### Dry mouth
Common in palliative care population due to side effect of medications & advanced illness.

**Non-pharmacological**: Sugar free chewing gum chewed for 10mins tds & PRN can stimulate saliva production & relieve dry mouth. **Pharmacological**: Artificial saliva – spray generously around mouth to coat mucous membranes qds & PRN – e.g *Glandsosane/ Saliveze* (both vegetarian) or *Orthana* (porcine based).

### Dyspnoea
Consider the presence of reversible causes. Eg Is patient well enough to have a pleural effusion tapped?

**Non pharmacological techniques**: – eg use of hand held fan, good breathing techniques. St Joseph’s Hospice has a physiotherapist led outpatient group - ICON ‘In Control Of Breathing’ - teaches breathless patients self-management respiratory techniques.

**Medications for Dyspnoea**:
1) If renal function normal, low dose opioids reduce dyspnoea¹. Suggest as an initial dose 1mg *Oramorph* po PRN. NB: In advanced COPD v small doses are used & slowly titrated over weeks – starting dose *Oramorph* 1mg po od.
2) Lorazepam 0.5mg sublingually bd can also help – anxiolytic effects.

### Pain

<table>
<thead>
<tr>
<th>WHO Ladder - Non opioids: Paracetamol/ NSAIDS Weak opioids: Codeine/ Dihydrocodeine / Tramadol Strong opioids: Morphine Sulphate is first line po strong opioid³. NB: Several different preparations: Oramorph liquid or Sevredol tablets = short acting, immediate release (IR) morphine (both have 4 hourly analgesia effect) MST or Zomorph = slow release (both 12hourly effect).</th>
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<tr>
<td>• For frail elderly, consider the significant NSAID side effect profile – may limit use.</td>
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<tr>
<td>• Renal impairment will cause accumulation of all oral opioids – fentanyl or buprenorphine may be safer. Please call St Joseph’s Hospice for advice on dosing in renal impairment.</td>
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**WHO analgesic ladder is effective at controlling pain in 88% cancer patients⁴**

NB: Prescribe Laxatives for all patient on opioids. Oral analgesia is as effective as parenteral unless there is an absorption problem.

**Signs of Opioid Toxicity:**
- Early: Drowsiness, hallucinations, myoclonic jerks
- Late: Reduced conscious level, decreased resp rate

**Commencing strong opioids = Step 3 of WHO analgesic ladder:**
1) If WHO step 2 (regular oral weak opioid & non opioid) fail to control pain: stop weak opioid, commence short acting Morphine Sulphate IR (eg *Oramorph*) at dose 5-10mg po 4 hourly. Give analgesia regularly not just PRN.
2) Prescribe same dose oral Morphine Sulphate IR PRN to take maximum 2 hourly.
3) Assess response. Increase regular & PRN dose every 1-2 days to titrate up Morphine Sulphate IR strength as necessary. **Typical dose escalation would be 10mg->15mg->20mg->30mg->40mg->60mg. Monitor for toxicity as per SR preparation (see below).**
4) When pain is controlled, convert IR Morphine Sulphate to slow release MST or Zomorph. Eg *Oramorph* 10mg po 4 hourly controls pain = 6 doses Oramorph per 24hrs = total 60mg Oramorph orally in 24hrs. MST is a bd preparation so divide 60mg by 2 for the equivalent dose, = 30mg MST po bd.
5) PRN Morphine sulphate dose should be an IR preparation at 1/6th of 24hr regular oral morphine dose. Eg MST 30mg po bd = total 60mg orally in 24hrs. 60/6= 10 mg Oramorph po PRN max 2hourly.

NB If patients are opioid naïve but starting morphine sulphate for pain, suggest using a smaller initial dose eg 2.5mg *Oramorph* po 4 hourly & PRN, then titrate dose up as necessary.

**Titrating Morphine Sulphate SR dose when pain not controlled:**
1) Increase MST by 33-50% of previous dose 2) Increase dose every 2-3 days 3) Increase PRN dose as above 4) Monitor response, warn family/pt of signs of opioid toxicity. This will need urgent dose reduction or strong opioid switch - call St Josephs for advice re this³³.

### Constipation
When did bowels last open? What is the patient’s normal bowel habit in health? Pt may only defaecate every 2 days usually.

If straining, some element of constipation exists. **NB**: Encourage oral fluid intake.

**Non stimulant laxatives (softeners)**: Effect takes approx. 24-48hrs. Eg Na Docusate max 200mg po tds OR Movicol. NB need to add at least 125mls water to each Movicol sachet or will be ineffective, so volume can be a burden. Movicol is not absorbed from GIT so can increase dose till regular bowel habit achieved. NB For initial management, Glycerine suppositories may be beneficial (can also be self-administered). **Stimulant laxatives**: Effect takes c.10hrs. Senna max 15mg po bd, Bisacodyl max 20mg noce. May cause or exacerbate colic.

**NB**: Combination of stimulant & softener may be more effective than either alone.
| **Nausea** | **Mechanical:** Nausea is intermittent, relieved by vomiting, large volume vomits. 
**Causes:** Subacute bowel obstruction, constipation  
**Biochemical:** Constant queasiness, small volume vomits, retching does not relieve nausea  
**Causes:** Renal/liver impairment, hypercalcaemia, sepsis eg UTI, medications eg antibiotics/opioids | Consider route of administration & severity of vomiting – is patient dehydrated? Is a syringe driver (SD) necessary to ensure absorption of anti-emetics? What is underlying cause, are investigations such as U&E, Ca, LFTs needed and appropriate?  
**Mechanical cause:** Metoclopramide 10mg po or sc tds. (SD dose Metoclopramide 30mg s/c over 24hrs)  
May exacerbate/case colic as prokinetic. If colic, use anti-emetics as per biochemical suggestions.  
**Biochemical cause:** Cyclizine 50mg po or sc tds +/- haloperidol 1.5mg po/sc max tds (SD dose Cyclizine 150mg s/c 24hrs).  
- In Parkinson’s, best antiemetic = Domperidone as does not cross blood brain barrier  
- In advanced heart failure: unclear which antiemetic safest? low dose Metoclopramide 10mg po/sc tds  
**NB:** MHRA alerts: use Domperidone (arrhythmia risk) & Metoclopramide (extrapyramidal side effects) for <1 week |
| **Itch** | Dry skin exacerbates. Chronic itch may not be mediated by histamine & instead by serotonin.  
**Non pharmacological:** Regular emollient applied at least bd.  
**Pharmacological:**  
1) Trial anti-histamine 2) If ineffective & distressing SSRI’s may help eg Sertraline 25-50mg po od. Tends to be effective within 6 weeks. Can cause initial nausea. |
| **Patient is Dying (last hours to days of life)** | Patient usually bedbound, drowsy.  
**Last hours** suggested by: peripheral mottling, resp rate changes (apnoeic episodes/ rapid breathing), weak rapid pulse, cold peripheries.  
**Subcutaneous or IV fluids** are not routine. Increased risk of excess chest secretions developing. Reduced oral intake is a natural part of dying process.  
If family remain concerned, suggest 12hrly s/c N-Saline drip; stop if chest secretions occur.  
**Agitation** - check not in urinary retention. Examine for signs of pain. Is pt withdrawing from nicotine/ etoh?  
Terminal restlessness=diagnosis of exclusion & requires sedation-call hospice for adviceiii |
| **When to use a syringe driver** | Majority of patient are comfortable if ‘4A’ injectable meds are available to them ie:  
- **Anti-secretories:** Glycopyrronium 400mcg s/c PRN max tds. Give early for chest secretions, as hard to clear once established, consider starting syringe driver. Relatives often find ‘death rattle’ distressing, it may not distress patient.  
- **Anti-emetics** – Haloperidol 1.5mg s/c PRN max tds  
- **Anxiolytics** – Midazolam 2.5-5mg s/c PRN max 2 hourly  
- **Analgesics** – If opioid naïve pt, suggest Diamorphine 2.5-5mg s/c PRN max 2 hourly. If not see below:  
**Syringe drivers:** If taking regular analgesics considercommencing syringe driver (SD) as once oral route is lost, pain will recur. SD infuses drugs s/c over 24hrs, so calculate total regular dose of oral morphine in 24hrs & convert the dose to Diamorphine equivalent. Diamorphine is 3x strength of oral morphine. It is the first line injectable opioid in East London.  
Eg MST 40mg po bd =80mg total oral morphine sulphate/24hrs. 80 divided by 3 = 25mg Diamorphine s/c via SD over 24hrs.  
For any additional PRN Diamorphine doses, divide SD dose by 6 Eg 25/6= 5mg Diamorphine s/c PRN max 2 hourly for pain.  
**NB:** Ensure family & pt know to stop MST when Syringe Driver starts.  
In renal impairment, Diamorphine will accumulate – please contact St Joseph’s Hospice for adviceii.  
Other 4A drugs can be added if necessary to Syringe Driver in doses suggested below: Please use East London SD form.  
- Glycopyrronium 1200mcg s/c over 24hrs for excess chest secretions  
- Haloperidol 1.5mg s/c over 24hrs for nausea or agitation.  
- Midazolam 10mg s/c over 24hrs for anxiety, dyspnoea or agitation. |

Written August 2014 – due review January 2015.

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ii NICE Guideline 140 May 2012 ‘Opioids in Palliative Medicine’.

iii Telephone number St Joseph’s Hospice 0203 30 30 400. 24/7 availability of specialist nurses & doctors for clinical advice, we also visit patients at home between 9am-5pm.