**PALLIATIVE CARE GUIDELINES: CONSTIPATION MANAGEMENT**

**Principles:**
- Constipation refers to the passage of small, hard faeces infrequently and with difficulty.
- Stool frequency varies considerably in the normal population and an understanding of the patient’s usual bowel habit is essential for management.
- Constipation is often overlooked despite being an important symptom that can cause distress and complications for many patients. Aim to anticipate and prevent constipation, especially when prescribing regular opioids.
- If evidence of bowel obstruction see separate guideline.

**Assessment:**
- Take a clinical history of the constipation. This should include the patients current bowel pattern compared to their normal, associated symptoms of constipation (e.g. abdominal pain, nausea, PR bleeding), any dietary changes and a list of current medications.
- Perform an abdominal examination including digital rectal examination unless the patient is too weak or likely to suffer undue pain or bleeding as a result.
- Request any appropriate investigations.

**Management:**
- Good holistic care requires a combination of general non-clinical measures and advice, investigation and treatment of any underlying cause(s) and appropriate symptomatic treatment(s). All three aspects of care are important and ideally should occur concurrently, however for certain patients the underlying cause of the constipation may be unclear. Management for these patients should focus on improving symptoms and quality of life whilst regularly reassessing.
- Most patients respond best to a combination of a softening and stimulant laxative.

<table>
<thead>
<tr>
<th>General measures</th>
<th>Treat underlying cause(s)</th>
<th>Treatment (Start with one laxative and titrate dose according to symptoms before adding a second. Often a combination of two laxatives will be required, e.g. bisacodyl and liquid paraffin)</th>
</tr>
</thead>
</table>
| Encourage fluid intake | History, examination and investigations should focus on finding or excluding underlying causes for constipation. Common causes include:  
  - Medication e.g. opioids, anticholinergics  
  - General body weakness/ immobility  
  - Reduced food intake and/ or dehydration  
  - Low residue diet  | Bisacodyl 5-15mg noxe (start with 5mg noxe and titrate up)  
  - Liquid Paraffin 10mls od (increase to bd if required) |
| Increase fibre in diet. Consider vegetable oil or margarine (1 tablespoon at breakfast) and/or dried crushed paw-paw seeds | Reverse/ treat any underlying cause(s) identified appropriately | Rectal measures:  
  - Rectal measures are sometimes necessary but should never replace prescription of an appropriate oral laxative  
  - If hard faecal mass present at digital rectal examination manual removal of faeces may be required  
  - Glycerine suppositories one suppository PR od |
| Encourage exercise/ ambulation where possible | | |
| Assess and manage any pain appropriately | | |

**Oral medication:**
- Bisacodyl 5-15mg noxe (start with 5mg noxe and titrate up)
- Liquid Paraffin 10mls od (increase to bd if required)

**Rectal measures:**
- Rectal measures are sometimes necessary but should never replace prescription of an appropriate oral laxative
- If hard faecal mass present at digital rectal examination manual removal of faeces may be required
- Glycerine suppositories one suppository PR od

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**PALLIATIVE CARE GUIDELINES: DELIRIUM (ACUTE CONFUSIONAL STATE) MANAGEMENT**

**Principles:**
- Delirium is a clinical syndrome, typically acute in onset that involves abnormalities of thought, perception and fluctuating levels of consciousness.
- Both hyperactive and hypoactive forms of delirium have been identified and patients may exhibit features of either.
- Delirium is common in patients with advanced disease, especially the elderly and those approaching end of life.

**Assessment:**
- Take a full history including MMSE. Often a collateral history is required from the patient’s caretaker.
- Examine the patient thoroughly looking for signs of an underlying cause and request any appropriate investigations e.g. CBC, RFTs, urinalysis.

**Management:**
- Good holistic care requires a combination of general non-clinical measures and advice, investigation and treatment of any underlying cause(s) and appropriate symptomatic treatment(s). All three aspects of care are important and ideally should occur concurrently, however for certain patients the underlying cause of the delirium may be unclear. Management for these patients should focus on improving symptoms and quality of life whilst regularly reassessing.

<table>
<thead>
<tr>
<th>General measures</th>
<th>Treat underlying cause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensure patient safety and optimise environment</td>
<td>• History, examination and investigations should focus on finding or excluding underlying causes for delirium.</td>
</tr>
<tr>
<td>• A care taker should remain with the patient</td>
<td>• Common causes include:</td>
</tr>
<tr>
<td>• Remove any objects that could be harmful</td>
<td>- Medications e.g. Opiate toxicity, anticholinergics, hypnotics</td>
</tr>
<tr>
<td>• Correct any sensory impairments, e.g. inadequate lighting</td>
<td>- Infections</td>
</tr>
<tr>
<td>• Ideally the environment should be familiar and not over stimulating</td>
<td>- Urinary retention</td>
</tr>
<tr>
<td>• Educate the family regarding delirium and provide support both emotionally and psychologically</td>
<td>- Constipation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Antipsychotics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First line:</strong></td>
<td><strong>Second line:</strong></td>
</tr>
<tr>
<td>• Haloperidol 1.25-5mg up to tds po or sc</td>
<td>• Chlorpromazine 25-50mg up to tds po or sc OR</td>
</tr>
<tr>
<td></td>
<td>• Risperidone 2mg po od (increased by 1mg daily to maximum of 6mg daily)</td>
</tr>
<tr>
<td><strong>Benzodiazepines:</strong></td>
<td></td>
</tr>
<tr>
<td>(Generally not recommended for delirium unless it is related to alcohol withdrawal, however can be used second line for patients with an agitated delirium in addition to haloperidol or chlorpromazine)</td>
<td>• Diazepam 5-10mg nocte po or sc</td>
</tr>
</tbody>
</table>
PALLIATIVE CARE GUIDELINES: BREATHLESSNESS MANAGEMENT

Principles:
• Breathlessness (dyspnoea) is a distressing symptom experienced by many patients with advanced disease.
• It is a subjective experience and should not be confused with tachypnoea that is an objective clinical sign.

Assessment:
• Take a full, holistic history from the patient and complete a clinical examination.
• Order any appropriate investigations e.g. CXR, CBC.

Management:
• Good holistic care requires a combination of general non-clinical measures and advice, investigation and treatment of any underlying cause(s) and appropriate symptomatic treatment(s). All three aspects of care are important and ideally should occur concurrently, however for certain patients the underlying cause of the breathlessness may be unclear. Management for these patients should focus on improving symptoms and quality of life whilst regularly reassessing.

<table>
<thead>
<tr>
<th>General measures</th>
<th>Treat underlying cause(s)</th>
<th>Symptomatic treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reassure the patient – breathlessness can be extremely frightening, and is exacerbated by anxiety. Explore the patient’s fears and concerns.</td>
<td>• History, examination and investigations should focus on finding or excluding underlying causes for breathlessness.</td>
<td>• Low dose morphine e.g. 2.5-5mg po 4 hourly can improve symptoms of breathlessness (if already on morphine for pain control, increase the dose by 20% and advise on taking breakthrough doses as required).</td>
</tr>
<tr>
<td>• Breathing exercises and relaxation techniques are often beneficial and should be taught to the patient:</td>
<td>• Reverse/ treat any underlying cause(s) identified appropriately.</td>
<td>• Diazepam 2.5-5mg po up to tds. This can be very helpful when the breathlessness is associated with significant anxiety or panic attacks.</td>
</tr>
<tr>
<td>○ Explain that their breathing will improve if they slow it down. Show them how to slow their breathing by pursing their lips as if they were going to whistle when they breathe out.</td>
<td></td>
<td>• Consider oxygen if hypoxic (however there is no evidence to support the use of palliative oxygen in patients with normal oxygen saturations).</td>
</tr>
<tr>
<td>○ Teach the patient to breathe with their diaphragm rather than the top of the chest by putting one hand on their chest and one on the top of their abdomen so they can feel where they are breathing from. The hand on the abdomen should move more if they are breathing with their diaphragm.</td>
<td></td>
<td>• Regular nebulised saline 0.9% may be helpful for patients with sticky bronchial secretions.</td>
</tr>
<tr>
<td>• Find the most comfortable position for the patient (usually sitting up).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Ensure good ventilation – open windows and/ or use a fan. Loosen any tight clothing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Conserve energy by limiting or reducing activities.</td>
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<td></td>
</tr>
</tbody>
</table>

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PALLIATIVE CARE GUIDELINES: END OF LIFE CARE MANAGEMENT PART 2: PRESCRIBING

Principles:
- Most patients find taking medication a burden especially towards the end of life.
- Focus on giving medication that will improve the patient’s quality of life and discontinue any unnecessary medications, e.g. anti-hypertensives.

Assessment:
- If the patient is unable to swallow choose an appropriate route to give necessary medications e.g. via NG tube, parenteral or PR.
- Subcutaneous (SC) is recommended when the enteral route is not possible e.g. patient has bowel obstruction. It is preferred over intravenous and intramuscular access due to its reduced trauma and pharmacokinetics.
- If repeated injections are anticipated or experienced a butterfly needle can be inserted and used as a route for regular SC injections.

Management:
- Common symptoms encountered towards the end of life include pain, agitation, nausea and excessive respiratory secretions. Management of these symptoms is highlighted below.
- Consider prescribing medications pre-emptive to symptoms arising, also referred to as anticipatory prescribing. This can avoid delays in administration but must also be assessed on a case by case basis.
- Morphine concentrations can vary between establishments depending on the preparation used - remember that SC morphine is twice the potency of oral morphine.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Enteral Route</th>
<th>Subcutaneous Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>Morphine 5 – 7.5 mg 4hrly</td>
<td>Morphine 2.5 – 5 mg 4hrly</td>
</tr>
<tr>
<td>Nausea and Vomiting</td>
<td>Haloperidol 2.5mg od titrated to bd</td>
<td>Haloperidol 2.5mg od titrated to bd</td>
</tr>
<tr>
<td>Anxiety or Agitation</td>
<td>Diazepam 5-10mg od titrated to tds</td>
<td>Diazepam 5mg od titrated to tds</td>
</tr>
<tr>
<td>Excessive bronchial secretions</td>
<td>Hyoscine butylbromide 20mg od titrated to tds</td>
<td></td>
</tr>
</tbody>
</table>

Morphine dose will depend on the patient, clinical problem and previous opioid use. If the patient is already taking opioids 1/6th of 24 hour oral dose can be given orally PRN or 1/12th of the 24 hour oral dose can be given SC PRN.

Anti-secretory medication should be given when symptoms first occur and will be less helpful if given later.

Issues of Hydration and Nutrition
- Patients should eat and drink as they wish and take sips of water as long as they are able.
- Families should be educated that it is normal for patients to lose their appetite, sense of thirst and stop feeding towards the end of life. They should not feed patients if they are no longer able to swallow as this may cause choking and distress.
- Intravenous fluids at this stage will not prolong life and will not prevent thirst. Over hydration may contribute to distressing respiratory secretions or generalised oedema and are generally discouraged; good regular mouth care is the best way to keep the patient comfortable.
- Intravenous dextrose for calorie supplementation is unlikely to be of benefit.
- If there is a reduced level of consciousness patients should be not be fed due to the risk of aspiration and artificial nutrition is generally discouraged at the end of life.
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PALLIATIVE CARE GUIDELINES:
FUNGATING WOUNDS MANAGEMENT

Principles:
- Fungating wounds can cause social isolation and low self esteem. However, with the appropriate support the majority of patients and their family members can manage even the most difficult of wounds.
- Good treatment manages all aspects of wound care including exudates, malodour and pain as well as promoting the emotional well being of the patient and family.

Assessment:
- Take a history from the patient and examine the wound.
- Consider the potential for serious complications such as catastrophic haemorrhage.
- Explore the psychological, social and spiritual effects the wound has on the patient and family.

Management:
- Good holistic care requires a combination of general advice, wound treatment and appropriate symptomatic treatment(s). All three aspects of care are important and ideally should occur concurrently, however for certain patient’s treatment of the wound itself may be limited due to e.g. advanced disease status. Management for these patients should focus on improving symptoms and quality of life whilst regularly reassessing.

| General measures | • Clean the wound regularly (at least daily) using a simple salt solution (dissolve 1 teaspoon of salt per pint of cooled boiled water – this is approximately equivalent to 0.9% saline).
| | • Apply clean dressings daily. These can be made from local materials.
| | • Protect the normal skin around the wound with barrier creams.
| Treat underlying cause(s) | • Consider what treatment options are available. Local or systemic treatment may be possible and could include surgery, radiotherapy and/ or chemotherapy.
| | • Liaise with the appropriate colleagues to organize such treatments.

| Symptomatic treatment | Pain | • Ensure that the pain is not caused by infection or dressings. Prescribe appropriate analgesia (see separate pain guideline).
| | Pain with dressing changes only | • Soak dressings off with a simple salt solution.
| | | • Give an extra dose of analgesia 30mins before dressing change.
| Malodour +/- Exudate | • Prescribe non-enteric coated metronidazole tablets. These should be crushed and the powder applied directly to the wound when changing the dressing, ideally daily.
| | | • For foul smelling PV discharge use metronidazole pessaries or non-enteric coated metronidazole tablets inserted PV.
| Infection | Systemic upset or cellulitis | • Continue management above AND
| | | • Prescribe an appropriate antibiotic (may need to be give parenterally).
| Bleeding | Mild | • Avoid trauma especially when changing dressings that should be soaked off with a simple salt solution.
| | Moderate to severe | • Consider palliative radiotherapy, surgery or chemotherapy
| | | • Consider adding tranexamic acid tablets po 500mg-1g tds

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PALLIATIVE CARE GUIDELINES: MOUTH CARE MANAGEMENT

Principles:
- Good mouth care is a vital part of palliative care; it not only improves comfort but helps maintain a patient’s ability to eat, drink and communicate effectively.
- All patients should have regular screening for mouth complications.
- High risk patients, e.g. those with oro-pharyngeal disease, receiving head and neck radiotherapy or immunocompromised patients should be given advice about mouth care preemptive to symptoms arising.

Assessment:
- Take a full, holistic history from the patient and examine the mouth looking for signs of dryness, coating, ulceration, infection or tumour.
- Order any appropriate investigations e.g. mouth swab particularly for patients with persistent or recurrent symptoms.

Management:
- Good holistic care requires a combination of general non-clinical measures and advice, investigation and treatment of any underlying cause(s) and appropriate symptomatic treatment(s). All three aspects of care are important and ideally should occur concurrently, however for certain patients the underlying cause of the oral symptoms may be unclear. Management of these patients should focus on improving symptoms and quality of life whilst regularly reassessing.

General measures
- Patients should maintain a moist mouth by sipping fluids regularly throughout the day. If the patient is unable to swallow they should rinse their mouth regularly with a simple saline or bicarbonate solution (add 1 teaspoon of salt or bicarbonate to a glass of warm water and stir well to dissolve).
- Brush teeth and clean tongue at least twice daily using a small soft toothbrush and toothpaste.
- Advise patients to suck fresh cold pineapple cubes once or twice daily; this can help lift debris from the tongue.
- Adjust foods to aid eating e.g. soft foods with lots of sauce/gravy and avoid too many sugary foods and drinks.
- Advise regular application of lip balm or ‘Vaseline’ to dry cracked lips.
- Review the patient’s medications and adjust as appropriate; certain drugs can exacerbate oral symptoms e.g. anticholinergics cause a dry mouth.

Specific oral problems

Candidiasis
- Ketoconazole 200mg od for 7 days OR Fluconazole 200mg od for 7 days.

Painful Mouth
- Oral morphine 4hrly (for dose refer to pain management guideline). Patients should hold the morphine in their mouth and use as a mouthwash for at least 30 seconds before swallowing.
- Analgesic and antiseptic gel (e.g. bonjela): apply topically to mouth ulcers 4hrly. Has limited use for patients with generalised oral pain.

Mucositis +/- Ulceration
- Assess carefully for evidence of infection and treat appropriately.
- For gingivitis or anaerobic lesions (often associated with significant halitosis) treat with metronidazole mouthwash. This can be made by mixing 50mls of intravenous metronidazole with 450mls of water (50mls of water can be replaced with juice or other flavouring if required). Educate patients to use this solution tds as a mouthwash for 1 minute before spitting out.
- Increase the frequency of mouth cleaning with a saline solution, up to hourly in severe cases.
- For severe cases of mucositis or aphthous ulceration consider a course of steroids. Prescribe Dexamethasone 8mg orally od for 5 days and then review.
- Review the patient’s management plan with the oncology or palliative care teams. If mucositis is secondary to chemo/radiotherapy the dose of treatment may need reducing or in severe cases a break in treatment may be advised to allow healing of the mucous membranes.

Herpes Simplex Infection
- Oral Acyclovir 200mg, 5 times a day for 5-10 days depending on severity.
- Treat lip ulcers with Acyclovir ointment: apply topically to lesions for 5-10 days.
Principles:
- Nausea and vomiting is a distressing symptom that is common in the palliative care population however often underreported by patients.

Assessment:
- Take a full, holistic history from the patient and complete a clinical examination.
- Order any appropriate investigations e.g. CXR, CBC.

Management:
- Good holistic care requires a combination of general non-clinical measures and advice, investigation and treatment of any underlying cause(s) and appropriate symptomatic treatment(s). All three aspects of care are important and ideally should occur concurrently, however for certain patients the underlying cause of the nausea and vomiting may be unclear. Management for these patients should focus on improving symptoms and quality of life whilst regularly reassessing.

### General measures
- Good frequent mouth care (see mouth care guideline)
- Patients should be encouraged to eat and drink as they wish. Regular sips of fluid and small low fibre meals are recommended over larger meals.
- Ensure the patient is adequately hydrated.

### Treat underlying cause(s)
- History, examination and investigations should focus on finding or excluding common underlying causes for nausea and vomiting.
- Reverse/treat any underlying cause(s) identified appropriately

### Treatment
- The choice of first line anti-emetic will be determined by the likely underlying cause of the nausea and vomiting (see below).
- Avoid combining drugs with similar mode of action or antagonistic effects e.g. prokinetics and anticholinergics.
- Consider giving medication via a non-oral route (sc or iv) if actively vomiting or severe nausea.
- Prescribe the chosen antiemetic regularly.

### Suggested medication

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Causes</th>
<th>Suggested medication</th>
</tr>
</thead>
</table>
| Gastric stasis or delayed bowel transit time | - Early satiety  
  - Medications, e.g. morphine  
  - Constipation  
  - Gastric outflow obstruction “squashed stomach syndrome” | - Metoclopramide 10-20mg 8 hourly 30 mins before meals (same dose sc or iv) |
| Metabolic disturbance or toxins | Metabolic:  
  - Renal failure, liver failure, hypercalcaemia  
  - Medications e.g. morphine  
  - Chemotherapy +/- Radiotherapy | Toxic:  
  - Medications e.g. morphine  
  - Chemotherapy +/- Radiotherapy |
| Raised intracranial pressure | - Intracranial tumours  
  - Infections e.g. toxoplasmosis  
  - Meningitis (TB, cryptococcal)  
  - Malaria | - Dexamethasone 8-16mg od (caution in patients with untreated infections) |
| Bowel obstruction | - If surgery ineffective, conservative management of malignant bowel obstruction can improve symptom burden – refer patient to MPCU |

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PALLIATIVE CARE GUIDELINES:
PAIN MANAGEMENT FOR ADULTS

Principles:
• Pain is what the patient says it is and can have physical, psychological, social and spiritual components.
• Aim to control pain quickly and safely. Regularly re-evaluate pain and monitor its response to treatment.
• Benefits and burdens alongside affordability and accessibility are important factors in the choice of analgesic.

Assessment:
• Evaluate the cause of the pain using a holistic history, thorough examination and appropriate investigations. Pain severity should be assessed using an appropriate pain evaluation tool such as the hand scale below.

Management:
• Good holistic care requires a combination of general non-clinical measures and advice, investigation and treatment of any underlying cause(s) and appropriate symptomatic treatment(s). All three aspects of care are important and ideally should occur concurrently, however for certain patients the underlying cause of the pain may be unclear. Management for these patients should focus on improving symptoms and quality of life whilst regularly reassessing.
• Pain management is based on the WHO analgesic ladder.
• Medications should be given regularly throughout the day and orally unless contraindicated.
• Patients started on a regular opioid should have a laxative co-prescribed unless contraindicated.

<table>
<thead>
<tr>
<th>Step</th>
<th>Analgesics</th>
<th>Comments</th>
<th>Adjuvants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> (non-opioid)</td>
<td>Paracetamol 1g 6 hourly or Diclofenac 50mg 8 hourly</td>
<td>Continue with step 1 analgesic when moving on to step 2 and 3</td>
<td>Amitriptyline 12.5-25mg nocte for neuropathic pain (can be increased to 50-75mg if tolerated)</td>
</tr>
<tr>
<td><strong>Step 2</strong> (Weak Opioid)</td>
<td>Morphine 2.5-5mg 4 hourly during the day with a double dose at night or Codeine Phosphate 30-60mg 6 hourly or Tramadol 50-100mg 6 hourly</td>
<td>Low dose morphine is considered a step 2 analgesic and is recommended first line if available as it is cheaper than codeine or tramadol</td>
<td>Clonazepam 0.5-1mg nocte for neuropathic pain second line</td>
</tr>
<tr>
<td><strong>Step 3</strong> (Strong Opioid)</td>
<td>Morphine 7.5-10mg 4 hourly during the day with a double dose at night. Increase the dose as required to control the patient’s pain</td>
<td>The elderly and/or those with renal impairment may require a dose adjustment</td>
<td>(For children see separate guideline)</td>
</tr>
</tbody>
</table>

The WHO Analgesic Ladder

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PALLIATIVE CARE GUIDELINES:
PAIN MANAGEMENT FOR CHILDREN

Principles:
• Pain is what the child says it is and can have physical, psychological, social and spiritual components. No child should be withheld adequate and safe analgesia.
• Aim to control pain quickly and safely. Regularly re-evaluate pain and monitor its response to treatment.

Assessment:
• Evaluate the cause of the pain using a holistic history, thorough examination and appropriate investigations.
• Pain severity should be assessed by using an appropriate pain evaluation tool such as the hands or faces scale below. Scores are from 0, 1, 2, 3, 4, 5 (0 = no pain and 5 = very, very much in pain).

Management:
• Good holistic care requires a combination of general non-clinical measures and advice, investigation and treatment of any underlying cause(s) and appropriate symptomatic treatment(s)
• Pain management for children is based on the WHO analgesic ladder using a two-step strategy
• Medications should be given regularly throughout the day and orally unless contraindicated.
• Patients started on a regular opioid should have a laxative co-prescribed unless contraindicated.

<table>
<thead>
<tr>
<th>Step</th>
<th>Analgesics</th>
<th>Comments</th>
<th>Adjuvants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> (non-opioid)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infants from 1 to 3 months</td>
<td>• Paracetamol 10mg/kg every 4-6 hrs max 4 doses/day</td>
<td>• Aspirin is rarely used in children</td>
<td>• Amitriptyline - children from 2-12 years, 0.2-0.5mg/kg (max 25mg) at night – increase if needed to max 1mg/kg twice a day</td>
</tr>
<tr>
<td>Children from 3 months to 12 years</td>
<td>• Paracetamol 10-15mg/kg every 4-6 hrs max 4 doses/day, max 1g at a time. • Ibuprofen 5-10mg/kg every 6-8 hours</td>
<td></td>
<td>• Carbamazepine – 5-20mg/kg/day in 2 or 3 divided doses, increase gradually to avoid side effects.</td>
</tr>
<tr>
<td><strong>Step 2</strong> (Opioid)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infants from 1 to 3 months</td>
<td>• Oral morphine 0.08-0.2mg/kg every 4 hrs</td>
<td>• Titration: After a starting dose, the dosage should be adjusted to the level that is effective with a maximum dosage increase of 50% per 24 hours.</td>
<td>• Diazepam (used for associated anxiety) 1-6 years: 1mg/day in 2-3 divided doses</td>
</tr>
<tr>
<td>Children from 1 to 2 years</td>
<td>• Oral morphine 0.2-0.4mg/kg every 4 hrs</td>
<td></td>
<td>• 6-14 years: 2-10mg/day in 2-3 divided doses</td>
</tr>
<tr>
<td>Children from 2 to 12 years</td>
<td>• Oral morphine 0.2-0.5mg/kg every 4hrs</td>
<td></td>
<td>• Hyoscine Butylbromide 1month – 2 years: 0.5mg/kg po 8hrly</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• 2-5 years: 5mg po 8hrly</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• 6-12 years: 10mg po 8hrly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Prednisone – 1.2mg/kg/day</td>
</tr>
</tbody>
</table>

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PALLIATIVE CARE GUIDELINES: MALIGNANT SPINAL CORD COMPRESSION

Principles:

- Malignant spinal cord compression (MSCC) is defined as compression of part of the spinal cord through a malignant process such as direct tumour pressure, oedema, vascular disturbance or vertebral instability.
- It is most commonly seen in metastatic lung, breast, prostate cancer or myeloma.
- MSCC is a palliative care emergency requiring urgent assessment and management. Late diagnosis and/or delays in treatment can result in paraplegia, loss of bowel/bladder control, impaired quality of life and reduced survival.

Assessment:

- Take a full, holistic history from the patient and complete a clinical examination. Key signs and symptoms of MSCC include:
  - **Pain** – Severe progressive back pain (particularly thoracic) +/- neuropathic or radicular pain. Pain is typically exacerbated by coughing, straining or lying flat. Pain usually precedes any sensory or motor deficit.
  - **Motor +/- Sensory Deficit** – Reduced power and sensation primarily of the lower limbs but may effect upper limbs depending on the level of compression.
  - **Autonomic dysfunction** – Bladder and/or bowel disturbance (loss of sphincter control is a late sign with a poor prognosis).
- Order imaging investigations urgently – ideally these should be done within 24 hours for patients with neurological symptoms
  - **MRI** is the gold standard though access and cost limit its use in Uganda. If MRI is available aim to image the whole spine as multiple levels of cord compression can occur.
  - If MRI unavailable consider **CT** of the vertebral column.
  - Always consider plain x-rays of the whole spine but remember these may not show the compression.

Management:

- Good holistic care requires a combination of general non-clinical measures and advice, investigation and treatment of MSCC and appropriate symptomatic treatment(s). All three aspects of care are important and ideally should occur concurrently.

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<th>General measures</th>
<th>Corticosteroids</th>
<th>Radiotherapy</th>
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<td>- Pain should be assessed and managed using the WHO analgesic ladder (see pain management guidelines).</td>
<td>- High dose steroids should be commenced immediately with any clinical suspicion of MSCC until a decision regarding treatment is made.</td>
<td>- Radiotherapy is the definitive treatment for MSCC. If appropriate patients with MSCC should be discussed with a radio-oncologist urgently for consideration of treatment.</td>
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<td>- Assess for concurrent problems such as pressure sores, bladder/ bowel incontinence and psychosocial distress.</td>
<td>- Unless contraindicated prescribe Dexamethasone 16 mg stat po followed by 16mg once daily while treatment is being planned and implemented.</td>
<td>- If there is complete paraplegia and loss of sphincter control, radiotherapy may improve pain control but is unlikely to restore function. Patients who are too frail or unfit for specialist treatment should not be transferred unnecessarily to a tertiary referral centre for radiotherapy.</td>
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<td>- Remember to involve OT and physiotherapy in the management of these patients.</td>
<td>- Once radiotherapy treatment has started the dose should be reduced over 5-7 days and then stopped.</td>
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<td>- Consider monitoring blood sugars, especially diabetic patients.</td>
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<td>- Advise patients to take after food to reduce the risk of gastric irritation.</td>
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