



*Yorkshire Cancer Network
and
North East Yorkshire and Humber
Clinical Alliance*

**A GUIDE TO SYMPTOM MANAGEMENT IN
PALLIATIVE CARE
Version 5.1**

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The Humber and Yorkshire Coast Cancer Network (HYCCN) was formed in 2000 in response to the NHS Cancer Plan. Following organisational change in February 2012 HYCCN became part of the North East Yorkshire and Humber Clinical Alliance (NEYHCA). The work on this document was completed prior to this date, therefore, the document references data and organisational names in use prior to the official name change.

A GUIDE TO SYMPTOM MANAGEMENT IN PALLIATIVE CARE

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INTRODUCTION

Authorship

These symptom management guidelines have been produced by the Sub-regional Palliative and End of Life Care Groups of the Yorkshire Cancer Network and the Humber and Yorkshire Coast Cancer Network. They were updated in November 2011 and reflect a consensus of opinion from specialists working in the field of palliative care in hospitals, hospices and in the community.

Disclaimer: These guidelines are the property of the Yorkshire Cancer Network and Humber and Yorkshire Coast Cancer Network Palliative and End of Life Care Groups. It is intended that they be used by qualified medical and other healthcare professionals as an information resource, in the clinical context of each individual patient's needs. The Palliative and End of Life Care Groups take no responsibility for any consequences of any actions taken as a result of using these guidelines. Readers are strongly advised to ensure that they are acting in keeping with current accepted practice and legislation, as these may change. For example, new NICE guidance on the prescription of opioids is expected in 2012, and the Palliative Care Formulary (PCF) is updated at regular intervals. No legal liability is accepted for any errors in these guidelines, or for the misuse or misapplication of the advice presented here. In difficult situations, please seek advice from your local Specialist Palliative Care service.

Useful Resources

Details are given here of selected widely used drugs. See also BRITISH NATIONAL FORMULARY (BNF) sections on "Controlled Drugs" and "Prescribing in Palliative Care". Check BNF for formulations, dose recommendations, side effects and contra-indications.

Other useful resources are

- Local intranet guidelines
- The latest version of: "The Palliative Care formulary (PCF)." Twycross R, and Wilcock A, Radcliffe Medical Press Ltd and website www.palliativedrugs.com/
- West Yorkshire Cardiovascular Network, "Symptom Management Guidelines for patients in the later stages

of heart failure and criteria for referral to specialist palliative care”, www.yorksandhumberhearts.nhs.uk

- Websites for Yorkshire Cancer Network (www.ycn.nhs.uk) and Humber & Yorkshire Coast Cancer Network (www.hyccn.nhs.uk) as appropriate to your area
- NICE website, www.nice.org.uk/guidance
- GMC guidelines, “Treatment and care towards the end of life: good practice in decision making”, (2010), www.gmc-uk.org

Unlicensed Use of Licensed Medicines (“Off label” use)

The unlicensed use of medicines is necessary when clinical need cannot be met by the licensed medicines available. The recommendations in this guide do include unlicensed use of licensed medicines. These recommendations are based on current accepted palliative care practice in the UK. In practice, approximately 25% of prescribed medicines for palliative care patients are used in an unlicensed way (e.g. given by subcutaneous injection when licensed for IM or IV use, or for the treatment of nausea and vomiting when only licensed as an antipsychotic). Further information regarding unlicensed use of individual palliative care medicines can be found in the current version of the PCF.

Prescribing unlicensed medicines or those outside the marketing authorisation may carry significant risks. The prescriber signing the prescription takes full responsibility. When prescribing licensed medicines for unlicensed use, it has been suggested that the prescriber should: document in the patient’s records the reason why they are using the medicine “off label”; where appropriate, gain informed consent from the patient; inform nurses and pharmacists to avoid misunderstandings where necessary; and give the patient a written leaflet where appropriate (a suitable leaflet may be downloaded from www.britishpainsociety.org/book_usingdrugs_patient.pdf). In practice, recording every unlicensed use may be impractical and gaining informed consent in every instance may lead to unnecessary anxiety for the patient or carer. Practitioners must follow their clinical judgment on the balance of potential burden and benefit and their own organisation’s policy on the unlicensed use of licensed medicines.

Principles of Symptom Management

1. Remember to consider the 'whole patient'. Symptoms are never purely physical or purely psychological, and all symptoms and treatments will have an impact on the patient, their family and friends.
2. Evaluate symptoms thoroughly. Consider potential causes and remember to consider causes other than cancer. Consider the impact of the symptom on the patient's quality of life.
3. Effective communication is essential. Explain in simple terms and avoid medical jargon. Discuss treatment options with patients and their families, and involve them in the management plan.
4. Correct the correctable, as long as the treatment is practical and not overly burdensome. Remember non-drug treatments e.g. palliative radiotherapy for metastatic bone pain.
5. When using drug treatments for persistent symptoms, give regularly and also 'as needed'. Keep drug treatment as simple as possible.
6. Review regularly and adjust treatment.
7. Remember to consider non-pharmacological strategies to help relieve symptoms e.g. simple repositioning, or the use of a TENS machine may help pain; complementary therapies may help psychological distress. Although the evidence base for such treatments is not robust, some patients find them helpful.
8. Plan in advance. Good communication is essential in establishing patients' wishes for their future care and treatment. Patients may want to document their wishes – the Preferred Priorities for Care document (available from www.endoflifecareforadults.nhs.uk) or an Advance Decision to Refuse Treatment may be helpful.
9. Keep other staff informed.
10. Ask for help. Refer to local guidelines or speak to the local Specialist Palliative Care team (SPCT). Refer to GMC guidelines (see Useful Resources).

This brief guidance covers some of the commonest symptoms in cancer and advanced progressive disease. For the management

of other symptoms not included here, including fatigue, cough, sweating, anorexia and oral problems please see an introductory palliative care text, such as 'Symptom Management in Advanced Cancer (4th edition)' R Twycross, A Wilcock and C Stark Toller (eds), and refer to the other useful resources listed in the introduction.

PAIN MANAGEMENT

SECTION A: PRINCIPLES

1. Pain is a total, personal experience with physical, psychological, social and spiritual dimensions. Optimal pain management will be compromised if any of these aspects are neglected.
2. Pain is common in advanced cancer and non-malignant conditions, and management can be difficult.
3. Not all pain experienced by a patient with cancer is caused by the cancer itself. Often several pains coexist, and an accurate diagnosis of the cause or mechanism of each pain must precede effective treatment. Regular review is vital for good pain control.
4. In general, successful relief of pain in palliative care patients requires:
 - (a) Regular, as well as p.r.n. (as required) dose.
 - (b) Titration of dosage against effect with no rigid upper limit for most opioids except buprenorphine, codeine and tramadol.
 - (c) Appropriate time interval between doses.
 - (d) Sufficient dose to prevent return of pain before next dose is due.
 - (e) Willingness to give strong opioids early when other analgesics fail.
 - (f) Early consideration of co-analgesics and non-pharmacological approaches.
 - (g) Regular review and assessment.
 - (h) Prescribers follow the "analgesic ladder" (see page 11).
 - (i) Appropriate patient explanation and information and medication taken as prescribed.
 - (j) Referral for anaesthetic analgesic interventions as necessary.
5. Morphine sulphate orally (or diamorphine or morphine subcutaneously) is the "Gold Standard" analgesic in advanced

cancer and other end-stage conditions, although other analgesics such as paracetamol or a weak opioid may suffice.

Alternative opioids may be required in patients with renal impairment (seek specialist advice).

6. Give morphine orally if the patient can swallow and absorb the drug. Only consider other routes if the patient has dysphagia, gastric stasis, intractable nausea or vomiting or impaired consciousness.
7. If parenteral opioids are required, a continuous subcutaneous infusion (CSCI) by portable syringe pump and/or p.r.n. subcutaneous (SC) injections should be used. Morphine sulphate or diamorphine are the first line drugs of choice, depending on local policy and practice. For higher doses, diamorphine may be advantageous because its high solubility allows larger doses to be given in small volumes.
8. Opioid side effects include:
 - constipation (very common)
 - nausea and vomiting (a common but controllable and transient side effect that usually improves after approximately 5 days)
 - drowsiness (often dose-related and temporary)
 - respiratory depression (clinically rarely a problem if dose is titrated correctly).

Always prescribe laxatives and consider prescribing p.r.n. or regular anti-emetics.

Neither tolerance nor addiction are significant problems in palliative care practice.
9. Some pains are only partially opioid-responsive. These include tension headache, post-herpetic pain, muscle spasms, nerve damage/ compression, bone pain, visceral distension, tenesmoid pain and activity provoked pain. These may require other measures including co-analgesics, nerve blockade or specific oncological treatments.
10. Co-analgesics include non-steroidal anti-inflammatory drugs (NSAIDs), anti-convulsants, anti-depressants, benzodiazepines and corticosteroids.

11. Review use of p.r.n. medication. If patients are requiring several p.r.n. doses a day, assess whether this is due to inadequately controlled background pain or the presence of break-through (episodic) pain. This term is used to describe a transient exacerbation of pain in someone who has relatively stable and adequately controlled background pain (PCF3). Consider whether such break-through pain is predictable (incident pain) e.g. on movement, or unpredictable (spontaneous) and how long the break-through pain lasts. Such assessment will determine how p.r.n. analgesics are tailored for the individual patient, specifically in terms of dose and duration of action. Inadequately controlled background pain usually requires the background dose to be titrated, whereas planned use of p.r.n. medication may be acceptable for incident or spontaneous pain. Further guidance is available in the PCF, and seeking specialist advice would also be appropriate.

SECTION B: ASSESSMENT AND REVIEW

What is the pain due to?

Consider:

Anatomy = site of origin

Aetiology = cause of pain

Be inquisitive. What helps? What makes it worse? Review and review again.

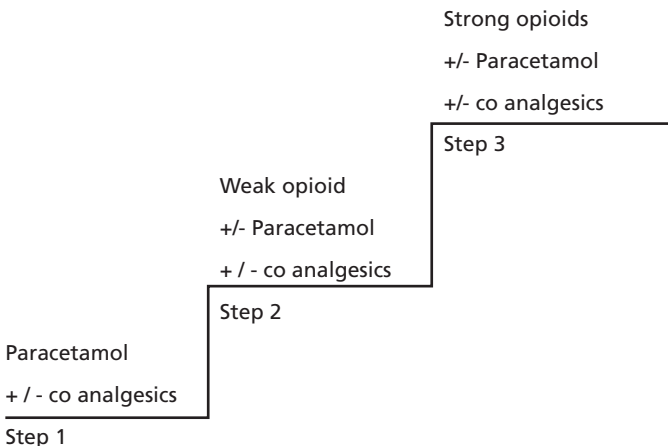
Investigate appropriately. Think of X-ray for pathological fracture or bone metastases; ultrasound or CT scan for deep soft tissue tumours.

Remember common non-malignant causes e.g. arthritis, tension headache, infections including oral thrush.

In advanced, progressive disease there are usually multiple causes of pain and a management plan will be needed for each of these.

Which analgesic?

Diagram of the analgesic ladder



The analgesic ladder progresses logically from a non-opioid via a weak opioid to a strong opioid. Start at the bottom of the ladder and work up as necessary. Use the drugs at the optimal dose regularly i.e. by the mouth, by the clock, by the ladder.

Remember:

- Weak opioids include codeine and dihydrocodeine.
- Co-codamol is available in three strengths containing paracetamol and either 8mg, 15mg or 30mg of codeine. In elderly or frail patients a lower strength may be required.
- Codeine is a pro-drug of morphine. Its analgesic effect is via its conversion to morphine, which varies between patients and there is a small proportion of the population in whom codeine is ineffective.
- Paracetamol has a different analgesic effect to opioids and can provide additional benefit for patients taking strong opioids.
- Tramadol is generally not used in cancer related pain.
- Strong opioids include morphine, diamorphine, oxycodone,

fentanyl, alfentanil, hydromorphone, buprenorphine, and methadone (specialist use only).

- To consider the aetiology of the pain/s and select analgesics accordingly (see Section C, Co-Analgesics, page 17).

SECTION C: RECOMMENDED DRUGS

1. Opioid analgesics

General Principles

1. Immediate and modified (slow) release preparations are available.
2. All patients taking regular analgesics should also have analgesics prescribed for 'breakthrough pain' to take 'as required' (p.r.n.).
3. P.r.n. immediate release opioids should be individually titrated. Commonly this is 1/6 of the total daily dose, but a range of 1/6 to 1/10 may be appropriate. For a patient on 30mg MST b.d. 1/6 of their total 24 hour morphine dose would be 10mg immediate release morphine; a patient on 30mg slow release oxycodone (e.g. Oxycotin®) b.d. would require 10mg immediate release oxycodone (e.g. Oxynorm®).
4. Maximum frequency and dose of p.r.n. opioids in 24 hours should be clearly stated.
5. Remember to prescribe regular laxatives and p.r.n. anti-emetics and discuss side effects of opioids with the patient.
6. When using opioid analgesics titrate doses upwards by 30-50% increments to relieve pain, or until unacceptable side effects occur.
7. Halve the usual starting doses if the patient is elderly or frail.
8. Some analgesics may accumulate in renal or hepatic impairment and specialist advice may be required. Careful individual tailoring of opioid dose is also required in patients with respiratory failure.
9. It is advisable to seek specialist palliative care advice regarding patients receiving higher doses of opioids, especially when undertaking conversions to alternative drugs or routes of administration.

1.1 Oral Preparations

1.1.1 Morphine sulphate

Formulations available

Immediate release tablets and liquids would be expected to be effective after 20 minutes and to last up to 4 hours. Examples include Oramorph® and generic Oral Morphine Sulphate Solution (strength 10mg/5mls) - both of which are colourless; Oramorph Concentrate Liquid (strength 20mg in 1ml - pink in colour) and Sevredol® tablets (morphine sulphate immediate release tablets - 10mg, 20mg and 50mg).

Modified/slow release tablets, granules and capsules would be expected to be effective after 4 hours and to last for 12 hours or 24 hours, depending on the preparation. Examples include MST Continus® tablets and suspension sachets, Zomorph® capsules and Morphgesic® tablets.

Starting regimen

- If a patient is not taking any weak (step 2) opioids it is usual to commence these first before considering morphine.
- If the optimal dose of weak opioid plus or minus paracetamol and/or an adjuvant drug does not control the pain, the patient should be switched to morphine at a dose which is equivalent to or slightly greater than the dose of the weak opioid that they are taking. The weak opioid must then be stopped (see Appendix 1 for conversions). E.g. a patient who has been taking strong Co-codamol 30/500 (Codeine phosphate 30mg, paracetamol 500mg) 2 tablets q.d.s regularly, could be commenced on slow release morphine sulphate (e.g. MST®) 15mg to 20mg b.d. with immediate release morphine for breakthrough pain and the dose titrated by 30-50% increments or until unacceptable side effects occur.
- If there are concerns about medicines adherence, opioid sensitivity or absorption of slow release products, start with between 2mg and 10mg of immediate release morphine 4 hourly and p.r.n. (start with 5mg 4 hourly if opioid naïve or not reliably taking previously prescribed analgesics, and with 2 or 3mg 4 hourly in the frail or elderly). See point 8 on page 12 regarding organ failure.
- Once a stable dose is achieved it is usual to transfer to modified

release preparations, e.g. a patient on 10mg oral morphine immediate release (e.g. Oramorph®) 4 hourly receives a total of 60mg morphine in 24 hours. This is equivalent to 30mg 12 hourly of morphine sulphate (modified release) tablets e.g. MST®, Zomorph®.

Patients being initiated on morphine by either method, should have their doses reviewed every 24 hours and titrated up by 30-50% increments as necessary if background pain remains inadequately controlled, taking into account both the regular dose of morphine and the number of p.r.n. doses that they have required in the previous 24 hours (Also see page 10, Pain Management Principles no. 11).

All patients being titrated on morphine should be monitored for signs of toxicity (confusion, drowsiness, hallucinations, jerking). If the patient has moderate to severe renal impairment, morphine metabolites will accumulate and specialist advice may be required regarding alternative opioids.

Breakthrough pain

All patients on modified release morphine should have immediate release morphine available p.r.n. for breakthrough pain.

CALCULATE - the total mg of modified release morphine prescribed in 24hrs and divide by 6 to give p.r.n. immediate release morphine dose.

E.g. MST 90mg b.d. = 180mg morphine /24hours divided by 6 = 30mg Oramorph (immediate release morphine) p.r.n.

1.1.2 Oxycodone

Oxycodone is a strong opioid with pharmacological properties similar to morphine. It is a useful second line strong opioid for patients who have not tolerated morphine. It is a more expensive option. Oral oxycodone is 1.5 to 2 times more potent than oral morphine. Consult a dose conversion chart when starting oxycodone or ask advice from your local palliative care team or pharmacy.

Formulations available

It is available as immediate release oxycodone (e.g. OxyNorm®) with duration of action 4-6 hours, or modified (slow release) oxycodone (e.g. OxyContin®) with duration of action of 12 hours.

Breakthrough pain

Immediate release oxycodone should be available p.r.n., at a dose which is usually 1/6 of the 24 hour dose of oxycodone.

1.2 Parenteral Preparations

This section contains information needed for prescribing continuous subcutaneous infusions via syringe pump.

1.2.1 Diamorphine and Morphine injections

Both diamorphine and morphine sulphate can be given p.r.n. subcutaneously (SC) with duration of action of up to 4 hours. Alternatively they can be given as a continuous subcutaneous infusion via a portable syringe pump.

For an opioid naïve patient, start with morphine sulphate or diamorphine, 2 or 3mg SC p.r.n. or between 5 and 10mg morphine or diamorphine over 24 hours as a continuous SC infusion.

It is usual practice across the Yorkshire and Humber networks to use the following conversion ratios:

- Parenteral morphine and diamorphine are between 2-3 times more potent than oral morphine (refer to local policy)

So, for example, to switch a patient previously on oral morphine to a continuous subcutaneous infusion of diamorphine:

Divide the total 24 hour dose of oral morphine by 3. E.g. if a patient is on MST 30mg b.d., they will require 20mg subcutaneous diamorphine over 24 hours.

It is extremely important that p.r.n. analgesia is prescribed. Give 1/6 of their total 24 hour subcutaneous opioid dose e.g. in the above example, the SC p.r.n. dose would be between 2 and 5mg diamorphine.

1.2.2 Oxycodone Injection

Patients on oral oxycodone who have been intolerant of oral morphine can be converted to a subcutaneous infusion of parenteral oxycodone.

To convert to subcutaneous oxycodone from oral oxycodone, divide the total daily dose of oral oxycodone by 2.

There are two concentrations of parenteral oxycodone available. These are 10mg/ml and 50mg/ml.

1.3 Transdermal preparations

Transdermal preparations are mainly suitable for patients with chronic pain already stabilised on other opioids. They may be useful in patients with poor compliance with oral opioids or swallowing/absorption problems. Some patients may experience less adverse effects than with oral morphine. They should not usually be started in the last days of life. Both fentanyl and buprenorphine have less adverse effects than morphine in patients with renal failure. N.B. All patients using transdermal patches should also be prescribed an immediate release preparation for breakthrough pain, the dose of which is dependent on the patch strength.

Transdermal fentanyl patches have a 72-hour duration of action.

Transdermal buprenorphine patches are available as:

- Low dose patches (BuTrans®) which have a duration of action of 7 days. These may be helpful in patients with poor compliance who require a low dose opioid.
- Higher strength patches (Transtec®), which have a duration of action of 96 hours but are designed to be replaced twice a week.

Consult dose conversion chart (see PCF or Appendix 1) when starting transdermal opioids or ask for advice from your local palliative care team or pharmacist.

1.4 Other routes of administration of strong opioids

Formulations of sublingual, buccal and nasal fentanyl are available.

1.5 What if opioids don't work?

a) Are opioids the analgesic of choice?

Consider aetiology.

Don't forget palliative radiotherapy for bone secondaries, which can be given as a single treatment. In 5-10% of patients some kind of nerve block will help (e.g. coeliac plexus block in pancreatic pain). Discuss with palliative care or pain clinic colleagues.

b) Is the dose high enough?

If there is a partial response or inadequate duration of pain

relief i.e. pain returns in under 4 hours after immediate release oral morphine or in under 12 hours after modified release morphine, increase the dose by 30-50% increments rather than shortening the interval between doses. Remember to check that the p.r.n. dose prescribed is still adequate and being taken for pain management rather than breathlessness.

c) **Is drug being absorbed?**

If there is uncontrolled vomiting, dysphagia or high stoma output, consider alternative routes of delivery (e.g. subcutaneous, rectal, intravenous, transdermal).

d) **Is pain breaking through with movement or painful procedures?**

Identify and minimise provoking factors. Consider pre-emptive doses of immediate release opioid, consider NSAIDs. Discuss with palliative care team.

e) **Are co analgesics required?**

Please see next section for indications.

f) **Who might be able to help?**

Don't be afraid to ask a more experienced colleague for help. Your hospital palliative care team, local hospice or community palliative care team will gladly offer advice.

2. Co-Analgesics

Choice of co-analgesic will be determined by the aetiology of the pain. More detailed information about NSAIDs is given in section 2.5, page 19.

2.1 Drugs for Bone pain

Consider NSAIDs, bisphosphonates, palliative radiotherapy and corticosteroids.

2.2 Drugs for Neuropathic pain

The decision to use an antidepressant or an anticonvulsant depends on a patient's symptoms and the adverse effect profile (anti-cholinergic side-effects with amitriptyline, namely dry mouth, urinary hesitancy, postural hypotension and constipation, or sedation and gastro-intestinal effects with gabapentin or pregabalin).

Patients may develop adverse effects before benefit, and effective analgesia may take up to a week to be achieved.

2.2.1 Antidepressants

Start with low dose, usually given at night, and gradually increase every 2-5 days if adverse effects allow.

Amitriptyline 10 to 75mg at night (lower than usual antidepressant doses).

2.2.2 Anticonvulsants

Slower titration is recommended in the frail and elderly, often slower than stated in the BNF.

Use with caution in renal impairment and seek advice if necessary.

Gabapentin Between 100 and 1800mg in divided doses

Pregabalin Between 25 and 300mg twice daily

In addition, for nerve root compression consider dexamethasone, between 8 and 16mg, NSAIDs, palliative radiotherapy, and pain team interventions.

2.3 Drugs for raised intra-cranial pressure

Dexamethasone 16mg/day

Corticosteroid of choice with high anti-inflammatory potency, high solubility and low mineralocorticoid effect (less salt and fluid retention).

Use at the lowest effective dose for shortest possible time.

Dexamethasone 1mg = Prednisolone 7mg

Taper the dose slowly when stopping (not usually necessary if duration of treatment is one week or less). Prescribe doses to be given in the morning to avoid causing insomnia.

2.4 Drugs for other pain

Painful muscle spasms

Diazepam Between 2 and 5mg, 8-12 hourly or once, at night

Baclofen 5mg t.d.s.

Liver capsule pain

Consider NSAIDs (see bone pain for suggestions), dexamethasone between 4 and 8mg o.m.

Musculoskeletal pain

Consider NSAIDs (oral or topical), TENS machine.

Intestinal colic

Anti-spasmodics; hyoscine butylbromide 20mg SC or hyoscine hydrobromide, between 150 and 300micrograms SL.

See also Intestinal Obstruction section, page 22.

Pelvic pain

Consider NSAIDs, corticosteroids, antispasmodics for colic.

2.5 Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)

Most patients with cancer have risk factors for significant gastrointestinal adverse effects therefore consider use of an H2-receptor antagonist or a proton-pump inhibitor alongside NSAID use. Use NSAIDs with caution in patients with renal impairment, uncontrolled hypertension or heart failure. Balance short and long term risks and benefits.

Ibuprofen tablets	400mg 8 hourly
Diclofenac tablets or suppositories	Maximum daily dose 150mg
Naproxen tablets or suppositories	Between 500mg and 1g daily, in divided doses

NAUSEA and VOMITING

- Nausea and vomiting can be difficult to control.
- It is important to consider all possible causes.
- Causes are often multifactorial and may require more than one drug.
- Consider reversible causes
e.g. gastritis - treat with H₂ - receptor antagonist or a proton pump inhibitor; oral thrush - treat with antifungals.
- If patient has severe nausea or vomiting, parenteral anti-emetics may be required.
- If initial advice in Drug Management Table is not effective contact the Palliative Care Team.
- Prescribe drugs regularly as well as p.r.n.
- Cyclizine and other antimuscarinic drugs block the final common pathway through which metoclopramide acts, therefore concurrent administration should be avoided.
- Cyclizine and Buscopan may crystallize when mixed in a syringe pump and should only be used together **on specialist advice**.

RECOMMENDED DRUG MANAGEMENT OF NAUSEA AND VOMITING

CAUSE	FIRST-LINE DRUG	STAT DOSE (PO or SC)	24 HR RANGE
Gastric stasis and irritation	Metoclopramide +/- proton pump inhibitor/ H ₂ -receptor antagonist	10 - 20mg	30 - 60mg PO or SC
Bowel obstruction WITHOUT colic	Metoclopramide	10 - 20mg SC only	30 - 60mg SC only
Bowel obstruction WITH colic	Cyclizine +/-	50mg SC only	100-150mg SC only
	Haloperidol +/-	1.5 – 5mg SC only	1.5 – 5mg SC only
	Hyoscine Butylbromide (Buscopan®)	20mg SC only	60 – 120mg SC only
Chemical e.g • drugs • hypercalcaemia • uraemia	Haloperidol	1.5 - 5mg	1.5 - 5mg PO or SC
Raised intracranial pressure	Dexamethasone plus Cyclizine +/- Ondansetron or Granisetron	8 - 16mg 50mg See BNF	8 - 16mg 150mg See BNF
Motion	Hyoscine hydrobromide OR	300micrograms SL 400micrograms SC	300micrograms SL q.d.s. 800micrograms - 1.2mg SC
	Cyclizine	50mg	100 -150mg PO or SC
Indeterminate/ Multifactorial	Levomepromazine	6 - 12.5mg 6mg tablet available on named patient basis or 25mg tablet can be quartered.	6.25 - 25mg PO or SC

INTESTINAL OBSTRUCTION IN ADVANCED CANCER

INTRODUCTION

Intestinal obstruction in advanced cancer is frequently incomplete, intermittent, at multiple sites or due to motility disturbance. There is a high incidence in ovarian and bowel cancer.

CLINICAL FEATURES

Symptoms vary depending on the level and degree of obstruction and may include any or all of the following:

- Nausea and vomiting
- Colicky pain
- Abdominal distension
- Dull aching pain
- Diarrhoea and/or constipation.

DIAGNOSIS

- History is most useful.
- Abdominal X-rays may help but “normal appearances” do not exclude bowel obstruction.
- Differential diagnosis is constipation but this may also co-exist with bowel obstruction.
- Passage of flatus stops in complete obstruction.

MANAGEMENT

All patients will require symptom management. Surgical intervention should also be considered early in appropriate cases (see below).

SURGICAL MANAGEMENT

Selecting patients who are likely to benefit from a surgical procedure (e.g. bowel resection or by-pass +/- stoma formation) is difficult. These decisions are best made with an experienced surgical colleague and careful discussion with the patient. Patients likely to benefit are those with no other life-threatening disease and single-site obstruction. Other factors to consider include patient performance status, co-morbidity, nutritional status and options for further treatment such as chemotherapy.

SYMPTOM MANAGEMENT

With appropriate symptomatic treatment patients may survive several weeks or occasionally months. Good symptom management can usually be achieved and greatly improves quality of life.

Medication should generally be given by subcutaneous injection or continuous subcutaneous infusion (CSCI).

a. IV Fluids and NG tube

These regimens are indicated while surgery is being considered or as a short-term intervention but are rarely appropriate for long-term management. NG tube may occasionally be used as a venting mechanism to relieve vomiting in gastric outlet or high small bowel obstruction.

b. Nausea and vomiting

- Set realistic goals. Nausea can usually be reduced significantly but vomiting may continue once or twice daily.
- Give anti-emetics parenterally and regularly. Subcutaneous infusion is often helpful (see nausea and vomiting section, page 20).

c. Pain

Colicky pain

- Stop stimulant laxatives and prokinetic drugs, e.g. metoclopramide.
- Use antispasmodics (hyoscine butylbromide, between 60 and 80mg/24 hours by CSCI).
- Diamorphine/morphine.

Dull aching pain

- Diamorphine/morphine.

Note: Dexamethasone, high dose metoclopramide and octreotide may also be used under specialist advice.

d. Ongoing nutrition and hydration

- IV fluids and total parenteral nutrition (TPN) are rarely necessary in far advanced cancer.
- Oral intake of food and drink can continue for the patient's enjoyment and is often surprisingly well tolerated - the patient will decide if the risk of vomiting outweighs the pleasure of eating.

Note: Patients with a high obstruction without other life-threatening complications require special consideration regarding symptom management, hydration and nutrition e.g. venting gastrostomy, subcutaneous fluids. TPN may be considered in individual cases.

CONSTIPATION

Constipation is very common in palliative care patients due to a combination of factors including immobility, reduced food and fluid intake, drugs, bowel pathology and sometimes hypercalcaemia. Diagnosis is usually made on the basis of history and examination. Abdominal X-ray is rarely required. Consider patient education and information about the causes of constipation, increasing fluid intake and making appropriate dietary changes to help improve symptoms.

Guidelines on the use of laxatives in constipation

- Assess cause and treat where possible.
- A combination of stool softener and stimulant laxative is usually required.
- Examples of stool softeners include:
 - Docusate
 - Poloxamer
 - Lactulose
 - Movicol®
 - Magnesium salts
- Examples of stimulant laxatives include:
 - Senna
 - Dantron
 - Bisacodyl
 - Sodium picosulphate
- Examples of combination preparations include:
 - Codanthramer (poloxamer and dantron)
 - Codanthrusate (docusate and dantron)
- Local units may have their own guidelines on first line laxatives.
- Avoid stimulant laxatives if colic is present.
- Note that dantron stains urine red and can cause contact

dermatitis. Do not use preparations containing dantron in incontinent patients.

- Note that lactulose may cause significant flatulence and bloating.
- In complete bowel obstruction, do not prescribe laxatives without seeking advice.
- Ask the patient whether they prefer laxative in liquid or tablet form.
- Review laxatives every 2 days.
- If patients are currently managing well on their laxative regimen, there is no need to change laxatives.
- If bowels haven't moved in 3 days, do a rectal examination and follow local guidelines on rectal measures.
- Subcutaneous methylnaltrexone may be indicated in rare cases for opioid-induced constipation resistant to optimal laxative regimens (**seek advice from specialist palliative care team**).

DYSPNOEA

Definition of dyspnoea: uncomfortable awareness of breathing.

Dyspnoea occurs very commonly in advanced cancer, cardiorespiratory and neurological disease.

Look for reversible causes as listed below.

Is dyspnoea of sudden onset?

Possible cause	Consider
Asthma	Bronchodilators, corticosteroids, physiotherapy
Pulmonary oedema	Diuretics, diamorphine/morphine
Pneumonia	Antibiotics, physiotherapy
Pulmonary embolism	Diamorphine/morphine Consider anticoagulants
Pneumothorax	Chest drainage, oxygen

Has dyspnoea arisen over several days?

Possible cause	Consider
Exacerbation of COPD corticosteroids	Antibiotics, bronchodilators,
Pneumonia	Antibiotics, physiotherapy
Bronchial obstruction by tumour	Dexamethasone 16mg o.m. early radiotherapy (RT), laser or stents
Superior vena caval obstruction	Dexamethasone 16mg o.m. Urgent stenting

Dyspnoea of more gradual onset

Possible cause	Consider
Congestive cardiac failure	Diuretics, digoxin, ACE inhibitors
Anaemia	As a chronic condition unlikely to be the major cause of dyspnoea. Transfusion may help if Hb<8g/dl. Oral iron is ineffective in chronic normochromic normocytic anaemia.

Pleural effusion	Consider pleural aspiration and follow with pleurodesis if appropriate. These procedures may be distressing for frail patients. Consider palliation - see over.
Pulmonary fibrosis	Possible if history of cytotoxics (esp. bleomycin), or lung RT. Palliative management – see below.
Ascites	Paracentesis if appropriate.
Primary/secondary carcinoma lung	Resection, RT or chemotherapy as appropriate.
Carcinomatous lymphangitis	Dexamethasone between 8 and 12mg o.m. Stop if not effective within one week. Bronchodilators may help.

Reversal of cause of dyspnoea inadequate or impossible – Palliative Management

- Dyspnoea is frightening to patient, family and staff. Reassurance and explanation are vital parts of the treatment whatever the cause.
- Modification of lifestyle, breathing retraining and relaxation may be beneficial if instituted early enough.
- Consider referral to physiotherapist or occupational therapist.
- A portable/table fan directed onto the face often eases dyspnoea.
- Good oral care is important if there is persistent mouth breathing.
- Humidified oxygen may help acute dyspnoea but should be used alongside other measures and its use reviewed regularly.
- Long term oxygen therapy for chronic respiratory illness should only be instigated by respiratory physicians.
- Many patients requiring palliation for breathlessness will not benefit from oxygen therapy. Measurement of oxygen saturation levels using a pulse oximeter may aid decision making in assessing whether or not oxygen is of benefit.

Drugs to consider

All drugs for symptomatic relief of dyspnoea are respiratory sedatives. When prescribed, their use should be monitored carefully. In the context of distressing dyspnoea in the terminal stages of illness the benefits usually outweigh the risks.

- **Opioids**

Oral morphine (immediate release) 2 to 3mg 4 hourly. Gradually titrate dose upward according to response or until unacceptable side effects occur. This can be converted to a long acting morphine preparation if effective.

If already taking strong opioid for analgesia contact palliative care team for advice.

- **Benzodiazepines**

Lorazepam between 500micrograms and 1mg SL may give rapid relief during panic attacks.

For longer-term management consider oral diazepam 2mg once at night or twice daily. Midazolam 2.5mg SC may benefit patients that cannot tolerate oral/sublingual route. These drugs can be continued in the terminal phase. See section on 'Last Days of Life' (page 41).

DELIRIUM

Delirium is extremely common in patients with advanced disease. It is a source of increased morbidity and distress and interferes with the ability to communicate effectively at the end of life. It is often unrecognised or treated inappropriately and can be misdiagnosed as dementia, depression, anxiety or psychosis.

Clinical features

- A. Disturbance of consciousness (i.e. reduced clarity of awareness of the environment) with reduced ability to focus, sustain, or shift attention.
- B. A change in cognition (such as memory deficit, disorientation, language disturbance) or the development of a perceptual disturbance that is not better accounted for by a pre-existing, established, or evolving dementia.
- C. The disturbance develops over a short period of time (usually hours to days) and tends to fluctuate during the course of the day.
- D. There is evidence from the history, physical examination or laboratory findings that the disturbance is caused by the direct physiological consequences of a general medical condition.

Subtypes of delirium are based on the type of arousal disturbance:

- o Hyperactive
- o Hypoactive
- o Mixed (with alternating features of hyper and hypoactivity)

Assessment

Obtain a thorough history to determine the patient's pre-morbid level of functioning, their use of alcohol and illicit substances and the chronology of the onset of the changes in their mental state.

Cognitive assessment tools such as the abbreviated mental test score should be used to gauge the patient's cognitive state but will not differentiate delirium from other causes of cognitive impairment. Identify any reversible causes: medication (e.g. drugs with anticholinergic side effects such as cyclizine, corticosteroids); infection; biochemical abnormalities; alcohol withdrawal.

Management

- Investigations appropriate to overall goals of care. Non-pharmacological measures are the mainstay and include:
 - o Addressing reversible causes
 - o Maintaining adequate fluid balance and nutrition
 - o Managing the patient's environment to reduce confusion and distress e.g.
 - ~ Visible clock to aid orientation
 - ~ Encourage family to visit and provide them with a full explanation
 - ~ Consistent nursing
 - ~ Good lighting during daytime
- Pharmacological interventions:
 - o Consider using haloperidol
 - ~ Oral between 500micrograms and 1.5mg b.d. with additional doses every four hours as needed
 - ~ SC between 500micrograms and 1mg, observe for 30-60 minutes and repeat if necessary
 - ~ Review at least every 24 hours & seek further advice from SPC if not working
 - ~ Discontinue within 7 days if symptoms resolve
 - o Benzodiazepines should be used with caution due to their ability to sedate and increase confusion.

PALLIATIVE CARE EMERGENCIES

METASTATIC SPINAL CORD COMPRESSION (MSCC) and VERTEBRAL METASTASES (VBM)

INTRODUCTION

- Spinal cord compression is a well-recognised complication of metastatic cancer.
- This can be a catastrophic event leading to paralysis below the level of the compression, urinary retention and faecal incontinence.
- If treated early these problems can usually be prevented or at least partially reversed.
- MSCC and VBM occur more frequently in some tumour types, when there is metastatic disease (especially bone) and in the later stages of a cancer trajectory. Lung, breast and prostate cancers account for over 50% of cases; lymphoma and myeloma account for 20%. Patients at high risk may have been identified by treating clinical teams and informed both of features to look out for and what to do if they suspect that they may be developing VBM or MSCC. Such patients should have been provided with an MSCC information booklet.
- Many of the features of MSCC (back pain, weakness, bladder and bowel change) are non-specific features of advanced cancer so the patient's symptoms and signs in the 'context' of their cancer must be considered.
- MSCC and VBM are suspected clinically but can only be proven by imaging (MRI is the Gold Standard).
- Patients should only be referred for MRI if they are fit enough to tolerate an MRI scan (40 minutes of flat bed-rest) and travel to Leeds or Hull (depending on the location of the patient) for therapy if the MRI is positive.
- Patients with suspected MSCC should have an MRI within 24 hours.
- Patients with suspected VBM should have an MRI within 7 days.
- Initial MRI imaging will be performed at the patient's local cancer unit and is accessed via the local cancer unit pathway,

usually via their Acute Oncology contact point. For YCN patients, treatment of MSCC and VBM is delivered in Leeds (Radiotherapy at SJIO or Surgery at LGI) ; for HYCCN patients, treatment takes place in Hull (Radiotherapy at CHH or Surgery at HRI) although if being treated conservatively this will be done in local hospitals rather than the cancer centre.

Please refer to NICE Clinical Guideline 75 on MSCC for additional information and background.

SYMPTOMS

Symptoms suggestive of spinal metastases:

1. Pain in thoracic or cervical spine.
2. Progressive lumbar spinal pain.
3. Spinal pain aggravated by straining.
4. Localised spinal tenderness.
5. Nocturnal spinal pain preventing sleep.

Symptoms suggestive of MSCC

1. Pain
 - (a) Back pain or nerve root pain either unilateral or bilateral, particularly if associated with alteration in gait.
 - (b) May be aggravated by movement, coughing or lying flat.
 - (c) May precede other symptoms by up to 6 weeks.
 - (d) May be absent in approximately 10% of patients.
2. Weakness

Motor weakness below level of lesion. This may be rapid or slow in onset and can be subtle in the early stages. Descriptions of perceived changes in strength are important.
3. Subjective sensory disturbance

Often precedes objective physical signs, e.g. "I feel like I am walking on cotton wool".

Proprioceptive changes may lead to gait dysfunction perceived as 'poor balance'.
4. Bladder/bowel dysfunction.

Urinary retention often develops insidiously. Generally occurs late.

SIGNS

The absence of signs does not exclude early spinal cord compression. Investigations should be considered on the basis of history alone in a patient who is at risk.

- Weakness/paraparesis/paraplegia.
- Change in sensation below level of lesion (not always complete loss of sensation).
- Reflexes – absent at level of lesion – increased below it.
- Clonus.
- Painless bladder distension.
- Loss of anal tone.

N.B. Sensory and reflex changes may occur secondary to other disease processes or previous neurotoxic chemotherapy.

INVESTIGATIONS & MANAGEMENT

The following general principles apply to the investigation and management of VBM and MSCC. The detailed MSCC and VBM clinical pathways for YCN and HYCCN and other supporting information are available from your local cancer network website (see useful resources, page 5).

Investigations

URGENT

- Contact LOCAL cancer unit Acute Oncology Team via their dedicated number to discuss case and need for further assessment/evaluation.
- Whole spine MRI - investigation of choice and shows full extent of disease. This should be done within 24 hours if MSCC is suspected.
- Do not use plain radiographs to diagnose or exclude spinal metastases or MSCC.
- If suspected VBM only (i.e. no neurology) then whole spine MRI within 7 days is indicated. Discuss with the patient's Consultant Clinical Oncologist (if they have one), the Consultant Clinical Oncologist linked to the appropriate site-specific MDT (if you don't know who this is contact the

site-specific MDT coordinator) or, if all other avenues fail, the Clinical Oncology SpR on-call. Please note that symptomatic VBM is not an emergency in the same way as suspected MSCC.

Management

Corticosteroids - can be commenced if there is strong clinical suspicion of cord compression and no contraindications, pending definitive investigations. Give dexamethasone 16mg stat then o.d. May give short term improvement while arrangements are being made for investigations and treatment.

After surgery or radiotherapy, dexamethasone can be reduced over 5-7 days unless neurological function deteriorates.

Monitor blood glucose levels while patient is on corticosteroids (peak would be expected in early evening after a morning dose).

Surgery - Surgical treatment can be appropriate in certain situations. The Clinical Oncology team will undertake appropriate assessment and triage of patient with proven MSCC on MRI. **DIRECT APPROACH TO THE SURGICAL TEAM FOR PATIENTS WITH PRE-EXISTING PROVEN MALIGNANT DISEASE AND MSCC SHOULD NOT BE UNDERTAKEN.** In most cases surgery should be followed by high dose radiotherapy.

Radiotherapy - forms the mainstay of treatment in most cases. The Clinical Oncology team will arrange delivery of this once MRI review and patient triage have been undertaken by them.

Chemotherapy - is virtually never used in acute management of MSCC but may be indicated in onward disease management as MSCC/VBM always reflect a background of progressive cancer.

No active anti-cancer therapy - may be appropriate for patients in the late stages of their cancer trajectory, in those who are unfit for travel, MRI scanning or radiotherapy treatment or who have established paraparesis and are pain free.

Pain relief - offer to all patients as per the WHO analgesic ladder (page 11).

Supportive care - full holistic care assessment should be made.

Venous thromboembolism prophylaxis - should be undertaken following assessment according to local policy.

Rehabilitation - Patient positioning and mobilisation should be undertaken according to patient ability/deficit. Flat bed rest is not indicated by default and patients may sit inclined as their pain and sitting balance permit. If safely ambulant then this should be encouraged. Patients should have physiotherapy/ occupational therapy assessment to agree an initial rehabilitation plan. Aggressive rehabilitation is often not appropriate (as it will be hampered by progressive background malignancy with fatigue and limited ability to comply) but fitter patients with residual but reduced function and at an earlier phase of their cancer trajectory may benefit from onward referral to local rehabilitation teams (though availability of local services may vary).

PROGNOSIS

Neurological - Ambulatory status post-treatment is linked to that pre-treatment. Where pre-treatment, the patient is walking without help, 90% will be ambulatory post-treatment; where walking with help, 60%; not walking but with residual power, 40%; no residual power at all, 10%. Patients with a slower onset of weakness (>14 days) have a better likelihood of regaining ambulatory function.

Overall survival - Patients who undergo resectional surgery would normally have an anticipated minimum survival duration of 6 months and median survival of 18 months. Patients who have radiotherapy and have further systemic anti-cancer treatment options have a median survival of 1 year. Those who receive radiotherapy but who have no systemic anti-cancer options remaining (i.e. are late-trajectory) have a median survival of 6 weeks.

SUPERIOR VENA CAVAL OBSTRUCTION (SVCO)

INTRODUCTION

- Most commonly seen in lung cancer.
- Consider lymphoma, particularly in young patients.
- Regard as emergency, as patient's condition may deteriorate rapidly.

SYMPTOMS AND SIGNS

1. Swelling or discolouration of the face and neck.
2. Feeling of fullness in the head.
3. Dyspnoea, worse on lying flat.
4. Non-pulsatile raised jugular venous pulse [JVP].
5. Dilated anterior chest wall veins.

INVESTIGATIONS

Discuss with radiologist regarding local policy:

- Chest X-ray
- Thoracic CT

MANAGEMENT

Vascular stenting is usual treatment of choice although radiotherapy or chemotherapy may be good alternatives.

Chemotherapy may be the treatment of choice in lymphoma and small cell lung carcinoma (if diagnosis previously established).

The evidence for the use of corticosteroids as a holding measure before definitive treatment is lacking. Where used this should be for a limited duration.

Discussion with local respiratory team/oncologist is recommended.

Recurrent superior vena caval obstruction

Radiotherapy may be considered. Vascular stent may be replaced. Thrombolysis may be considered if a stent is blocked by thrombus.

OUTCOME

Treatment often gives useful symptomatic relief.

If untreatable SVCO, patient has a prognosis of days.

HYPERCALCAEMIA

INTRODUCTION

- Affects approximately 10-20% of patients with advanced cancer.
- Most commonly seen in multiple myeloma, breast, renal and squamous carcinomas.
- Consider in unexplained nausea, vomiting, confusion or constipation.
- More commonly due to tumour secretion of parathyroid hormone-related protein than to bone metastases.
- May develop insidiously.

SYMPTOMS AND SIGNS

Severity of symptoms is more related to the speed of rise of the serum calcium rather than the absolute level.

- Non-specific early symptoms: lethargy, malaise, anorexia.
- Common symptoms: nausea and confusion.
- Other symptoms: constipation, thirst and dehydration.
- Late features: drowsiness, fits, coma.

INVESTIGATIONS

- Corrected serum calcium
- Urea and electrolytes

MANAGEMENT

Treat if serum calcium elevated, symptomatic and clinically appropriate.

- Intravenous bisphosphonate* e.g. pamidronate between 30 to 90mg, zoledronic acid 4mg or ibandronate between 2 to 4mg. Choice depends on local guidelines and renal function.
- Pre and post dose rehydration with 0.9% sodium chloride tailored to the patient's renal function, cardiovascular status and oral intake.

*N.B. Bisphosphonates may also be used for treatment of bone pain and prevention of skeletal events - see full prescribing guidelines for doses.

FOLLOW UP

Recheck calcium if symptoms have not improved after 3-4 days.

- Maximal response to bisphosphonates is seen after 6-11 days.
- If appropriate, repeat the same or a different bisphosphonate if calcium level has not decreased.
- Consider investigating for hyperparathyroidism in selected patients.
- For recurrent hypercalcaemia consider intermittent intravenous bisphosphonates. If repeated doses of bisphosphonates are anticipated, patients should have a dental assessment and their dental practice informed, to minimise the risk of osteonecrosis of the jaw.

OUTCOME

- Average duration of response is 3-4 weeks.
- Patients should be informed that hypercalcaemia may recur and to monitor for symptoms.
- Prognosis depends on the underlying pathology, but refractory hypercalcaemia is a poor prognostic indicator.

LYMPHOEDEMA

INTRODUCTION

Lymphoedema is a chronic progressive swelling due to the inability of the lymphatic system to maintain normal tissue homeostasis. This results in an accumulation of protein-rich fluid in the subcutaneous tissues.

Lymphoedema is one form of chronic oedema. In patients with cancer, lymphoedema is usually secondary to the underlying cancer or previous cancer treatment.

CHARACTERISTIC FEATURES

- Oedema
- Chronic inflammation
- Skin changes e.g. dry skin, thickened tissues (Stemmer's sign)
- Heaviness and aching in the affected limb
- Excess fibrosis
- In the early stages of lymphoedema pitting is demonstrated. With time, this feature is lost due to the oedema having a high protein content.

GENERAL MANAGEMENT

Where available, patients should be referred to specialist lymphoedema clinics

The core treatment elements are:

- Skin care - keep skin clean and moisturised with non-perfumed emollient (e.g. aqueous cream, Diprobase®)
- Compression/support
- Movement and exercise
- Simple lymph drainage, self-massage techniques

Avoid affected limb for any medical procedure e.g. injection, venepuncture, blood pressure measurement.

MANAGEMENT OF CELLULITIS IN LYMPHOEDEMA

Comprehensive advice is available in the Consensus document from the Lymphoedema Support Network and British Lymphology Society (www.thebls.com August 2010).

Treat early, monitor closely and continue antibiotics for at least 14 days after clinical improvement is observed.

1. Oral amoxicillin 500mg t.d.s. (clarithromycin 500mg 12 hourly or erythromycin 500mg q.d.s. if penicillin allergic).
2. If evidence of Staphylococcus Aureus infection add in or substitute flucloxacillin.
3. Follow guidance on the British Lymphology website, www.thebls.com.

Acute infection is usually painful; review analgesics. Avoid compression garments and NSAIDs in acute attack.

If patient develops systemic symptoms, IV antibiotics may be required; seek specialist advice.

Recurrent cellulitis

Antibiotic prophylaxis is needed if patient has had 2 or more attacks of cellulitis per year. Penicillin V 500mg daily (erythromycin 500mg daily if penicillin allergic) first line. Please consult www.thebls.com and refer for specialist advice.

Further information

The Lymphoedema Support Network: www.lymphoedema.org/lsn

The British Lymphology Society: www.thebls.com

THE LAST DAYS OF LIFE

Recognition of imminent death is important. It allows withdrawal of unnecessary treatments and preparation of the patient and family/carers for death. This phase is often heralded by a more rapid deterioration in the patient's general condition and can be difficult to recognise. If all potentially reversible causes for the patient's condition have been considered and appropriately managed, the following symptoms and signs in patients may indicate that the prognosis is short:

- Profound weakness
- Confined to bed for most of the day
- Drowsy for extended periods
- Disorientated
- Severely limited attention span
- Loss of interest in food and drink
- Too weak to swallow medication.

ACTIONS

1. Sensitive check the awareness of patient and family/carers and explain the plan of care.
2. Negotiate appropriate treatment and advance care plans with the patient, if they have capacity. Check if an Advance Decision to Refuse Treatment (ADRT) has been made or a Lasting Power of Attorney (LPA) for welfare appointed.
3. If the patient does not have capacity, clinical decisions must be made in the patient's best interest in line with the Mental Capacity Act. Family, carers and other healthcare professionals should be consulted. The role of the family is to advise on what the patient would have wanted for his/herself.
4. Establish the patient's preferred place of care. This should take into account the needs and wishes of the patient and the family/carers.
5. Fast Track/Continuing Care Funding Form or equivalent needs to be signed for patients wishing to be cared for in a home or care home setting.

6. CPR status should be reviewed. In accordance with local policy, either complete a transferable regional DNACPR form or DNACPR forms in all relevant settings and prior to ambulance transfers.
7. If at home/care home ensure an Out of Hours Handover Form has been completed and the patient and family/carers have the NHS Direct Palliative Care Line number.
8. Professional carers may need to acknowledge and share their own feelings. Mutual support and teamwork are important.

Physical care

What nursing care and support is needed?

1. If a patient is to be discharged home from hospital ensure the general practitioner, district nurse and where appropriate, the community palliative care team are aware.
2. Adequate day and night nursing support needs to be arranged. Consider night sitters.
3. Ensure the patient is not left alone for long periods and preferably not at all.
4. Involve family/carers in practical care as much as they wish and discuss the plan of care.
5. When the patient is in the last days/hours of life consider an integrated care pathway for the dying e.g. LCP, where available.
6. Priorities of care include:
 - Assess regularly for common symptoms at the end of life: pain, agitation, respiratory secretions, nausea and vomiting and breathlessness.
 - Treat dry mouth with good regular mouth care (minimum hourly).
 - Immobility and pressure areas - bed, mattress, positioning needs to be assessed.
 - Continence - consider catheter, convener, pads and monitor for signs of retention.
 - Bowel care - assess for bowel problems that may cause

discomfort, such constipation or diarrhoea.

- Assess the psychological, religious, cultural and spiritual care needs of the patient and family.

What about food and fluids?

A reduced need for food and fluids is part of the normal dying process and patients should be supported to take food and fluids by mouth for as long as tolerated. Symptoms of thirst / dry mouth are often due to mouth breathing or medication / oxygen therapy and good mouth care is essential.

For many patients, the use of clinically assisted (artificial) hydration will not be of benefit and decisions about their use should be made in a patient's best interest. If clinically assisted artificial hydration or nutritional support is in place, review rate / volume / route according to individual need. Possible benefits of withdrawing or reducing clinically assisted hydration/nutrition include reduced vomiting and incontinence, reduced painful venepuncture.

What about medication?

Reassess indications and potential benefits in the context of the terminal phase for ALL medications. Only continue medication needed for symptom management. If the oral route is not appropriate the subcutaneous route or the rectal route can be used for many symptom management drugs.

When in the last days/hours of life refer to local integrated care pathway for the dying symptom management guidelines where available. Ensure anticipatory medications are prescribed and available for the five common symptoms which may develop in the last hours or days of life: pain, terminal restlessness, respiratory tract secretions, nausea and vomiting and breathlessness.

Terminal restlessness

Assess the patient carefully. Restlessness can occur at the end of life but there may be a precipitant, therefore look for evidence of:

- Physical discomfort - pain related to underlying condition, urinary retention, faecal impaction or new event e.g. haemorrhage, malfunctioning syringe pump.
- Respiratory distress - dyspnoea, cough, tracheal obstruction.

- Neurological problems - fits, hallucinations, myoclonic jerks, motor restlessness. Remember any of these may be caused by drugs (including opioids and anti-emetics).
- Psychological distress (see below).

If there are no reversible precipitating factors or psychosis, midazolam is the drug of choice (see syringe pump section, page 47). Haloperidol is useful for delirium.

Respiratory tract secretions or 'Death Rattle'

This is a rattling noise produced by the movement of secretions in the upper airways in patients who are too weak to expectorate effectively. Relatives and carers may find this distressing. It is important to explain to the relatives/carers that this is unlikely to be causing distress to the patient.

- Repositioning of the patient and postural drainage may help.
- Anti-secretory drugs can be used (see syringe pump section or local integrated care pathway for the dying symptom management guidelines).
- Prompt drug treatment is required.

For resistant symptoms consider other causes e.g. gastric or chest secretions and manage accordingly.

Distressing terminal events

Events such as haemorrhage, fits or tracheal obstruction are unusual and can often be anticipated and a management plan discussed with nursing staff in advance. Prescribe appropriate p.r.n. medication (e.g. diamorphine or morphine and midazolam) to relieve distress and sedate if necessary. Seek advice from palliative care team if unsure.

Do not attempt cardiopulmonary resuscitation (DNACPR) orders

If a patient is in the last days of life, cardiopulmonary resuscitation (CPR) is highly unlikely to be of clinical benefit. The resuscitation status of the patient should be discussed within the clinical team and documented as per local policy. It is good practice to explain to the patient and their carers: why CPR will not be attempted; that the focus of care is on palliation and comfort; in the home setting, that family members know what to do when the patient dies.

Psychological and spiritual care of patient and family

Decisions about the plan of care should be communicated to the patient where appropriate and to the relative or carer. The patient, relative and carer should be given the opportunity to discuss what is important to them at this time.

The patient may be anxious for themselves or others and addressing psychological and spiritual needs may contribute to alleviating symptoms of agitation.

Consider barriers to communication such as hearing, vision and speech difficulties, learning disabilities, dementia, neurological conditions and confusion. The relative or carer may know how specific signs indicate distress if the patient is unable to articulate their own concerns.

Encourage open communication and explore fears and concerns:

- Facilitate expression of emotions.
- Involve children and those with learning disabilities.
- Remember spiritual care and religious needs (offer to contact chaplain, priest, rabbi etc. if appropriate).
- Consider music, art, poetry, reading, photographs or something else that has been important to the well-being of the patient.

Care after death

Practical and legal aspects to attend to after death

Arrangements may vary depending on place of death and local bereavement service provision.

- Warn relatives when Coroner's referral might be necessary (e.g. mesothelioma). It is preferable to do this before the patient's death.
- Ensure prompt verification of death, personal care after death and provision of death certificate.
- Provide information about the role of the undertaker, how to register a death, common feelings of grief and available support.
- For deaths not occurring in the patient's own home, ensure patient's GP is informed within 24 hours.

- For deaths occurring at home, ensure planned visits are reviewed and arrangements made to return equipment.
- Ensure hospital appointments (and transport) are cancelled and hospitals/consultants involved with the patient's care are informed.

Bereavement

It is good practice after someone has died to provide written information about common feelings of grief and available support and to identify those at increased risk in bereavement. Risk factors include:

- previous multiple losses or recent losses
- ambivalent relationship
- dependent children involved
- bereaved parent
- previous psychological problems or substance abuse
- people living alone or feeling unsupported.

Seek advice from colleagues and relative's GP (with their permission), if one or more of these risk factors are present.

It is good practice to review how someone is coping 6-8 weeks after the bereavement.

SYRINGE PUMP PRINCIPLES

In palliative care a syringe pump or driver is an alternative way of administering medication continuously via the subcutaneous route when the patient is unable to swallow or absorb oral drugs due to any of the following:

- persistent vomiting, intestinal obstruction, dysphagia, weakness, unconsciousness or mouth, throat and oesophageal lesions.

Where indicated, syringe pumps can be used for a short period for symptom control, or for longer in the terminal phase. The rationale for use should be explained to the patient and their relatives.

Considerations:

- Doses of medication are calculated on the basis of patients' previous requirements.
- Following commencement of a syringe pump it will be several hours before therapeutic levels are achieved, so consider giving a stat dose of medication equivalent to the normal breakthrough dose.
- Syringe pumps require careful monitoring and should be prescribed on prescription/ syringe pump charts as per local Trust syringe pump policies.
- Inadequate symptom control is not an indication for syringe pump use unless there is reason to believe oral medications are not being absorbed.
- Recommended sites for insertion of the cannulae are the anterior chest wall, upper arms, abdominal wall and thighs.

NOTE:

A variety of models of ambulatory infusion devices (syringe pumps) are in use. Graseby ambulatory syringe drivers no longer meet MHRA safety requirements and are being phased out. As a result, McKinley T34 syringe pumps are now widely used in the region. Alternative MHRA approved syringe pumps may also be available. Please follow your local syringe pump policy.

COMMON DRUG DOSAGES FOR SUBCUTANEOUS MEDICATIONS AND INFUSIONS

- All the drugs on this page and opposite can be given as subcutaneous infusions in a syringe pump.
- Remember to prescribe subcutaneous p.r.n. medication. If using more than one drug in a syringe pump, check compatibilities with current PCF, pharmacy, or Specialist Palliative Care Team.
- To convert from oral morphine see section 1.2.1. (page 13). For other opioids, , seek specialist advice. If symptoms are not controlled, other regimens may be needed. Seek specialist advice.
- Haloperidol and cyclizine can be effective in combination. Cyclizine and metoclopramide are antagonistic.

Commonly used sub-cutaneous medications	Usual 24 hour dose range	Usual starting s/c prn dose (& max frequency initially, where relevant)	Useful ampoule size information	Comments
AMALGESICS Diamorphine / Morphine	Between 5 and 10mg/24 hours if opioid naive. Otherwise: • 1/3 of previous 24 hour oral morphine dose as diamorphine/24 hours SC • 1/3 to 1/2 of previous 24 hour oral morphine dose as morphine/24 hours SC (see local guidelines). Review and adjust dose if necessary. Seek advice from SPCT	1/6th of the 24 hour SC dose 1/6th of the 24 hour SC dose 1/6th of the 24 hour SC dose	Diamorphine: Dry powder: 5mg, 10mg, 30mg, 100mg, 500mg Morphine sulphate: 10mg/1ml, 15mg/1ml, 20mg/1ml, 30mg/1ml, 20mg/2ml, 30mg/2ml, 40mg/2ml, 60mg/2ml	Seek advice if: • patient requiring rapidly escalating doses • patient in renal failure.
NSAIDs				May relieve musculo-skeletal pain.

ANTIEMETICS	Haloperidol	Between 1.5 and 5mg	1.5mg (max b.d.)	5mg/1ml	Also see nausea & vomiting section. Haloperidol has antiemetic and sedative properties. Cyclizine incompatible with hyoscine butylbromide. Levomopromazine doses above 12.5mg may be sedating.
	Cyclizine	Between 100 and 150mg (max dose 150mg in 24 hours)	50mg (max t.d.s.)	50mg/1ml	
	Levomopromazine	Between 6.25 and 12.5mg	6.25mg (max q.d.s.)	25mg/1ml	
	Metoclopramide	Between 30 and 60mg	Between 10 and 20mg (max q.d.s.)	10mg/2ml	
ANTISECRETORY DRUGS	Hyoscine hydrobromide Hyoscine butylbromide Glycopyrronium	Between 1.2 and 2.0mg (max dose 2.4mg in 24 hours)	400microgram (max q.d.s.)	400micrograms/1ml, 600micrograms/1ml	Early intervention for "death rattle" is required. Hyoscine hydrobromide is sedating. Hyoscine butylbromide is: • not sedating • incompatible with cyclizine Glycopyrronium is not sedating
		Between 60 and 120mg	20mg (max t.d.s.)	20mg/1ml	
		Between 600micrograms and 1.2mg	400 microgram (max t.d.s.)	200micrograms/1ml, 600microgram/3ml	
		Between 10 and 20mg (starting dose)	Between 2.5mg and 5mg	10mg/2ml	
SEDATIVES Midazolam	May be increased according to patient response. Seek SPCT advice.			Other preparations are available, however, their use should be restricted to minimise the risk of unintended overdose.	Muscle relaxant, anxiolytic and anticonvulsant (see below) – short acting so essential to give as a continuous subcutaneous infusion. If ineffective seek specialist advice.
	Between 20 and 60mg/24 hrs to replace oral anti-convulsants may be required.	10mg		10mg/2ml Other preparations are available, however, their use should be restricted to minimise the risk of unintended overdose	Seek SPCT advice re management of prolonged fits.
ANTICONVULSANT Midazolam	Between 1 and 8mg/24 hours	500micrograms		1mg/ml	Longer acting than midazolam when used p.r.n. and sedating. Seek SPCT advice re management of prolonged fits
Clonazepam					

Appendix 1

Step 2 Opioid analgesic equivalences with oral morphine sulphate in Palliative Care

General Principles

- a) LOCAL ORGANISATIONAL OPIOID CONVERSION CHARTS for opioid use in palliative care MUST be used in preference to these tables.
- b) If there is any uncertainty regarding the safe prescribing of opioids seek specialist advice before doing so.
- c) It is advisable to double check calculations and document method used in the patient record, including for appropriate p.r.n. opioid.
- d) Clinical judgement should also be applied, considering: underlying clinical situation; comorbidity and concomitant drugs; nature of pain and its opioid responsiveness; toxicity of current opioid; previous opioid doses and adherence; rapidity of opioid escalation; reason for switching - if pain is controlled, switching due to adverse effects or convenience is usually less problematic than switching if the pain is uncontrolled (seek specialist advice).
- e) Larger doses of opioid may require an empirical decrease in the dose of the replacement opioid and re- titration. For doses greater than 120mg oral morphine equivalence a day it is advisable to seek advice. Specialist advice is strongly recommended for doses greater than 200mg oral morphine equivalence a day.
- f) Arrangements for analgesic review and monitoring for adverse effects, including consideration of patient's place of care, need to be considered, documented in the patient record and communicated onwards.

These tables should only be used in the context of these guidelines as a whole, and used alongside the summary key principles outlined opposite.

Step 2 ("weak") opioids - dose conversion to oral morphine sulphate			
N.B. Some people cannot efficiently metabolise codeine or tramadol to the active metabolite and therefore they may require a lower dose of strong opioid on titration to step 3			
Oral "Weak" opioid	Total MAX daily dose	Conversion factor	Approximate 24 – hourly oral morphine sulphate dose equivalence
Oral Codeine phosphate	240mg/day	÷ 10*	24mg/day
Oral Dihydrocodeine	240mg/day	÷ 10*	24mg/day
Tramadol hydrochloride (also weak noradrenaline and serotonin reuptake inhibitor)	400mg/day	÷ 10*	40mg/day

* Reference: Palliative Care Formulary 3rd Ed

TRANSDERMAL FENTANYL PATCHES - dose conversion to oral morphine sulphate		
Usually changed every 72 hours. If possible patients should not be switched between brands when on stable dose.		
Fentanyl patches micrograms/hr	24 – hourly oral morphine sulphate dose (Based on Durogesic SPC April 11)	4-hourly and breakthrough oral morphine sulphate dose (rounded to practical amounts)
* 12	* <45mg	5 to 10mg
25	<90mg	10 to 15mg
† 37	90 to 134 mg	15 to 25mg
50	135 to 189 mg	25 to 35 mg
† 62	190 to 224mg	35 to 40mg
75	225 to 314 mg	40 to 50 mg
FOR LARGER SIZE PATCHES SEEK SPECIALIST ADVICE		

* Durogesic DTrans®, and Osmanil® 12mcg/hr fentanyl patches are only licensed for dose titration steps indicated by †, not as starting dose. Mezolar Matrix® patch SPC states starting doses should not exceed 12 to 25 mcg/hr and Matrifen® patch SPC states starting dose should not exceed 25mcg/hr (see individual SPCs).

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Appendix 1 (Contd.)

Step 2 Opioid analgesic equivalences with oral morphine sulphate in Palliative Care (contd.)

General Principles

- a) LOCAL ORGANISATIONAL OPIOID CONVERSION CHARTS for opioid use in palliative care MUST be used in preference to these tables.
- b) If there is any uncertainty regarding the safe prescribing of opioids seek specialist advice before doing so.
- c) It is advisable to double check calculations and document method used in the patient record, including for appropriate p.r.n. opioid.
- d) Clinical judgement should also be applied, considering: underlying clinical situation; comorbidity and concomitant drugs; nature of pain and its opioid responsiveness; toxicity of current opioid; previous opioid doses and adherence; rapidity of opioid escalation; reason for switching - if pain is controlled, switching due to adverse effects or convenience is usually less problematic than switching if the pain is uncontrolled (seek specialist advice)
- e) Larger doses of opioid may require an empirical decrease in the dose of the replacement opioid and re- titration. For doses greater than 120mg oral morphine equivalence a day it is advisable to seek advice. Specialist advice is strongly recommended for doses greater than 200mg oral morphine equivalence a day.
- f) Arrangements for analgesic review and monitoring for adverse effects, including consideration of patient's place of care, need to be considered, documented in the patient record and communicated onwards.

These tables should only be used in the context of these guidelines as a whole, and used alongside the summary key principles outlined opposite.

TRANSDERMAL BUPRENORPHINE PATCHES - dose conversion to oral morphine sulphate

There is no regional consensus regarding conversion ratios. Follow local guidance where available. 1:75 ratio in cancer pain (Ref: Mercadante S and Caraceni A, Palliative Medicine July 2011 25(5) 504-515) reflects more closely previous clinical practice in some specialist services, however UK SPC for Transtec® Patch quotes a range of 1:75 to 1:115 based on multiple single dose studies and chronic pain data.

BuTrans® Patch (Change once a week. Use in cancer pain is unlicensed)

BuTrans® Patches micrograms/hr	24-hourly oral morphine sulphate dose equivalence (conversion ratio 1:75 (ratio range 1:75 to 1:115 approximated))	4-hourly and breakthrough oral morphine sulphate dose (rounded to practical amounts)
5	9mg (10mg to 15mg)	1mg to 2 mg**
10	18mg (20mg to 30mg)	3mg (to 5mg)
20	36mg (35mg to 55mg)	5mg (to 10mg)

** Or use equivalent dose of oral codeine phosphate and check efficacy

Transtec® Patches (Change twice a week on same days. Licensed for use in cancer pain)

Dose Conversion

Transtec® Patches micrograms/hr	24-hourly oral morphine sulphate dose equivalence (conversion ratio 1:75 (ratio range 1:75 to 1:115 approximated))	4-hourly and breakthrough oral morphine sulphate dose (rounded to practical amounts)
35	63mg (60 to 95mg)	10mg (10 to 15mg)
52.5	95mg (95 to 145mg)	15mg (15 to 25mg)
70	126mg (125 to 190mg)	20mg (20 to 30mg)

FOR LARGER SIZE PATCHES SEEK SPECIALIST ADVICE

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NOTES

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