St Elizabeth Hospice

Pain management

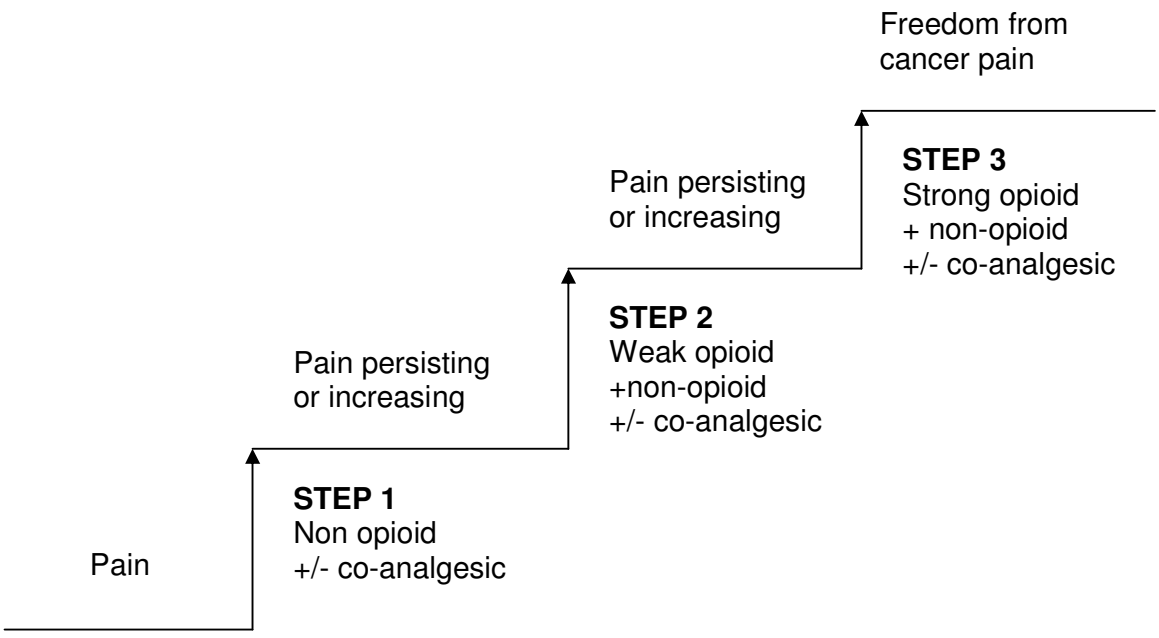
St Elizabeth Hospice
Registered Charity No. 289154

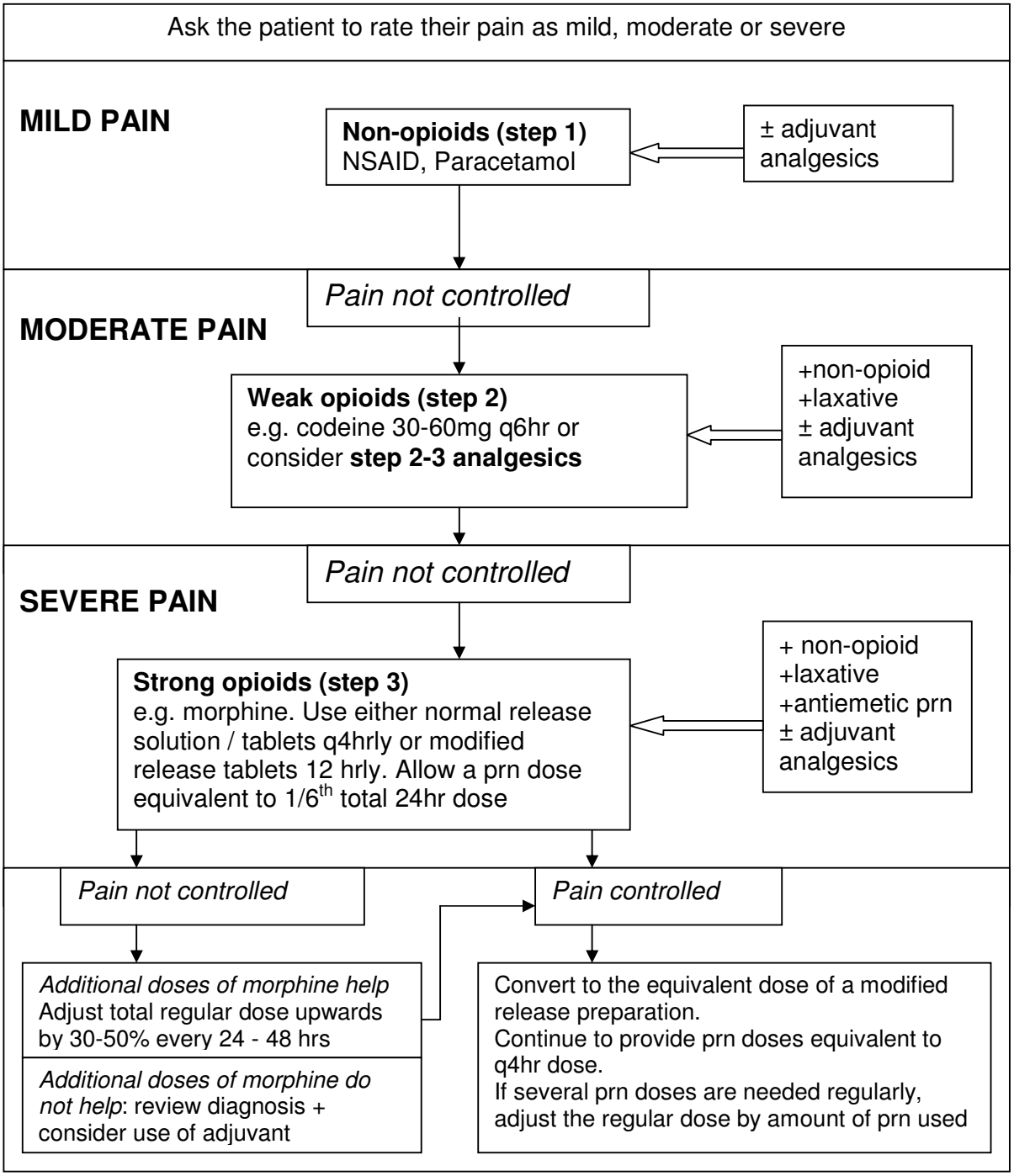
Successful treatment requires an accurate diagnosis of the cause and a rational approach to therapy. Most pains arise by stimulation of nociceptive nerve endings; the characteristics may depend on the organ involved. The analgesic ladder approach is the basis for prescribing but careful choice of appropriate adjuvant drugs (eg anticholinergics for colic, NSAIDs for bone pain and benzodiazepines for muscle spasm), will greatly increase effective palliation. A burning or shooting component to the pain is likely to be due to nerve compression or injury.

WHO Guidelines for the Management of Pain

- The WHO and EAPC guidelines permit effective pain control of chronic cancer pain in the majority of patients
- The WHO describes 3 steps in analgesic prescribing, the “analgesic ladder”
- The oral route is the recommended route and should be used where possible.
- Analgesics should be given regularly, according to the analgesic ladder, for the individual and with attention to detail
- A co-analgesic is a drug which may or may not have intrinsic analgesic activity, but which may contribute significantly to pain relief when used with conventional analgesics.
- If pain is difficult to control, always review the need for co-analgesics
- A patient’s treatment should start at the step of the WHO ladder appropriate for the severity of pain.
- If pain is not controlled on a given step, move upwards to the next step. Do not prescribe another analgesic of the same potency
- Patients should be given information about pain and its management and be encouraged to take an active role in their pain management.

The WHO analgesic ladder





Regular laxative: Codanthramer or Docusate + Senna or Bisacodyl.
Avoid danthron containing aperients in patients who are incontinent or who have an indwelling catheter/external nephrostomy or colostomy.
Antiemetic: prescribe as required for 7-10 days e.g. Metoclopramide 10mg tds or haloperidol 1.5mg nocte

TITRATION OF ORAL MORPHINE

- Use normal release preparations to titrate i.e. Oramorph given q4h PO
- Start on 5mg q4h. If patients are taking maximum dose of a step 2 analgesic and still have severe pain start on 10mg q4h
- Prescribe breakthrough (prn) normal release morphine at the same dose as the q4h dose, given as often as required (up to 1-2hrly)
- Take the number of breakthrough doses into account when adjusting the total daily dose
- Increase the q4h dose by approximately 30-50% every 24-48 hrs until pain is controlled. Suggest increments as follows
  10mg→15mg→20mg→30mg→40mg→60mg→80mg→100mg→130mg
- A double dose of morphine at bedtime is not an effective substitute for a 4hrly dose during the night. Patients should either be prescribed a dose in the middle of the night or encouraged to take a breakthrough dose if they wake.
- If a patient is already on a slow release morphine preparation and is in severe pain it may be advisable to re-titrate by converting back to a normal release preparation given q4h with dose increases as above until pain is controlled.

- Once pain is adequately controlled on q4h normal release morphine, convert to a modified release morphine preparation. To calculate the dose add up the total morphine requirement including both regular and breakthrough doses in the previous 24 hrs and divide by 2 and prescribe Zomorph or MST at this dose to be given twice daily i.e. exactly 12 hours apart
- e.g. Oramorph 10mg q4h = 60mg oramorph/24hr PO.
  Divide by 2 = 30mg Zomorph or MST 12 hrly PO
- Prescribe breakthrough analgesia at the correct dose (1/6th of the total 24 hr oral morphine dose)
- Can use bd morphine preparations to titrate patients

PARENTERAL ANALGESIA

1. **Diamorphine**

- Is the strong opioid of choice for parenteral use because of its greater solubility – maximum recommended concentration 250mg / ml
- If patients are unable to take morphine orally, the preferred alternative route is the subcutaneous route
- IV infusion of opioids may be preferable in patients who already have an indwelling line, have generalised oedema, develop severe site reactions or have coagulation disorders

  - To convert from oral morphine to SC Diamorphine calculate the total 24 hour dose of oral morphine and divide this by three
  - This is the 24 hour SC Diamorphine dose which is usually given by continuous subcutaneous infusion
    e.g. *Zomorph/ MST 30mg bd PO= 60mg oral morphine/24 hrs PO .*
    Divide by 3 = 20mg Diamorphine SC /24hrs
  - Prescribe Diamorphine SC as required for breakthrough pain at 1/6th of the 24 hour SC Diamorphine dose.
  - Assess the number of breakthrough doses required each day and change the 24hr dose accordingly.

2. **Morphine**
   - Morphine can be used in syringe drivers.
     - To convert from Oral morphine to subcutaneous morphine calculate the total 24hour dose of oral morphine and divide this by two

   e.g. Zomorph/MST 30mg bd = 60mg oral morphine/24hrs PO
   Divide by 2 = 30mg morphine sulphate SC/24hrs

ALTERNATIVE STRONG OPIOIDS

Morphine is the strong oral opioid of choice. Diamorphine is the parenteral opioid of choice. A small proportion of patients develop intolerable adverse effects with oral morphine / Diamorphine, before achieving adequate pain relief. In such patients a change to an alternative opioid should be considered. Each has its own advantages and disadvantages. *Seek guidance*

- **Fentanyl:** Synthetic strong opioid analgesic. Mostly inactive metabolites therefore better for use in renal failure. There is some evidence that Fentanyl is less constipating than morphine. Available as transdermal patch, parenteral formulation and transmucosal preparations. The most common formulation of Fentanyl used in palliative care is the transdermal patch. The transdermal patch is useful especially when there is difficulty swallowing, vomiting or intractable constipation but should only be used for stable pain as titration is difficult.

- **Oxycodone:** An effective alternative to morphine if a patient has morphine intolerance. It has fewer active metabolites and a more predictive pharmacokinetic profile than morphine.Less hallucinations and itch than with morphine. Elimination half life is prolonged considerably in liver failure.)

- **Methadone**: Recommend referral to specialist palliative care for advice

- **Hydromorphone**: Recommend referral to specialist palliative care for advice

- **Buprenorphine:** Unlike most opioids, it does not increase pressure within biliary and pancreatic ducts. It is a partial opioid agonist and has an analgesic ceiling at a daily dose of 3-5mg. At low doses, Buprenorphine and morphine are additive in effect, at high doses antagonism by Buprenorphine may occur. Available in sublingual and transdermal preparations.

- **Alfentanil**: recommend referral to specialist palliative care for advice. Highly lipid soluble synthetic opioid, chemically related to fentanyl. Inactive metabolites and therefore suitable for use in renal failure. Available for injection SC or IV

CONVERTING FROM ALTERNATIVE STRONG OPIOID

If patient is already on a strong opioid use potency ratio to calculate the equivalent dose of oral morphine/24hrs.
If pain is uncontrolled and thought to be opioid responsive increase this calculated dose by 30%. Divide this total dose by 6 and prescribe Oramorph q4hrly or divide by 2 and prescribe Zomorph q12hrly

BREAKTHROUGH PAIN + INCIDENT PAIN

- Breakthrough pain is a transient flare of moderate to severe pain in the presence of otherwise controlled background pain.
- There are several types of breakthrough pain: neuropathic, visceral, incident or that related to the end-of-dose failure of scheduled analgesics.
- Incident pain is breakthrough pain following movement e.g. pain resulting from metastatic disease in weight bearing bones.

Management of breakthrough / incident pain

- The appropriate dose for patients on a strong opiate is $1/6^{th}$ of the total 24hr dose of that opiate. For predictable pain, give 30 minutes before expected provoking factor. e.g. before dressing changes or procedures
- For end-of-dose failure, increase dose of background analgesia rather than decreasing the dose interval.
- If breakthrough pain is unpredictable and occurs more than 3 times a day in the context of a controlled release opioid, consider re-titrating with an immediate release opioid or increasing the dose of modified release opioid
- If breakthrough pain is Neuropathic consider co-analgesics, eg clonazepam prn
- If the cause is potentially reversible e.g. from a Metastatic lesion in a bone causing pain on movement, consider radiotherapy or orthopaedic intervention
- Consider newer fentanyl preparations for BTcP that is rapid in onset and offset, eg Fentanyl tablets and intranasal fentanyl. These medications need titration separately from the background analgesic medication.

OPIOID ADVERSE EFFECTS

Adverse effect	Management
Constipation	• Regular laxative. • Use stimulant (e.g. Senna) + softening laxative (e.g. Docusate)
Nausea + vomiting	• *If gastric stasis* (large volume vomiting): Metoclopramide 10mg tds PO • *In other cases* Haloperidol 1.5-3mg PO nocte
Dry mouth	• Local measures: water spray, ice
Respiratory depression	• If respiratory rate < 8/min and SaO_2 < 90%, patient barely rousable / unconscious / cyanosed: • Give O_2 by mask. • Dilute a standard ampoule of 400 microgram Naloxone in 10mls N saline. Administer 0.5ml (20 microgram) IV every 2 minutes until the patient's respiratory status is satisfactory. Further boluses may be necessary. • Caution: the use of higher dose boluses of naloxone may cause the patient to wake suddenly with uncontrolled pain, vomiting and distress • See guidelines on management of opioid overdosing

Opioid withdrawal (flu-like symptoms, shivery, colic, diarrhoea)	• Due to abrupt withdrawal after period of prolonged use. • Restart regular opioid, and then reduce in steps of 30% over at least 5 days.

ADJUVANT ANALGESICS

Skeletal muscle cramp: benzodiazepines

- Diazepam 2-5mg nocte PO

Smooth muscle colic*:* antimuscarinics

- Buscopan 20mg PO qds or 20mg SC stat + 40-80mg CSCI/24hrs

Liver capsule pain: NSAID, corticosteroids, strong opioid

- Dexamethasone 4-8mg od PO

Raised intracranial pressure: corticosteroids

- Dexamethasone 8-16mg PO/24hr
- Give doses before mid-afternoon to avoid insomnia
- Once symptoms controlled, reduce to lowest effective dose

Bone pain*:* NSAID, strong opioid, radiotherapy, bisphosphonates

- Diclofenac 75mg bd PO or parenteral diclofenac CSCI
- Prescribe proton pump inhibitor if risk of GI toxicity or if concurrent use of steroids.

Soft tissue infiltration pain: NSAID, corticosteroid

- Dexamethasone 4-8mg od PO

Neuropathic pain**;** anticonvulsants, antidepressants, corticosteroids

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