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GOLDEN RULES

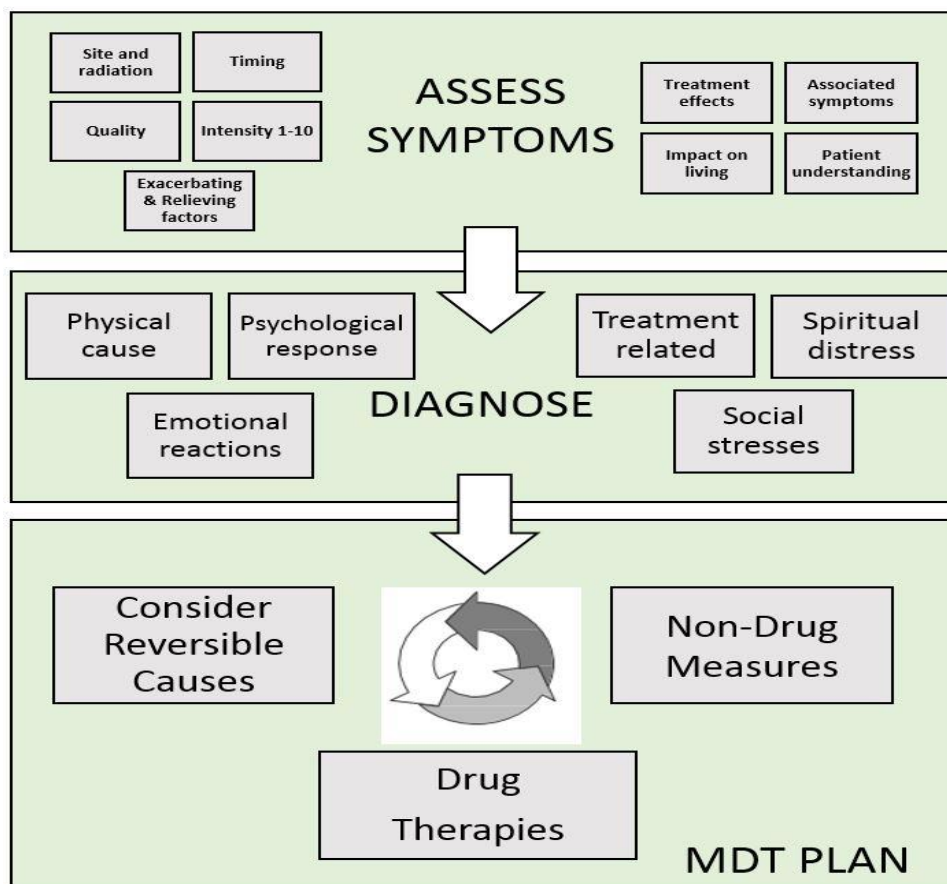
There are some key principles or '**Golden Rules**' which underpin symptom management. These include:

Assess and **diagnose** the cause of symptoms, before **planning** symptom management

Treat potentially **reversible** causes, where appropriate

Always consider **non-drug approaches** as they can be as important as the use of drugs

Management plan is influenced by prognosis and patient choice and depends on the **therapeutic goal**



Plan regular **review** and reassessment for all symptoms

The **WHO Analgesic Ladder** remains the basis for prescribing for all types of pain

Set **therapeutic goals** for drug prescribed e.g. use **opioids as analgesics**, not for sedation

All drugs need a **review** date; the goal is to use the **minimum** effective dose

Adopt a **Team** approach

Ask for **Specialist advice** in difficult situations

PAIN

All sections of this book focus on management of patients with advanced and progressive disease, including both malignant and non-malignant conditions. The advice is not meant to guide the management of chronic pain, which, though also multi-dimensional, requires long term management plans focussing more on psychological interventions and less on opioid use.

Pain is a complex symptom which is influenced by physical, psychological, social and spiritual factors.

Multiple pains are common. In cancer patients with pain: one third will have one pain, one third will have two pains and one third will have three or more pains. Multiple pains are common in non-malignant and co-morbid conditions. They may also occur as a result of age, debility and medical treatment.

Pain Assessment

Assessment and management of pain should follow relevant Golden Rules and the steps outlined for assessment of any symptom (ref p3). It is important to assess each pain separately to make a diagnosis and treat accordingly.

Pain assessment tools

Tools such as a numerical rating scale or visual analogue scale may help the patient to describe the severity of the pain and the response to treatment. Tools are also available for assessment of pain in people with learning difficulties, dementia and other communication issues.

Pain management

Once a pain has been assessed and diagnosed, aim to treat any reversible cause. Alongside this, or if the cause is irreversible, the WHO Analgesic Ladder remains the basis for prescribing in all types of persistent pain.

NON-DRUG TREATMENTS

Consider the use of:

- Relaxation techniques
- Psychological Assessment and Support
- Distraction
- Heat pad/ ice pack
- TENS
- Acupuncture
- Creative Therapies

DRUG TREATMENTS

WHO Analgesic Ladder

- analgesics should be given regularly
- it is essential to use an analgesic appropriate to the severity of the pain
- patients with palliative care needs, whose pains do not respond to weak opioids, need a trial of management with strong opioids
- all patients taking opioids should also be prescribed laxatives
- the oral route is preferred for all steps of the ladder

Co-analgesia (non-opioid medication) should be prioritised in non-malignant and longer prognosis conditions.

		STEP 3
		STEP 2
STEP 1	Moderate pain	Severe pain
Mild pain Paracetamol	Weak opioid +/- Paracetamol	Strong opioid +/- Paracetamol
Co-analgesia NSAIDS, adjuvants, nerve blocks, TENS, Acupuncture		
Specific Therapies Radiotherapy, Chemotherapy, Surgery, Antibiotics		
Address Psychological Problems		

STEP 1

Consider a trial of Paracetamol and stop if not clearly effective.

Paracetamol

Can be given orally (tablet or liquid), via PEG, rectally or IV.

Usual dose 0.5 -1g qds, maximum 4g in 24 hours.

Risk of hepatotoxicity is increased in those who are malnourished or have abnormal liver function.

Reduce dose in the frail elderly and those who weigh less than 50kg to a maximum of 2g in 24 hours.

4hr half-life and qds dosing of 1g may mean that a patient only has pain relief available to cover 16hrs a day.

NON-STEROIDAL DRUGS (NSAIDs)

NSAIDs are particularly useful for pain caused by inflammation or exacerbated by movement, however the risk/ benefit balance must always be considered.

Serious Gastrointestinal Events with NSAIDs

Risk is 1 in 500 with 2 months of treatment, likely increased in debilitated patients at end of life and decreased by gastro-protection. Depends not only on the NSAID used but on other factors such as the dose and duration, concurrent medications and age >65. Of the NSAIDs commonly used in palliative care, Ketorolac is high risk, Diclofenac, Naproxen and high dose Ibuprofen (>1200mg/24 hours) are moderate risk and Ibuprofen is relatively lower risk.

Serious Thrombotic Events with NSAIDs

The absolute risk for serious thrombotic events (stroke, myocardial infarction) with NSAIDs remains small, however Ibuprofen and Naproxen have been found to be the least likely to increase risk.

Other Serious Side Effects

Beware of NSAIDs exacerbating renal and cardiac failure and consider the risk of bronchospasm.

Prescription of NSAIDs

Always consider a PPI alongside NSAIDs.

Take into account an individual's risk factors and use the lowest dose possible to achieve pain control.

First line: Ibuprofen 400mg tds PO

Second line: Naproxen 500mg bd PO

Third line: Diclofenac SR 75mg bd PO/ 100mg od pr/im or 150mg/ 24hrs csci

Ketoprofen, Diclofenac and Ketorolac may be given as a csci* recommend specialist advice

STEP 2

Codeine

- Codeine Phosphate 30-60mg 4-hourly PO
- Codeine in combination with Paracetamol e.g. Cocodamol 30/500, 2 tablets qds PO
- Constipation is a common side effect
- Around 10-15% of the population do not respond to a Step 2 analgesic but will respond normally to step 3.
- Those with a sensitivity/allergy to morphine may also react to codeine

Tramadol (Controlled drug)

- Has an opioid effect but also acts as a serotonin and noradrenaline reuptake inhibitor
- Nausea is a common side effect
- Tramadol Hydrochloride 50-100mg qds (maximum 400mg/24 hours), also available as a modified release preparation
- Risk of serotonin toxicity when given with other serotonergic drugs (clonus, sweating, tremor, agitation, and in extreme cases, death)

STEP 3 – STRONG OPIOIDS

If patients do not achieve useful relief of pain when titrated to doses between 120-180 mg morphine equivalent per 24 hours, referral to a specialist in palliative or pain medicine is strongly recommended and additional adjuvants are likely to be needed.

Morphine

Remains the first-line strong opioid (except in renal impairment), oral is the preferred route. Not all pains are opioid responsive, and some respond better to one opioid than another due to individual differences in drug pharmacokinetics.

Elderly and cachexic patients and those with renal impairment may need lower doses, reduced frequency or alternative opioids: see table on p23

We recommend that all opioids are prescribed by brand name to avoid confusion.

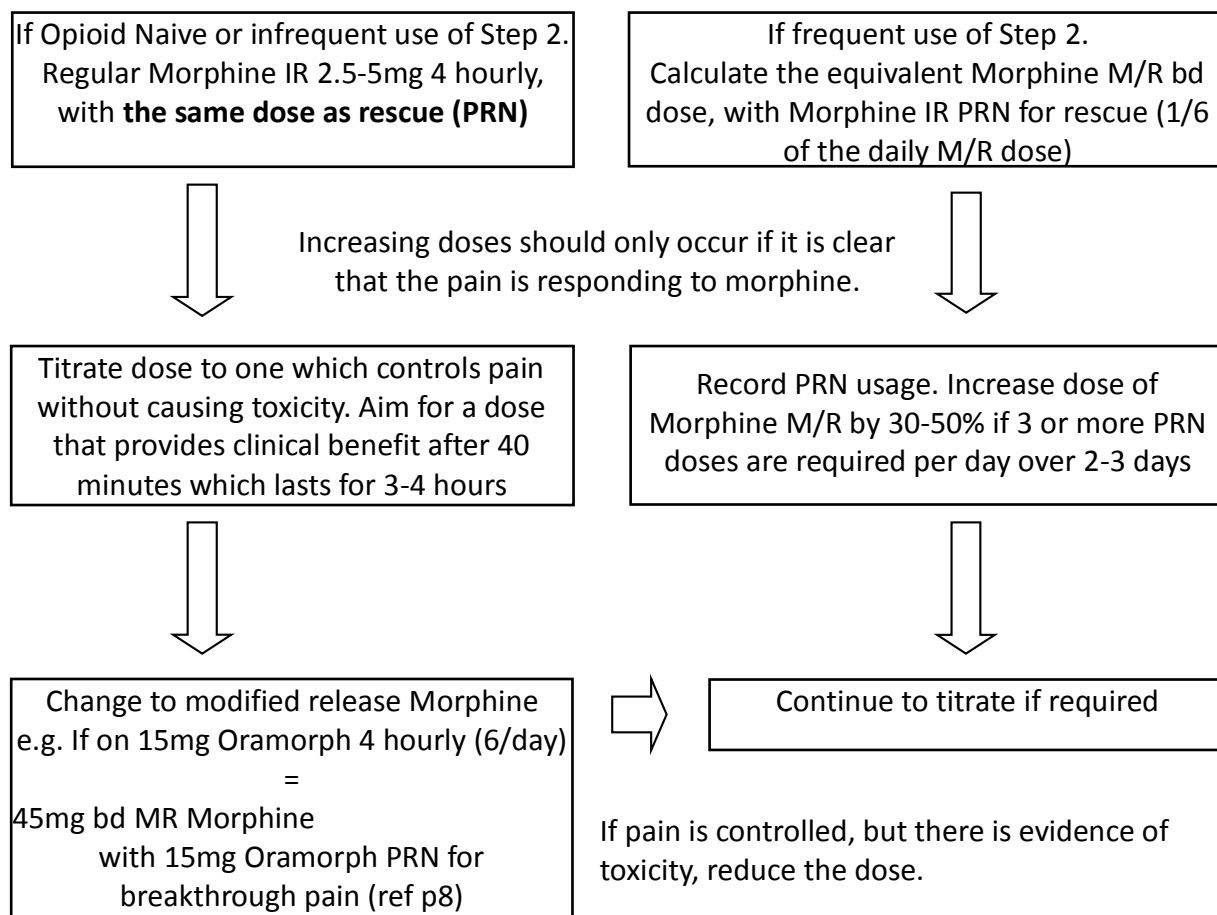
Commencing oral opioids

Calculate the morphine equivalent of any Step 2 drugs to guide starting dose e.g.

The codeine in *Cocodamol 30/500* 2 qds (total 240mg) $\underline{=}$ Morphine 24mg/24hrs.

Start with either regular Immediate Release IR morphine sulphate (e.g. *Oramorph*) 2.5mg (15mg/day) to 5mg (30mg/day) 4 hrly

Or Modified release MR morphine sulphate 10mg (20mg/day) to 15mg (30mg/day) BD



If pain is uncontrolled, with evidence of toxicity, seek specialist advice and consider opioid switch or adjuvants (ref p10)

BREAKTHROUGH PAIN

Breakthrough pain is a transient exacerbation of pain occurring despite adequate background analgesia.

Encouraging patients/carers to maintain a record of use of breakthrough doses will be helpful to guide when an increase in background pain relief may be needed.

Poorly controlled background pain and pain occurring shortly before the next dose of regular opioid (end-of-dose failure) are managed by titrating up the regular opioid.

The dose of breakthrough medication should be one sixth (1/6) of the daily background opioid dose:

e.g. A patient on Morphine M/R 120mg bd (=240 mg morphine per day) should have Morphine I/R (Oramorph or Sevredol) 40mg prn (240 x 1/6)

Problem	Features	Suggested management
<i>Incident pain</i>	Pain associated with an incident e.g. movement, swallowing, defaecating, coughing, dressing changes, weight-bearing	Manage precipitating factors Rescue medication of IR opioid at least 30 minutes prior to incident Consider NSAIDs/ Adjuvants Consider SL / buccal / nasal Fentanyl preparations
<i>Spontaneous breakthrough pain</i>	Pain occurs without an obvious trigger, e.g. colic, neuropathic pain	Rescue medication of IR opioid Consider adjuvants Consider titrating background analgesia

Some patients appear to gain psychological as well as pain benefit from use of prn short acting opioids, possibly by allowing the patient to have control over their pain management. Increasing their background pain relief may lead to drowsiness or opioid toxicity without any reduction in the frequency of prn use. Accepting prn use >3 times per day and keeping background pain relief relatively low may work best in these patients.

Sublingual / Buccal / Nasal Fentanyls*: Use in Incident Pain

These are expensive compared with Oramorph and are best left for specialist use.

They are licensed for use in incident pain; as they are slightly faster acting compared with traditional IR opioids – i.e. prescribe at least 10 minutes prior to an incident likely to cause pain. The dose is not related to background opioid dose and drugs are not interchangeable. Start at lowest dose and titrate up to effective level. They must not be used in opioid naive patients.

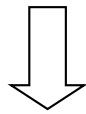
** for specialist use or after specialist advice*

TRANSDERMAL OPIOIDS

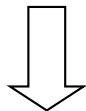
Transdermal (TD) opioids are contraindicated for acute pain and in severe uncontrolled pain requiring rapid dose titration, due to their long half-life. In cachexic patients absorption may be unpredictable, so TD drugs should be used with caution as conversion charts may not apply. Cutting patches is not recommended.

Suggested management (for stable pain)

Calculate current oral Morphine equivalent dose and use conversion table as a guide to which TD drug and dose to commence.

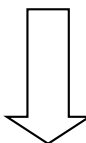


Apply patch.
Continue current opioid regime for 12 hours before stopping.



Options for rescue medications:

- Consider adjuvants
- Immediate release morphine or oxycodone
- Fentanyl, Morphine, OxyNorm or Diamorphine SC if unable to tolerate oral medication
- NSAIDs



Wait at least 72 hours before titrating dose.
Titrate by a maximum of 25-50% of dose.

Notes

For opioid naive patients, the lowest strength Buprenorphine patch (BuTrans 5mcg/hr) may be appropriate.

TD medications take at least this long to reach effective plasma levels.

Some patients experience a degree of withdrawal when switching from morphine or oxycodone to Fentanyl, which can be managed with small doses of regular Oramorph or OxyNorm for the first few days.

Fentanyl is not as constipating as other opioids so laxatives may need to be reduced.

It can take up to 3 patch changes to reach steady-state plasma concentrations of TD drugs.

Dose increases will take at least 12 hours to take effect.

Plasma levels of TD drugs remain raised for at least 24 hours after removal of patch – relevant in switches from TD to alternative routes, and in managing toxicity.
For management of patches in last days of life; ref p70.

OPIOID SIDE EFFECTS AND TOXICITY (Grey boxes indicate immediate action is required)

Side effect	Notes	Suggested management
Constipation	Virtually inevitable	Proactive prescribing of softening & stimulant laxatives Methylnaltrexone rarely needed
Nausea	Usually settles after a few days Less likely with slow titration If persistent consider toxicity	Consider Haloperidol 0.5-1.5mg at night PO or Domperidone or Metoclopramide 10mg tds PO
Dry mouth, hiccups, sweating, vivid dreams		Manage symptomatically ref p34, 46, 48, 77 Consider opioid switch if severe
Toxicity – myoclonus, pin-point pupils, hallucinations, delirium, sedation	May be precipitated by rapid dose escalation, accumulation (particularly Methadone, Fentanyl patches), renal or hepatic impairment, dehydration or infection	Reduce dose Seek specialist advice Monitor respiratory rate Correct renal impairment if appropriate Consider opioid switch and adjuvants Consider admission
Respiratory depression (RR <8bpm & reduced saturations)	Sign of severe toxicity	Stop regular opioid (remember to remove patches) and use prn opioids at half dose until improvement in respiratory rate (RR) and conscious level Seek specialist advice Consider urgent bloods and give iv or sc fluids if dehydrated to aid opioid clearance Consider the cause e.g. change in renal function Use Naloxone only if severe as will cause reversal of analgesia with sudden severe pain When stable: Restart opioid at half dose or consider switch to short acting opioid or alfentanil csci, monitor carefully
Opioid-induced hyperalgesia* (OIH)	Widespread and worsening pain, hyperalgesia, allodynia, myoclonus, delirium, sedation and fits	Reduce dose by 30- 50% Seek specialist advice Consider opioid switch, NSAID, adjuvants

Opioid-induced Hyperalgesia*

Pain can be paradoxically increased as a result of taking an opioid. It can occur at any dose and with any opioid. Failure to recognise OIH can result in escalating opioid and sedative effect.

It should be considered if:

- tolerance to opioids develops rapidly
- dose increases result in worsening pain or have short-lived benefit
- the pattern of pain changes (distribution beyond the original site)

If this condition is suspected, seek specialist advice.

OPIOID SWITCHING

Issue with oral Morphine	Suggested switch	Notes
Unable to achieve good pain control without causing toxicity	Oral oxycodone	Many people who do not tolerate morphine will tolerate another opioid (provided pain is opioid-responsive)
Dysphagia Poor oral concordance Uncertain absorption Intractable constipation	TD preparation e.g. Buprenorphine or Fentanyl	Only for stable and well-controlled pain as titration is difficult Buprenorphine and Fentanyl are less constipating than other opioids
Nausea or vomiting Inability to tolerate oral medication in the terminal phase	Continuous subcutaneous infusion (csci) via syringe driver	Convert to same opioid sc that has been given orally Prescribe sc prn doses
Renal impairment* (eGFR<30) For further details ref p23	Buprenorphine or Fentanyl TD Alfentanil or Fentanyl csci Rescue medication: Low dose and infrequent oxycodone IR or buccal / sl / sc fentanyl	The majority of opioids accumulate in renal impairment Buprenorphine, Fentanyl and Alfentanil are safer. There is little evidence for Oxycodone but it appears safer than morphine

Other options (for specialist initiation only) include:

- Methadone* - difficult titration and can accumulate, but may be useful in complex and neuropathic pain.
- Oxycodone with naloxone combination drugs* – consider when intractable constipation despite optimal laxative use.

INSTRUCTIONS TO THE PATIENT AND CARER ABOUT OPIOID USE

- Emphasise the need for regular administration
- Explain about rescue (prn) medication for breakthrough pain
- Warn about possible side effects
 - Explain need for regular and ongoing laxatives
 - Nausea can be a problem initially – take antiemetic regularly for the first few days and prn after that
- Reassure that when used for pain relief, problems with tolerance and psychological dependence are very rare
- Advise not to stop abruptly due to potential withdrawal effects

Opioids and driving

Stable doses of appropriately titrated opioids do not preclude driving, however patients should be advised:

- Not to drive for the first week after starting opioids
- Not to drive for 3 hours after taking a rescue medication
- Not to drive for 48 hrs after changing long acting opioid dose
- To drive only if feeling alert and entirely safe to do so
- To start with a short and familiar drive, with a companion
- To inform their insurance company, who may advise that the DVLA should be informed
- Carry proof of medication prescribed e.g. repeat prescriptions
- It will be an offence to be over new legal limits for many medicines (e.g. opioids, benzodiazepines) whilst driving, as it is with drink driving, from 2015.

Opioids and travel abroad

Duration of travel and requirements

<i>Less than 3 months</i>	Medical letter stating demographics, place and dates of travel and full details of drugs. Import and export requirements for all countries en route should be fulfilled
<i>More than 3 months</i>	Medical letter and import/export requirements as above, plus export license (available from the Home Office website), unless arrangements can be made in the destination country for a prescription to be completed

PRESCRIBING OPIOIDS

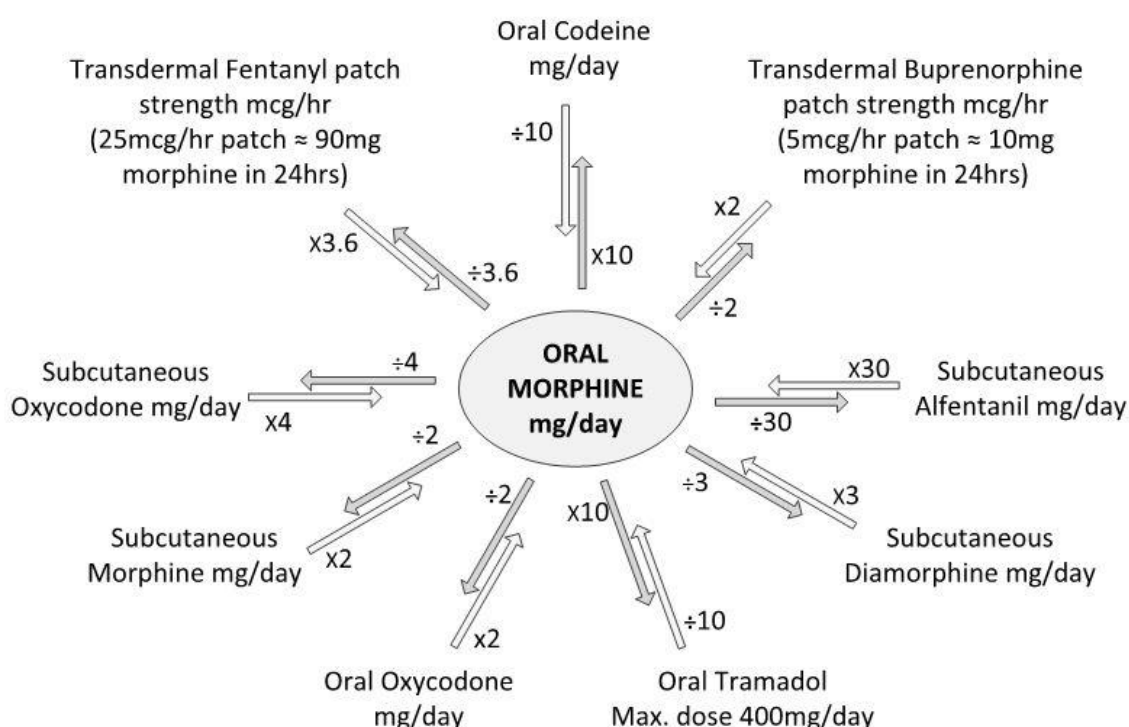
The conversions given are approximate and vary between individuals – the diagrams/ charts should be used only as a rough guide.

At higher doses consider a reduction in the dose when converting from one strong opioid to another as there is a risk of toxicity. It is safer to start lower and titrate up as needed.

Seek specialist advice for conversions at higher doses.

The conversion to and from methadone is variable and should only be attempted in an inpatient specialist unit (risk of accumulation and toxicity).

OPIOID CONVERSION DIAGRAM



Most data on doses are based on single dose studies so they are not necessarily applicable in chronic use, also individual patients may metabolise different drugs at varying rates. The advice is to always calculate doses using morphine as standard and to adjust them to suit the patient and the situation. Caution should be used in renal and hepatic failure. Some doses have been rounded up or down to fit with the preparations available. Avoid patch use in unstable pain.

How to use these tables:

Look for the name of the drug you wish to prescribe. Then decide which route you wish to use. For parenteral use we recommend the subcutaneous route. If you are giving a long acting opioid (12 hrly dose or patch), you will need to prescribe a prn dose for breakthrough pain – this is one sixth of the 24 hour dose, or the 4hourly dose of the same drug, or, in the case of fentanyl or buprenorphine, use the correct 4hrly dose of morphine for breakthrough pain (this should be prescribed PRN, maximum hourly so that patients do not have to wait for rescue analgesia).

OPIOID CONVERSION CHART

MORPHINE			SUBCUTANEOUS DIAMORPHINE		SUBCUTANEOUS ALFENTANIL	SUBCUTANEOUS OXYCODONE				FENTANYL	BUPRENORPHINE	TRAMADOL	CODEINE PHOSPHATE
Oral (mg)	Subcutaneous (mg)		(mg)		(mg)	Oral (mg)	Subcutaneous (mg)			Transdermal Patch (mcg / hr)	Transdermal Patch (mcg / hr)	Oral (mg)	Oral (mg)
4hr dose	12hr dose	24hr total dose	4hr dose	24hr total dose	4hr dose	4 hr dose ie IR preparation	12 hr dose ie MR preparation	24hr total dose	24hr total dose	Patch strength	Patch strength	24 hr total dose	24 hr total dose
5	10	20	5	10	20	1	2.5	5	10	15	20	100	60
5	15	30	2.5	15	10	0.125	1	1.25	10	15	12	100	60
10	30	60	5	30	20	0.25	1.5	2.5	15	30	25	200	120
15	45	90	7.5	45	30	0.5	3	7.5	25	50	37		
20	60	120	10	60	40	0.75	4	10	30	60	37		
30	90	180	15	90	60	1	6	15	45	90	50		
40	120	240	20	120	80	1.25	8	20	60	120	75		
50	150	300	25	150	100	1.5	10	25	75	150	75		
60	180	360	30	180	120	2	12	30	90	180	100		
70	210	420	35	210	140	2.5	14	35	105	210	125		
80	240	480	40	240	160	2.5	16	40	120	240	125		
90	270	540	45	270	180	3	18	45	135	270	150		

Worked Examples:

You wish to prescribe Modified Release Morphine sulphate (e.g. Zomorph or MST) 30mg bd

This is equivalent to 60mg oral Morphine sulphate in 24 hours

One sixth of this dose is the prn dose – i.e. 10mg

Prescribe

Modified Release Morphine sulphate 30mg bd and 10mg Immediate Release Morphine sulphate (e.g. Oramorph) PRN, max hourly

You wish to prescribe a Fentanyl 100mcg/hr patch

This is equivalent to 360mg oral Morphine sulphate in 24 hours

One sixth of this dose is the prn dose – i.e. 60mg

Prescribe

Fentanyl patch 100mcg/hr (renew patch every 72 hours) and 60mg Immediate Release Morphine sulphate (e.g. Oramorph) PRN, max hourly

You wish to prescribe Modified Release Oxycodone (e.g. OxyContin tablets) 60mg bd

This is equivalent to 120mg oral Oxycodone in 24hrs (and equivalent to 240mg Morphine in 24hrs)

One sixth of this dose of oxycodone is the prn dose – i.e. 20mg

Prescribe

Modified Release Oxycodone Tablets 60mg bd and Immediate Release Oxycodone (e.g. OxyNorm Liquid) 20mg PRN, max hourly

You wish to change a patient from 30mg bd Modified Release Morphine onto a csci, syringe driver

This is equivalent to 60mg oral Morphine in 24hrs

This is the equivalent to 30mg subcutaneous Morphine in 24 hours – this is the dose to be used in the syringe driver

One sixth of this dose is the 4hrly dose – prescribe 5mg Morphine subcutaneously PRN, max hourly

Seek specialist advice when at higher doses e.g. the equivalent of 180mg of oral Morphine in 24 hours or more. Consider reducing the equianalgesic dose by 30-50% if converting from a less sedating Opioid e.g. Fentanyl to Morphine, Oxycodone or Diamorphine (as the sedative effects may be much greater for an 'equianalgesic' dose).

TYPES OF PAIN

Pain can be from the **direct effect** of the tumour (infiltration, pressure) or from **treatments** associated with the cancer (surgery, radiotherapy, constipation, mucositis).

It can also be related to **procedures** (dressing changes, pressure sores, movement, muscle stiffness). In 15 – 20% of patients with cancer and pain, the pain is not caused by the cancer itself but by **unrelated pathology** (e.g. osteoarthritis).

All types of pain can show some response to opioids and using the analgesic ladder is appropriate. The cause of the pain always needs to be established as these additional management approaches will vary according to pain type and cause.

Bone Pain: Dull, aching, exacerbated by movement, tender over bone	
Possible Cause	Management options
Bone metastases, arthritis, consider if hypercalcaemia	NSAIDs Bisphosphonates <ul style="list-style-type: none"> Can reduce pain of bone metastases, particularly in those associated with myeloma, breast and prostate cancer Use Pamidronate 90mg over 4 hours iv every 4 weeks, or Zoledronate 4mg over 15 minutes iv every 6 weeks Side effects include osteonecrosis of the jaw and hypocalcaemia Use Zoledonate or Ibandronate, dose reduction in patients with reduced eGFR Oncology/orthopaedic referral for consideration: <ul style="list-style-type: none"> Radiotherapy Radioactive isotope treatment (in patients with multiple sclerotic metastases) Internal fixation of long bones following or at risk of fracture Vertebroplasty in isolated vertebral collapse Denosumab : Monoclonal antibody
Liver Capsule pain: Sharp, stabbing, right upper quadrant or right shoulder tip	
Possible causes	Management options
Liver metastases, other liver disease	NSAIDs Dexamethasone 8mg od PO/SC for 5 days then assess benefit and stop if no improvement
Raised Intracranial Pressure (ICP): Headache worse in the morning, associated with vomiting	
Possible causes	Management options
Brain tumour, brain metastases	Dexamethasone 8 – 16mg PO/SC daily Consider Neurosurgical referral for consideration of tumour debulking, resection if isolated metastasis, shunt insertion
Pancreatic Pain: Central abdominal pain, radiating through to the back	
Possible causes	Management options
Pancreatic tumour, pancreatitis	Often multifactorial and may need combination of opioid, NSAID and neuropathic agents Consider interventional pain referral for coeliac plexus block

Smooth Muscle spasm: Crampy, colicky, intermittent pains	
Possible causes	Management options
Bowel/Bladder/Biliary: Constipation, bowel obstruction, ureteric obstruction, bladder spasm	Treat constipation if present Review medication as prokinetic drugs (metoclopramide, domperidone) may be the <i>cause</i> of the smooth muscle spasm Use an anticholinergic (avoid using with a prokinetic as they have opposing actions on the bowel) for relief of pain although this may worsen constipation; other side effects incl dry mouth Hyoscine Butylbromide: Poor oral absorption: give 20mg sc prn / 60- 120mg/24hr csci Oral agents include Mebeverine, Alverine citrate. For bladder spasm, exclude UTI, consider Oxybutynin SR, Tolterodine, Amitriptyline.
Oesophageal Pain: Intermittent chest pain, related to swallowing	
Possible causes	Management options
Oesophageal tumour, candida infection	Treat oesophageal candida Use drugs for relief of smooth muscle spasm: <ul style="list-style-type: none"> • Nifedipine 10 mg tds PO • GTN - try sl, if effective consider TD patch • Benzodiazepines
Rectal and Pelvic Pain: Tenesmus, pain exacerbated by bowel action, deep seated pelvic pain	
Possible causes	Management options
Pelvic and Rectal tumours, constipation	If constipation is excluded: <ul style="list-style-type: none"> • NSAIDs • Neuropathic agents • Drugs for relief of smooth muscle spasm: Nifedipine 10 mg tds PO/ GTN - try sl, if effective consider TD patch/ Benzodiazepines • Local steroid (Colifoam, Predsol) • Oncological referral for local radiotherapy • Consider interventional pain referral for sacral plexus nerve block
Skeletal Muscle Pain: Ache, stiffness, worse in the morning, spasms	
Possible causes	Management options
Debility, Motor Neurone Disease, Parkinsons Disease May be difficult to identify if overlying long bone or spinal metastases.	Muscle relaxants <ul style="list-style-type: none"> • Diazepam, starting dose 2mg on PO • Clonazepam, starting dose 0.25-0.5mg on PO • Baclofen, starting dose 5mg tds PO • Tizanidine, starting dose 2mg od, increasing to tds PO

ADJUVANT ANALGESIA FOR SPECIFIC PAINS

Medication which helps the management of specific and mixed pains, and may have opioid sparing effects. Down titration of opioids may be required if the adjuvant is effective – always consider whether side effects are a result of the adjuvant or of opioids which now need to be reduced.

NEUROPATHIC PAIN

Pain in patients with cancer often has a neuropathic element, due to infiltration of a nerve by tumour. Nature of the pain is often described as sharp, shooting, stabbing, altered sensation (hypersensitivity, hot, cold, numb) or function (flushing, weakness, tone).

Opioids have some benefit but prescribing a co-analgesic provides additional benefit and a dose sparing effect. Tricyclic or mixed action antidepressants and/or antiepileptics are commonly used to manage this pain. These medications have similar efficacies with NNT ranging from 3-5. It will take time (5-14 days once titrated to a therapeutic level) to assess efficacy.

First line adjuvant treatment is either an antidepressant or gabapentin/ pregabalin: the choice can be determined by side effect profile and any other beneficial effects.

If 1st line treatment has limited efficacy – add in drug from an alternative group.

If 1st line treatment has no effect – change to drug from an alternative group.

The Specialist Palliative Care Team or Acute/ Chronic Pain Team will be happy to provide advice. If pain is localised it may respond to specific nerve blocks or other interventions. Referral is suggested if not responding to standard treatment.

Anticonvulsants

Gabapentin

- Start with 300mg od at night PO
- Increase dose every 3 days, in increments of 300mg to a maximum of 1200mg tds
- Reduce starting and increment dose to 100mg in the elderly or in those with an impaired eGFR.
- Side effects include sedation, which often improves after the first few days
- The capsules can be opened and their contents sprinkled on food if the patient is finding them difficult to swallow

Pregabalin

- Start 50-75 mg bd PO
- Increase dose every 3 days in increments of 50mg bd, to a maximum dose of 600mg daily in bd or tds doses
- Reduce starting and increment dose in the elderly or in those with an impaired eGFR
- Side effects include sedation, which often improves after the first few days

Other anti-epileptics such as carbamazepine may help – seek specialist advice.

Antidepressants**Amitriptyline**

- Start with low dose 10mg PO nocte
- Increase after 3 days to 25mg PO nocte
- If required, increase weekly by 25mg to a maximum of 150mg od PO
- Side effects include sedation, dry mouth, constipation, postural hypotension, urinary retention
- Avoid use with Tramadol (risk of Serotonin toxicity) or if the patient is at risk of cardiac arrhythmias
- Lofepamine, Nortriptyline and Dosulepin are alternatives

Duloxetine

- Start with 60mg od, increase to 60mg bd if tolerated

Corticosteroids**Dexamethasone**

- Useful for short term relief of pressure, particularly in
 - spinal cord compression (16mg od PO/SC)
 - nerve root compression (8mg od PO/SC)
- Give in the morning so as not to affect sleep
- Give for 5 days and assess response, stop if no beneficial effect, otherwise slowly reduce dose to lowest effective dose, stopping if possible
- Consider giving a PPI with the steroid
- Side effects include insomnia, agitation, hyperglycaemia (check blood sugar one week after starting or if symptomatic)

Lidocaine Plaster, Capsaicin cream, NSAID gels and acupuncture could be considered.

Other options (for initiation by a specialist)* might include:

Benzodiazepines**Clonazepam**

- Start at 0.5mg at night
- Use 0.25mg in the frail/ elderly
- Side effects include daytime somnolence, cognitive impairment
- Sedation may limit dose increases

Diazepam

- Doses of 2mg – 10mg od at night may help, especially if there is an element of muscle spasm in addition

Ketamine (NMDA antagonist), Methadone and Interventional procedures (ref p20), all*

PAINS AMENABLE TO INTERVENTIONAL PROCEDURES

Many pains are amenable to intervention by a pain management specialist anaesthetist. Neural blockade can be temporary with local anaesthetic or semi-permanent with neurolytic agents such as phenol. Injected steroids are particularly useful when pain is due to compression of the nerve.

- Back pain due to metastases often responds to epidural injection of high dose steroid and local anaesthetic. Caudal injections are easily performed and are useful for sacral pain. Thoracic and cervical epidurals are more difficult.
- Intrathecal infusion of opioid and local anaesthetic can be very helpful for intractable pain, but ongoing management requires considerable support.
- Pancoast tumour or other brachial plexopathy: brachial plexus block. Some patients with chest and lower cervical root pain may benefit from percutaneous cervical cordotomy.
- Rib pain may be temporarily abolished by intercostal injection of local anaesthetic proximal to the lesion. Longer term benefit may result from infiltration with depot steroid. If helpful, permanent block may be obtained with a neurolytic technique.
- Chest wall pain can be very difficult to control, especially when it occurs as a result of mesothelioma. Intercostal and paravertebral blocks can be effective, but if ineffective, early referral for percutaneous cervical cordotomy is recommended (for referral details see MesotheliomaUK website). Some specialists perform thoracic epidurals, intrapleural infusions or intrathecal phenol injection.
- Upper abdominal pain, especially due to pancreatic tumour, responds to coeliac plexus neurolytic block in around 80%. This can be performed under direct vision at laparotomy, or under fluoroscopy or CT guidance. Some centres offer endoscopic ultrasound assisted coeliac plexus block.
- Lower abdominal and pelvic pain: superior hypogastric plexus or lumbar plexus block can give worthwhile benefit but with a lower success rate.
- Perineal pain: saddle anaesthesia using intrathecal phenol (as with all neurolytic techniques this is the province of the specialist).
- Hip pain may be helped by a variety of procedures, including direct injection of local anaesthetic and steroid into the joint, psoas compartment block, and block of the obturator nerve together with the nerve to quadratus femoris. Percutaneous cervical cordotomy may be appropriate if unilateral pain.
- Intrathecal or epidural opioid and local anaesthetic infusions may help in difficult pains, where usual routes of administration are not effective or not tolerated.

PAIN ASSOCIATED WITH NEUROLOGICAL DISEASE

The most common neurological condition seen by palliative medicine physicians is Motor Neurone Disease (MND). In MND, 70% of patients report pain as being a major symptom and it is often an issue in other neurological disease, for example Parkinson's Disease (PD), Multiple Sclerosis, Huntington's Chorea.

In all cases, treat reversible causes and where appropriate, try non pharmacological management approaches first. Where pain persists follow the WHO analgesic ladder and consider:

Likely cause	Management
Joint stiffness	Repositioning Physiotherapy Heat pad NSAIDs (ref p6) Intra-articular joint injection Optimise management with dopamine agonists in Parkinsons Disease
Pressure areas	Regular turning Pressure relieving mattress/cushion Optimise nutrition
Spasticity (Specialist MDT management)	Physical & positional goal orientated therapies Botulinum toxin Baclofen, Tizanidine – high side effect burden for both drugs Gabapentin, Clonazepam/Diazepam.
Muscle cramps	Quinine (night cramps), Clonazepam/Diazepam
Altered sensation	Neuropathic agents

PAIN ASSOCIATED WITH RESPIRATORY AND CARDIAC DISEASE

Common causes of pain:

- Chest wall/ back pain from muscle strain and cachexia
- Pleuritic pain
- Bone pain from osteoporosis following long term steroid use.

Follow the WHO analgesic ladder, bearing in mind that:

- NSAIDs may worsen fluid retention in patients with cardiac failure and so should be avoided
- NSAIDs may cause a deterioration in respiratory function in patients with asthma
- Opioids commenced at low doses and titrated safely will REDUCE the sensation of breathlessness.
- In patient at risk of CO₂ retention slow titration of opioids over weeks will minimise the risk of respiratory depression.

PAIN ASSOCIATED WITH LIVER DISEASE

Pain in end-stage liver disease may result from:

- Pressure sores/general discomfort secondary to weight loss/cachexia
- Abdominal distension secondary to ascites
- Subcostal discomfort if liver enlargement or scarring

Be aware that cognitive impairment secondary to encephalopathy may result in difficulties reporting pain.

Prescribing in hepatic impairment

Drug metabolism is usually only affected when hepatic impairment is severe, as evidenced by encephalopathy, varices or evidence of impaired synthetic function (abnormal INR &/or LFTs). Drugs tend to have an increased half-life and be more sedating in hepatic impairment.

Drug	Change in hepatic impairment	Comments
Reduce dose		
Paracetamol	↓ dose	Hepato-toxic drug
Amitriptyline	↓ dose	Titrate slowly
Gabapentin/Pregabalin	↓ dose	Titrate slowly
Reduce dose, increase dose interval		
Morphine	↓dose, ↑interval	Use immediate release
Diamorphine	↓dose, ↑interval	Accumulates
Avoid		
NSAIDs	Avoid	Risks outweigh benefits
Codeine	Avoid	Prodrug - Reduced metabolism to morphine
Tramadol	Avoid	Accumulates
Oxycodone	Avoid	Accumulates
Buprenorphine	Avoid	Accumulates
Alfentanil	Avoid	Unpredictable accumulation
Same dose but Increase dose interval		
Benzodiazepines	↑interval	Use short-acting e.g. lorazepam and midazolam
Normal dosing		
Fentanyl	Usual dose	Monitor as may still accumulate

PAIN ASSOCIATED WITH RENAL DISEASE

- Avoid NSAIDs. In the terminal phase, once the risks/ benefits have been carefully assessed, short term use may be appropriate.
- Dialysis will affect the clearance of many drugs – seek renal team specialist help

Likely cause	Management
Muscle spasm/ cramps	Muscle relaxants/ Quinine
Neuropathic pain secondary to peripheral neuropathy	Neuropathic agents
Restless legs syndrome	Clonazepam / Gabapentin
Bone pain from osteoporosis, renal osteodystrophy	Consider orthopaedic intervention
Complex ischaemic pain from vasculitis, peripheral vascular disease, calciphylaxis	Consider ketamine*
Osteomyelitis	Treat infection

Prescribing in renal impairment

Drug	Renal Impairment – eGFR (ml/min)			Comments
	60-90	30-60	<30	
NSAIDS	Half normal starting dose	Avoid	Avoid	Nephrotoxic
Midazolam	↓dose	↓dose, ↑interval	↓↓dose, ↑interval	Renally excreted. Protein binding reduced. Increased end-organ sensitivity.
Diazepam	Usual dose	↓dose	↓dose	
Clonazepam	0.5mg on PO	0.25mg on PO	Start lower	
Amitriptyline	Usual dose	10mg on	10mg on	
Gabapentin	Starting dose 300mg od PO Max 600mg tds	Starting dose 300mg on PO Max 300mg tds	Starting dose - PO 300mg alt. days Max 300mg bd	May accumulate. If eGFR < 15 Max 300mg on PO
Pregabalin	Starting dose 75mg bd PO Max 300mg bd	Starting dose 50mg bd PO Max 150mg bd	Starting dose 25-50mg od PO Max 150mg od	If eGFR < 15 max dose 75mg od PO
Baclofen	5mg tds PO	5mg bd PO	5mg od PO	
Codeine	Usual dose	↓dose ↑interval	Avoid	Renal excreted drugs and their active metabolites will accumulate and cause toxicity
Tramadol	Usual dose	↓dose	↓dose, ↑interval	
Morphine	↓dose	↓dose, ↑interval	Avoid	
Diamorphine	Usual dose	↓dose, ↑interval	Avoid	
Oxycodone	Usual dose	Usual dose	↓dose	Metabolites are less toxic than those of morphine
Hydromorphone Fentanyl	Usual dose	↓dose	↓↓dose	
Alfentanil Buprenorphine Methadone Hyoscine butylbromide	Usual dose – relatively safe in renal impairment			

RESPIRATORY

BREATHLESSNESS

Breathlessness is common in palliative care (40-80%) and is often multi-factorial. There is frequently a psychological component – being breathless is usually frightening and patients often have unspoken fears about how they will die.

Assess triggers - both physical (e.g. movement, cough, talking, chest pain, eating, defaecation) and emotional.

Investigations e.g. chest x-rays, scans and blood tests may be needed to exclude reversible causes but are often of limited value; oxygen saturation will guide the use of oxygen. A therapeutic trial of treatments, either singly or in combination, is often necessary to find out what works for an individual patient.

Management

A. Consider Reversible causes: such as pleural effusion, pulmonary emboli, respiratory infection, cardiac failure, where appropriate (see table).

Consider the role for further oncological interventions e.g. chemotherapy or radiotherapy.

Symptomatic treatments

These are appropriate in most breathless patients, alongside management of potentially reversible causes, if appropriate. Management should be individualised to the patient. Trials of different interventions, both drug and non-drug, should be considered.

B. Non-Drug measures

Episodes of breathlessness are distressing, but often short-lived; highlighting the value of non-drug measures. This should include

- Providing a strategy to regain control of their breathing during an acute episode of breathlessness
- Explore the patient's fears about breathlessness
- General and specific reassurance (e.g. that the patient will not suffocate)
- Explanation of the mechanisms of breathlessness
- Positioning for easier breathing (sitting up/ leaning forward), individualised to the patient
- A fan (hand held or fixed) or cool air across the face is often helpful
- Patients may find the 'calming hand' or looking at well-loved pictures helps them to relax
- Breathing exercises, relaxation training } 'pulmonary rehabilitation' by
- Counselling and re-adaptation } physiotherapist/specialist nurse
- Crisis management plan developed with the patient and family – 'what to do' if suffering from acute episodes of breathlessness
- Acupuncture, aromatherapy, reflexology

C. Drug therapies

- *Nebulised saline* may help where there are tenacious secretions
- *Opioids* often help reduce the subjective sensation of breathlessness, particularly when there is breathlessness at rest; there is no evidence that they shorten life or cause significant respiratory depression when used appropriately. If opioid naïve, start on 1.0 - 2.5mg of immediate release oral morphine 4 hourly prn and titrate upwards. In some non-malignant conditions, and in the presence of renal impairment, lower doses and less frequent administration may be sufficient.
If already on morphine for pain, the dose may need to be increased by 25 - 50% for co-existing breathlessness. If the patient is unable to take oral medication, opioids can be given via csci/syringe driver. Nebulised opioids are no longer advised.
- *Anxiolytics* may be used alone or in combination with opioids, if there are secondary anxiety symptoms. Benzodiazepines are not recommended as first line unless panic/anxiety is prominent or the patient is in the last weeks of life. In such circumstances consider prescribing:
Diazepam 2 - 10mg daily for background control, with option of Lorazepam 0.5 - 1mg sublingually (quick-acting) for acute crises and panic attacks.
Midazolam 2.5 - 10mg sc stat or 5 – 20*mg per 24 hours by csci (syringe driver) if patient is not able to take oral medication. (Higher doses in certain circumstances*)
Levomepromazine 6.25mg nocte/bd can also be considered, or 6.25 – 12.5mg /24 hours via syringe driver.
The route of administration will depend on the severity of the patient's condition. For general information on the place of anxiolytic antidepressants refer section on Anxiety (ref p76).
- *Oxygen* has variable effects; it is difficult to predict who will benefit other than by individual therapeutic trial, but patients with oxygen saturations <90% may benefit from oxygen. Nasal cannulae are often preferred to masks. For some patients the burden of continuous attachment/dependence on oxygen may outweigh its benefit.

Treatments for specific causes of breathlessness	
<i>Lung tumour/metastases</i>	Radiotherapy, chemotherapy Dexamethasone 4-8mg daily
<i>Lymphangitis carcinomatosa</i>	Dexamethasone 8-16mg daily
<i>Large airway narrowing</i>	Dexamethasone 4-8mg daily Radiotherapy (liaise with oncology team) Stenting (liaise with oncology/cardiothoracic team)
<i>Bronchospasm</i>	Inhaled bronchodilators, steroids
<i>Effusions</i>	Pleural effusion: drainage, pleurodesis Pericardial effusion: drainage, formation of pericardial "window" Ascites: drainage
<i>Laryngeal obstruction</i>	Urgent ENT opinion Dexamethasone 4-8mg daily Tracheostomy may be required

<i>Superior vena cava obstruction</i>	Urgent oncology opinion Dexamethasone 16mg daily
<i>Infection</i>	Antibiotics if appropriate
<i>Respiratory secretions</i>	Nebulised saline Mucolytics Physiotherapy
<i>Pulmonary emboli</i>	Anticoagulation if appropriate
<i>Pulmonary oedema</i>	Diuretics, consider ACEi
<i>Arrhythmias</i>	Dependent on arrhythmia; seek advice from cardiologists if unsure
<i>Chest wall/pleuritic pain</i>	See Pain section p4-23 Consider trial of lidocaine plaster if painful rib metastases/fracture
<i>Deconditioning</i>	Gentle exercise to optimise cardiovascular and muscle function and fitness Review steroids (which cause myopathy)
<i>MND, other neuromuscular conditions</i>	Consider nasal or mask BiPAP (seek respiratory advice early)
<i>Anaemia</i>	Correction of iron/B12/folate deficiency, Transfusion if appropriate

Refractory/severe breathlessness

Refractory/severe breathlessness in the dying patient is distressing and frightening for patients and their families. After discussion with the patient and family, a syringe driver with opioid +/- anxiolytic may be needed. The aim is to achieve the required balance between sedative side effects and the control of breathlessness and anxiety; according to patient's wishes.*

Decisions about ventilation

When a patient may be at risk of respiratory failure, the risks/benefits of mechanical ventilation (invasive or non-invasive) should be considered and, where appropriate, discussed with the patient in order to avoid crisis decisions about ventilation. Careful documentation of the decision is necessary.

For patients with progressive neuromuscular conditions, early discussion with the respiratory team is advised.*

Sudden major airway obstruction in the palliative care setting

This is a palliative care emergency. It is likely to require urgent sedation, e.g. midazolam 10mg iv or sc. The cause should then be treated where possible if appropriate.

HOARSE VOICE

Hoarseness is relatively common either as a presenting symptom (e.g. laryngeal cancer) or a complication (e.g. vocal cord paralysis caused by recurrent laryngeal nerve palsy associated with mediastinal lymphadenopathy). Patients may withdraw from social interaction as they find speaking an effort and they are concerned people cannot understand them.

Causes/Risk factors

- Recurrent laryngeal nerve palsy secondary to mediastinal lymphadenopathy
- Lung cancer
- Laryngeal cancer
- Laryngitis
- Acid reflux
- Smoking
- Post-nasal drip
- Allergies
- Hypothyroidism
- Overuse of voice
- Injury

Management

A Consider Reversible causes where possible.

B Non-Drug measures

- Allow the patient time to communicate
- Reassure the patient that they can be understood, even if their voice is a whisper.
- Consider referral to ENT for vocal cord injection (e.g. Teflon or gel) to bulk the paralysed vocal cord and enable the normal vocal cord to close against it.
- Consider referral to Speech and Language Therapist.

COUGH

Cough is a physiological mechanism to protect the airways. When perceived as excessive it should be considered a symptom.

Prolonged bouts of coughing are exhausting and frightening. Take a comprehensive history paying attention to time course, exacerbating factors (e.g. position, swallowing, exercise), associated symptoms (e.g. breathlessness, wheeze), sputum (colour, quantity, consistency) and haemoptysis. Examine the patient fully, and consider further investigations such as PEFr, chest X-ray if it will help guide the management plan.

Management

A Consider Reversible causes *where possible, refer to specific treatment table*

Management depends on the cause and the therapeutic goal

B Non-Drug measures

1. Positioning
2. Chest physiotherapy and optimise cough technique

C Drug therapies

Consider the type of cough:

- wet / dry cough
 - patient able to cough effectively /unable to cough effectively
1. Mucolytics – if wet and patient able to cough effectively
 - a. Nebulised saline 2.5-5mls prn/qds
 - b. Carbocisteine 1.5-2.25g daily in divided doses
 2. Cough suppressants (anti-tussives) – if dry cough, or if patient unable to cough effectively
 - a. Simple linctus
 - b. Opioids – codeine linctus 5-10mls qds or immediate release oral morphine 1.25-2.5mg 4 hourly and titrate according to effect. Methadone can also be used in low dose*

Treatments/management strategies for specific causes of cough	
Asthma/COPD	Optimise therapy with bronchodilators, steroids etc.
Cardiac failure	Optimise therapy with diuretics, ACEi
Gastro-oesophageal reflux	Proton pump inhibitors, ranitidine, antacids, prokinetics
Lung/mediastinal tumour	Dexamethasone 4-8mg daily Radiotherapy/chemotherapy if appropriate
Infection	Antibiotics if appropriate
Lymphangitis carcinomatosa	Dexamethasone 8-16mg daily
Drugs e.g. ACE inhibitors	Stop/review need for drug and consider switching to alternative treatment
Post-nasal drip	Antibiotics Steroid nasal spray

GASTROINTESTINAL

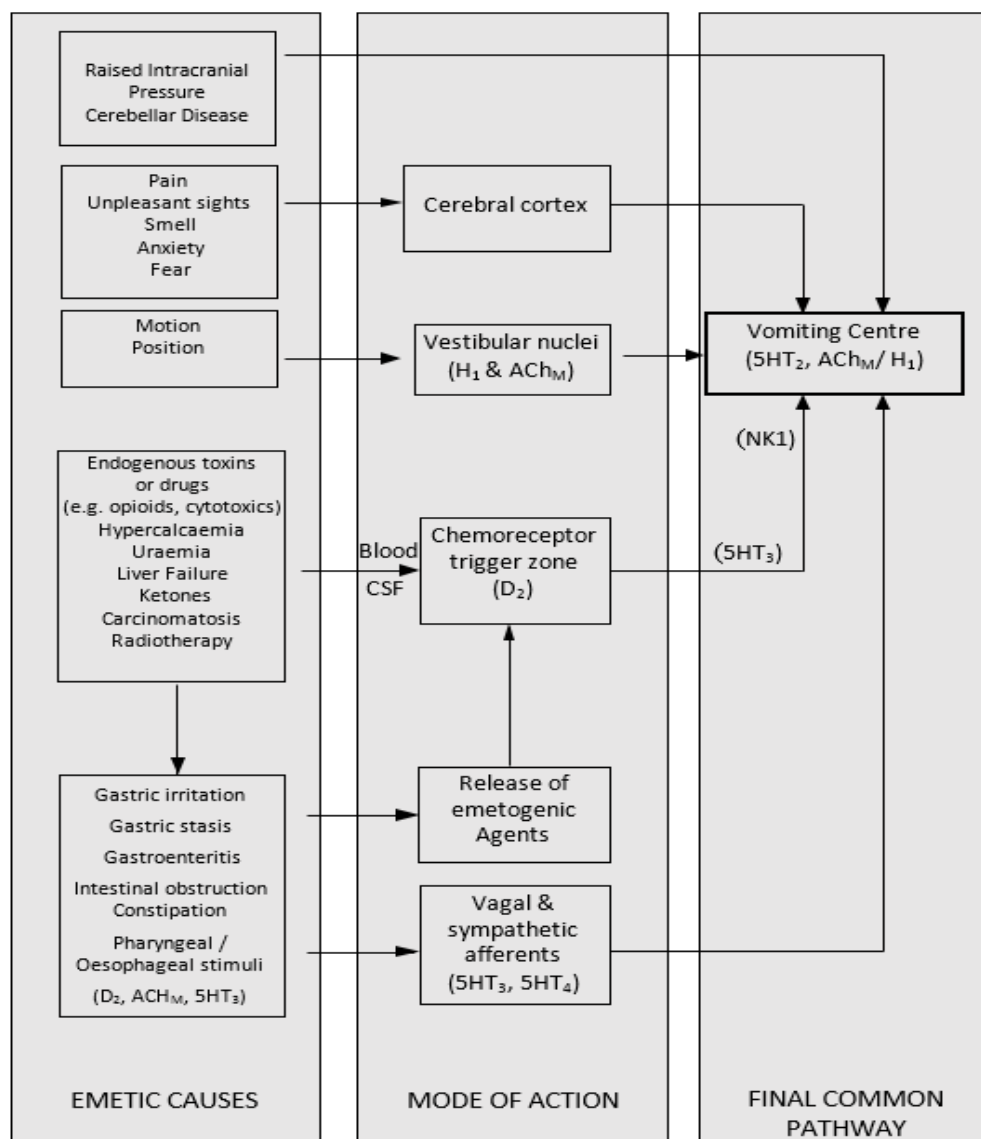
NAUSEA AND VOMITING

Nausea describes the unpleasant feeling of needing to vomit and is often accompanied by autonomic symptoms such as pallor and salivation.

Vomiting is the forceful expulsion of gastric contents through the mouth. Regurgitation is the passive expulsion of material from the pharynx or oesophagus through the mouth.

Retching describes rhythmic, laboured, spasmodic movements of the diaphragm and abdominal muscles usually occurring in the presence of nausea and often resulting in vomiting.

Mechanisms



Causes/Risk factors

There are many causes of nausea and vomiting and often more than one cause is present. Nausea and vomiting can be complex to manage and it is important to recognise the contribution of psychological, social and spiritual factors as well as the purely physical.

Cause	Clinical features	Drug therapy
<i>Raised intracranial pressure</i>	Worse in morning, may be associated with headache and drowsiness	Dexamethasone Cyclizine Levomepromazine
<i>Cerebellar disease</i>	Ataxia, past-pointing, dysarthria	Dexamethasone Cyclizine Levomepromazine
<i>Anxiety</i>	Anxiety or apprehension e.g. pre-chemotherapy	Levomepromazine Benzodiazepines
<i>Motion, positional</i>	Worse on movement or travelling	Cyclizine Prochlorperazine Hyoscine hydrobromide
<i>Drugs, endogenous toxins</i>	May be apparent from drug history (coincides with starting drug); renal failure, hypercalcaemia (ref p55)	Metoclopramide Haloperidol Levomepromazine
<i>Chemotherapy and radiotherapy</i>	Symptoms worse at time of treatment or in subsequent days or weeks	Consult oncology colleagues Early N/V: 5HT ₃ antagonists or domperidone Delayed N/V: Dexamethasone Levomepromazine Prokinetics
<i>Gastric stasis</i>	Early satiety (fullness after small meal)	Metoclopramide Domperidone Erythromycin*
<i>Gastric irritation</i>	May be associated with epigastric discomfort, acid indigestion	Review medication Antacids Proton pump inhibitors Misoprostol 400mcg bd if caused by NSAIDs
<i>Intestinal stasis</i>	Constipation, abdominal fullness, reduced bowel sounds	Metoclopramide
<i>Intestinal obstruction</i>	Dependent on level of blockage. Little bowel movement or flatus PR; vomiting brings relief from nausea, or may be little nausea; may be faeculent material in vomit; colic; abdominal distension, scanty or tinkling bowel sounds, empty rectum	Refer p32-33
<i>Constipation</i>	Reduced frequency of passing hard stool; may have stool in rectum	Refer p38
<i>Indeterminate</i>	No discerning features	Metoclopramide Levomepromazine Cyclizine Trial of others

Management

A Consider Reversible causes

Treat, if appropriate e.g. hypercalcaemia.

If drug induced consider stopping, reducing or changing drug.

B Non-Drug measures

These include relaxation and psychotherapeutic techniques, acupuncture, ginger and Seabands. Diet should also be assessed.

C Drug therapies

In established nausea and vomiting, may need to use antiemetics via non-oral routes for initial control e.g. csci via syringe driver. When nausea and vomiting are multifactorial, a broad spectrum antiemetic (e.g. Levomepromazine) may be most appropriate

Antiemetic drug profiles

† avoid in Parkinsonism and dystonia

Drug	Usual starting dose	Dose range	Comment
Cyclizine	50mg tds oral	Up to 150mg oral or subcutaneous	H ₁ antihistamine with anticholinergic action. Avoid in heart failure. Skin irritation if sc – avoid if possible
Dexamethasone	4mg od, dose depends on cause	4 – 16 mg od for 5 day trial	Reduces intracerebral swelling, other modes of action uncertain. Risk side effects. Set review date.
Domperidone	10mg tds – qds oral 30mg suppositories bd pr	20mg tds-qds oral 60mg bd rectal suppositories	Dopamine D ₂ antagonist and prokinetic. Unlikely to cause sedation / extrapyramidal effects
Haloperidol †	0.5-1.5mg nocte oral or sc 2.5mg/ 24h by csci	5mg nocte oral or sc 5mg over 24h by csci	Pure dopamine D ₂ antagonist, not prokinetic. Often used for opioid induced nausea. May cause extrapyramidal effects
Hyoscine hydrobromide	300mcg sl (Kwells) 1mg/72h by transdermal patch 200mcg sc prn 800mcg /24h by csci	600mcg up to qds sublingual (sl) 2.4mg over 24h by csci (unusual to use this dose for control of N/V)	Antimuscarinic anticholinergic (ACh _M) Sedating
Levomepromazine †	6mg nocte orally 6.25mg/ 24h by csci	12.5mg nocte orally (i.e. half a 25mg tablet) to 25mg – usually sedating at this dose whether orally or over 24h by csci	Activity at multiple sites (5HT ₂ , D ₂ , ACh _M /H ₁). Can cause hypotension in susceptible patients, drowsiness, dry mouth and other anticholinergic effects. Use lowest effective dose unless sedation required. Lowers the seizure threshold.
Metoclopramide †	10mg tds 30mg/24h by csci	20mg tds – qds (note MHRA suggest restrict to 30mg/24h to reduce risk of side effects)	Dopamine D ₂ antagonist; 5HT ₄ agonist (bowel prokinetic). 5HT ₃ antagonist at higher doses (100mg daily). May cause extrapyramidal effects – monitor for parkinsonism, tremor, restlessness
Prochlorperazine †	5mg tds oral 3mg bd buccal	10mg tds oral 6mg bd buccal	Predominantly D ₂ antagonist, weak ACh _M /H ₁ . Can give im, not sc (irritant)
5HT₃ antagonists			Ondansetron, granisetron etc. Used to control early vomiting after chemotherapy and abdominal radiotherapy. Avoid prolonged use – cause constipation
Neurokinin₁ antagonists*			Used as an adjunct with emetogenic chemotherapy

INTESTINAL OBSTRUCTION

Intestinal obstruction in association with advanced cancer is often complex and difficult to control. Early discussion with specialist palliative care team is recommended. There are often both mechanical (intestinal narrowing) and functional (poor motility) elements.

Diagnosis

Range of symptoms depends on level of blockage, but these include:

- Vomiting often with little preceding nausea
- Constipation, although some flatus and/or stool may still be passed
- Abdominal distension and generalised discomfort
- Colic may or may not be a feature
- Bowel sounds may be hyperactive or scanty

Review previous operation notes; abdominal x-ray may be helpful

Exclude simple constipation by history, abdominal and rectal examination

Causes/Risk factors

Most common with primary tumours of ovary and colon, but may occur with almost any primary site, including breast and lung

Tumour mass within lumen

Tumour on peritoneal surface causing oedema or adhesions

Infiltration within muscle coats preventing normal peristalsis

Damage to autonomic nerve plexuses by tumour infiltration of mesentery

Pancreatic carcinoma may cause gastric stasis by unknown mechanism

Adhesions, radiation fibrosis, metabolic disturbance, constipation, sepsis

Management

This will depend on the site of obstruction; whether complete or incomplete; bowel motility; and the patient's wishes and general condition.

A Consider Reversible causes

Consider surgery or stenting if there are clinical features to suggest a single site of obstruction, especially where colic is a prominent symptom, or where distension is such as to require venting.

B Non-Drug measures: if inoperable, aim to control symptoms without the need for continuous 'drip and suck'. However:

a) nasogastric intubation or percutaneous venting gastrostomy may be preferred by patients with gastroduodenal obstruction where drug treatment has been unsuccessful

b) hydration with 1+ litre per day iv or sc may relieve thirst (not dry mouth), but may increase vomit volume

C Drug therapies

Constant abdominal pain

- Strong opioids (Step 3 analgesic ladder) e.g. morphine, diamorphine by csci

Colic

- Avoid/stop stimulant and bulking laxatives
- Avoid prokinetic antiemetics (metoclopramide, domperidone)
- Hyoscine Butylbromide 40 - 120mg daily by csci
- Mebeverine, alverine PO may help if only intermittent partial obstruction

Nausea and vomiting (ref p29)

Aim to abolish nausea and to reduce vomiting to a minimum.

- Levomepromazine
- Haloperidol
- Metoclopramide may help where there is gastric stasis or ileus but is contra-indicated in the presence of colic; the response is unpredictable if there has been a gastro-jejunostomy
- Anti-secretory agents to reduce volume of GI secretions and therefore vomiting:
 - hyoscine butylbromide 40 - 120mg daily by csci reduces secretions. Likely to need high doses up to 240mg/24hrs, for anti-secretory effect
 - H₂ antagonist* (Ranitidine 150 – 200mg/24hrs via csci) to reduce volume of gastric secretions
 - octreotide* initially 250 - 500mcg per day by csci: reduces volume of intestinal secretions and inhibits motility. Effect may take several days to appear. The final effective dose is likely to be 300 – 1200mcg per day

Laxatives

- Check that lower rectum is empty
- Do not use if there is complete obstruction
- If there is partial intermittent obstruction, can use faecal softeners with caution:
 - Docusate sodium up to 200mg tds
 - Magnesium hydroxide mixture 20 - 30 ml od or bd
 - Macrogols (e.g. Movicol) 1 sachet up to tds.

Shrinkage of tumour masses

Hormone/cytotoxic therapy is occasionally indicated if the patient's overall condition is good, especially in primary tumours of ovary, colon or breast. Radiotherapy is occasionally appropriate for low large bowel tumours.

Dexamethasone 8- 12mg iv or sc daily may help to relieve peri-tumour oedema and so relieve obstruction.

General measures

- Treat dry mouth (ref p34)
- Treat symptomatic gastro-oesophageal reflux

MOUTH PROBLEMS

Good mouth care is essential to the wellbeing of debilitated patients. Although mouth problems are very common (up to 90% of patients in some surveys), it is often a neglected area of care.

Diagnosis

Assess oral cavity daily using a pen torch and spatula.

Note the state of the lips, teeth/dentures (remove the dentures for examination), mucous membranes and tongue, and also the type/volume of saliva

Assess nutritional status

Consider the quality of diet and adequacy of fluid intake

Assess mental state

This will determine the patient's ability and willingness to participate in their care

Causes/Risk factors

Dry mouth (xerostomia) especially from drugs (opioids, tricyclic antidepressants, antimuscarinics), dehydration (reduced intake or diuretics) and local radiotherapy

Poor oral and dental hygiene

Poor oral intake leading to decreased mastication

Poor nutritional state, especially if leading to vitamin deficiencies

Infections: viral, bacterial and fungal

Some cytotoxics can cause mucositis and acute ulceration; radiotherapy can cause mucositis

Bisphosphonates can cause osteonecrosis of the jaw, particularly when dentition is poor.

Corticosteroids and diabetes predispose to oral candidosis

Oral tumours

Management

A Consider Reversible causes

Treat oral infections e.g. metronidazole for fungating tumours in the mouth, acyclovir for herpes orolingivitis (can be extremely painful)

Attend to oral intake, diet and consider vitamin deficiencies.

B Non-Drug measures

Maintain frequent attention to good oral hygiene.

Alcohol-free chlorhexidine mouthwash may be used in debilitated patients - inhibits plaque formation and is antiseptic.

Maintain good denture care by cleaning and rinsing thoroughly; Patients may benefit from general advice on denture care.

C Drug therapies

Review medications causing dry mouth or other oral problems.

Specific mouth problems

	Non-Drug measures	Drug therapies
<i>Lack of good quality saliva</i>	Salivary stimulants: Sugar free chewing gum	Pilocarpine 5 - 10mg tds (or 4% 1 - 2 drops flavoured to taste), bethanecol 10mg tds
	Saliva substitutes: Sips of water or ice cubes may give short term relief	Spray e.g. Xerotin (non-acidic, no animal products) Gels e.g. Biotène oral balance
<i>Oral thrush</i>	Increase the flow of saliva (see above)	Nystatin oral suspension 1 - 5ml qds Treat for at least 7 days
	Ensure that dentures are thoroughly cleaned and disinfected	Fluconazole 50mg daily by mouth for 7 days. Less effective in xerostomia. Note that there is increasing resistance to triazole antifungals
<i>Painful mouth</i>		Diffiam or soluble aspirin gargle, flurbiprofen lozenges or systemic NSAIDs
		Oramorph liquid held in the mouth, local anaesthetic (lidocaine) spray (may cause initial stinging)
<i>Aphthous ulcers</i>		May respond to local steroid e.g. hydrocortisone pellets
<i>Chemotherapy induced mucositis</i>		Mugard sucralfate suspension Gelclair
<i>Excessive salivation or drooling with swallowing problems</i>	Botulinum toxin injection to the salivary glands to reduce salivation	May be helped by: hyoscine hydrobromide patch 1mg/72hrs, atropine drops 1% sublingual or glycopyrronium orally or via csci hyoscine butylbromide via csci (ref p72-74), or amitriptyline (low dose) po or via gastrostomy.
	In severe cases, radiotherapy to the salivary glands may be considered, but can cause excessive dryness	May make the saliva unacceptably sticky, in which case consider propranolol

ANOREXIA

Loss of appetite is common in advanced illness. It may or may not be distressing for the patient themselves but is often a source of concern for family members:

“If only he would eat...”

Clinical features

A reduced interest in food which at its most severe may manifest as nausea

Often associated with taste changes

May increase (appetite diminishes) as the day goes on

Distinguish from mouth problems, difficulties with swallowing, and early satiety due to gastric stasis

Causes/Risk factors

Extensive malignancy (but occasionally occurs as a presenting symptom)

Uncontrolled symptoms

Psychological, emotional and spiritual distress e.g. anxiety and depression

Drugs, especially cytotoxics, digoxin

Management

A Consider Reversible causes:

Treat nausea, pain and other symptoms

Treat depression, use mirtazapine rather than SSRIs; the latter can increase anorexia

Review drugs

B Non-Drug measures

Aim to provide frequent, small, attractive portions within pleasant and social surroundings

Reduce psychological distress with support and counselling

C Drug therapies

If drugs are needed and there are no contra-indications:

- alcohol before meals
- megestrol acetate 160 - 320mg daily: may take 2 - 3 weeks to respond (increased risk of thrombosis)
- dexamethasone 2 - 4mg or prednisolone 10 - 30mg od (but note risk of side effects especially if continued for more than a few weeks (ref p56).

ANOREXIA CACHEXIA (FATIGUE) SYNDROME

Loss of appetite is frequently seen in combination with weight loss and fatigue.

Diagnosis

A syndrome of loss of appetite, fatigue, and profound weight and muscle loss.
There is usually an associated rise in acute-phase proteins, e.g. CRP

Causes/Risk factors

Usually associated with cancer but may occur with heart failure and chronic infection or inflammation

Cytokine release leading to proteolysis, lipolysis, increased resting energy expenditure, and hypothalamic disturbances including anorexia

Management

A Consider Reversible causes

Correct associated problems (see above)

B Non-Drug measures

Fatigue management programme - gentle but regular exercise programme to reduce muscle loss and promote adaptive behaviour

C Drug therapies

Consider dexamethasone 2 - 4mg od mane or NSAIDs to reduce inflammatory process (ref p6)

Evidence is unclear on the place of fish oils (e.g. Maxepa), nutritional supplements (e.g. Prosure), anabolic steroids and methylphenidate.

CONSTIPATION

Constipation is common in patients with advanced disease. It can cause abdominal pain and urinary retention. Even if not eating, patients can become constipated due to accumulation of faecal matter formed from gut secretions, cells and bacteria. It is far better to anticipate and prevent constipation than to wait until treatment is urgent.

Diagnosis

Constipation should be considered if there is a history of passing harder and/or less frequent stools than normal. Faecal impaction may present with overflow ('spurious diarrhoea'). The rectum can be empty or impacted, collapsed or cavernous. Assess anal sensation and tone if concerns about spinal cord or sacral nerve root lesion/s. Exclude intestinal obstruction.

Causes/Risk factors

Drugs, especially opioids, antidepressants, antispasmodics, ondansetron
 Inactivity, immobility, weakness, lack of privacy
 Dehydration due to poor fluid intake, vomiting, polyuria, fever
 Poor nutrition, reduced fibre intake
 Hypercalcaemia
 Spinal cord compression or sacral nerve root lesion
 Concurrent disease including painful anal conditions, neurological disorders

Management

A Consider Reversible causes

Reduce or eradicate underlying cause(s) as far as possible

B Non-Drug measures

If general condition allows, mobilise and encourage fluids; facilitate privacy

C Drug therapies

Use softeners if stool is hard, stimulants if soft stool is not expelled
 Patients taking regular opioids will usually and routinely need both, although macrogols alone are often sufficient

Drug action	Specific treatment
<i>Stimulants</i>	Senna 2 - 4 tablets nocte or bd Bisacodyl tablets 5 - 20mg nocte or bd Sodium picosulphate solution 5 - 10ml od/bd
<i>Softeners</i>	Docusate sodium capsules 200mg nocte or bd Macrogols (e.g. Movicol) 1 sachet od or bd
<i>Osmotics</i>	Magnesium hydroxide 20 - 30ml od or bd Lactulose 10 - 15ml bd (not advised, excess wind)
<i>Combined preparations</i>	Co-danthramer liquid or capsules (two strengths) Co-danthrusate liquid or capsules

Macrogols can be used to treat faecal impaction: up to 8 sachets/day for up to 3 days. Patients may need suppositories or enemas for established constipation and in the context of spinal cord compression.

If rectal faeces, glycerol or bisacodyl suppositories are usually given. If the rectum is empty but colon loaded with hard stool, use arachis oil retention enema overnight (check no peanut allergy) followed by phosphate enema.

If opioid related constipation consider methylnaltrexone* sc (dose according to weight). Manual disimpaction should be a last resort, and consent obtained after full explanation; sedation may be required.

DIARRHOEA

Diarrhoea is an increase in the fluid content of stools (either through increased secretion or reduced absorption) with increase in stool frequency. It is often multifactorial.

Diagnosis

The patient who speaks of 'diarrhoea' may be referring either to the frequency or to the looseness of bowel motions. An accurate history and examination are crucial: assess for watery/liquid stools usually with an increased stool frequency.

Causes/Risk Factors

- Excess laxative use
- Impacted faeces with overflow (spurious diarrhoea)
- Side effects of some drugs, e.g. chemotherapy, antibiotics, PPIs, NSAIDs
- Infections, including *C. difficile*, upper GI bacterial overgrowth, giardia
- Partial intestinal obstruction (ref p32-33)
- Previous treatment: pelvic radiotherapy, extensive bowel resection
- On initiation of enteral feeding
- Pancreatic insufficiency, characterized by bulky, offensive stools which float (steatorrhoea)
- Effects of some tumours, e.g. carcinoid, mucus secretion in rectal cancer
- Other - e.g. inflammatory bowel disease, bile salt malabsorption, secondary lactose intolerance, autonomic neuropathy (diabetes, paraneoplastic)

Management

A Consider Reversible causes

Screen for infections and prescribe antibiotics as appropriate

B Non-Drug measures

Address dehydration if appropriate

C Drug therapies

Review all drugs, including laxatives and non-prescription drugs

Symptomatic treatments

- Loperamide 2 - 4mg every 6 hours; binds to opioid receptors in gut
- Codeine phosphate 30 - 60mg tds - qds
- Co-phenotrope (Lomotil) 2 tablets up to qds

Specific treatments

Cause	Specific treatment
Radiotherapy induced	Local / systemic steroids
Pancreatic insufficiency Steatorrhoea	Pancreatic enzymes (Creon capsules; 3 strengths)
Bacterial overgrowth / Blind loop	Metronidazole
Faecal fistula Carcinoid	Octreotide
Bile salt malabsorption	Cholestyramine

FISTULAE

A fistula is an abnormal connection between two hollow organs (e.g. bladder and bowel, or trachea and oesophagus). Management is often complex and will depend on the site and size of fistula, the complications, the patient's general condition and their wishes. Consider early referral to palliative care team.

Causes/Risk factors

- Locally advanced cancer eroding through one organ to the next
- Radiotherapy
- Surgery

Fistula site	Clinical features
Tracheo-oesophageal	Difficulty swallowing Recurrent aspiration pneumonia
Rectovesical	Faecal matter in urine Gas in urine Recurrent UTI Leakage of urine rectally
Rectovaginal	Faeculent matter passed per vagina
Vesicovaginal	Leakage of urine vaginally
Enterocolic	Diarrhoea
Enterocutaneous	Localised discharge of copious fluid; can lead to dehydration, electrolyte depletion and skin irritation

Management

A Consider Reversible causes

Consider surgical intervention if appropriate (e.g. defunctioning colostomy, tracheal stent)

B Non-Drug measures

- Maintain good skin care
- Prevent excoriation with a barrier product
- Collect effluent in a closed stoma bag. A good seal to minimise leakage and odour. If necessary seek advice from stoma care nurses

C Drug therapies

- Metronidazole may be helpful if there is blind loop or overgrowth of anaerobes.
- Octreotide* by csci may be helpful in reducing effluent (ref p74)

ASCITES

The diagnosis is made from clinical assessment: symptoms of progressive abdominal distension which may be accompanied by breathlessness, early satiety, vomiting, constipation or lower limb oedema with shifting dullness, fluid thrill on examination. Abdominal ultrasound can be used to confirm, with marking for paracentesis, if appropriate. Exclude tumour masses, organomegaly, distended bladder, intestinal obstruction.

Causes/Risk factors

Peritoneal metastases - may be associated with extra-abdominal primary sites.
 Tumour obstructing retroperitoneal/diaphragmatic lymph system.
 Hypoalbuminaemia, usually associated with extensive liver metastases.
 Secondary sodium retention.
 Venous compression or thrombosis of inferior vena cava or hepatic vein.
 Other concurrent disease, e.g. heart failure, cirrhosis.

Management

A Consider Reversible causes

For example: anticoagulation for thrombosis

B Non-Drug measures

If symptoms are minor, explanation and reassurance may be sufficient.

Paracentesis may be appropriate for patients with a tense, uncomfortable, distended abdomen, especially if associated with breathlessness. Can use ultrasound to identify suitable location.

Drain up to 5 litres of fluid per day, but sudden release of abdominal tension may lead to venous decompression, hypotension and collapse. This risk can be reduced by using iv Albumin.

Can remove drain after 6 hours, there is no advantage in draining to dryness. If leakage continues after drain is removed, place stoma bag over puncture site.

Indwelling drainage systems e.g. PleurX may be considered for selected patients who require repeated paracentesis. An alternative is a peritoneo-venous shunt (e.g. Denver or LeVein shunt) which may help to conserve electrolytes and albumin.

C Drug therapies

<i>Analgesia</i>	Range from Paracetamol to strong opioids	For abdominal pain or discomfort of distension
<i>Antiemetics</i>	Domperidone or Metoclopramide	For gastric stasis
<i>Diuretics</i>	Spironolactone (especially if low albumin) 50 - 200mg od. Furosemide (especially if dependent oedema) 40 - 80mg od	Diuretics should be considered particularly when hepatic metastases &/or cirrhosis. Monitor electrolytes, renal function and blood pressure.
<i>Corticosteroids</i>	Dexamethasone 2 - 4mg od	May reduce lymph blockage
<i>Laxatives</i>	Ref p38	To treat constipation
<i>Cytotoxic chemotherapy (local/systemic)</i>	Seek oncological advice	May be appropriate, especially for primary carcinomas ovary, breast or colon.

NEUROLOGICAL

RAISED INTRACRANIAL PRESSURE

Clinical features include severe headache which may be worse when lying down or straining. Vomiting, convulsions, cognitive changes, diplopia, restlessness may occur. Papilloedema may be present. A CT/MRI scan may be appropriate.

Causes/Risk Factors

Cerebral metastases (common with some primaries, e.g. lung, breast, melanoma and rare with others, e.g. prostate).

Primary cerebral tumour.

Other causes – abscess, cerebro-vascular event, sagittal sinus thrombosis, secondary hydrocephalus following surgery.

Management

A Consider Reversible causes

Discuss with oncology, neurosurgical colleagues if appropriate

B Non-Drug measures

Raise head of the bed

Consider cranial irradiation or neurosurgery for malignancy dependant on prognosis/status

C Drug therapies

Dexamethasone up to 16 mg per day. Avoid doses after 2pm as may add to insomnia

Gradually reduce dose to minimum effective; monitoring to ensure symptoms remain controlled

Withdraw dexamethasone if no improvement after 7 days on 16mgs daily

(Phenytoin and carbamazepine may reduce steroid therapeutic effect by up to 50%, and vice versa, by enzyme inductions)

Symptom	Drug Group	Drug options
Headaches	<i>Analgesics</i>	Paracetamol/ NSAIDs/ Opioids
Vomiting	<i>Antiemetics</i>	Cyclizine
Fits	<i>Antiepileptics</i>	Ref p43

Antiepileptics should not be used for primary prophylaxis in the presence of cerebral metastases (outside of the peri-surgical setting). They should be reserved for those who have had at least one seizure.

FITS

The type of fit should be identified: whether generalised, tonic clonic, focal fit, absence or status epilepticus. The majority of fits secondary to cerebral primary or secondary tumours are focal fits, which may generalise. Consider a diagnosis of subclinical 'silent' fits as a possible cause of unexplained intermittent confusion or drowsiness.

Exclude syncopal attacks, cardiac arrhythmias, TIAs etc.

Causes/Risk Factors

Previous epilepsy, brain trauma/surgery, brain tumour or metastases

Drugs which lower seizure threshold: e.g. phenothiazines, tricyclics, tramadol

Drug interactions:

Anticonvulsants have many variable and unpredictable interactions; significantly

Carbamazepine and Phenytoin can reduce the effect of steroids

Drug withdrawal, e.g. steroids, alcohol

Metabolic disturbance, e.g. hypoxia, hyponatraemia, hypoglycaemia

Management

A Consider Reversible causes

e.g. drugs, metabolic causes

B Non-Drug measures

Clear explanation and support for patient and family regarding management

C Drug therapies

Secondary Prevention of further fits

Review dexamethasone dose if appropriate (may be given oral or sc)

i. Oral route available

Sodium valproate initially 100-200 mg bd/tds increasing every 3 days to 1-2 grams per day

Levetiracetam 250-500mg bd (most people will need at least 500mg bd) – relatively rapid titration possible

Carbamazepine multiple drug interactions

Phenytoin because of difficulties with drug interactions and pharmacokinetics is best avoided, however if patient already on this, check and optimise dose levels and albumin NB hypoalbuminaemia will make phenytoin level appear falsely low

Avoid combination therapy if possible - if needed discuss with neurologist

Secondary Prevention of further fits

ii. If unable to take oral medication

Midazolam 20 – 60 mg/24 hours by csci

Sodium Valproate* (useful if wishing to avoid sedation) sc doses are equivalent to oral doses (cannot be mixed with other drugs).

Levetiracetam* can be given sc and dose is equivalent to oral

Phenobarbital* by csci (NB may irritate skin – alternative is to give iv)

Carbamazepine suppositories bd

Immediate management of the fitting patient

First aid precautions, explanation and reassurance, protect airway, oxygen if cyanosed, check blood sugar.

If:

- no prior history of seizures;
- or previously did not resolve spontaneously;
- and /or caused distress:

Give midazolam immediately - 10mg buccal, sc or iv

Otherwise only give midazolam if seizure does not spontaneously resolve after 5 minutes or a second seizure occurs within an hour of the first. (Lorazepam 4mg is an alternative given iv slowly, 2mg/ min)

If seizures persist

Repeat midazolam once after 20 mins if sc or buccal, 10 mins if iv

If seizures have not ceased unlikely now to respond to further midazolam

At this point decision required regarding the most appropriate place of care: possible hospital transfer, for consideration of intubation/ventilation, or if this is a terminal event for hospice admission or ongoing support in place of choice.

If hospital transfer not appropriate use:

Phenobarbital 10-15mg/kg up to a maximum of 1g im in divided doses
(or iv at a maximum rate of 100mg/min)

Levetiracetam * can also be given in this situation, as csci or bd sc infusion

SPINAL CORD COMPRESSION

Occurs in 5-10% of patients with advanced cancer.

It is therefore essential to be alert for early signs, which can be subtle:

e.g. heaviness of the legs

Do not wait for signs to become unequivocal:

- **Early diagnosis** and **urgent treatment** within hours are vital to improved outcome, mobility and continence
- Once paralysed only 5% walk again, but some survive more than one year

Often history is of back pain with or without radiation in the territory of a nerve root, followed by sensory changes, bladder or bowel disturbance, and leg weakness, but can be any combination of these

If at thoracic level there is likely to be a sensory level with brisk reflexes;

if cauda equina compression, reflexes may be diminished

Causes/Risk Factors

Epidural invasion from vertebral body metastases or paravertebral nodes

Bony deformity from vertebral body collapse

Blood borne epidural or intradural metastases

Primary spinal cord tumour

Management

A Consider Reversible causes

This will depend on the patient's general condition

Immediate investigation is usually appropriate:

Emergency MRI scan, or CT scan if MRI unavailable / not possible

Urgent referral to clinical oncologist / acute oncology service / neurosurgical team

B Non-Drug measures

Specialist palliative care assessment for management and/or rehabilitation of patients with established paraplegia is recommended and may include:

Pain relief

Pressure area care

Urinary catheter

Bowel regulation – allow some constipation and use regular enemas or suppositories

Physiotherapy and occupational therapy assessments: wheelchair, home modifications

Psychological readjustment.

C Drug therapies

Immediate: Dexamethasone 16mg per day

Consider prophylaxis against venous thromboembolism

HICCUP

A pathological respiratory reflex characterised by diaphragmatic spasm and abrupt closure of the glottis.

Causes/Risk factors

Peripheral (diaphragmatic or phrenic nerve irritation)

- gastric distension or irritation
- liver enlargement/involvement
- intrathoracic nodes/tumour
- tumour irritation / involvement of diaphragm

Central (medullary stimulation)

- raised intracranial pressure
- brain stem CVA/tumour
- uraemia (also causes gastric stasis)

Management

A Consider Reversible causes

Consider underlying cause, see risk factors

B Non-Drug measures

Symptomatic treatments

- Pharyngeal stimulation
'Grandmother's remedies' e.g. sipping cold water, crushed ice, spoonful of granulated sugar. These mostly cause pharyngeal stimulation and are often effective, at least temporarily
- Elevation of pCO₂: inhibits hiccup reflex
Breath holding
Re-breathing into a paper bag

C Drug therapies

Peripheral causes

- Reduce gastric distension/irritation:
Prokinetics e.g. metoclopramide 10-20mg tds/qds
Proton pump inhibitors, ranitidine, antacids, simeticone
- Reduce irritation due to nodes/tumour/liver enlargement
Dexamethasone 4-8mg od
- Muscle relaxants
Baclofen 5mg tds (N.B. sedation)
Nifedipine MR 10mg od (N.B. lowers blood pressure)

Central causes

- Central suppression of the hiccup reflex
Haloperidol 0.5-1mg od-tds
Diazepam 2mg od - bd or midazolam 5-10mg via syringe driver
Gabapentin 300mg od initially followed by dose titration
Chlorpromazine 10-25mg od – tds (N.B. very sedating)
Levomopromazine 6.25-12.5mg daily orally or csci via syringe driver
- Phrenic nerve block in intractable hiccup

SKIN

ITCH

Itch can have a profound impact on quality of life with symptoms including disturbed sleep. The cause can be **histamine mediated** (allergies, acute urticaria, insect bites) but is commonly **histamine unrelated**. Risk factors include:

- Hepatic disease e.g. biliary obstruction
- Chronic renal failure
- Systemic opioid therapy
- Lymphoma
- Paraneoplastic phenomenon.
- Parasites, e.g. scabies, fleas.
- Iron deficiency
- Skin diseases, e.g. eczema, psoriasis
- Graft versus host disease after allogenic bone marrow transplant

A Consider Reversible causes

For example: active treatment of underlying cancer/ lymphoma with chemotherapy, steroids and radiotherapy will alleviate paraneoplastic itch.
Avoid provocative influences e.g. rough clothing, vasodilators, overheating.
Some emollients contain lanolin which may in itself worsen itching.

B Non-Drug measures

Try to break the itch/scratch cycle – clip nails, cotton gloves, paste bandages
Use distraction measures
Avoid washing with soap/bubble bath; use a pH balanced soap substitute or emollient bath additives
Apply emollients topically to combat dryness
Apply topical antipruritic lotions or use menthol 2% in aqueous cream
Consider early advice from dermatologist or palliative medicine physician

C Drug therapies: Drug therapy should consider the underlying cause where possible

Histamine Mediated	(therapeutic trial is worthwhile)
Antihistamine	Chlorphenamine 4mg qds Loratadine 10mg od (non-sedating)
Multifactorial/Paraneoplastic	
SSRI	Paroxetine 5-20mg od
NaSSA	Mirtazapine 7.5 - 15mg nocte
Cholestatic jaundice	
Consider intervention	Stenting for common bile duct obstruction
Non reversible	Sertraline 25-100mg Colestyramine 4 - 8g daily Rifampicin* (enzyme inducer) Naltrexone*
Uraemia	
	Gabapentin (low dose) Ondansetron 8mg od Naltrexone*
Opioid Related	
May be reversible	Switch opioid/Chlorphenamine 4mg qds/Ondansetron 8mg od

SWEATING/HYPERHIDROSIS

Sweating can have many causes and if due to fever from infection may be reversible. It can be endocrine related (menopause, diabetes, hyperthyroidism, carcinoid) or due to a neoplastic fever from extensive malignancy or lymphoma.

It is a side effect of many drugs (e.g. opioids, antidepressants, steroids, alcohol, tamoxifen, goserelin, ciprofloxacin, esomeprazole) and can also be a sign of intense pain or overwhelming anxiety/fear (then mainly confined to axillae, palms, and soles).

A Consider Reversible causes

Address underlying cause if identifiable and possible such as infection or treatment of underlying malignancy

B Non-Drug measures

Environment – fans, adjust ambient temperature, avoid heavy bedclothes, wear cotton clothes or wicking material rather than synthetic or mixed fibres, use moisture absorbing mattress covers, frequent baths or sponging

Consider Acupuncture

C Drug therapies

In hormone related malignancies

Megestrol acetate 160mg od
Venlafaxine (37.5mg od increasing to 75mg bd)
Gabapentin 300mg tds
Paroxetine 20mg od
Clonidine (50mcg bd increasing to 100mcg bd)

For other causes

Paracetamol 1g qds (nocte for night pyrexias)

NSAIDs:

Diclofenac MR 75mg nocte /bd
Naproxen 250 - 500mg bd

Anticholinergics:

Oxybutynin 2.5 - 5mg bd
Propantheline bromide 15mg tds
Glycopyrronium* po / csci

In refractory situations

Gabapentin 300mg tds
Paroxetine 20mg od or alternative antidepressant
Dexamethasone 4mg od

MALIGNANT ULCERS/FUNGATING WOUND

These occur when there is tumour infiltration of epithelium and its surrounding blood and lymphatic vessels, which then appears as a crater-like wounds or nodular lesions. A central necrotic area may develop which may become infected. Seek specialist advice if problems associated with the ulcer persist or psychological distress is high.

A Consider Reversible causes

Unless treatment of the underlying cause is possible, the fungating wound is not reversible
Treat secondary infection as this will exacerbate symptoms (pain, bleeding, and malodour)

Assessment is helpful:

- Prioritise the problem which the patient considers to be most important
- Explore meaning of ulcer to individual, impact on relationships, body image, and identity
- Identify location, size, nature of ulcer - these affect choice of dressing and fixation
- Check amount of devitalised tissue in ulcer - affects need for cleansing and debridement
- Condition of surrounding skin - if skin is macerated, protective barrier or film may be needed
- Consider potential for serious complications, haemorrhage, vessel/airway obstruction and plan accordingly

B Non-Drug measures

Utilise the patient's prioritised concerns to determine the goals of care

Patients should be enabled to manage dressing changes if this is their wish

Cleanse the wound only if it is producing excess exudate or has loose necrotic tissue

Consider early discussion with Tissue Viability Nurse and Specialist Palliative Care

C Drug therapies

<i>Dressings</i>	Type of dressing and frequency of change should be determined by agreed goals. Refer to BNF Wound Management Products Appendix 5, local wound care formulary / guidance and Tissue Viability Nurse. If wound visible consider skin coloured dressing
<i>Pain</i>	For the wound itself: Consider topical morphine or diamorphine 10mg mixed with hydrogel.* Systemic analgesics may be required, ref p4-23 Consider breakthrough analgesia or short acting opioid for dressing changes, ref p8
<i>Bleeding</i>	Consider alginate dressing. Other options: tranexamic acid, adrenaline 1:1000 topically to wound or in dressing, cautery, radiotherapy, sucralfate paste and embolization
<i>Malodour</i>	Consider topical or systemic metronidazole, activated charcoal dressing.
<i>Itch</i>	Consider TENS and ref p47

LYMPHOEDEMA

The diagnosis needs to be accurately made from the history and examination; and lymphoedema differentiated from other causes of limb swelling: heart failure, immobility, venous insufficiency and obstruction, chronic renal failure, hypoalbuminaemia, limb dependency. Causes can include primary congenital or familial lymphoedema but secondary obstruction occurs from tumour spread, surgery, or radiotherapy or recurrent streptococcal infections.

A Consider Reversible causes

Treatment is aimed at improvement and control, as cure is not possible

B Non-Drug measures

Management is based on skin care, lymph drainage, compression and exercise. Treatment should be undertaken by a trained practitioner and early referral to the local lymphoedema service will give the best chance of maximum improvement. Clear explanation of the lymphatic system, reasons for condition and means of treatment will encourage compliance. Monitor progress by regular measurement and assessing skin condition.

Effective skin care in the form of daily moisturising and careful attention to hygiene optimise skin condition and minimise the risk of infection.

Washing skin use Oilatum or Dermol 500

Emollients for skin e.g. Epaderm, QV

If the skin is dry or with keratosis use Hydromol or Flexitol cream.

Dermol 500 if skin is itchy or refer p 47

Cetaben if antibacterial emollient is needed.

Lymph drainage/exercise

Regular simple light superficial massage may help; should be taught by a trained practitioner.

Exercises including: breathing, movement around affected limb, promote muscle pump.

Manual lymphatic drainage may help, supervised by a trained practitioner.

Compression (Should only be applied by trained practitioner)

Compression bandaging or compression wraps may be appropriate for a limited period, particularly if the limb is misshapen, or fibrosis or lymphorrhoea are present.

Properly measured graduated compression hosiery worn daily except during acute inflammatory episode; remove at night.

Occasionally a multi-chambered sequential pneumatic compression unit may help reduce limb volume unless there is quadrant/midline oedema. Use at low pressures and in conjunction with other measures. May help reduce fibrosis.

With advanced disease and severe obstruction pain may be exacerbated by compression; balance the intervention with the patient's overall condition.

Kineseo taping

Alleviates pain and facilitates lymphatic drainage by lifting the skin.

Particularly beneficial in the reduction of trunk, head and neck lymphoedema where compression bandaging or hosiery is difficult or not appropriate.

C Drug therapies

Diuretics may help if there is heart failure or hypoalbuminaemia.
Steroids may reduce lymphadenopathy, but can increase fluid retention.

Management of Acute attack of cellulitis

Consider if admission indicated: influenced by systemic symptoms and/ or poor response to oral antibiotics

Monitor extent and severity of rash; marking the edge of erythema. Monitor CRP, WCC, temperature and microbiology of skin before antibiotics started. Consider blood cultures.

Treat with antibiotics according to local protocols or British Lymphoedema Society (BLS) guidelines www.thebls.com/consensus.php

No or poor response to first line antibiotics after 48 hours: substitute second line oral treatment.

Continue antibiotics until signs of acute inflammation resolved; treat for minimum of 14 days from time of clinical response. Treat up to 1-2 months if necessary.

Avoid compression garments, advise bed rest and limb elevation during the acute attack. Provide adequate analgesia.

Antibiotics “in case”: there is a high risk of further attacks of cellulitis. Prescribe two week emergency supply of antibiotics to be used if needed.

Minimise Risk of recurrent cellulitis

Consider antibiotic prophylaxis if two or more attacks of cellulitis per year. Consider life-long prophylaxis.

Measures to manage swelling are important; lymphatic therapy will reduce the frequency of attacks.

Recurrent episodes of cellulitis may not be preventable but a reduction in the frequency of cellulitis and / or the severity of episodes is possible. If poor response to first line prophylactic antibiotics; consider trials of other prophylactic antibiotics

Involve local specialist lymphoedema services and advice from microbiologists as management can be complex.

MISCELLANEOUS:

ANAEMIA/BLEEDING/THROMBOEMBOLISM/
HYPERCALCAEMIA/STEROID USE/DIABETES MANAGEMENT/
END STAGE LONG-TERM CONDITIONS

ANAEMIA

Diagnosis is based on symptoms e.g. tiredness, weakness, breathlessness on exertion. Alongside blood counts – haemoglobin, RBC indices, platelets and WBC; consider iron studies, B12 and folate. Ferritin is unreliable in advanced malignant disease.

Causes/Risk factors

Increased rate of RBC loss:

- Bleeding – acute (anaemia may not be revealed immediately)
– chronic (microcytic, reticulocytes, thrombocytosis)
- Haemolysis – primary, secondary e.g. autoimmune process, drugs, infection (macrocytosis, reticulocytes, raised bilirubin)

Reduced RBC production:

- Chronic disease and renal disease (normochromic, normocytic or microcytic)
- Bone marrow infiltration – leukaemia, lymphoma, carcinoma (especially carcinomas of prostate or breast)
- Aplastic – especially drugs (including NSAIDs, antibiotics, antiepileptics, antipsychotics, hypoglycaemics, but many drugs have been implicated)
- Sideroblastic secondary to malignancy
- Infection, debility
- Deficiency of iron (microcytic), B₁₂ or folate (macrocytic), mixed deficiency

Management

A Consider Reversible causes where possible (see bleeding/haemorrhage ref p53) and review medication e.g. anticoagulants, NSAIDs

B Non-Drug measures

Manage symptoms and explain to the patient the cause of their symptoms

C Drug therapies

- Consider iron (consider iv replacement), B₁₂ or folate if deficient
- Consider transfusion if specific symptomatic benefit is anticipated with Hb < 80g/l. Transfusion can cause heart failure in debilitated or elderly patients; use 2 - 4 units maximum per day with furosemide cover
- If the anaemia is chronic, patients may adapt even if Hb 80g/l. Do not transfuse unless a specific benefit is anticipated
- Reassess one week after transfusion for any symptomatic relief. If little relief then transfusion need not be repeated if the haemoglobin falls again: consider other causes and treatments for symptoms.

BLEEDING/HAEMORRHAGE

Causes/Risk Factors

- Direct tumour invasion
- Platelet or coagulation disorders, including disseminated intravascular coagulation, heparin-induced thrombocytopenia
- Infection, which may cause haemoptysis, haematuria, vaginal bleed, fungating wounds
- Drugs – anticoagulants, antiplatelet drugs, NSAIDs, SSRI antidepressants
- Peptic ulceration

Management

A Consider Reversible causes

- Stop anticoagulants and review medication; consider reversing anticoagulants and discussing with haematology
- Treat any infection which may be exacerbating bleeding

B Non-Drug measures

Consider radiotherapy when bleeding is due to malignancy, especially haemoptysis, haematuria or cutaneous bleeding

Consider palliative surgical techniques including endoscopic laser or cautery for tumour where feasible and appropriate

C Drug therapies

Consider replacement of blood, platelets, clotting factors, fluids

Consider chemotherapy, if appropriate

Tranexamic acid 500mg -1.5g bd - qds orally (stabilises clots); caution in haematuria as may lead to clot retention

Etamsylate 500mg qds orally (enhances platelet adhesion within capillaries)

Specific treatments

Site of bleeding	Management options
<i>Nasal</i>	Packing and cautery
<i>Oral</i>	Sucralfate suspension Tranexamic acid mouthwash
<i>Haemoptysis</i>	Radiotherapy is often helpful in lung tumours
<i>Liver</i>	Consider embolization
<i>Upper GI</i>	Consider stopping any NSAIDs Proton pump inhibitors Consider embolisation
<i>Lower GI</i>	Tranexamic acid po or 0.5g in 5ml water pr bd Rectal steroids
<i>GI tumours</i>	Thalidomide* 100 - 400mg od
<i>Skin</i>	Kaltostat dressing Topical adrenaline 1 in 1000 to soak dressing Topical tranexamic acid 500mg in 5ml water applied on gauze dressings

Severe terminal haemorrhage

Stay with the patient, verbal reassurance and physical touch help. Dark towels or sheets may help mask the blood. If anticipated, give carers a supply of buccal midazolam 10mg. If slow, use suction as appropriate and consider iv medication. If rapid, consider midazolam 5-10mg iv or im (for relief of psychological distress) and if needed, diamorphine or morphine sulphate for pain. Relatives and staff who witness the event will need support.

VENOUS THROMBOEMBOLISM

Some degree of venous thromboembolic disease (VTE) is extremely common in patients with cancer and to a lesser extent with other advanced disease.

Suspect pulmonary emboli in patients with episodic and otherwise unexplained breathlessness or confusion. Measurement of oxygen saturation with a finger probe may be helpful.

Serological tests such as D-Dimers are unhelpful in advanced cancer.

Doppler scans will reveal deep vein thrombosis (DVT) in large veins.

CT pulmonary angiography can detect even small pulmonary emboli.

Causes/Risk factors

- Malignant disease
- Pelvic disease
- Recent chemotherapy or surgery
- Immobility from hip fracture/spinal cord compression
- Cardiac failure
- Respiratory failure
- Central venous catheter
- Thrombophilia
- Age >65y
- Drugs e.g. megestrol acetate, HRT

Management

Thromboprophylaxis

Refer to local protocols. Assess whether patient is at risk of VTE. If so, take into account any risk of bleeding and expected prognosis; and then discuss with the patient whether they wish to have active prophylaxis with anti-embolism stockings and low molecular weight (LMW) heparin as appropriate, balancing risks and benefits to optimise quality of life. If the patient is in the last few days or weeks of life then thromboprophylaxis is often not appropriate, and is not routine.

The best evidence in favour of thromboprophylaxis is in potentially reversible co-existing acute conditions e.g. patient admitted to hospital for intravenous antibiotics for community acquired pneumonia.

Treatment

- If there is symptomatic or objective evidence of VTE, consider treatment dose LMW heparin which is more effective in VTE associated with malignancy and is less likely to cause bleeding than warfarin but requires daily injections. LMW heparin followed by warfarin is cheaper, but requires more frequent blood tests. INR may be very difficult to keep stable in those with advanced disease and variable nutritional intake. Refer to local guidelines.
- Regularly re-assess the patient to ensure that the current management strategy is appropriate to the stage of their illness and their wishes.

HYPERCALCAEMIA

Hypercalcaemia is a poor prognostic sign; resistant hypercalcaemia is usually an indication of entering the terminal phase and aims of treatment should be reviewed.

Hypercalcaemia is common in cancers with bone metastases (e.g. breast, prostate, lung) or may be due to ectopic production of PTH-related peptides [PTHrP]. It occurs in 10% of cancer patients and 30% of those with myeloma. Amongst solid tumours, it is most commonly associated with squamous carcinomas and breast cancers.

Diagnosis

Corrected serum calcium > 2.7 mmol/l; symptoms usually only become troublesome above 2.9 mmol/l; levels > 4 mmol/l may be fatal

Any combination of the following symptoms can be seen: nausea, confusion, fatigue, loss of appetite, emotional disturbances, thirst, polyuria, constipation and abdominal pain.

Causes/Risk factors

Bone metastases.

PTHrP-secreting tumours, e.g. carcinoma of lung.

Dehydration, renal impairment.

Tamoxifen flare.

Management

A Consider Reversible causes

e.g. stop thiazide diuretics, vitamin D/calcium supplements

B Non-Drug measures

Communication and psychological support for patient and family

C Drug therapies

Relieve associated symptoms – treat nausea and vomiting with haloperidol or levomepromazine, relieve thirst and constipation

Decide if **specific** treatment is appropriate

- Correct dehydration using saline iv if applicable.
- If serum calcium >3.0mmol/l or >2.8 and still symptomatic after iv rehydration, use iv bisphosphonates:

pamidronate 90mg in 500ml saline over 2 - 4 hours, or

zoledronate 4mg in 50ml saline over 15 mins (more potent).

(In renal impairment the doses above need adjustment – see BNF; if eGFR<30 only licensed bisphosphonate is ibandronic acid).

Bisphosphonates can take 72hrs to take effect, so avoid rechecking calcium before day 4. If normocalcaemic, plan to recheck three weeks after treatment. If serum calcium still raised after 7 days, iv bisphosphonate can be repeated. Explore patient wishes regarding future treatment, consider ceilings of treatment and document advance care plans.

Oral bisphosphonates have no place in the acute treatment of hypercalcaemia but may be used to maintain normocalcaemia and as prophylaxis for myeloma and breast carcinoma.

Denosumab* (monoclonal antibody) may have a role.

STEROID USE

Steroids are frequently prescribed in palliative care with good effect but there is a lack of evidence to support their effectiveness and to guide dosage. It is important to document the starting date and dose clearly with the indication for use, then review regularly.

General points

- Dexamethasone is the preferred drug
- Prescribe as a single or two morning doses to avoid sleep disturbance
- Give a 5 - 7 day trial and stop if there is no benefit
- Discuss potential benefits and side effects with patient
- If benefit achieved, reduce to lowest effective dose and then review regularly
- Stop if ineffective or when benefit lost (see below)
- Check blood sugars weekly if on 4mg dexamethasone or more
- Avoid co-administration with a NSAID, if feasible
- There is an increased risk of bleeding with concurrent use of SSRI and NSAID- patients should be on PPI for gastric protection
- Increase (up to double) dose if on phenytoin or carbamazepine

Indications

Always consider alternatives to steroids, the initial dose of dexamethasone **varies** for different indications.

Stopping steroids

- Can withdraw immediately if less than 3 weeks treatment and less than 6 mg/ day dexamethasone
- Otherwise tail off by 2mg every 5-7 days until 2mg od, then by 0.5mg every 5-7 days (betamethasone 0.5mg tabs are a more cost effective alternative)
- After cranial irradiation start reducing 2 weeks after completion of treatment e.g. 16 - 12 - 8 - 6 - 4 - 2mg at intervals of 3 days; if symptoms recur, return to previous effective dose

Common problems

Usually related to higher or longer-term doses but some patients can be particularly sensitive and develop problems within weeks/at lower doses)

- Early: oral thrush, hyperglycaemia, heartburn, sleep disturbance, mania.
- Late: proximal myopathy, skin atrophy, bruising, depression, face & body shape changes.

Steroid equivalents (approximate)

Dexamethasone 2mg	Betamethasone 2mg	Prednisolone 15mg	Hydrocortisone 50mg
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DIABETES MANAGEMENT

Aims (in last months of life)

Asymptomatic, preferably with blood sugars 7-15 mmol/l

Avoid diabetes related emergencies: i.e. no hypoglycaemia, symptomatic hyperglycaemia, diabetic ketoacidosis, nor hyperosmolar hyperglycaemic state (HHS)

Avoid unnecessary injections and testing

Management

Blood sugar testing

- On oral therapy: test 18:00 (pre-meal)
- If starting/on steroids: test 18:00 (pre-meal)
- If worried about fasting hypoglycaemia: test before breakfast

Diet controlled

- Blood sugars <15, and no steroids: no further testing
- Blood sugars 15-17: continue testing
- Blood sugars >17 +/- symptoms: start sulphonylurea (e.g. gliclazide, glimepiride)

On oral therapy

- Stop glitazone and consider stopping metformin (powder form if tablets too large).
- Blood sugars <15: continue oral therapy but if <5: halve dose of oral therapy.
- Blood sugars >17 +/- symptoms: increase/start sulphonylurea
- If still >17: add intermediate acting insulin 10units at 08:00 (increase by 2 units every 48h if >17)

Insulin controlled

- If eating, continue usual regimen or contact diabetes team
- If not eating, stop short acting insulin, continue long acting or swap to intermediate acting at 08:00 (test 18:00), contact the diabetes team

On/starting steroids

- Single dose steroid mane. Test blood sugars 18:00 (pre-meal)
- If blood sugars > 15, start low and increase up to maximum recommended daily dose
- If still > 15 on maximum dose sulphonylurea (e.g. gliclazide 320mg/day) with no day or night hypoglycaemic symptoms: switch to intermediate acting insulin (e.g. Insulatard, Humulin I or Insuman Basal 10 units at 08.00)
- Titrate dose to achieve blood glucose 6-15 mmol/l before evening meal

Notes

Use intermediate acting not short acting insulin preparations.

Avoid bd insulin mixtures (risk of hypoglycaemia), qds regimes (multiple tests and injections), bd steroids (prolonged hyperglycaemia), bolus/prn Actrapid (poor control, risk of hypoglycaemia), metformin, glitazones.

Treat hypoglycaemia with sugar e.g. GlucoGel; glucagon less effective if no glycogen stores.

In the last few days of life, can allow blood sugars >17 if asymptomatic.

Communicate the basic principles described above to patient, family and carers.

Many patients will have had diabetes for many years, and will be used to trying to control their blood sugars tightly. It is important to have a discussion with the patient, their family and their carers about ensuring that the patient has no hypoglycaemic episodes ('hypos') and is not symptomatic from high blood sugars, rather than concentrating on tight glucose control.

End of life management for Patients with diabetes

Withdrawing treatment in type 1 diabetes mellitus at end of life

- The decision to stop insulin completely should generally be taken only after discussion with the patient (if still has capacity) and family
- It is appropriate to stop insulin injections completely when the patient is unconscious as part of the dying process (not because of hypoglycaemia or diabetic keto-acidosis) and when all other life-prolonging treatments have been stopped.
- If it is felt strongly that the insulin should be continued, a simple regimen can be used, e.g. once daily long-acting, or bd intermediate-acting insulin, with the minimum of routine monitoring, e.g. fingerstick blood glucose test once daily at 18.00 (premeal).

Withdrawing treatment in type 2 diabetes mellitus at end of life

- Stop oral hypoglycaemics, glucagon-like peptide-1 (GLP-1) receptor agonist injections and blood glucose monitoring when the patient becomes unable to swallow
- Consider stopping low-dose insulin (e.g. insulin <15units total daily dose). If a patient requires a total daily dose of >15 units of insulin, or a decision is made to continue insulin therapy, manage as for type 1 diabetes (see above).

END STAGE IN LONG-TERM CONDITIONS

General principles

1. Looking ahead (see also Advance Care Planning ref p63):
 - prognostic triggers – “Would you be surprised if this patient was to die in the next year?”; repeated hospital admissions; increasing dependency; specific clinical prognostic indicators (see below)
 - to ease the transition from invasive treatment to supportive care
 - discussion with patient (and carer as appropriate) about their understanding of severity of disease and likely prognosis, preferences for future care and treatment, and what to do or where to go in a crisis
2. Assessment of patient’s and carers’ needs for physical, psychological, emotional, social, financial and spiritual support (ref p86)
3. Symptom control, for restoration or maintenance of dignity and quality of life:
 - optimisation of medical management of condition, treatable causes of deterioration and iatrogenic problems
 - palliation of disease-specific symptoms (ref p60-62)
4. Information exchange – ensure that the information/choices above are communicated to the relevant hospital team, GP, community team and support services and others, as appropriate
5. Triggers for Specialist Palliative Care referral:
 - poorly controlled symptoms
 - complex needs or problems that require additional help
 - help required with issues brought up in 1 and 2 above
 - preferred place of care at the end of life is a hospice and this is thought to be appropriate given the patient’s circumstances

End stage Heart failure

Specific clinical prognostic indicators:

Heart failure NYHA Stage III or IV, ejection fraction $\leq 20\%$, albumin <25 , failure to respond to diuretics, increasing frequency of hospital admissions, worsening co-morbidities.

Specific treatments

<i>Breathlessness</i>	Low dose opioid and/or benzodiazepine (ref p24-26) Optimisation of diuretics and ACEi/Angiotensin II blockade if appropriate Beta agonist bronchodilators not advisable if angina or aortic stenosis
<i>Oedema</i>	Balance dose of diuretics against symptomatic hypotension and dehydration Good skin care, cautious hosiery compression of legs
<i>Low mood and depression</i>	Psychological, social and occupational therapy support Avoid methylphenidate and caution with tricyclic antidepressants as arrhythmogenic
<i>Nausea</i>	Avoid cyclizine as may exacerbate heart failure
<i>Pain</i>	Caution with NSAIDs and steroids because of fluid retention
<i>Constipation</i>	Magnesium hydroxide and lactulose have reduced effectiveness
<i>Poor appetite</i>	May be exacerbated by gastrointestinal oedema Avoid dexamethasone as appetite stimulant, as may worsen fluid retention
<i>Fatigue</i>	Deconditioning may compound fatigue caused by heart failure Consider whether beta blockers may be contributing to fatigue
<i>Care of the dying</i>	Review oral medication Consider use of sc furosemide for symptom control although the evidence for this is limited Hyoscine can be used to dry secretions Contact cardiology department or refer to local policy to arrange switching off implantable cardiac defibrillator (ICD) after discussion with patient or family as appropriate.

End stage Kidney failure

Specific clinical prognostic indicators:

eGFR <15

Decision not to dialyse

Contemplating withdrawal from dialysis.

Specific treatments

<i>Pain (often bone)</i>	<p>Prescribe Paracetamol</p> <p>Avoid NSAIDs unless last days of life and assessed risk/ benefit</p> <p>Consider strong opioids (ref p7)</p> <p>PRN opioid will usually be fentanyl sc 12.5 - 25mcg up to hrly</p> <p>Oxycodone is also used</p> <p>Regular background analgesia: fentanyl / buprenorphine patch or csci fentanyl* or csci alfentanil* (will mix with most drugs)</p>
Neuropathic pain	Amitriptyline, Gabapentin† or Pregabalin†
<i>Nausea</i>	Metoclopramide, Haloperidol, Levomepromazine†
<i>Hiccups</i>	Metoclopramide
<i>Itch</i>	<p>Aluminium hydroxide mixture 15ml tds</p> <p>Mirtazapine 15mg od</p> <p>Ondansetron</p> <p>Gabapentin†</p>
<i>Restless legs</i>	<p>Gabapentin†</p> <p>Clonazepam 0.5mg od</p> <p>Pramipexole</p>
<i>Care of the Dying</i>	<p>Caution with opioids which will accumulate and may cause toxicity : alfentanil or fentanyl safer than morphine (ref p23)</p> <p>Be prepared for significant restlessness (ref p81)</p>

† need dose reduction.

Little difference between dialysed and non-dialysed patients in dosing, although gabapentin often given only on dialysis day.

End stage COPD

Specific clinical prognostic indicators:

- On long term oxygen therapy
- Episodes of respiratory failure or NIV
- Right heart failure
- Cachexia
- FEV₁ < 30% predicted

Specific treatments

<i>Breathlessness</i>	Pulmonary rehab programme, Low dose opioid (up to 30mg morphine or equivalent in 24hr) Benzodiazepines (e.g. sl lorazepam) can be helpful for associated anxiety/panic but their safety profile and efficacy is less certain than Low dose opioids for breathlessness Home nebulisers Assess for supplementary oxygen
<i>Pain</i>	Often due to steroid side effects (e.g. osteoporotic fractures) Higher side effect risk with NSAIDs
<i>Low mood and Anxiety</i>	Psychological, social and Occupational Therapy support
<i>Constipation</i>	Standard measures (ref p38)
<i>Muscle deconditioning</i>	Physiotherapy and Occupational Therapy assessment

END OF LIFE:

ADVANCE CARE PLANNING/DNACPR/LAST DAYS

FUTURE AND ADVANCE CARE PLANNING

Future care planning is the process of timely, voluntary discussions between an individual and their healthcare professionals to establish future preferences for care. Such proactive discussions can help the patient and family prepare for death and may involve Advance Care Planning (ACP) in case the patient should later lose capacity to make such decisions. This allows the patient to maintain some influence or control over their future care.

Discussion about the future preferably takes place before a deterioration in the patient's condition, while they are well enough to take part in the discussion and express their preferences. Triggers or prompts for ACP include:

- the Surprise Question: 'Would you be surprised if this patient was to die in the next year?'
- AMBER care bundle criteria: is the patient (a) clinically unstable or deteriorating with little reversibility and (b) at risk of dying in the next one to two months?
- clinical prompts e.g. repeated hospital admissions, shift in treatment focus, loss of function
- community care needs assessment
- care home admission
- enquiry by the patient

Before initiating an ACP discussion, the healthcare professional must consider whether ACP is likely to provide overall benefit to the individual at that time. The healthcare professional should have knowledge of likely disease events, treatment options and local services available. It is usually helpful to include family/carers in these discussions (with the patient's permission).

Discussions could include:

- exploring the patient's and family's insight into the disease
- future expectations
- treatment choices
- organ donation
- patient's preferences and priorities for care at the end of life (e.g. being pain free, avoiding being a burden): "what is important to you?"
- patient's preferred place(s) of care when their condition deteriorates – it is often helpful to explore a range of alternatives
- patient's beliefs and values
- anything the patient feels is important to them

The healthcare professional needs to exercise skill and sensitivity to:

- know when and how to instigate ACP
- avoid pressurising the patient to take part
- recognise when to stop discussion

Discussion(s) can be aided by introducing the leaflet: *Planning for your Future Care – A Guide* which also covers organ donation, wills and funeral planning.

(ref p94)

Advance Care Planning spans a spectrum from open conversations to formal, legally binding documents.

Outcomes include:

- 'no wish to discuss further at this time'
- the patient identifying one or more persons to speak on their behalf to help healthcare professionals make a best interests decision (this is not the same as legally appointing a Lasting Power of Attorney)
- a Statement of Wishes and Preferences
- DNACPR decision (ref p 65)
- the patient making an Advance Decision to Refuse Treatment (ADRT)
- the patient appointing a Lasting Power of Attorney (for Personal Welfare and/or Property and Affairs)

With the patient's consent, these preferences should be:

- communicated to all professionals involved in their care
- documented appropriately e.g. on the Electronic database systems (e.g. Electronic Palliative Care Co-ordination System EPaCCS), or local alerting systems

All Advance Care Plans should be reviewed every so often to check that they still accord with the patient's preferences, as wishes often change as illness progresses.

DNACPR DECISIONS

A DNACPR (Do Not Attempt Cardiopulmonary Resuscitation) or 'Allow a Natural Death' decision can be part of an advance decision made by the patient. It is more commonly made when the patient is becoming more unwell, e.g. when setting ceilings of treatment or as part of the AMBER Care Bundle in hospital patients. For patients with ICDs, deactivation should be discussed when a DNACPR decision is made.

Making a DNACPR decision can help to promote dignity in the dying phase, facilitate a patient staying at home when they are dying, and allow family and staff to concentrate on interventions which support the patient's comfort.

Decision-making can sometimes be hard because:

- policy documents do not distinguish between an *expected* death and sudden cardio-pulmonary arrest
- the general public have unrealistic expectations of success rates of CPR attempts
- there is a lack of understanding about how CPR can lead to adverse outcomes, even where the restoration of cardiac output is successful

The following framework is suggested to facilitate decision-making:

- explanation that the illness is progressing and death will naturally happen; rather than focus discussion on CPR alone
- recognise that open discussion with patients and their family is best practice

Communication with patients and their families should include:

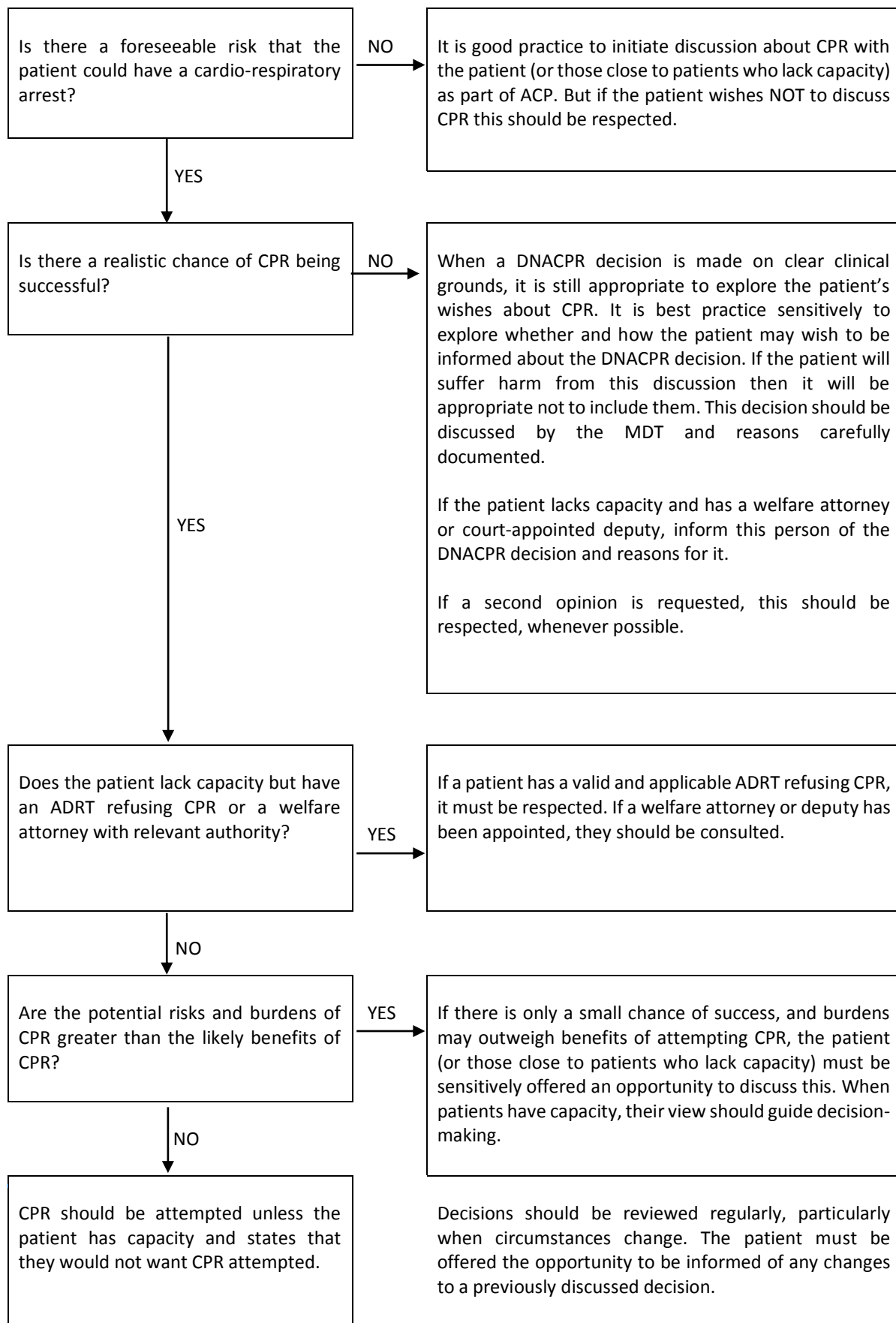
- a discussion about what care **will** be given, rather than what will not be done
- emphasise that a DNACPR decision only relates to CPR and does not involve withholding other treatments
- emphasise that any decision is based on clinical judgement, not on age or 'worth' of the patient's life
- including the fact that the illness is progressing and death will naturally happen, rather than specifically around CPR
- explanation that an anticipated death can be dignified and peaceful

When appropriate, negotiate the resuscitative interventions which may be carried out in the event of sudden collapse.

Best practice is based on the principles of shared decision making. Do not exclude patients from discussing a decision regarding CPR because it may be distressing. To not include them in the discussion, the distress must be considered likely to cause the patient a degree of harm. Do not withhold information just because it is difficult to convey.

CPR is very unlikely to be successful in patients in the terminal phase of a life-limiting illness. However, if the patient is not in a terminal phase and there is a realistic chance that CPR will restore cardiac output and breathing, then the possible benefits and potential adverse outcomes should be discussed with the patient and the decision made in partnership with them.

CPR Decision-Making Flowchart



THE LAST FEW DAYS OF LIFE

Principles and key elements

Five national priorities have been recognised as essential for the dying patient.

1 Recognise the possibility the person is likely to be dying

It is important to recognise when a patient is dying. As this is not always easy, the patient should be reviewed by a senior clinician in hospital, or GP in the community.

When a patient has an advanced and progressive life-limiting illness and is deteriorating with no (appropriately) reversible cause, dying might be recognised if they are:

- becoming progressively weak and bedbound
- drowsy for much of the day
- having difficulty swallowing tablets
- losing interest in food and drink
- losing attention span and may be confused

2 Communicate with the person and those important to them

- Explain that predicting dying can be difficult
- Explain that the patient appears to be dying
- Discuss reasons for reviewing clinical interventions, drugs and other treatments including nutrition/hydration with the patient and family/friends
- Ensure effective communication amongst all involved
- Inter-professional communication should be explicit: that the patient is believed to be dying, that death can be expected. This may include permission for qualified nurses to verify death

3 Involve them in decision making about treatment and care

All decision-making should be carried out in partnership with the patient and their family/friends. If available, use a Personalised Care Plan for End of Life Care to guide care and decision-making, as all these decisions should be recorded so that everyone involved knows what the patient wants. Remember a person can change their mind.

4 Support the needs of both the patient and those important to them

- Ensure practical and emotional support offered to family and carers
- Support both before and after death
- Check religious, spiritual and cultural needs and meet them where possible

5 'Plan, and Do' with an individual plan of care

Practical Care

- While the patient is able to take sips, offer drinks frequently. A narrow straw will be easier to use than a broad one when the patient is very weak
- Mouth care is essential e.g. clean mouth and tongue with soft brush or sponge, use saliva replacement if patient is conscious and has dry mouth
- Continence management - consider how bowel and bladder care will be managed and whether a urinary catheter is appropriate. Monitor for development of urinary retention
- Skin care – ensure appropriate care of pressure areas and wounds is carried out.

Maintain Comfort to achieve a pain free and comfortable death

- Adopt a problem solving approach to symptom control
- Review all drugs and keep only the essentials to maintain comfort. Stop any remaining long-term prophylactic medications e.g. anti-hypertensives, warfarin, statins
- Anticipatory prescribing: Analgesic, Antiemetics, Anxiolytics, Antisecretory (ref p69-71)
- Assess and review clinical interventions e.g. blood tests, diagnostic imaging and medical treatments e.g. clinically assisted hydration and nutrition
- Anticipate and plan for possible complications e.g. haemorrhage
- Regularly reassess the patient

Identify a person to coordinate and organise care and support and provide information as to who to contact for information and support, day or night.

Make every possible effort to enable the patient to receive the end of life care they want, including being in the place of their choice, which may have changed over time.

Planning for Death

- To avoid inappropriate resuscitation attempts particularly at home, check that the patient's DNACPR status is known and recorded for all visiting health professionals (ref p65-66)
- If the diagnosis is mesothelioma, asbestosis or other industrial disease, remember to warn the family that the Coroner's team will be notified after death and it is very likely that a post mortem will be necessary. Other notifiable deaths are listed on the back of the death certificate
- If a non-medical practitioner is qualified to verify death, make this explicit in the community notes indicating that this is an "expected death" and that coroner involvement is not indicated
- Check whether cultural or religious rituals are expected to be adhered to after death
- Provide information and/or contact numbers about procedures immediately after death.

ANTICIPATORY PRESCRIBING: GUIDANCE ON MEDICATION FOR SYMPTOM CONTROL

When a patient is dying, swallowing often becomes difficult.

Prescribe medicines essential to maintain comfort by non-oral routes (usually sc):

- 'as needed' or prn
- regularly if the patient has an ongoing symptom or was taking the drug regularly when they could swallow – using a syringe driver for continuous subcutaneous infusion (csci) (ref p72-74).

Choice of drug will be guided by the patient's current symptoms, previous drug requirements and local guidelines.

There are five symptoms that may develop in the last hours or days of life:

- Pain
- Agitation
- Respiratory Tract Secretions
- Nausea and Vomiting
- Dyspnoea

It is good practice to prescribe **anticipatory drugs** to help with these symptoms:

- prn on the hospital drug chart *or*
- prn on the community drug chart *and*
- to ensure medication is available in the patient's home (in a 'Just in Case' Box)

Drugs commonly required including PRN dose recommendations (All sc):

Symptom	Medication	Notes
<i>Pain</i>	Morphine 2.5-5mg sc prn	For patients already taking opioid analgesia the dose may need to be adjusted; caution in renal failure
<i>Restlessness Agitation</i>	Midazolam 2.5-5mg sc prn	If frank delirium use an antipsychotic rather than midazolam alone. (Ref p 81 for dose ranges)
<i>Respiratory tract secretions</i>	Glycopyrronium 200mcg sc prn (max 1.2mg in 24hr)	An alternative is Hyoscine butylbromide 20 mg sc prn
<i>Nausea and vomiting</i>	Haloperidol 0.5-2.5mg sc prn (max 5mg in 24hr) or Levomepromazine 6.25mg sc prn (max 25mg in 24hr) or Cyclizine 50mg sc prn (max 150mg in 24hr)	Higher doses may be used as an antipsychotic Site irritation and limited compatibility with other drugs may limit use of cyclizine
<i>Breathlessness</i>	Morphine 2.5mg sc prn	Ref p 24-26

ANALGESICS

Opioids and NSAIDs are the main analgesics used.

If opioid naïve and in pain, consider starting morphine sulphate 5-10mg sc in syringe driver over 24hours, with morphine sulphate 2.5-5mg prn (ref p7). If on regular opioids by mouth, this will need to be converted to the sc route. prn opioid doses are $1/6^{\text{th}}$ of total daily dose given by the same route.

Worked examples

To convert from **oral morphine to sc morphine**, divide total daily oral morphine dose by two, remembering to include any prn morphine use e.g.

Patient taking 30mg bd Zomorph and 30mg oramorph prn over last 24 hours

Total daily dose oral morphine = $30 \times 2 = 60\text{mg} + 30\text{mg} = 90\text{mg}$

$90 \div 2 = 45\text{mg}$ morphine sulphate in syringe driver

$45\text{mg} \div 6 = 7.5\text{mg}$ sc morphine prn (1-2hourly)

To convert from **oral morphine to sc diamorphine**, divide total daily oral morphine dose by three (remember to include any prn use), e.g.

Patient taking 30mg bd Zomorph

Total daily dose oral morphine = $30 \times 2 = 60\text{mg}$

$60 \div 3 = 20\text{mg}$ diamorphine in syringe driver

$20\text{mg} \div 6 = 3.3\text{mg}$ sc diamorphine prn so prescribe 2-5-5mg sc diamorphine (1-2hourly)

To convert from **oral oxycodone to sc oxycodone** divide total daily oral oxycodone dose by two (remember to include any prn use), e.g.

Patient taking 30mg bd Oxycontin

Total daily dose oral oxycontin = $30 \times 2 = 60\text{mg}$

$60 \div 2 = 30\text{mg}$ oxycodone in syringe driver

$30\text{mg} \div 6 = 5\text{mg}$ sc oxycodone prn so prescribe 5mg oxycodone prn (1-2hourly)

If the patient is on fentanyl or buprenorphine patch, and still has pain, **keep the patch on** and add additional opioid to syringe driver. Use prn opioid requirements in the last 24 hours as a guide to how much opioid to prescribe in the syringe driver.

Stiffness, general aches and pains often develop with immobility during the dying phase. Consider prescribing an NSAID (ref p6), or midazolam 5 - 10mg/24h via csci.

ANTIEMETICS

The options for which antiemetic to prescribe as should still be in accordance with symptoms being experienced (see other antiemetics ref p31). If sickness has been well controlled on oral medications, consider switching to subcutaneous route where possible

Otherwise, the following are often used in the dying phase:

Haloperidol

- 0.5-2.5mg sc prn (max 5mg/24hrs)
- 0.5-1.5mg sc od at bed time as has long half-life or
- 1.5-5mg sc as csci via syringe driver

Levomepromazine

- 6.25-12.5mg sc prn (max 25mg/24 hrs as anti-emetic)
- can be given as 6.25-12.5mg sc od at bed time as has long half-life or
- 6.25-25 mg sc as csci (higher doses can cause sedation)

Cyclizine

- 50mg sc prn tds (max 150 mg/ 24hrs as csci)

ANXIOLYTICS/ANTIPSYCHOTICS

These are prescribed for agitation or terminal restlessness (ref p81)

Although haloperidol and levomepromazine can be used for terminal agitation, the doses used are higher than when used as anti-emetics; **always start at the lower end of the dose range** taking account the patient's age and regular/prn use.

If agitation persists, seek specialist advice*.

Midazolam

- 2.5 - 5mg sc prn
- 10-60mg per 24hrs as csci

Haloperidol

- 2.5-5mg sc prn (max 15mg/24hrs)
- 2.5-5mg sc od at bed time as has long half-life or
- 5-10mg sc as csci

Levomepromazine

- 12.5-25mg sc prn or
- 12.5-150mg per 24hrs as csci

ANTISECRETORIES

Once established, rattling from upper airway secretions is hard to stop. If the patient is not distressed, reassure the family that although unpleasant to hear, it is not harmful to the patient. Repositioning the patient may help.

Hyoscine butylbromide

- 20 mg sc prn or
- 40-120 mg per 24hrs as csci

Glycopyrronium

- 200- 400 microgram sc prn
- 600-1200 microgram sc as csci

Some centres may use hyoscine hydrobromide (ref p74), although this may contribute to paradoxical agitation.

SYRINGE DRIVERS

A syringe driver is a small, portable battery-powered pump. It administers drugs subcutaneously by continuous infusion. It offers an alternative route of drug administration with little impact on patient mobility or independence. By maintaining steady drug plasma levels, a syringe driver **may** improve symptom control.

Indications

For administering drugs when the oral route is difficult or inappropriate. It is **not** only for patients who are in the final stages of their illness. If the problem resolves, it may be possible to return to the oral route. Consider setting up a syringe driver if:

- Severe nausea and/or vomiting
- Severe oral tumours, sores or infections
- Dysphagia
- Intestinal obstruction
- Poor absorption of oral drugs (rare)
- Weak, unconscious or sedated patient
- Patient preference

Before setting up the syringe driver, explain to patient and family the reason for using it, how it works and the possibility of infusion site reactions. Provide a patient information leaflet where available.

Syringe drivers currently in use:

- T34 (CME Medical – formerly McKinley) - preferred because of safety features and automatically calculates the rate (mm/hr) and the volume remaining (mL) from the type and size of syringe
- Graseby MS16A – infusion rate has to be set manually in mm/hr
- Graseby MS26 – infusion rate has to be set manually in mm/24hr
- Graseby syringe drivers to be phased out to meet safety guidelines

Setting up the Syringe Driver

- The line should be primed before calculation or measuring length
- Use a Luerlock syringe
- Label the syringe with the patient's name, drug(s) and dose(s), diluent and date and time started
- Site syringe driver in anterior chest wall or upper arm (anterolaterally), back (away from spine and scapulae), anterior abdominal wall, anterior thigh. Do not site near a joint or bony prominences and avoid skin folds, broken, oedematous, infected or recently irradiated skin. Do not site in abdomen if patient has ascites
- Check syringe driver and infusion site one hour after setting it up, then every four hours (in hospital), and daily in community settings, and document.

Practical Points

1. Use as few drugs in the syringe driver as possible (usual maximum 3)
2. Do **not** use the boost button to administer breakthrough medication. Always prescribe appropriate prn doses of breakthrough medication sc
3. A syringe driver may take 4-6 hours to provide effective symptom control. Use prn medications to relieve symptoms if necessary
4. Infusion site reactions may occur as a result of irritant solutions or metal allergy.
Consider:
 - Changing the diluent to 0.9% saline, where compatible with other drugs
 - Change to less irritant drug, e.g. change cyclizine to another anti-emetic
 - Diluting the solution as much as possible, e.g. dilute to 23mL in a 30mL syringe in a T34 syringe driver
 - Using a plastic cannula instead of a butterfly needle (and always in patients allergic to metal)
 - Change the insertion site every 2-3 days
 - Add dexamethasone 1mg to solution (if compatible); check local guidelines
 - Apply hydrocortisone 1% cream to insertion site and cover with occlusive dressing
5. Certain drug combinations may precipitate within the syringe. If this occurs, stop the syringe pump and:
 - Check drugs are compatible
 - Switch to 0.9% saline as diluent (where compatible)
 - Dilute the solution as much as possible, e.g. using a 30mL syringe in a McKinley T34 syringe pump
 - Separate drugs into two syringe drivers
 - Draw up dexamethasone last when used in combination
 - Avoid exposure of solution to sunlight and heat (e.g. electric blankets)
 - Seek specialist advice on alternative drug combinations

Drugs often used in the syringe driver

- All doses are given **per 24 hours SC (ref p74)**
- **When deciding drug doses, take into account regular and prn drug requirements in last 24 hours**
- **Always start at the lower end of the dose range**
- Water for injection is the recommended diluent. However 0.9% saline must be used for several drugs e.g. ketorolac, levomepromazine, octreotide and dexamethasone. Note: 0.9% saline is incompatible with cyclizine
- Not all drug combinations are compatible: check with local Palliative Care Team, pharmacy, or Palliative Care Formulary (ref p94)

SYRINGE DRIVER CSCI DRUGS

Prescriptions may include:

USE	Medication	Dose ranges in CSCI over 24hr
ANALGESIC	Morphine sulphate	5-300mg (or higher*)
	Diamorphine	5-100mg (or higher*) More soluble (and more expensive) than morphine. Useful if volume of mixture with morphine/other drugs too great to fit into syringe
	Oxycodone	5-200mg (or higher *) Alternative to morphine and diamorphine. Relatively expensive For patients already taking opioid analgesia the dose will need to be adjusted; caution in renal failure (p23)
ANTIEMETIC	Metoclopramide	30-80mg Prokinetic antiemetic. Extrapyramidal effects may occur at higher doses
	Haloperidol	0.5-5mg Anti-dopaminergic antiemetic Extrapyramidal effects may occur at higher doses; avoid giving to patients with Parkinson's disease
	Levomepromazine	6.25-25mg Anti-emetic dose range
	Cyclizine	100-150mg Antihistaminic and Antimuscarinic antiemetic. Acts at vomiting centre. Often causes site irritation. Limited compatibility
ANXIOLYTIC	Midazolam	5-60*mg Benzodiazepine; sedative, antiepileptic. Higher doses are only appropriate for palliative sedation.
ANTIPSYCHOTIC	Haloperidol	5-10mg Higher doses required for restlessness/ agitation and delirium (p79) than for nausea/ vomiting.
	Levomepromazine	12.5mg-150mg* (Higher doses are only appropriate for palliative sedation)
ANTISECRETORY	Glycopyrronium	600micrograms-1.2mg
	Hyoscine Butylbromide	20-120mg (240mg*) useful for reducing secretions. Consider when intestinal obstruction or respiratory secretions. Also antispasmodic used to relieve intestinal colic.
	Hyoscine Hydrobromide	400mcg-2.4mg, will cause sedation, may cause agitation
OTHER	Dexamethasone	Up to 16mg. To relieve raised intracranial pressure, liver capsule and neuropathic pain, and as antiemetic. May precipitate when higher doses used with other drugs.
	Octreotide*	300-1200microgram Used in intestinal obstruction (p32) and for fistulae (p40)
	Occasionally used	Alfentanil*, fentanyl*, furosemide*, diclofenac*, ketorolac*, ondansetron*, phenobarbital*, ranitidine*

PSYCHOLOGICAL

DEPRESSION

It is important to consider the differential diagnoses: adjustment reaction, depression, hypoactive delirium and dementia. Be aware that many of the usual somatic symptoms of depression such as anorexia, weight loss and sleep disturbance may already be present in patients with advanced progressive disease, including cancer. Depression may be hidden behind a brave but hollow smile or even overt joking. A therapeutic trial of antidepressants may be appropriate.

Diagnosis

Biological symptoms

- Diurnal variation in mood; may be agitation
- Sleep disturbance especially with frequent or early morning waking

Psychological symptoms

- Persistent, pervasive low mood with loss of pleasure and enjoyment
- Morbid guilt, feelings of helplessness and worthlessness/low self-esteem
- Suicidal ideas and intentions

Causes/Risk factors

Past history of depression

Need to adjust to many life changes over a short period of time

Poor symptom control

Immobility and isolation with poor quality of life and lack of support

Uncertainty about illness or prognosis

Early dementia

Drugs – corticosteroids (long term use, or on withdrawal), benzodiazepines, some cytotoxics, antihypertensives and narcoleptics

Management

A Consider Reversible causes

Minimise the causes: see above

B Non-Drug measures

Provide psychological support or therapies

C Drug therapies are recommended in moderate or severe depression.

NICE guidance is that first line of treatment should be with an SSRI (e.g. Sertraline Citalopram). If there is a lack of response or unacceptable side effects, consider a switch to another SSRI or to Mirtazapine. Mirtazapine is an alternative anxiolytic antidepressant with a side effect profile of increased appetite, weight gain and improved sleep, which may be useful in some patients.

A tricyclic antidepressant may be helpful if pain or poor sleep are prominent features. Consider specialist referral for depression in the last few weeks of life: options include multi professional support and use of methylphenidate.

ANXIETY

Common features include:

- Feeling of being on edge, restless or agitated, apprehension
- Inability to concentrate
- Physical effects such as sweating, tachycardia, staring eyes with dilated pupils
- Anxiety may be a presenting feature of an underlying depression

Causes/Risk factors

- Past history of anxiety
- Poor symptom control
- Inadequate/inaccurate/conflicting information
- Unfamiliar surroundings
- Uncertainty about the future, concern for family/finances etc.
- Early dementia
- Depression
- Caffeine, steroid treatment, salbutamol therapy, methylphenidate
- SSRIs – starting treatment and withdrawing treatment may both be associated with anxiety
- Withdrawal of drugs e.g. opioids /benzodiazepines/alcohol/nicotine
- Akathisia – inner restlessness caused by antipsychotics such as haloperidol, metoclopramide

Management

A Consider Reversible causes e.g. drugs, unexpressed fears

B Non-Drug measures

- Appropriate information, discussion and support for patient/family
- Relaxation techniques and complementary therapies
- Crisis management plan

C Drug therapies

- Treatment of depression if present using anxiolytic antidepressant e.g. Citalopram, tricyclic antidepressant or Mirtazapine
- If symptoms due to confusion causing agitation (ref p79)

Specific treatments

<i>Immediate (Acute relief of panic)</i>	Lorazepam 0.5-1mg given sublingually
<i>Short term</i>	Haloperidol 0.5-3mg at night Olanzapine 2.5mg at night up to 5mg bd Diazepam 2mg bd and/or 5mg at night – for short term use
<i>Longer term</i>	Anxiolytic antidepressant (ref p75) Haloperidol or Olanzapine as for short term If the patient is unable to swallow or has a syringe driver for other reasons, consider Midazolam 10-20mg, Haloperidol 1.5-3mg or Levomepromazine 6.25-12.5mg per 24 hours by csci

INSOMNIA

Insomnia is a subjective complaint of poor sleep. This can mean insufficient, interrupted or non-restorative sleep or sleep at the wrong time. It is important to clarify whether the issue is an inability to get to sleep due to anxiety, confusion; a tendency to wake repeatedly due to urinary problems, pain or anxiety; or early morning waking due to depression.

Causes/Risk factors

- Anxiety or depression
- Poor symptom control
- Nocturia
- Environmental changes – inpatient admission – interruptions by staff
- Fear – e.g. of going to sleep or of nightmares
- Beware of well-intentioned reassurance that “you will die in your sleep”
- Ensure delirium is not missed
- Drugs – stimulants (caffeine etc.), steroids (worse if given later than 2pm), diuretics, opioids (vivid dreams, hallucinations), fluoxetine, propranolol (nightmares)
- Drug withdrawal – alcohol, benzodiazepines, barbiturates

Management

A Consider Reversible Causes

Minimise the causes – control symptoms as far as possible, keep interruptions to a minimum, reduce drug therapy or give stimulants early in the day, counsel about fear and anxieties

B Non-Drug measures

Establish good sleep hygiene (e.g. a consistent bed time ritual)
Encourage relaxation techniques

C Drug therapies

Zopiclone 3.75-7.5mg, Zolpidem 5-10mg or Zaleplon 5-10mg have fewer residual effects than benzodiazepines or

Benzodiazepines e.g. temazepam 10-20mg are rarely first line; risk falls in elderly

Benzodiazepines and zopiclone may help patients get off to sleep but do not ensure a good night's sleep – patients may wake repeatedly. A tricyclic antidepressant may help to ensure a better night's sleep.

Clomethiazole (1-2 capsules) has a short duration of action

Note – all used as a single dose at night, short term use advised. Hypnotics may increase risk of falls and nocturnal confusion.

Use low dose Haloperidol if any evidence of delirium (start with 0.5mg od-tds)

DROWSINESS

Causes/Risk factors

Organic

Disease progression and likely impending death
 Infection, especially within respiratory and urinary tracts
 Raised intracranial pressure
 Post-ictal

Biochemical

Metabolic abnormalities:

- uraemia, especially if on opioids
- hyper/hypoglycaemia
- hypercalcaemia
- hyponatraemia
- hepatic failure
- respiratory failure (blood gas analysis likely to be inappropriate)

Drugs

Opioids, tricyclic antidepressants, benzodiazepines, antimuscarinics, antihistamines. Even drugs that have previously been well tolerated may cause problems if renal impairment or new drug interactions

Other

Fatigue
 Insomnia
 Psychological withdrawal

Management

A Consider Reversible causes

Correct physical causes listed above if indicated
 Assess accurately; if the patient is near to death due to advanced disease, further interventions are unlikely to be appropriate

B Non-Drug measures

Give explanation and reassurance to patient and family, this symptom commonly causes high levels of distress

C Drug therapies

Review dose of opioids and other sedative drugs

Specific:

Dexamethasone up to 16mg daily for raised ICP
 Antidepressants for retarded depression (ref p75)

General:

Dexamethasone 2-4mg daily may act as stimulant
 Methylphenidate* initially may act as stimulant

CONFUSION

Delirium is typified by acute confusion, often with visual illusions or hallucinations, together with increased or decreased psychomotor activity and fluctuating level of consciousness or attention. It must be distinguished from **dementia**, which is associated with gradual onset poor short-term memory and no impairment of consciousness, and which will not be considered here. However, acute delirium may develop in an individual with pre-existing cognitive impairment.

Diagnosis

Use confusion assessment method (CAM) to diagnose delirium:

Three of the following four possible features: acute onset and fluctuating and inattention plus either disorganised thinking or altered level of consciousness

Evidence from the history, examination, or investigations that there may be a physical cause (collateral history is very important)

Delirium can be hyperactive, hypoactive or mixed

Hypoactive delirium is far more common and easily missed

Causes/Risk factors

Age and pre-existing cognitive deficit

Drugs – e.g. opioids, tricyclic antidepressants, antimuscarinics, any sedative drug, baclofen; corticosteroids may cause hypomania

Opioid toxicity exacerbated by uraemia*, dehydration or infection is an important cause of confusion and hallucinations. Look for constricted pupils, myoclonic jerks, skin hyperaesthesia and reduced respiratory rate. (ref p10)

Infection, especially within respiratory and urinary tracts

Biochemical abnormalities – see list under Drowsiness (ref P78)

Intracerebral causes – space occupying lesions, infections, stroke

Environmental changes – interruption from staff, excessive unfamiliar stimuli, inpatient admission

Social isolation

Poor symptom control – pain, constipation, urinary retention, anxiety, depression.

Alcohol or drug withdrawal, including nicotine

Management

A Consider Reversible causes

Treat or minimise any possible causes, including drugs, metabolic abnormalities or infections e.g. oxygen if cyanosed/hypoxic and oxygen saturations are <90%

Dexamethasone up to 16mg per day if cerebral tumour or raised ICP

B Non-Drug measures

Minimise stimuli: nurse in room with diffused lighting, little extraneous noise, and few staff changes

Attempt to keep patient in touch with reality and environment

Allay fear and suspicion – explain all procedures, don't change position of patient's bed, if possible have a friend or relative of patient present

Stress that patient is not going mad and that there may well be lucid intervals

C Drug therapies

If paranoid, deluded, agitated or hallucinating **AND** distressed (may also be needed for hypoactive delirium if patient is distressed):

Haloperidol 0.5mg-1 mg initially-increasing dose as needed, up to tds po/sc or 1.5-10mg over 24 hours csci

Olanzapine 2.5mg nocte up to 5mg bd po.

Risperidone and quetiapine are equally effective

Levomepromazine 6.25mg-50mg* po nocte or sc (twice as potent by sc route) or by csci 6.25mg-150 mg* over 24 hours (higher doses may be used by specialists)

Benzodiazepines may be needed in addition to antipsychotics for acute distress or to control dangerous behaviour (benzodiazepines alone can make delirium worse) e.g.

Lorazepam 0.5-1mg sublingually

Or

Midazolam 2.5-5mg sc/buccal or 10-60mg* by csci over 24 hours

The lower doses are recommended, higher doses following specialist advice

Please note:

Review early, as symptoms may be exacerbated by sedative effects of medication.

If possible avoid antipsychotics in Parkinson's disease or Lewy Body Dementia.

RESTLESSNESS

This may be akin to delirium in someone very close to death, or may occasionally reflect unresolved psychological distress, especially if this has previously been a problem.

Causes/Risk factors

Physical discomfort – unrelieved pain, distended bladder or rectum, inability to move, insomnia, uncomfortable bed, breathlessness

Drugs – opioid toxicity (especially in renal, liver impairment) hyoscine hydrobromide (paradoxical agitation), dopamine antagonists (akathisia), steroids

Infection

Raised intracranial pressure

Biochemical abnormalities – hypercalcaemia, uraemia, hypoxia

Psychological/spiritual distress – anger, fear guilt. Consider especially if patient has been unwilling to discuss illness

Management

A Consider Reversible causes

Accurately assess the patient

Ameliorate all physical elements if possible, e.g. analgesia, catheterisation

B Non-Drug measures

Must be multi-professional approach involving family or main carers

Listen to the patient and address anger, fear and guilt if possible

May be very distressing for the family who will need much support

Their presence may help or worsen the patient's agitation

C Drug therapies

If there are hallucinations or frank delirium (ref p79)

Haloperidol 0.5-5mg po/sc or 1.5-10mg* by csci over 24 hours

Or

Levomepromazine 6.25-50mg* po/sc or 6.25-150mg csci over 24 hours.

In exceptional circumstances doses as high as 200mg* by csci over 24 hours may be used,

* discuss with specialist if considering doses towards the top of these ranges

May need to add (if intractable symptoms):

Diazepam 2mg bd or 5mg at night po

Midazolam 2.5-5mg sc or 10-60*mg csci over 24 hours

Clonazepam* 0.5-2mg by csci over 24 hours

Phenobarbital*

Propofol* by carefully monitored iv infusion

BREAKING BAD NEWS

Bad news is any information which alters a patient's view of their future for the worse. The bigger the gap between expectation and reality the worse the news. Giving bad news means entering a therapeutic dialogue: listening and responding; which will affect how patients and families will cope. The aim is to:

- Maintain trust between patient, family/carer and health professionals
- Enable appropriate adjustment for the reality of the situation
- Encourage informed choice of management options
- Reduce uncertainty about the future or at least acknowledge it
- Enable patients to regain a feeling of some control over their situation

The following framework describes one approach to Breaking Bad News:

- 1. Preparation**
 - Know the facts and potential management plan
 - Arrange for privacy, sufficient seating and avoidance of interruptions
 - Whenever possible offer the patient the chance to have a close family member or friend present
- 2. Assess understanding** (may need repeating as further information given)
 - "What do you understand about your illness/what is happening?"
 - "What did the doctor tell you?"
- 3. Check if more information wanted and at what level**
 - "Do you want to go on or is that enough now?"
 - Again, this may need to be repeated as you give further information
- 4. Allow denial**
 - Allow the patient to control the pace of information flow, and to whom the information should be given
- 5. Sharing the information**
 - Start from where the patient is. Give warning shots and further information in small chunks. Know when to stop
 - Be clear and simple, avoiding jargon, and above all be gentle
 - Avoid assumptions about understanding i.e. check that they have heard what you believe you have said
- 6. Elicit concerns**
 - What is worrying the patient most?
- 7. Respond to the patient's feelings**
 - Identify the patient's feelings and acknowledge them
 - Give an empathic response such as "this sounds really hard for you"
 - Listen for and observe the emotional content and behaviour
 - Allow them time to think through the situation and ask questions.
 - "Is there anything else you'd like to say or ask me?"
- 8. Summary and plan**
 - Summarise what has been said, emphasising the positive
 - Outline future treatment if appropriate, using written or printed material if possible.
 - Foster realistic hope, e.g. "We may not be able to cure you but there are things we can do to make you feel better and cope with your illness"
 - Recheck their understanding. Ask who may be told of the diagnosis/information

9. Make arrangements for further contact

Offer early review

Ask who may be told of the diagnosis/information

10. Ensure others are informed of what was said

Tell the General Practitioner and other staff on duty as soon as possible

Record as exactly as possible what was said, so that it can be repeated later and to avoid any misunderstanding

Giving the patient a recording of the interview is popular and effective

Remember

Make sure the patient feels the centre of attention

Much of what you communicate is by non-verbal means and behaviour

Move at the patient's pace, giving information that is appropriate for the time

If using euphemisms, try to find out what they understand by these words

Express your humanity and warmth, and interest in their care

Breaking bad news does not have to be done at one session, it is often best done in stages

Do not be afraid of them expressing negative feelings or crying

Be prepared for an initial stunned silence or anger

Ensure that you are answering the questions that you are being asked

Avoid jargon

Do not tell lies

Some direct questions are best answered initially by asking "What makes you ask that?"

This may enable them to explain the worry behind the question

It is a breach of confidentiality to tell relatives without a patient's consent, where the patient has the capacity to agree to or refuse disclosure

(Breaking Bad News a Ten Step Approach: Kaye.P)

DEALING WITH DENIAL AND COLLUSION

DENIAL

Denial is a basic coping mechanism that allows us to continue to function when faced with information or events with which we are struggling to handle. It may be practised by the patient, family or professionals. Denial is not necessarily unhealthy and can be normal, as in the first stage of accepting bad news. However, if taken to extremes or creating situations that are harmful, such as preventing appropriate treatment, adequate symptom control or future planning for dependents, it may be appropriate to explore the denial.

Assessment

Is it healthy or unhealthy? That is, is it reducing or increasing distress?

Is there an appropriate reason for challenging denial?

Is it really denial? Many people have a good understanding of the situation but do not wish to talk about it.

Is other health professionals' denial contributing?

Management

Gently explore what the person understands of what they have been told.

Using the framework outlined in Breaking Bad News (see p82), gently move the person towards a better understanding of reality, particularly with regard for the particular need identified for challenging the denial. It is often helpful to use such phrases as "What if?" or "Let's look at the worst scenario even if it may not happen".

Be prepared to modify denial in stages; as far as possible at the patient's pace; and accept that it is unrealistic to expect all patients to come to terms with their mortality.

Ensure that extra support is available following the challenging of denial.

Support family or carers who may be finding the patient's denial stressful.

Alert other health professionals involved of any changes in the patient's understanding.

It is possible to remain alongside a person in denial without challenging or colluding with their denial.

COLLUSION

Collusion usually occurs when the family conspire among themselves or with professionals to withhold information from or lie to the patient. It is often well intentioned, acting in what is believed to be the best interests of the patient. However, this inevitably creates tension because, ethically and legally, the patient has the right to information and to authorise disclosure of information to family.

Management

1. Explore the family's understanding and reasoning

Establish whether they are trying to protect themselves or the patient

Recognise that they may have valid concerns about the patient's capabilities and past behaviour patterns

Show understanding of their situation.

2. Reassurance and explanation.

Reassure that you will not walk in and impose information

Explain that:

The patient has a right to information, if requested; honesty is an important part of maintaining trust in a doctor-patient relationship

There are usually stressful consequences of living out an ever increasing lie

If the patient asks direct questions, their understanding and wishes will be explored before answering the question appropriately and sensitively.

Offer to facilitate a joint conversation between the family and patient if they are finding it too difficult.

3. Gently explore the patient's understanding, and assess their desire for further information.

Pass this on to the family, with the patient's consent, to enable more communication.

4. Respect and accept complex family dynamics and do not presume to know what is best for families.

Occasionally patients collude with professionals to withhold information from their family.

This is more difficult as the patient has to give permission for disclosure of information, but the principles are the same as above - exploration of reasoning; explanation of consequences; reassurance of sensitive handling and offer facilitation.

PSYCHO-SOCIAL AND SPIRITUAL CARE

Palliative care extends far beyond pain relief and the alleviation of symptoms. Psychological/emotional, spiritual and social needs of both patient and their family/carers should be addressed.

This holistic assessment is important in ensuring that the patient and family have optimal support in any care setting. It also ensures that discharge planning is effective (hospital/hospice staff should check that these plans are acceptable to the patient, family, carers and Primary Health Care Team).

The framework for needs assessment should include:

- Psychological needs
- Spiritual issues
- Social needs
- Information needs
- Carers' needs

Many factors influence the way in which patients and families cope with their illness and the following need to be considered during an assessment:

- The history of the illness and their understanding of what is happening, including their emotional and psychological response
- How the illness is affecting the person's ability to carry out their role, for example as parent, partner, lover, breadwinner
- Family history – who is around, where are they, how important are they, how supportive are they?
Constructing a family tree (genogram) is often helpful both for establishing relationships and for use as a therapeutic tool in helping people talk about their issues
- Life stresses – for example what is happening with regard to money, jobs, housing, children, sources of support; and how the person has previously coped with stressful situations in life
- Hopes and fears – what is the worst thing that can happen, what are the plans for the future, what losses and disappointments have occurred, what unfinished business is there, and what do they still wish to accomplish?

During assessment it should become apparent whether further expert professional help is required for psychological, spiritual and social care. Those available will include specialist palliative care staff, clinical psychologists, counsellors, chaplain/spiritual advisors and adult and children's social workers.

SPIRITUAL CARE

Spiritual care is one of the central aspects of palliative care. It is difficult to define; but any problem, conversation or contact may involve spiritual as well as physical, psychological or social issues.

Spirituality is to do with how we live, what we treasure and value, and peace of mind.

Spirituality is relational in its expression, i.e. feeling the need to connect with someone or something.

The term spiritual may therefore include anything that affects a person's sense of wellbeing or wholeness. A useful question to open a conversation could be 'Do you feel at peace?'

All patients have spiritual needs while only some will have religious needs.

The primary task when faced with spiritual questions is to help the person towards some relief of distress. This does not necessarily require specialist help – all health professionals should be prepared to make initial assessments and identify these issues.

Spiritual distress

When a person experiences a life crisis they will look to their spiritual values, beliefs, attitudes and religious practices to make sense of it. If these do not enable them to cope with the crisis, then they may experience spiritual distress.

Expressions of spiritual distress include:

- **fear** about the future, about dying and what happens after death
- **loss** of identity or roles (such as parenthood, work)
- **helplessness** and loss of control over what is happening
- **anxiety** about relationships, body image or sexuality
- **suffering** excessively from physical symptoms, especially pain
- **anger**
- **guilt** or shame
- **hopelessness**, despair, feeling alone or unloved
- **exploration** of meaning and purpose of their life
- **breaking** with religious or cultural ties
- desire to **reconnect** with past religious or cultural support

Dealing with spiritual distress

Accept that there is unlikely to be a specific answer – it's OK not to know.

Listen attentively and be prepared to face uncertainties – just by "being there" you can help the patient to make connections and embark on their own search for meaning

Do not be afraid to ask simple questions about their fears, losses and feelings, "the future", sense of control, past regrets, values, beliefs and religious needs. Offer the support of a chaplain or other spiritual leader particularly if you feel out of your depth or there is a requirement for a religious input.

Basic principles

1. Provide a safe caring environment.

- Good symptom control
- Show willingness to listen
- Value their role and appearance, and belief systems

2. Attend to:

- Signs of their wishing to explore spiritual issues
- Ask yourself “Why am I being told this? And why now?”
- Your own verbal and non-verbal behaviour and reactions (patients can be reluctant to embarrass professionals if they sense that they are causing discomfort)

3. Listen to:

- Questions
- Expressions of fear, anger, loss
- Their story

4. Assess in terms of:

- Past, present and future. Ask simple questions as outlined above
- What help is needed

5. Reassure and help with:

- Good physical care in illness and dying
- Respect for their integrity, worth and values
- Information as requested
- “Unfinished business”
- Personal support – “being alongside”
- Care for family and carers
- Reviewing of life
- Arranging provision of spiritual counselling if needed e.g. to help face mortality
- Arranging provision of religious and sacramental care, according to faith

Above all – be there

6. Attend to yourself:

- Facing intense feelings or distress can leave us feeling uncomfortable, inadequate, helpless or vulnerable. The task is to live with our own uncertainties. It is therefore important to explore difficult issues or share concerns with colleagues, e.g. through individual or group supervision.

CULTURE

In our society there is a wide variety of people of different faiths, ethnic backgrounds and countries of origin. Within these groups, each individual will express their cultural attitudes uniquely, as they are influenced by upbringing, background, environment, beliefs and life experience.

Cultural attitudes can particularly influence:

- Language and use of colloquialisms
- The roles of the family
- How symptoms or illness are described and understood
- Attitudes towards expressing emotion and discussing private issues with those outside the family
- Ethical issues, including autonomy and confidentiality
- Attitudes towards conventional Western therapies, complementary or alternative therapies, food and diet
- Attitudes towards pain relief
- Attitudes towards death and dying
- Rituals surrounding death (see below)
- Preferred place of care – home, care home, hospital or hospice
- Acceptance of help and support

Health professionals should show their awareness by:

- Ensuring appropriate language interpretation services are used
- Demonstrating willingness to listen and a wish to understand cultural differences and implications
- Meeting specific requirements (such as food, privacy, opportunity to practice religious observances etc.) wherever possible
- Being prepared to negotiate boundaries and details of care
- Ensuring that there is access to an appropriate religious advisor

Do not make assumptions - ASK.

Remember that each person is unique, regardless of cultural background and professed faith

BEREAVEMENT

BEREAVEMENT

Grief is a natural process experienced by anyone who has to adjust to a significant loss. An appreciation of what is 'normal' is required in order to recognise when and what type of intervention is needed. Bereavement has been described in terms of **tasks of grief**:

Initial shock, numbness and disbelief before emotional reality of the loss is felt. Seeing the body after death, attending the funeral or visiting the grave are often important in facilitating acceptance of the reality of the death.

The pain of separation which affects behaviour and emotions. The bereaved usually suffer overwhelming periods of sadness as they are faced with the day-to-day reality of their loss. They may try to reduce this by avoiding reminders of the deceased. They may also find themselves 'searching' for the bereaved, dreaming about them or actually seeing or hearing them. Visual or auditory hallucinations at this time are normal. Agitation, restlessness and an inability to concentrate can result from the conflict between this searching and avoiding behaviour – attempts to avoid the reality of the situation.

A range of emotions other than sadness may be experienced. Anxiety may be due to loss of the familiar routine and feelings of insecurity. Anger may be directed towards the deceased for abandoning them, towards God, or (justly or unjustly) towards professionals. It may simply manifest as general irritability. Feelings of guilt may occur when anger is directed internally.

It is common for physical symptoms related to over-activity of the autonomic nervous system to be experienced, e.g. palpitations, insomnia, diarrhoea and fatigue. A transient hypochondriasis can occur, but it is abnormal if it persists.

Despair or depression. As the pangs of grief and anxiety reduce in frequency and severity the bereaved may lose interest and purpose in life. They feel hopeless and become withdrawn. This may last for months.

Eventually the loss is **accepted** and life without the deceased is adjusted to.

The task of **resolution and reorganisation** is entered when emotional energy is reinvested in new relationships and activities, although anniversaries often trigger renewed grief.

For some, part of the work of grieving may be undergone before the actual death of the deceased (**anticipatory grieving**). The bereaved oscillate between loss oriented (e.g. active grieving, letting go, breaking bonds, etc.) and restoration oriented work (such as doing new things, investing in new relationships). Coping with bereavement is seen as a dual process of dealing with the pain and loss at the same time as building a new life.

For most people, no formal psychotherapeutic intervention is needed as their personality, previous life experiences, social network and loving relationship with the deceased enable them to come to terms with their loss, and often to grow personally through it. Often all that is required is a watchful eye to check that their grief is continuing normally. Written information explaining what may be experienced and giving useful contact numbers is often appreciated.

For many, a trained volunteer who listens may address the need of the bereaved to recognise and express their feelings and fears, enabling them to make sense for themselves of the events which have occurred. Reassurance that what they are experiencing is 'normal' is extremely helpful. A chaplain may also be helpful to those whose faith is shaken, destroyed or awakened.

Some find meeting with a group of individuals who have undergone a similar experience can be supportive. These groups may or may not have a trained facilitator. Many areas have their own voluntary bereavement and counselling groups including branches of CRUSE.

The needs of children and adolescents are specific to their stage of development and can be quite complex: they may also benefit from specialist support.

There is no clear boundary between what is 'normal' and what is 'complicated' grief, and it is often a question of unusual intensity of reaction or of timing (duration).

Recognition of those likely to develop a **complicated grief** reaction can also allow early supportive intervention and prevent its development.

Risk factors include:

- Unexpected/untimely death
- Unpleasant death
- Ambivalent relationship
- Excessively dependent relationship
- Child/adolescent (may be protected/excluded)
- Social isolation
- Excessive use of denial, preventing anticipatory grieving
- Unresolved anger
- Previously unresolved losses
- Previous psychiatric illness
- History of alcoholism/drug abuse
- Other concurrent stressful life events

Some of these complicated grief reactions can be dealt with by the primary health care teams, social workers, psychotherapists or trained counsellors. Some people require specialist help from psychotherapists or psychiatrists, and it is important for all professionals to realise their own skills and limitations and refer appropriately.

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USEFUL READING LIST

The Oxford Textbook of Palliative Medicine (4th edition Hanks GW et al)

Palliative Care Formulary for advice on drugs in palliative care <http://www.palliativedrugs.com>

Palliative Care Adult Network Guidelines <http://book.pallcare.info/index.php>

Planning for your Future Care – A Guide <http://www.nhs.uk/nhs.uk/>

Always refer to local Specialist Palliative Care guidelines for advice on management in palliative care.

ABBREVIATIONS

csci	continuous subcutaneous infusion (via a syringe driver)	sc	subcutaneous
sl	sublingual	pr	per rectum
po	by mouth	prn	as needed
iv/im	intravenous/intramuscular	bd	twice a day
od	once a day	qds	four times a day
tds	three times a day	nocte	at night
mane	in morning	MR	modified release
IR	immediate release		

* Refers to: For specialist use or after specialist advice

CREDITS

This Good Practice guide, commonly known as the **'Green Book'** has been written to provide advice on clinical management in palliative care. The First edition was produced in 1993 by the Dorothy House Foundation. The book was adopted by all the Specialist Palliative Care units in Wessex in 1997 and this Eighth edition has been revised and reviewed by Palliative Medicine Consultants, working together as the Wessex Palliative Physicians. It is a consensus guide for all staff working with patients with palliative care needs. Credit is also given to colleagues in individual multi-professional teams for their support and contribution.

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