

# **Symptom Control and Caring for the Dying Patient: Palliative Care Guidelines**

**4th Edition**

Produced by  
Kent Palliative Medicine Forum  
University of Kent

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	Midazolam	Metoclopramide	Levomepromazine	Hyoscine Hydrobromide	Haloperidol	Glycopyrronium Bromide	Diamorphine & Morphine	Cyclizine
Hyoscine Butylbromide	✓	Not Applicable	✓	Not Applicable	✓	Not Applicable	✓	⊘
Cyclizine	✓	⊘	Not Applicable	✓	✓	✓	✓	
Diamorphine	✓	✓	✓	✓	✓	✓		
Glycopyrronium Bromide	✓	Not Applicable	✓	Not Applicable	✓			
Haloperidol	✓	Not Applicable	Not Applicable	✓				
Hyoscine Hydrobromide	✓	Not Applicable	✓					
Levomepromazine	✓	Not Applicable						
Metoclopramide	✓							

  

Key	
✓	= Compatible at usual concentrations
⊘	= not suitable to be used together
✓	= dilute in sterile water no greater than 10mg/ml

## Introduction

This booklet is aimed at all health care professionals involved in the care of patients with incurable, progressive disease who are experiencing unpleasant symptoms. The interventions and treatments described are initial measures that all doctors and nurses should be able to start. If the symptoms do not resolve specialist advice can be obtained from the contacts given at the end of the booklet.

Note: Cautions and contra-indications may apply to any of the medications some of the indications are outside of the product licence. Please refer to the BNF, especially the palliative care section near the beginning.

## Doses

Where a range of doses is given it is generally the case to start at the lower end, unless specialist advice suggests otherwise. This should be reviewed regularly and increased if the symptom is not improving.

## Contents

Pain  
Syringe driver use  
Constipation  
Nausea and vomiting  
Gastrointestinal obstruction  
Acute confusional states  
Dyspnoea  
Checklist for the dying patient  
Respiratory secretions at the end of life  
Restlessness at the end of life  
Heart failure  
Renal failure  
Diabetes in palliative care  
Communication: breaking bad news and CPR discussions  
Contact details for hospices and hospital palliative care teams

## Abbreviations

SL Sublingual  
SC Subcutaneous  
IM Intramuscular  
PO Per oral  
IV intravenous  
CSCI Continuous subcutaneous infusion via a syringe driver  
od Once daily  
bd Twice daily  
tds Three times a day  
qds Four times a day  
prn As required  
hr hour  
mg milligrams  
g grams  
mmol/l millimols per litre  
NSAID Non-steroidal anti-inflammatory

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

# The management of pain

A holistic approach is necessary when dealing with pain control in terminal illness. There may be several factors contributing to the experience of pain such as:

## Psychological Fears

The fears and concerns of the patient.

## Social Concerns

Most patients are part of a wider social network and may have concerns regarding them.

## Spiritual Distress

The meaning of the illness to the patient which may lead to questions about the meaning of life - "why me?" "what next?".

Principles of good pain control
<ul style="list-style-type: none"><li>● Assess the patient.</li><li>● Explain symptoms to patient and carers</li><li>● Treat the cause of the pain where possible</li><li>● Use the analgesic ladder at the appropriate step</li><li>● Regular prescription of analgesia</li><li>● Prescribe appropriate analgesic for breakthrough pain</li><li>● Clear explanation to the patient and carers</li><li>● Review analgesic needs frequently</li></ul>



## **Assessment**

- What is the cause of the pain?
  - Treat reversible causes.
  - Carefully exclude conditions requiring intervention such as spinal cord compression, fracture and infection.
- What are the characteristics and severity of the pain?
  - Assess by the effect on activities of daily living or at rest / sleep.
- What is the type of pain: neuropathic, bone, visceral, etc?
- What associated social, psychological, spiritual and physical issues are present?

## **Management**

- All patients require a full explanation
- Most patients require regular analgesia, and may also require specific treatments aimed at underlying causes (e.g. palliative radiotherapy for metastatic bone pain)
- Start at an appropriate step of the ladder:

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

	STEP 3	Strong opioids e.g. morphine & paracetamol (+/- adjuvant analgesics)
	STEP 2	Weak opioids e.g. co-codamol 30/500 (+/- adjuvant analgesics)
STEP 1		Paracetamol (+/-adjuvant analgesics)

The usual starting doses on each step are:

- Paracetamol 1g po qds
- Co-codamol 30/500 two tablets po qds
- Slow release morphine (e.g. Zomorph capsules or MST tablets) 10mg-30mg every 12 hours

For patients commencing morphine, an as required (“breakthrough”) dose should also be prescribed:

- Immediate release morphine (e.g. Oramorph liquid or Sevredol tablets) a dose of a 1/6th of the 24hour morphine dose is appropriate. e.g. a patient taking 90mg BD of slow release morphine is the equivalent of 180mg in 24 hours and so would receive 30mg as breakthrough. See the table on the inside cover which gives the appropriate break through dose of immediate release morphine, which will need to be increased in line with the regular dose.
- More frequent use of breakthrough analgesia for example more than 3 doses in 24 hours requires review of the regular dose.

If pain is severe then it is good practice to start at step 3 i.e. strong opioids. Continue to titrate up the morphine dose by up to 30% every 24-48 hours until pain relief is satisfactory or side-effects occur. Prescribe a laxative and an anti-emetic - see sections on constipation and nausea.

If patients are unable to take by mouth then analgesia should usually be given SC. To make this conversion see the table in the inside front cover. The 24 hour dose by CSCI is given via a syringe driver.

### ***Alternative opioids***

Other opioid drugs are available and are sometimes used for palliative care patients. Morphine remains the first choice, although there may be specific indications where alternatives are indicated such as renal failure or intolerable side effects. The table on the inside front cover gives the relative potency of these medications helping to guide conversions from one opioid to another.

### **Oxycodone**

Oxycodone provides an alternative oral opioid to morphine. It has a role if patients develop intolerable side-effects from morphine.

### **Alfentanil**

This may be of use in patients with significant renal impairment. Please contact the Palliative Care Team for further advice.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## **Transdermal Opioids (Patches)**

These should only be used for patients who have stable analgesic requirements. They are not suitable for acute pain but may be useful for patients who:

- Are unable to take oral medication
- Are unable to comply with regular medication
- Experience intolerable side-effects to other opioids
- Have significantly impaired renal function

Delivery systems used by different patch manufacturers can lead to prescribing confusion. It is now advised that when prescribing opioid patches that the brand name is used.

## **Fentanyl**

Patch strengths: 12 micrograms/hr, 25 micrograms/hr, 50 micrograms/hr, 75 micrograms/hr and 100 micrograms/hr. NB patches only require changing every 72 hours.

When the first patch is applied it will take 12-18 hours before maximal analgesia is achieved. The starting dose should be the appropriate conversion from the current opioid (see table on the inside front cover). The dose of the patch should not be increased until it is due to be changed, but an immediate-release opioid should always be prescribed for breakthrough pain (see chart for appropriate doses). Also, once a patch is removed, there will continue to be some absorption of fentanyl from the skin for a further 12-18 hours.

## **Buprenorphine**

Buprenorphine is now available in a number of formulations which vary in duration of activity. Butrans is changed weekly and Transtec twice weekly. As with fentanyl there is a delay in onset of analgesic effect of 12-18 hours after first application of a patch, and a similar delay for the effect to wear off after patch removal. For further advice on the use of this opioid please contact the Palliative Care Team.

## ***Common side-effects of opioids***

### **Constipation**

Prescribe a regular laxative to prevent constipation. Increase the dose as the opioid dose increases. See later section on management of constipation for suggested regimens.

### **Nausea**

May occur when starting or increasing opioids, therefore prescribe an anti-emetic for use if necessary –see section on nausea and vomiting.

### **Dry Mouth**

Can occur in about 40% of patients.

Local measures e.g. ice cubes, pineapple chunks

Artificial saliva (e.g. Saliva Orthana spray or oral balance gel)

Check for oral candidiasis and treat appropriately

### **Drowsiness**

May occur when opioids are started or the dose is increased, but it is usually transient and will reduce over a few days.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## **Opioid toxicity**

Features of opioid toxicity include

- Sedation
- Hallucinations
- Confusion
- Myoclonus

It is important to consider other reversible causes such as hypercalcaemia, sepsis, dehydration and the possible role of other medications. Morphine toxicity is particularly associated with renal impairment; please see renal section for details of specific management.

Management of suspected toxicity includes:

- Address other possible causes e.g. rehydration
- Reduce opioid dose
- Opioid sparing techniques e.g. non opioid analgesics
- Switch opioid e.g. convert to an alternative opioid with a 20-30% dose reduction

NB When sedation is required (to address problems of anxiety, restlessness, agitation) it should not be achieved by increasing the opioid dose, instead a more appropriate sedative medication should be prescribed.

## **Specific pain syndromes**

It is helpful to identify the following syndromes which benefit from particular management strategies:

### ***Bone pain***

- Paracetamol
- NSAIDs e.g. diclofenac (modified release) 75 mg bd or naproxen 500 mg bd
- Palliative radiotherapy – refer to oncology
- Bisphosphonates e.g. pamidronate infusion

### ***Back pain and spinal cord compression***

**Increasing or new back pain with any neurological symptoms or signs in lower limbs or alteration in bowel or bladder function requires urgent action to exclude spinal cord compression.**

- **Commence dexamethasone 8mg bd**
- **Arrange MRI of whole spine**
- **Refer for urgent oncology or neurosurgical opinion.**

### ***Headache from raised intracranial pressure***

May present in primary cerebral tumour or cerebral metastases.

Give dexamethasone, starting at 8 mg bd in the morning and at lunchtime as may cause insomnia if given later in the day. If there is no response within 7 days discontinue the dexamethasone. If patient responds, gradually reduce the dosage to a maintenance dose.

Consider palliative radiotherapy – refer to oncology.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## ***Bowel colic***

- Assess for and manage constipation.
- Hyoscine hydrobromide (Kwells) 300 micrograms SL tds or hyoscine butylbromide (Buscopan) 10mg - 20mg SC.
- In bowel obstruction, the oral route is not appropriate for drug administration (see section on intestinal obstruction).

## ***Liver capsule pain***

Dexamethasone 4mg - 8 mg od, NSAID and/or paracetamol.

## ***Infection***

Treat with an appropriate antibiotic.

## ***Neuropathic pain***

- Analgesic ladder (see earlier) – pain may be opioid responsive.
- Adjuvant analgesics:
  - Dexamethasone: 8mg od to relieve nerve compression
  - Amitriptyline: Starting dose 10mg - 25mg at night and titrate upwards
  - Gabapentin: Starting dose is 300mg od (elderly patients 100mg); titrate upwards as tolerated.

Neuropathic pain may be difficult to control and advice needed from the Specialist Palliative Care Team.

## ***Interventional procedures for pain***

Consider referral to a pain clinic in specific pain syndrome (e.g. coeliac plexus block for pancreatic pain) or in difficult pain situations when analgesics are not working and toxicity is a problem.

## ***TENS (Transcutaneous Electrical Nerve Stimulation)***

For nerve irritation and localised pain. Consult a physiotherapist.

## ***Use of a syringe driver***

The syringe driver is a battery-operated machine designed to deliver drugs via a continuous subcutaneous infusion (CSCI) over 24 hours.

The main indications are the inability to swallow or absorb drugs due to

- Weakness or coma
- Persistent nausea and vomiting
- Medical management of intestinal obstruction if surgery is not possible or appropriate

## ***Drugs commonly used in a syringe driver***

A combination of 2-3 drugs can be used to achieve good symptom control.

The syringe driver site, stability of the contents and rate of infusion should be checked regularly.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## Analgesics

Morphine is the most commonly used opioid analgesic used by CSCI in a syringe driver although oxycodone can be used in patients intolerant of morphine or diamorphine if the volume to be infused is too large.

## Calculating doses of morphine, diamorphine and oxycodone via CSCI

- Calculate the 24 hour dose of opioid on the basis of the previous 24 hour opioid requirement (see also table of equivalent doses)
- When reviewing dosage, calculate the total dose of opioid received in the previous 24 hours considering any additional doses given for breakthrough pain.
- For breakthrough pain, give 1/6th of the 24 hour opioid dose by SC bolus injection.
- Opioids are usually combined with other drugs (see below). The drugs should be diluted to an appropriate volume with 0.9% saline (except with cyclizine).

## NSAIDS

If a patient is unable to take a NSAID by mouth, an equivalent dose of diclofenac can be given rectally, or by CSCI. Diclofenac should not be combined with other drugs in the same syringe driver and should be diluted with 0.9% saline, in a minimum volume of 20 mls.

## Transdermal opioids and CSCI

If setting up a CSCI via a syringe driver in a patient using transdermal patches, continue to apply the patch at the appropriate interval rather than convert to a parenteral opioid in the syringe driver. Add any additional opioid required for breakthrough pain to the CSCI.

## Anti-emetics

Drug	Usual starting dose range/24hours
Haloperidol	1.5mg - 5mg
Levomepromazine	5mg - 25mg
Cyclizine	150mg
Metoclopramide	30mg - 60 mg

## Respiratory secretions and bowel colic

Drug	Usual starting dose range/24hours
Glycopyrronium Bromide	600 micrograms – 1.2mg
Hyoscine Butylbromide (Buscopan)	40mg - 120mg
Hyoscine Hydrobromide	800 micrograms – 1.2mg

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## Terminal agitation and restlessness

(NB exclude urinary retention and pain- see later section)

Drug	Usual dose range/24hours	Comments
Midazolam	10mg - 60mg Add in levomepromazine if agitation not controlled with 60mg	Useful in previously anxious patient.
Levomepromazine	25mg - 100mg	Useful if psychotic features

## Seizures

If no recent seizures consider need for ongoing prophylaxis.

Use midazolam starting with 20mg over 24hours and increasing as required. This is necessary in patients who had required anticonvulsants for convulsions

If uncontrolled convulsions despite higher doses (>60mg midazolam) seek specialist advice.

## Management of constipation

- Careful history and clinical assessment, including rectal examination (diarrhoea may reflect overflow).
- Minimise contributory factors, especially constipating medication where possible. Constipation is not a contraindication to the prescription of such medication.
- Always prescribe laxatives when commencing opioids.
- Combination regimes of laxatives are more effective; either two medications or a combination product (see below).

Select precise combination according to:

- Any risk of bowel obstruction? – Avoid stimulant laxatives if there is any colic.
- Volume of oral intake – what is realistic for patient to manage?
- Patient preference
- Individual laxative indications and contra-indications

Give appropriate laxatives regularly and titrate to maintain a comfortable stool.

Rectal intervention may be needed to address existing constipation prior to establishing an effective laxative regime, although in selected patients Macrogol 3350 (Movicol) may be effective for faecal impaction.

For some patients on-going rectal intervention may need to be continued in conjunction with oral laxatives particularly where there are predisposing factors, such as sacral nerve root involvement or spinal cord compression.

## ***Suggested oral laxative regimens***

- Docusate and senna
- Co-danthramer capsules or suspension (also “Strong” version available). Should be avoided in the incontinent patient
- Macrogols e.g. Movicol, Idrolax

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## ***Suggested rectal interventions***

- Glycerine and bisacodyl suppositories
- Phosphate enema alone (no more than three times a week)

## **Nausea and vomiting in palliative care**

Nausea and vomiting are common symptoms in palliative care occurring in over 50% of patients. There is often more than one precipitating factor making management particularly difficult.

### ***Approach to nausea and vomiting***

- Review current medication and discontinue any nonessential precipitating drug
- Remove any other known precipitating factors
- Treat reversible causes e.g. Hypercalcaemia (see later section)
- Prescribe a regular oral anti-emetic.
- If a patient is vomiting then an injection is necessary and if this successfully controls the vomiting it can be followed by regular oral anti-emetics
- If the vomiting persists commence CSCI via a syringe driver
- NB Reluctance to commence a syringe driver is a common reason for poor management of vomiting.

### ***Causes of nausea and vomiting***

- Area postrema (chemoreceptor trigger zone) activity: e.g. biochemical abnormalities (raised calcium or renal failure), drug changes (opioids, cytotoxics, antibiotics, digoxin) or infection.
- Cerebral cortex activity: e.g. anxiety
- Emetic pattern generator (Vomiting centre): e.g. radiotherapy to head or neck, primary or secondary cerebral tumours
- Gastric irritation: e.g. NSAIDs, iron, cytotoxics, radiotherapy
- Gastric stasis or compression: e.g. pressure from tumour or ascites or drug induced such as opioids, tricyclic antidepressants, phenothiazines, hyoscine
- Gastrointestinal obstruction (see later section)

### ***First line medication***

- Haloperidol 1.5 mg-3 mg as a single night time dose
- Cyclizine 50 mg tds. (often combined with haloperidol)
- Metoclopramide 10 mg-20 mg tds especially if improved gastric emptying is required

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## **Possible adjuvant medication**

- Lorazepam 500 micrograms sublingual or po prn may be helpful where anxiety is a precipitating factor
- Dexamethasone 4mg - 16 mg/day for raised intracranial pressure.
- Proton pump inhibitors e.g. lansoprazole 30mg for gastric irritation.

## **Second line medication**

- Levomepromazine (5 mg - 25 mg/24 hours)
- Higher doses of metoclopramide (up to 120 mg daily).

NB. Theoretically the prokinetic effect of metoclopramide will be lost if prescribed with an anti-muscarinic drug such as tricyclic antidepressants, cyclizine or levomepromazine. Before moving to 2nd line treatment consider giving a subcutaneous injection and then to a CSCI via a syringe driver if necessary.

## **Management of gastrointestinal (GI) obstruction in palliative care**

Having ruled out constipation as a cause of symptoms, there are three main approaches to a patient with malignant GI obstruction:

1. Interventional approach with surgery or stenting for patients with:
  - good performance status
  - isolated lesions and minimal previous surgery
2. Oncological intervention for patients with:
  - good performance status no previous chemotherapy treatment or where effective second line chemotherapy is available
3. Medical approach will be the case for the majority of patients and can often provide good control of symptoms without use of naso-gastric tubes or intravenous fluids. This may be appropriate initially in patients being considered for oncological intervention. The medical approach to managing GI obstruction differs according to the presence or not of colic.

For patients with no colic:

- Metoclopramide 30-60 mg/24 hours via CSCI. Sometimes higher doses are required.

For patients with colic:

- Hyoscine butylbromide 60mg - 120mg / 24 hours or glycopyrronium 400 micrograms – 1.2 mg / 24 hours as an antisecretory agent and antispasmodic
- Levomepromazine 5mg - 25 mg / 24 hours as an antiemetic
- Octreotide 500 micrograms / 24 hours if further anti-secretory effect is required. This can be titrated up.

All these drugs should be given by CSCI.

Infrequent colic may be managed by SL hyoscine hydrobromide (e.g. Kwells 300 micrograms). Sodium docusate should be given as a softening laxative.

## **Steroids in GI obstruction**

A trial of dexamethasone 8 - 16mg mane may be indicated. There is some evidence for relief of obstruction, but this has to be weighed against the risk of side effects and in particular the risk of inducing a good appetite to a patient who is vomiting.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## Acute confusional states in advanced disease

Characterised by acute onset, altered level of consciousness, fluctuating course with disorganised thinking, disorientation and inattention

More common in the elderly, physically ill, patients in the terminal stages of their illness and patients with an underlying dementia or cerebral primary or secondary malignancy. Whilst offering immediate treatment consider reversible causes: recent drug changes, organ failure, hypoxia, infection, hypercalcaemia, dehydration, encephalopathy, hypo/hyperglycaemia.

### Management

- Offer calm, well-lit environment, careful explanations, consistent carers and ideally presence of close relative
- In absence of abnormal behaviour or perception or psychosis:
  - Reduce anxiety if necessary with lorazepam 500 micrograms - 1.0mg SL or PO
  - If continued sedation indicated, midazolam 2.5mg - 10mg SC prn initially
- In the presence of abnormal behaviour or perception or psychosis:
  - If wishing to avoid excessive sedation give haloperidol 1mg - 5mg SC or 2mg -10mg orally (note subcutaneous : oral potency haloperidol 2:1)
  - Should sedation be required, use levomepromazine 12.5mg - 50mg / 24 hrs in CSCI via syringe driver or orally. If risk of seizures, combine with midazolam SC to raise threshold (see syringe driver section)
- Explain to family/carers the treatment prescribed.

Acute confusion is complex and difficult to manage so early involvement from the Palliative Care Team is recommended.

### Hypercalcaemia of malignancy

Occurs in 10-20% of patients with malignant disease (especially breast cancer, squamous cell carcinoma, small cell carcinoma, renal cell carcinoma and myeloma). Often there is a humoral component irrespective of the presence of bone metastases.

### Symptoms

- Often non-specific and include confusion and drowsiness, anorexia, nausea and vomiting, constipation, polyuria and polydipsia,.
- Renal failure and coma may result if left untreated.
- Symptoms may relate to the rate of rise in calcium but not necessarily to the degree of hypercalcaemia.

Treatment is based on the corrected serum calcium  $\text{mmol/l} = \{[40 - \text{albumin g/l}] \times 0.02\} + \text{serum calcium mmol/l}$

The correction is important as this group of patients often have a low serum albumin.

### Management

- Hypercalcaemia is often a poor prognostic sign and so may not be appropriate to try to treat in the last few days of life.
- Correct dehydration.
- IV bisphosphonates (pamidronate, zoledronic acid or ibandronate) following hydration.
- Some drugs have a single specified dose. Others recommend a treatment dose dependent on initial albumin corrected plasma calcium concentration. In the latter

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

- case it has been suggested that the higher doses should be given irrespective of initial calcium level to increase likelihood of response and prolong duration.
- Dose may need to be adjusted depending on renal function
  - Maximum effect can take up to a week
  - Drug and dose may need review in refractory hypercalcaemia and advice sought from the palliative care team.

## **Palliative management of breathlessness**

The uncomfortable awareness of breathing is a frightening symptom, and management of that fear and anxiety is essential. Episodes of hyperventilation or panic are a common feature.

Assessment includes history, examination and appropriate investigations. Reversible causes should be treated when possible. Symptomatic management requires a multidisciplinary approach and includes both non-pharmacological and pharmacological strategies. The relative contribution of these approaches will depend on the degree of breathlessness and the patient's prognosis.

### ***Treat reversible causes where appropriate***

E.g. pulmonary embolus; infection; reversible bronchoconstriction; pleural effusion; anaemia; cardiac failure; superior vena cava obstruction (dexamethasone, radiotherapy, stent).

### ***Non-pharmacological strategies***

- Should be employed in all breathless patients
- Exploration of fears and concerns
- Explanation and reassurance: e.g. "an awareness of lack of breath, like after exercise, is not in itself dangerous"
- Cool draught or fan, loosen tight clothes
- Hand pneumonic for controlled breathing: Stop, sigh, shoulders, slow breath in, slow breath out.
- Readily available calming support
  - Position yourself where you are fully supported and comfortable
  - When a muscle is tense relax it by moving it in the opposite direction to the tension
  - Take a moment to feel that area become relaxed
  - Move each part of the body until the whole body feels relaxed
  - Think about a time or place where you felt relaxed
  - Take slow even breaths and few minutes to yourself
- General adaptation measures e.g. move bed downstairs, sitting to wash, help with housework etc.
- Consider referral to a specialist palliative care team and physiotherapist. Some centres also run breathlessness clinics.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## ***Pharmacological treatment***

### **Opioids**

- Reduce the sensation of breathlessness (supported by systematic review findings)
- Improvements are seen at doses that do not cause respiratory depression.
- Starting dose: morphine 2mg - 5 mg PO 4 hourly prn.
- If more than 2 doses are needed within a 24 hr period, prescribe morphine regularly and titrate the dose according to response.
- In patients already taking regular opioids for pain then increase regular dose by 25-30%
- The appropriate 4 hourly “breakthrough” dose of morphine should be prescribed
- Alternative opioids can be used for patients who cannot tolerate morphine.

### **Benzodiazepines**

- Helpful in managing the fear and anxiety associated with dyspnoea.
- E.g. lorazepam 500 micrograms-2.5 mg daily or diazepam 2mg - 10 mg daily
- Sublingual lorazepam (Genus brand only) 500 micrograms - 1 mg or oxazepam 10mg – 20mg prn is useful in the management of a respiratory panic attack.

### **Nebulised saline 0.9%**

Helpful for sticky bronchial secretions.

### **Oxygen**

Useful in some patients, but there is no correlation with the degree of hypoxia. It has no role if saturation is normal.

### **Parenteral medication**

If the patient is unable to take oral medication, then morphine or diamorphine at the appropriate conversion dose and midazolam can be given by CSCI and prn (see section on end of life care).

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

# The dying patient

## ***Recognising the dying patient***

- Treatable causes for deterioration have been excluded or refused, or treatment deemed inappropriate or ineffective.
- The multi-professional team agree that the patient is dying
- The following criteria may apply:
  - Patient is bedbound
  - Patient is semi-conscious
  - Patient is no longer able to take tablets
  - Patient is only able to take sips of fluid

Commence the Liverpool Care Pathway for the dying if it is being used locally. If not available use the following checklist to guide care

## ***Checklist for the dying patient***

- Assess medications and discontinue non-essentials
- Prescribe prn SC medications
  - Analgesia e.g. diamorphine or morphine at the appropriate dose
  - Anti-emetic: e.g. haloperidol 1.5mg - 3mg 4-6 hourly or cyclizine 50mg 6-8 hourly or levomepromazine 5mg -12.5mg prn 6 hourly
  - Sedative: midazolam 2.5mg - 10mg prn 2-4 hourly
  - Antimuscarinic for respiratory secretions: glycopyrronium 200 micrograms – 400 micrograms 2-4 hourly or hyoscine butylbromide (Buscopan) 20mg 2-4 hourly
- In the community there is a need for anticipatory prescribing of these medications including the 0.9% saline or water for injections. CSCI prescriptions should include an appropriate range to prevent delays in symptom control.
- Consider commencing a CSCI if more than one dose of these medications is required.
- Discontinue inappropriate medical interventions, such as blood tests, IVIs, antibiotics
- Discontinue inappropriate nursing interventions such as the monitoring of vital signs and replace with observations concerning symptom control. Ensure that mouth care and bowel and bladder care regimes are in place.
- Assess the patient's and family's insight into the situation and give appropriate information. You may need to explain that the patient is dying, the plan of care for the patient and 'how' death will occur.
- Assess patient's religious or spiritual needs.
- Ensure Do Not Attempt CPR forms are completed and the decision communicated to all professionals involved.
- Handover the condition of the patient to the on-call team or out of hours providers in the community.

## **Respiratory secretions at the end of life**

It is important to distinguish terminal secretions from conditions which may require alternative treatments e.g. ventricular failure or pneumonia.

'Death rattle is the noisy respiration caused by turbulent air passing through or over accumulated secretions in the oropharynx or bronchial tree in a patient who is close to death and unable to clear secretions by coughing and/or swallowing'.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## **General interventions**

- Repositioning of the patient [e.g. supine to lateral]
- Avoiding over-hydration
- Addressing family distress.

## **Drug treatment**

Treatment should be commenced as soon as symptoms become apparent.

- Glycopyrronium is the preferred drug because:
  - No central side effects
  - Potency and efficacy
  - Longer half life than other anti-muscarinics.
  - Dose: 200 micrograms – 400 micrograms SC prn and 1.2mg / 24 hours by CSCI.

Other medications that can be used are

- Hyoscine butylbromide: 20 mg SC prn and 40mg - 120mg over 24 hours by CSCI.
- Hyoscine hydrobromide: 400 micrograms SC prn and 1.2mg – 2.4mg over 24 hours by CSCI. NB Can cause sedation or agitation

Other Measures

- Antibiotics (where infected secretions are distressing)
- Diuretics (where there is evidence of ventricular failure)
- Agents to reduce awareness of the secretions e.g. midazolam
- Suctioning usually only has a role in severe cases

## **Restlessness at the end of life**

Patients may become agitated in the last few days or hours of life.

### **Causes**

May be physical, metabolic or psychological and precise aetiology may be difficult to identify or investigation of the cause may be inappropriate given the patient's poor prognosis. It is, however, important to exclude easily treatable causes such as:

- Full bladder
- Constipation
- Pain
- Drug toxicity.

### **Drug management of restlessness at the end of life**

Midazolam

- 2.5mg - 10mg SC stat and prn 4 hourly
- Consider midazolam 10mg - 60mg per 24 hours by CSCI. This can be gradually increased according to response.

Levomepromazine

- Often useful in situations which fail to respond adequately to midazolam and may be used in addition to it.
- 12.5mg – 25mg SC prn
- 25mg - 100mg / 24 hours via CSCI if ongoing sedation required

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

Aim of treatment should be to achieve relief of symptoms without preventing the patient from being able to communicate. On some occasions symptom relief can only be achieved with sedation. If response unsatisfactory, review possible causes and seek specialist palliative care advice

## **Symptom control in end stage heart failure**

The guidance in this document is pertinent to patients with end stage heart failure however the following cautions may need to be considered depending on the patient's circumstances.

### ***Pain***

- Be aware that NSAIDS may worsen heart failure.
- Patients with heart failure may also have renal impairment and in such cases appropriate guidance for opioid prescribing in renal impairment should be sought. [page 18-19]

### ***Nausea and vomiting***

- Consider toxicity from medication especially digoxin.
- Domperidone and metoclopramide are first choice
- Cyclizine should be used with caution in severe heart failure as it can result in vasoconstriction and reduced cardiac output.
- Haloperidol and levomepromazine can affect QT interval and reduce blood pressure. Use lowest doses possible.

### ***Breathlessness***

Ensure heart failure therapy is optimised including appropriate use of diuretics. Review doses and route of cardiac medication. If breathlessness persists see (page 13-14)

### ***Cough***

Can be due to heart failure or other co-morbidity.

### ***Constipation***

- Avoid ispaghula husk because of fluid requirements
- If using macrogols, Idrolax is preferred rather than Movicol due to its lower sodium content

### ***Miscellaneous***

- When using antidepressants – avoid tricyclic antidepressants and venlafaxine where possible.
- Steroids - Cause fluid retention

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## ***Withdrawal of medications and investigations***

Symptom control should continue along with active cardiological management as long as this remains appropriate. However as the patient's condition deteriorates and their prognosis is reduced all drug therapy needs to be reviewed, along with the need for routine tests. In general, continue medications with short term symptomatic benefits and stop those aimed at medium to long term reductions in morbidity or mortality. Drug rationalisation needs to be tailored to the individual patient situation but the following may provide useful initial guidance. If a patient is known to the heart failure team discussion is suggested as they will have useful information concerning a patient's symptomatic response to individual medications.

Consider continuing with:

- Diuretics (unless too dry)
- Anti-anginal medication if symptomatic
- Rate control medication

Consider reducing or stopping:

- Antihypertensives (monitor BP initially)
- Anti-anginals if no symptoms (monitor for symptom recurrence)
- ACE inhibitors
- Beta blockers
- Lipid lowering agents
- Anti platelet medication
- Anti-coagulants
- Relax diabetic regimes

Refer to Kent Cardiac Network guidance.

Implantable cardioverter-defibrillator should be de-activated according to local policy.

## **Symptom management in end stage renal disease**

### ***Pain***

Exact dosing advice depends on estimated glomerular filtration rate (eGFR).

Paracetamol can be used safely

Fentanyl and alfentanil are the opioids least likely to accumulate.

A NSAID may be used in normal doses if pain control is a clear priority over maintaining existing renal function

### **Suggested approach**

Mild pain

- Paracetamol 1g QDS

Moderate pain

- Buprenorphine patch
- Fentanyl patch 12 micrograms per hour  
Alfentanil 1mg - 2mg via CSCI

Please refer to dose conversion chart to establish relative potencies of these opioids.

Severe pain

- Carefully titrated doses of fentanyl patch or alfentanil CSCI

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

Breakthrough medication

- Fentanyl via SC injection or transmucosal preparation
- If not available
  - Tramadol immediate release 50mg – 100mg 12 hourly
  - Morphine immediate release 1.25mg – 5mg po 6-8 hourly
  - Oxycodone immediate release 1.25mg – 5mg 6-8 hourly

Observe carefully for signs of opioid toxicity (see page XX) which will suggest accumulation. Do not use slow release preparations.

### ***Nausea and vomiting***

Haloperidol 500 micrograms – 1.5mg SC or 1.5mg - 3mg via CSCI over 24hrs (may accumulate)

Cyclizine 50mg tds

Levomepromazine 6.25mg SC prn or 6.25mg via CSCI over 24hrs

### ***Dyspnoea***

Opioids and benzodiazepines provide effective symptom relief.

The same precautions apply as per the use of opioids with pain (above).

Benzodiazepines can be used in the same manner as in the breathlessness section (see page 13-14)

### ***Respiratory tract secretions***

Refer to page 15-16. There is no difference in the management in renal failure.

### ***Restlessness at the end of life***

Midazolam 2.5mg SC prn or after 3 prn doses consider CSCI 5-10mg over 24hours

This can be gradually titrated up according to severity of anxiety or agitation.

### ***Itching***

Chlorpheniramine 4mg tds/qds or promethiazine 25mg bd or 10mg - 20mg tds

The use of topical creams such as Eurax and aqueous cream with menthol.

For more details on end of life care in renal failure please refer to:

[www.mcpcil.org.uk/liverpool\\_care\\_pathway/non-cancer](http://www.mcpcil.org.uk/liverpool_care_pathway/non-cancer)

## **Diabetes mellitus in palliative care patients, nearing the end of life**

Aim to:

- Prevent short term problems and symptoms rather than longer term complications.
- Achieve blood glucose between 7-17 mmol/l.
- Where possible, treat reversible causes of hyperglycaemia such as infection or steroids.
- Priority is to avoid hypoglycaemia, whilst preventing ketoacidosis and hyperosmolar non-ketotic state.

Dietary restrictions are only required if there is no other means to control unpleasant symptoms.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

### ***New diabetics with advanced disease***

Management depends on prognosis, blood glucose levels and presence or absence of ketonuria.

Cachectic patients have a poor response to oral hypoglycaemics so consider insulin early.

Blood sugar	Management
11 – 27mmol/l.	Gliclazide 80mg. Titrated up to 160mg BD according to glucose levels and symptoms.
>27mmol/l with no ketones. 11-27 mmol/l with moderate or severe ketonuria.	Start long acting insulin 10 units at night increasing dose gradually as required.
>27mmol/l with ketones or significant symptoms.	Acute admission for more intensive management if appropriate.

### ***Type 1 diabetes***

Insulin is always required until the last short number of days or hours of life.

Long acting insulin is the most effective approach as the patient's condition deteriorates.

Anorexia is common. Short acting insulin can be given after eating to prevent risks of hypoglycaemia if the meal isn't finished.

Stable nutrition.	No change in diabetes management.
Decreased appetite.	Daily blood glucose, decrease insulin appropriately until stable.
Severe anorexia or vomiting.	Convert to long acting insulin at night either 10 units or 25% of total daily dose if on high doses. Monitor blood glucose BD until stable. Consider admission.

### ***Type 2 diabetes on oral agents***

Weight loss or decreased appetite.	<ul style="list-style-type: none"> <li>• Avoid metformin or thiazolidinediones such as pioglitazone and rosiglitazone.</li> <li>• Use gliclazide to manage glucose levels and symptoms.</li> <li>• Adjust dose according to weekly blood glucose.</li> <li>• Watch for symptoms of hypoglycaemia.</li> </ul> May be possible to stop oral agents.
Hyperglycaemia with symptoms.	<ul style="list-style-type: none"> <li>• If glucose &gt;17 mmol/l commence long acting insulin 10 units at night and adjust according to symptoms.</li> </ul> If glucose > 27 mmol/l then admission may be appropriate for more intensive management.
Terminal phase	Stop oral agents, no monitoring of blood glucose.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## ***Hypoglycaemia***

Hypoglycaemia is a significant risk as anorexia develops. It may not respond well to glucagon and glucose products such as Glucogel should only be given if swallowing is safe.

## **Communication at the end of life**

In the palliative phase, decisions about treatments and place of care need to be anticipated and often made in advance to ensure good communication and understanding of the situation by all those involved in the patient's care.

Regular discussion with the patient and their carers is essential especially as death approaches.

## ***Breaking bad news***

Professionals are often involved in giving bad news. The steps below may help in structuring these conversations.

Preparation: Know the details of the patient and their illness, ask a colleague to accompany you, think about a suitable environment and check who the patient wants to have present.

1. Find out who is who
2. Find out what they know already
3. Find out how much they want to know
4. Warning shot
5. Explanation
6. Elicit concerns and allow to ventilate emotions and feelings
7. Follow up

## ***Cardiopulmonary resuscitation (CPR) discussion and decision making***

Decisions about CPR often cause concern for professionals but are important to document and communicate to all professionals involved. In the community or for patients going home from hospital this would include:

- GPs
- District nurses
- Ambulance service
- Other carers
- Specialist community teams

In hospital or other care settings, clear processes for decision making and recording should be in place.

Patients must be central in information and decision making however it is not necessary to discuss resuscitation with patients who do not wish to or who are already aware they are dying. Where CPR is discussed it is important that patients and carers are aware of the very low likelihood of success and what the procedure involves. Where carers only are involved in the discussion it is important that they realise that their role is to inform the process and not to make the final decision as this can result in a burden of guilt.

Where it is clear that attempts at CPR would not restart the heart for any sustained period (for example when the patient is very ill or dying) there is no requirement to discuss CPR specifically. Discussion should aim to secure an understanding of the situation, the needs of the patient and how their care will be managed in the future.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## ***Suggested ways to approach CPR discussions***

1. Assessing current understanding of condition  
“Tell me what you understand about how your illness is progressing”
2. Explore perceptions of the future  
“How do you see the future going?”
3. Clarify the current situation by suggesting a poor outlook so providing a warning shot  
“We are concerned about your condition, you don’t appear to be getting any better. What do you think?”
4. Gain permission to continue to discuss future  
“We would like to talk about your future care and management, would that be OK?”
5. Explanation about probability of dying and the changing focus on managing symptoms explaining that whilst attempting to maintain the situation there are some things that won’t be of benefit  
“We are concerned you may be dying now and that we need to focus on maintaining your comfort”  
Or:  
“Whilst we will try to get you as well as we can there are some procedures that will not help and will probably cause you more suffering; such as CPR / ventilation / artificial nutrition, etc”
6. Discussion of likely future events and how they can be managed with a palliative approach  
“I would like to talk through some of the things that may happen to you and how we would we manage them? How do you feel about that?”
7. Explore feelings and answer any questions  
“How does this leave you feeling? What questions would you like to ask?”
8. Arrange follow up

This is meant only as a guide as to how a discussion may be lead. The exact phrases used should be determined by the patient and their responses to previous questions or information.

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

# **Adult specialist palliative care units and teams in Kent**

## ***Ashford***

Pilgrims Hospice in Ashford  
01233 504100  
Fax: 01233 504132

William Harvey Hospital Macmillan Palliative Care Team  
01233 633331 x88352 Fax: 01233 616867

## ***Canterbury***

Pilgrims Hospices in Canterbury  
01227 459700  
Fax: 01227 812606

Kent and Canterbury Hospital Palliative Care Team  
01227 766877 BI 238 or BI 007

## ***Dartford, Gravesham and Swanley***

The Lions Ellenor Hospice (In-patients and day therapy)  
01474 320007  
Fax: 01474 534633

Ellenor Foundation Hospital Support Team  
Darent Valley Hospital  
01322 428293  
Fax: 01322 428294

The Ellenor Foundation Dartford Community Team (including Ellenor Shining  
Lights Children's Team)  
01322 221315  
Fax: 01322 626503

The Ellenor Foundation Gravesend Community Team  
01474 538508  
Fax: 01474 326260

## ***Hastings***

St Michael's Hospice  
01424 445177  
Fax: 01424 721255

Conquest Hospital Macmillan Palliative Care Team  
01424 758016

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## ***Maidstone***

The Heart of Kent Hospice  
01622 792200 Fax: 01622 718920

Maidstone Hospital Macmillan Palliative Care Nurse  
01622 225024  
Fax: 01622 225116

## ***Margate***

Pilgrims Hospice in Thanet  
01843 233920  
Fax: 01843 233931

QEQM Hospital Palliative Care Team  
01843 225544 x65153 x65074  
Fax: 01843 234529

## ***Medway and Swale***

Wisdom Hospice  
01634 830456  
Fax: 01634 845890

Medway Maritime Hospital Palliative Care Team  
01634 833807  
Fax: 01634 833807

## ***Tunbridge Wells***

Hospice in the Weald  
01892 820500  
Fax: 01892 820520

Kent and Sussex Hospital Macmillan Palliative Care Team  
01892 632346  
Fax: 01892 632939

## **Further Reading**

[www.palliativedrugs.com](http://www.palliativedrugs.com)

For further advice please contact your local palliative care team. Advice is available both during and out of office hours.

## Dosage conversion between opioids

Morphine					Oxycodone				Diamorphine		Alfentanil		
ORAL			Parenteral		Oral		Parenteral		Parenteral		Transdermal		
24 Hour total morphine	Morphine modified release tabs	Morphine oral solution or tabs	Morphine by CSCI	Morphine prn SC	Oxycontin modified release tabs	Oxynorm oral	Oxynorm by CSCI	Oxynorm prn SC	Diamorphine by CSCI	Diamorphine prn	Alfentanil by CSCI	Fentanyl DTrans matrix Patch	Buprenorphine patch
mg/24 hrs	mg/12 hrs	mg/4 hrs	mg/24 hrs	mg/prn	mg/12 hrs	mg/4 hrs	mg/24 hrs	mg/prn	mg/24 hrs	mg / prn	mg/24hours	micrograms/hr	micrograms/hr
30	15	5	15	2.5	10	2.5	10	2.5	10	2.5	1	12	10
60	30	10	30	5	15	5	15	2.5	20	5	2	25	20
100	50	15	50	7.5	25	10	25	5	30	5	3	37	35
120	60	20	60	10	30	10	30	5	40	7.5	4	50	52.5
180	90	30	90	15	45	15	45	7.5	60	10	6	75	70
240	120	40	120	20	60	20	60	10	80	15	8	100	105
360	180	60	180	30	90	30	90	15	120	20	12	150	140
480	240	80	240	40	120	40	120	20	160	25	16	200	
600	300	100	300	50	150	50	150		200	35	20	250	
800	400	130	400		200	70	200		250	40	25	325	
1000	500	160			250	80			300	50	30	400	
1200	600	200			300	100			400	60	40	500	

### Other opioids

From total daily opioid dose (mg)	To get to the equivalent 24 hour total oral morphine (mg)	
Codeine	x	0.1
Dihydrocodeine	x	0.1
Hydromorphone	x	5
Oxycodone (oral)	x	2.0
Tramadol	x	0.1
Diamorphine (parenteral)	x	3

Higher doses of oxynorm and morphine are too large a volume for SC injection.

Conversions to and from fentanyl and buprenorphine patches should be checked against manufacturer's guidance.

N.B. The conversions given in this table are approximate and may need to be adjusted according to response  
Advice from the palliative care teams should be sought at higher dose conversions