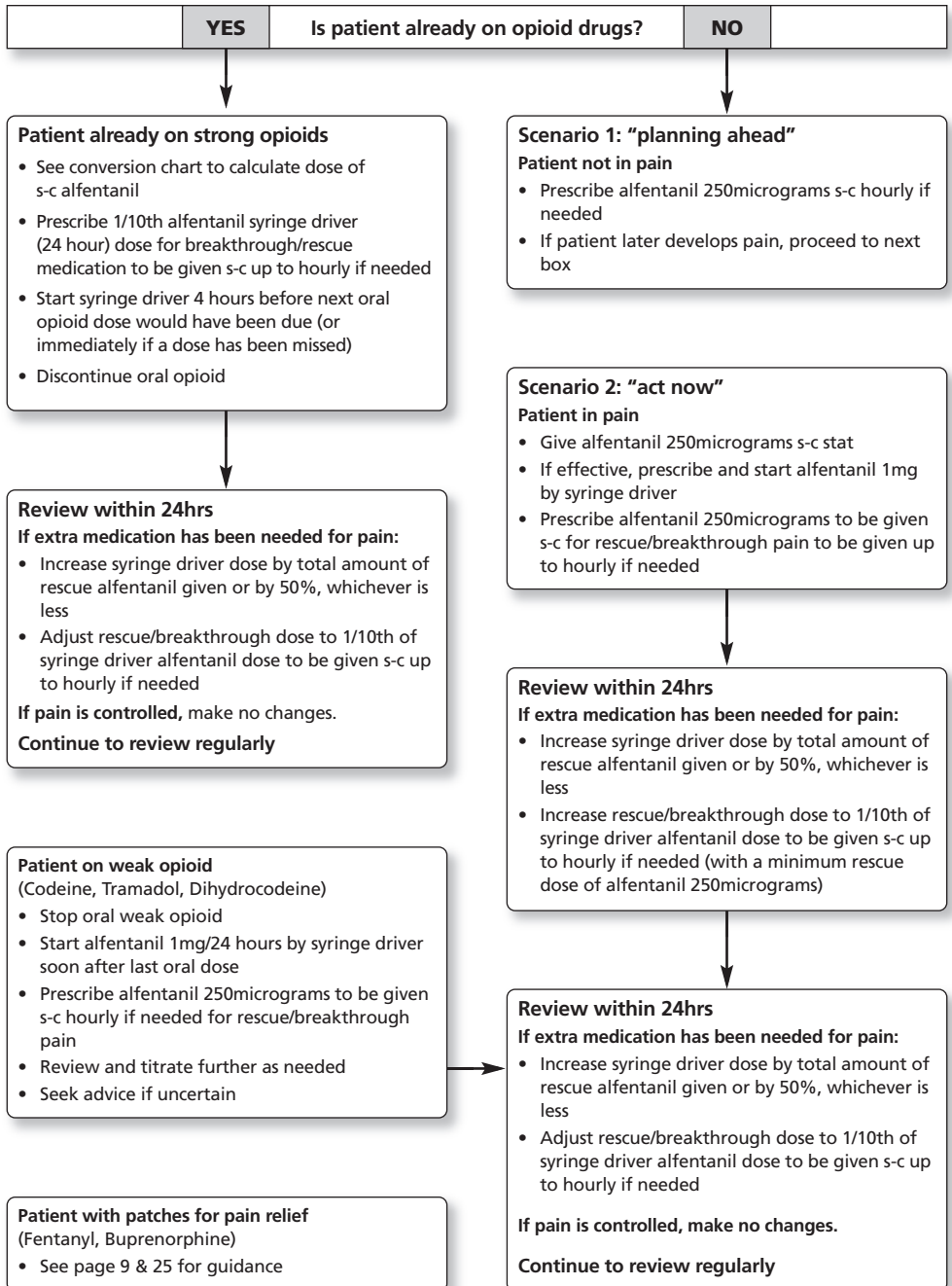
- Increase syringe driver dose by total amount of rescue morphine given or by 50%, whichever is less
- Adjust rescue/breakthrough dose to 1/6th of syringe driver morphine dose to be given s-c up to hourly if needed

**If pain is controlled, make no changes.**

**Continue to review regularly**

## PAIN AT THE END OF LIFE IN RENAL FAILURE

(Trigger is eGFR<30ml/min in line with LCP for Renal Failure)



## PAIN AT THE END OF LIFE – SUPPLEMENTARY INFORMATION

### Fentanyl patches for a patient in the last days of life

It is recommended to continue fentanyl patches in these patients. Remember to carry on changing the patch(es) every 72 hours – this is sometimes forgotten.

If pain occurs, give rescue doses of morphine 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 morphine is not appropriate, seek advice about an alternative injectable opioid.

### Adding a syringe driver to a patch

If 2 or more rescue doses are needed in 24 hours, start a syringe driver with morphine (or other opioid) and continue the patch(es).

The morphine (or other opioid) dose in the syringe driver should equal the total rescue doses given in previous 24 hours 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.

**IF YOU ARE IN ANY DOUBT ABOUT THESE CALCULATIONS, ASK FOR SPECIALIST ADVICE.**

### 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

The breakthrough dose is usually between 1/10th and 1/6th of the total 24 hour dose. A common starting point is to prescribe 1/6th of the total 24 hour dose (using a practical dose, rounding down rather than up) to be given hourly as needed and adjusted according to benefit and tolerability.

#### Patients on alfentanil via syringe driver:

Calculate the breakthrough or rescue dose as 1/10th of the 24 hour dose.

#### Patients on fentanyl via syringe driver:

Calculate the breakthrough or rescue dose as 1/8th of the 24 hour dose.

#### Patients with a fentanyl patch:

Use the opioid dose conversion chart on page 9 to calculate the appropriate dose.

**Rescue doses may be given hourly up to the maximum defined by the prescriber.**

**A defined maximum number of doses will prompt early review if pain is uncontrolled.**

**When managing a patient with renal failure and alfentanil is unavailable, please seek specialist advice.** Alternatives include fentanyl, hydromorphone and sometimes oxycodone.

## NAUSEA AND/OR VOMITING AT THE END OF LIFE

This guideline for management of nausea/vomiting in the last days of life should be read in conjunction with the general guideline on nausea/vomiting on p.12.  
 Patients already taking an oral anti-emetic who reach the last days of life should have the anti-emetic continued by the sub-cutaneous route to ensure on-going symptom control.  
 This may require a drug change (Domperidone to Metoclopramide; Prochlorperazine to Cyclizine).

New onset nausea/vomiting in the last days of life is difficult to investigate and may be multi-factorial. Evidence suggests cyclizine + haloperidol in combination is 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.

**IN RENAL FAILURE: AVOID CYCLIZINE. USE HALOPERIDOL or LEVOMEPRMAZINE.**

### 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

**If** anxiolytic/sedative effects likely to be helpful consider levomepromazine as first line anti-emetic prescribed as below.

### REVIEW AFTER 24hrs:

If symptoms are controlled, continue as before.

If either nausea or vomiting persists change anti-emetic to levomepromazine as below and/or contact the Specialist Palliative Care Team.

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

Review the possible causes but do not delay changing the anti-emetic regime or arrange burdensome investigations in an end of life care situation.

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 may 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 24hours. Once daily s-c dosing is an alternative to s-c infusion.

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 p.27).

## RESTLESSNESS AND/OR AGITATION AT END OF LIFE

Consider and treat common causes of restlessness - urinary retention, faecal impaction and pain.  
Also consider whether sedation is acceptable to patient.

Patients on regular or long term benzodiazepines who enter the last days of life should continue to receive a benzodiazepine. Give midazolam by s-c infusion to prevent rebound agitation/withdrawal.

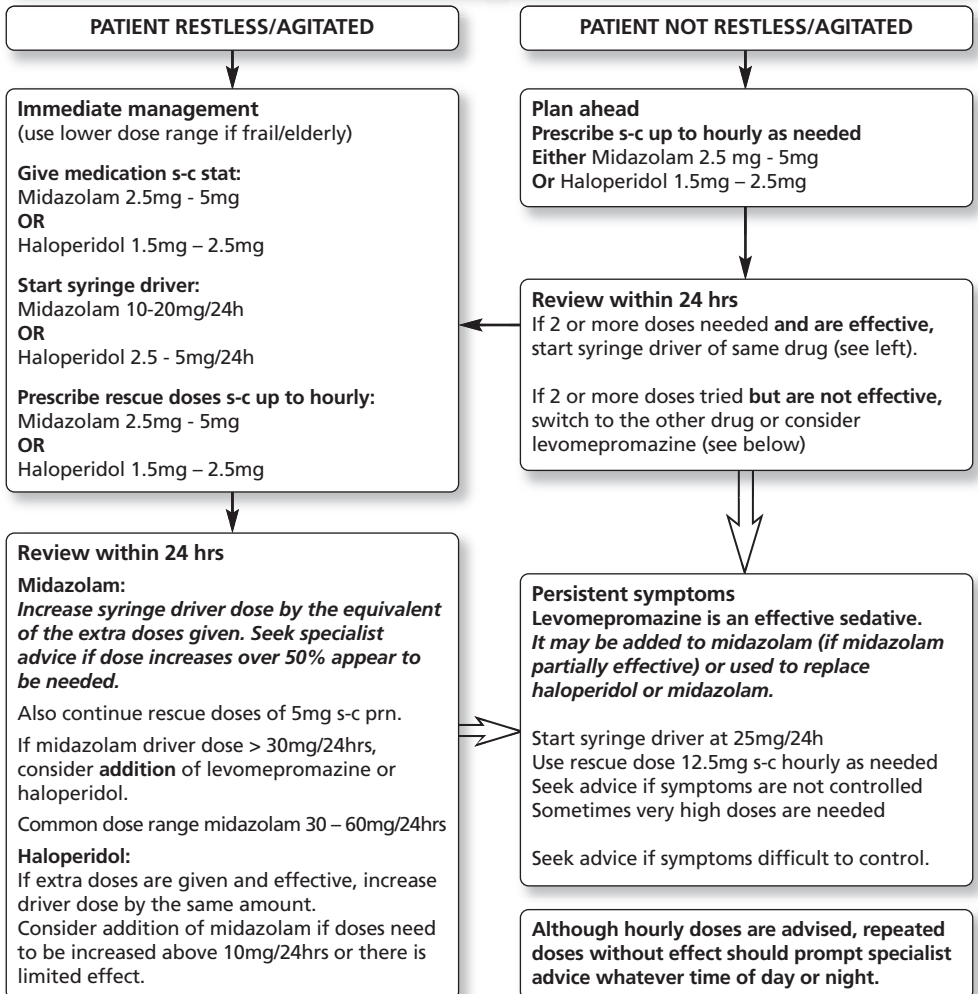
**The doses given here are a guide. In complex situations, seek specialist advice.**

**If sedation is clinically indicated, choose MIDAZOLAM**

**Where there is Delirium or to avoid excess sedation, choose HALOPERIDOL**

**LEVOMEPRMAZINE may be preferable where there is paranoia/psychosis**

**IN RENAL FAILURE: MIDAZOLAM is preferred first line option**



## RESPIRATORY TRACT SECRETIONS AT END OF LIFE

Secretions ('death rattle') are easier to control early than late. Treat promptly.

**Considerations when choosing drug treatment:**

Hyoscine salts are commonly prescribed to try to control secretions in the last days of life.

Hyoscine **butylbromide is non-sedating** and should therefore be considered in a conscious patient.

(N.B. *Hyoscine butylbromide is incompatible with cyclizine in a syringe driver*).

Hyoscine **hydrobromide has sedative effects** which may be useful, but occasionally causes agitation.

Some palliative care services use **Glycopyrrolate** as the preferred anti-secretory agent to avoid sedation.

**IN RENAL FAILURE: Avoid hyoscine hydrobromide.**

**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 400micrograms

**Start syringe driver**

Either Hyoscine butylbromide 60mg/24h  
Or Hyoscine hydrobromide 1.2mg/24h

**Ensure rescue doses up to hourly s-c as needed**

**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 400micrograms

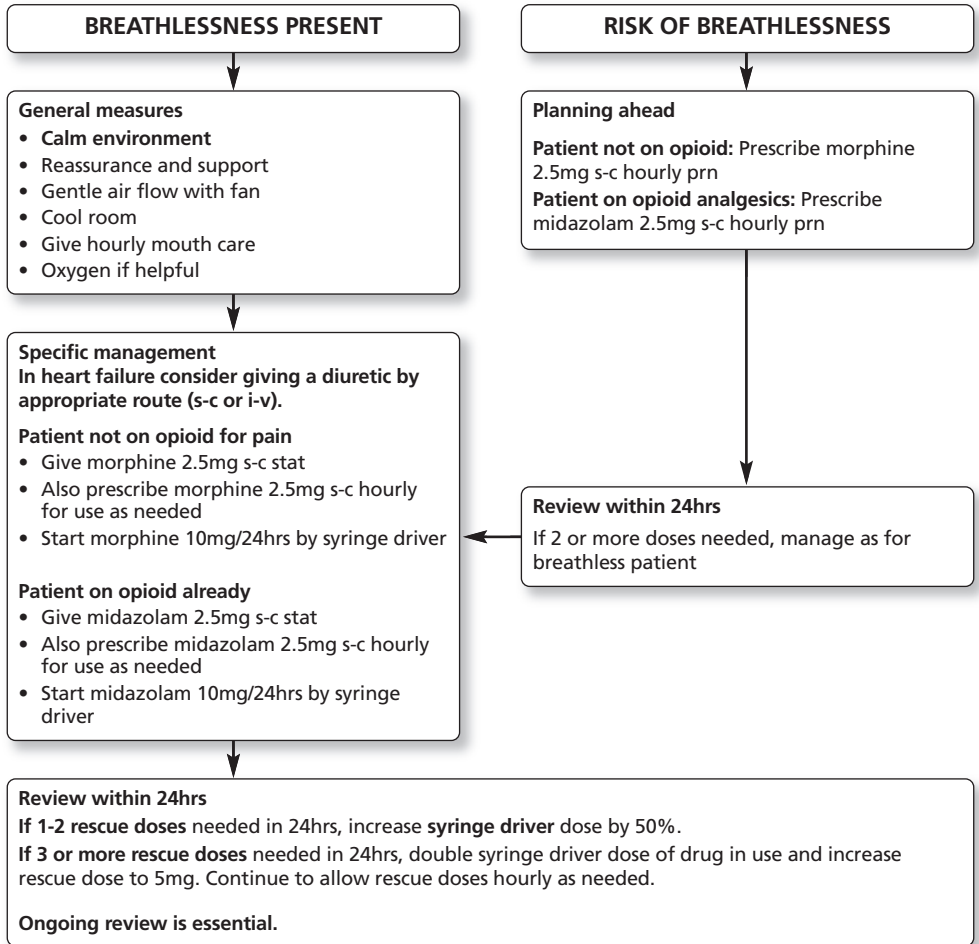
**Review after no longer than 24hrs**

If 2 or more doses needed, manage as for 'secretions present'.

**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***(for patients with severe renal failure (eGFR<30) see page 30)***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.

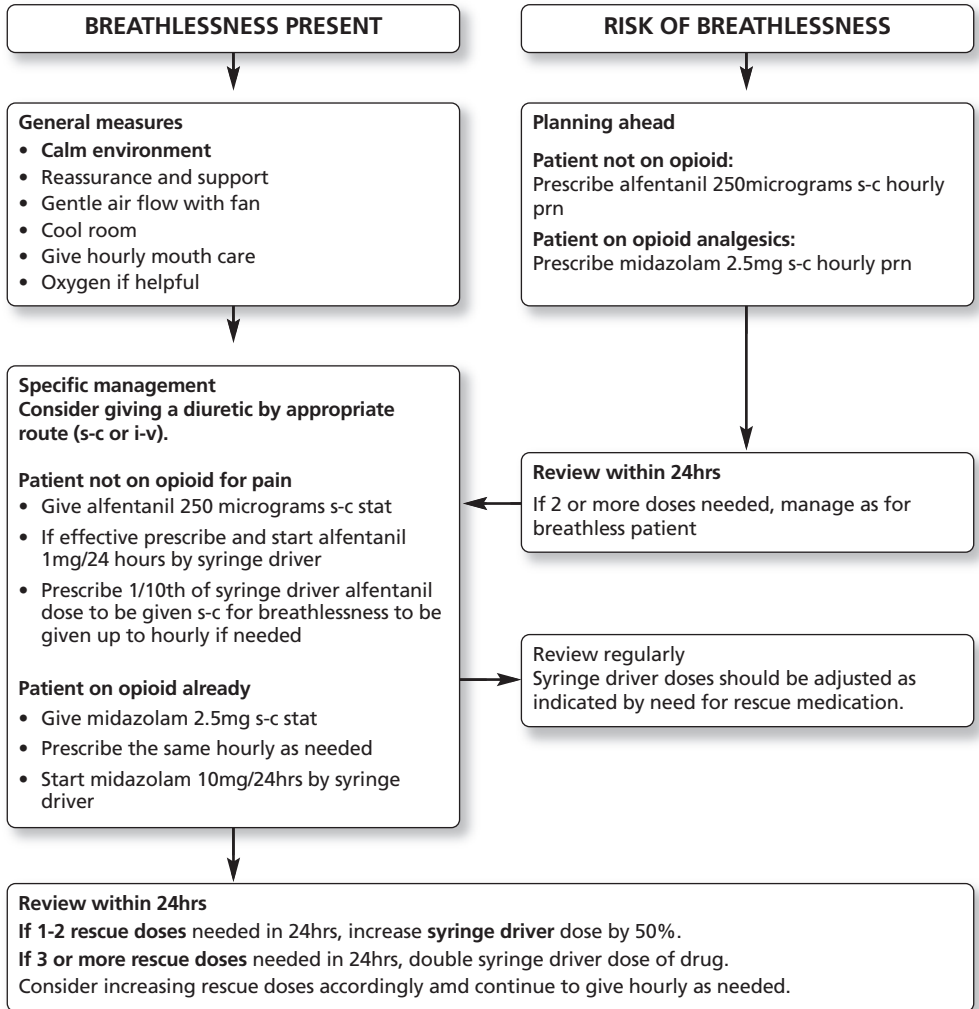
Review every few hours and further titration is necessary to maintain good symptom control.

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.

## BREATHLESSNESS AT END OF LIFE IN RENAL FAILURE

(Trigger is eGFR<30ml/min in line with LCP for Renal Failure)





## SPECIALIST PALLIATIVE CARE SERVICES CONTACT DETAILS

### CUMBRIA

Carlisle & Eden Palliative Care Team: 01228 603208  
 West Cumbria Specialist Palliative Care Services:  
 01900 705200  
 Eden Valley Hospice: 01228 810801  
 Out of hours advice: 01228 810801

### DARLINGTON

Hospital & Community Team: 01325 465564  
 St. Teresa's Hospice: 01325 254313  
 Out of hours advice: 01325 254313

### DERWENTSIDE

Derwentside Community Team: 01207 594608  
 Willowburn Hospice (for nursing advice): 01207 529224

### DURHAM

University Hospital North Durham: 0191 333 2338  
 Durham & Chester-le-Street Community Team:  
 0191 387 6532  
 St. Cuthbert's Hospice: 0191 386 1170  
 Out of hours advice: 0191 569 9195

### DURHAM DALES & SEDGFIELD

Community team: 01388 607301  
 Out of hours advice (Butterwick Hospice):  
 01642 607742

### EASINGTON

Community Macmillan Service: 0191 586 2426  
 Out of hours advice: 01429 855558

### GATESHEAD

Hospital & Community Team: 0191 283 4586  
 Out of hours advice: 0191 273 3435

### HARTLEPOOL

Hospital & Community Team:  
 01429 522154 or 01429 522697  
 Hartlepool Hospice: 01429 855555  
 24hr advice line: 01429 855558  
 Out of hours Consultant advice: 01642 617617

### MIDDLESBROUGH, REDCAR & CLEVELAND

Hospital Team: 01642 854938  
 Community Team: 01287 639100  
 Teesside Hospice: 01642 819819  
 Out of hours advice: 01642 819819  
 Out of hours Consultant advice: 01642 850850

### NEWCASTLE

St. Oswald's Hospice: 0191 285 0063  
 Marie Curie Hospice: 0191 219 1000  
 Hospital Specialist Palliative Care Teams  
 RVI: 0191 282 4019  
 Northern Centre for Cancer Care: 0191 213 8606  
 Freeman Hospital: 0191 213 7221  
 Community team: 0191 226 1315  
 Out of hours advice: 0191 273 3435

### NORTH TEES

Hospital Team: 01642 624548  
 Community Team: 01642 765453  
 Butterwick Hospice (Stockton on Tees): 01642 607742  
 Hospice at Home: 07977 217050  
 Out of hours advice: 01642 607742  
 Out of hours Consultant advice: 01642 617617

### 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

### NORTH YORKSHIRE – Hambleton & Richmondshire

Hospital & Community: 01609 751313  
 Out of hours advice:  
 Friarage Hospital: 01642 819819  
 Community: 01325 254313  
 Out of hours Consultant advice: 01642 850850

### 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 6396

### SUNDERLAND

Hospital Team: 0191 565 6256 ext 47337  
 Community Team: 0191 569 9193  
 St. Benedict's Hospice: 0191 569 9195  
 Out of hours advice: 0191 569 9195

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