**Nausea and vomiting (N & V)**
Exclude obstruction & biochemical abnormalities

**Oral antiemetics**
1. Haloperidol 500microgram to 3mg nocte: biochemical or opioid induced N & V
2. Levomepromazine 6.25mg to 12.5mg nocte (¼ - ½ x 25mg) (Nozinan®) - broad spectrum antiemetic - may sedate 6mg tablets available for named patient only but expensive
3. Metoclopramide 10mg tds: Prokinetic
4. Cyclizine 25mg to 50mg tds/8 hourly: ↑ ICP or obstruction
5. Parkinson’s patients avoid all dopamine antagonists 1,2 & 3
Use ondansetron or cyclizine

**Combinations of antiemetics both orally or sc**
- **Can use 1 & 4 or 2 & 3 together as complementary effect**
- **Care with 1 & 2 - don’t administer together - give either/or**
- **Not advisable to use 1 & 3 or 4 & 3 together**

**Subcutaneous antiemetics**
Use water for injection unless indicated
1. Haloperidol **Stat or prn dose** sc 500microgram to 1mg **SD dose** 1mg to 3mg/24hour **Max dose** 5mg (SD + prn)
2. Levomepromazine **Stat or prn dose** sc 2.5mg to 5mg **SD dose** 5mg to 12.5mg/24hour **Max dose** 12.5mg/24hour for nausea
Dilute for levomepromazine alone is 0.9% sodium chloride
3. Metoclopramide **Stat dose** sc 10mg **SD dose** 30mg to 60mg/24hour **Max dose** 100mg (SD + prn)
4. Cyclizine **Stat or prn dose** sc 25mg to 50mg **SD dose** 100mg to 150mg/24hour **Max dose** 150mg/24hour (SD + prn)
Avoid/Reduce in liver/cardiac/renal failure
5. Ondansetron **prn 4** to 8mg, 8 to 12 hourly **SD 8** to 16mg/24hr

**Agitation/Delirium**
Is patient at risk to self or others?
Consider treatable causes:
- Constipation, urinary retention, hypercalcaemia, infection
- Haloperidol **Stat or prn dose** po/sc 500microg to 3mg nocte **SD dose** sc 3mg to 10mg/24hour

**Anxiety**
Diazepam (oral) 2mg to 5mg tds
Lorazepam (oral, SL) 50micrograms to 1mg **Max dose** 4mg
NB 1mg lorazepam is equiv to 10ium diazepam

**Terminal restlessness**
Midazolam (10mg/2mL) **Stat or prn dose** sc 2mg to 5mg **SD dose** sc 5mg to 60mg/24hr
Use lower stat and SD doses in renal failure 30mg max’

**Alternatives**
Levomepromazine **Stat or prn dose** sc 6.25mg to 12.5mg **SD dose** sc 6.25mg to 100mg/24hour**
** Seek specialist palliative care advice for higher doses Seek advice Phenobarbitaline sc **Stat dose** 100mg to 200mg

**Thrush**
Nystatin® suspension 1mL qds (chlorhexidine deactivates Nystatin, leave ½ hour between doses)
Flucanazole 50mg od for 7 to 10 days
Miconazole gel
Use a soft toothbrush to clean the mouth

**Respiratory secretions (Death rattle)**
Hyoscine butylbromide (Buscapan® 20mg/mL)
**Stat or prn dose** sc 10mg to 20mg **SD dose** sc 40mg to 120mg/24hour **Max dose** 120mg (SD dose + prn)
Causes less confusion and less sedating than alternatives

**Alternatives** seek advice
Glycopyrronium (Robinul®): 200microgram/mL
**Stat or prn dose** sc 250microgram
SD dose sc 400microcg to 1.200microcg/24hour
Max dose 1200microgram/24hour
Hyoscine hydrobromide (to be avoided in renal failure)
Hyoscine patch 1.5mg/72hour

**For specialist palliative care advice contact:**
Medicines Information for hospital York
Medicines Information for GP
Tel: (01904) 725960 Tel: (0191) 2824631
York St Leonard’s Hospice Tel: (01904) 708553
Hospital Palliative Care Team Tel: (01904) 725835
Community Palliative Care Team Tel: (01904) 724476
St Catherine’s Hospice Tel: (01723) 351421
Hospital Palliative Care Team Tel: (01723) 342446
Community Palliative Care Team Tel: (01723) 356043

**Notes**
1. SD is syringe driver
2. Micrograms should always be written in full
3. Avoid using decimal points when prescribing opioids or naloxone
4. If a range is quoted in literature always start with lowest dose
5. For any new products or change in product license since this publication refer to product literature
6. MHRA guidance states metoclopramide 10mg tds for one week only, prescribing beyond this will be an unlicensed use
7. Consult symptom control algorithms in renal failure

**Introduction**
This formulary is a guide for prescribers in hospitals and primary care across the locality. The acceptance and use of this formulary will enhance the quality and consistency of palliative care. All prescribers should follow local CCG prescribing policies for the most cost effective specific products/brands to ensure they fulfil paragraph 18 of Good Medical Practice which states ‘You must make good use of the resources available to you’. Some drugs are unlicensed for route and indication but are nationally used in specialist palliative care units. Dose adjustments may be required in patients with renal impairment. Consult renal handbook or BNF or SPC (www.medicine.org.uk)

**Pain**
Analgesia should be prescribed on a REGULAR basis.
NB: Laxatives should be co-prescribed at step 2 & 3

**Step 1:** Paracetamol 500mg to 1g qds (lower dose for <50kg)

**Step 2:** 1 + weak opioid
**Weak opioids**
Codeine 30mg to 60mg qds
Combination preparations are prescribed
Cocodamol 8/500 or 30/500 (up to 2 qds)
If intolerant of codeine use tramadol or buprenorphine patch (buprenorphine in micrograms/hour changed every 7 days)

**Step 3:** Replace Step 2 opioid with 2 to 4 hourly prn morphine IR liquid/IR tablets or oxycodone IR if GFR<30mL/min Titrate according to response

**Then/or**
Convert to 12 hour sustained release morphine/alternative opioid

**Conversion:**
Codeine/tramadol to oral morphine divide by 10
Buprenorphine10 micrograms/hr equiv 24mg oral morphine/24hr

**Document any opioid conversions in notes**
Document conversation with patients in notes that opioids may impair ability to drive and issue appropriate leaflet.

**Morphine formulations**
Zomorph SR® cap: 10, 30, 60,100, 200mg (Capsule contents may be sprinkled on food)
MST® Continus tablet: 5, 10, 15, 30, 60, 100, 200mg
Immediate release (IR) morphine sulphate liquid 10mg/5mL, Oramorph® concentrate 20mg/1mL, Sevedrol® tabs 10,20,50mg
For persistent or breakthrough pain
Prescribe IR morphine (total daily dose (TDD) of sustained release morphine divided by 6) to be taken 2 to 4 hourly prn
Morphine intolerance (including renal patients)
Some patients will get significant side effects with morphine. Consider opioid dose reduction, if appropriate. Patients may benefit from switching to oxycodone or fentanyl. Remember some pains are not opioid responsive.

Consult Specialist Palliative Care Team for more advice

Oxycodone Mild to moderate renal failure eGFR<30mL/min
Prescribed as MR 12 hourly sustained release tablet with immediate release IR capsule or liquid breakthrough medication which may be taken every to 2 to 4 hours prn
Prescribe according to CCG guidance in primary care
Oxycodone MR tablets 5, 10, 15, 20, 30, 40, 80, 120mg
Oxycodone IR capsules 5mg, 10mg, 20mg
Oxycodone IR liquid 5mg/5mL, 10mg/mL
Conversion Oral morphine to oral oxycodone divide by 2

Transdermal patches - not suitable for unstable pain
Fentanyl TTS each patch usually lasts 72 hours
(In some patients the patch needs changing every 48 hours)
Fentanyl patches 12, 25, 50, 75, 100micrograms/hour
Prescribe according to CCG guidance in primary care
• Slow onset of action
• Cover with morphine/oxycodone for first 12 hours
• Residual effect up to 24 hours as sub-dermal reservoir
Approximate conversion: 12mcg/hr = 45mcg morphine/24hr
25mcg/hr = 90mcg oral morphine/24hr
If patient dying keep patch on and change it every 72hrs

Buprenorphine patches
5, 10, 20micrograms/hour change every 7 days
35, 52.5, 70micrograms/hour change every 4 days
Max dose 140microgram/hour
For breakthrough pain use immediate release morphine but if morphine intolerant use oxycodone IR (capsule or liquid). Ask SPCT advice re alfentanil spray or IR transmucosal fentanyl products

Subcutaneous opioids Remember to prescribe prn doses, prn=total daily dose(TDD) divide by 6 when prescribing SD
Morphine injection: first line if eGFR<30mL/min
Morphine injection 10mg/mL, 30mg/mL
Conversion Oral morphine to sc morphine divide by 2
Diamorphine is not used routinely in York or Scarborough.
Diamorphine injection 5mg, 10mg, 30mg, 100mg, 500mg
Conversion Oral morphine to sc diamorphine divide by 3

Oxycodone(OxyNorm®) inj 10mg/mL, 20mg/2mL, 50mg/mL
Conversion Oral oxycodone to sc oxycodone divide by 2

Alfentanil injection 500micrograms /mL (2mL, 10mL) (used if eGFR<15mL/min) Contact SPCT for advice

Adjuvants or co-analgesics
Steroids - document indication in notes
Dexamethasone should be given as a morning daily dose
Avoid giving steroids after 2pm as insomnia may occur.
Monitor blood sugars. Consider gastroprotection.
High dose steroids may cause agitation or psychosis
Liver capsule pain Dexamethasone 6mg od
Nerve pain Dexamethasone 6mg od
Bone pain Dexamethasone 6mg od
Raised Intracranial Pressure (ICP) Dex Up to 16mg 1st brain, Dex 8mg for brain secondaries

Bowel obstruction 6mg sc daily
Tritrate dose down as recommended by oncologists/doctors

NSAIDs - Bone pain:
Ibuprofen 200mg to 600mg tds (liquid available)
Naproxen 500mg bd
Consider gastroprotection in high risk* patients on NSAIDs
Lansoprazole 15mg to 30mg od/omeprazole 20mg to 40mg od
*High risk elderly, cancer, previous peptic ulcer or GI bleed, concomitant steroids, SSRI, cardiovascular disease

Colic - Stop stimulant laxative & prokinetic
Hyoscyamine butylbromide (Buscapan®)
Poorly absorbed orally
Stat dose 10mg to 20mg prn 4 hourly sc
SD1 dose 40mg to 120mg/24hour sc
Max SD1 dose 120mg sc (SD1 dose + prn)

Neuropathic pain
Tricyclic antidepressants (avoid in patients with arrhythmias)
Amitriptyline 10mg to 150mg nocte
(Other antidepressants may have analgesic properties)
Anticonvulsants (caution if GFR<30mL/min)
Gabapentin 100mg nocte titrating by 100mg initially
Max dose usually 600mg tds (licensed for 1200mg tds)
Pregabalin 25mg bd
Max dose 300mg bd
Clonazepam is unlicensed. Seek Palliative Care advice
Steroids: Dexamethasone 4mg to 6mg daily

Bowel obstruction
Is it constipation? Is it total or subacute?
Background pain: Morphine or alternative opioid +/- steroids
Antiemetics: If subacute and no colic consider metoclopramide
If colic cyclizine or cyclizine + haloperidol or Levomepromazine (Norzin®)
Colic: see Hyoscyamine butylbromide (Buscapan®) above
Antiserotonin: Buscapan® and Octreotide
Buscapan® SD4 40 to 120mg/24hour Max dose 120mg/24hour
Octreotide is a somatostatin analogue and reduces the volume of vomitus. Used in complete bowel obstruction, helps nausea
Octreotide SD1 300 to 600mcg/24hour Max1000 mcg/24hour

Constipation
Try to anticipate constipation and treat the cause
• A softener & stimulant is usually required in patients taking opioids. Avoid bulking agents
• Full rectum–stimulant required if soft faeces/softener required if hard faeces
• Do not use stimulant if obstruction present

Softener Docusate 100mg to 200mg bd/tds

Osmotic Macrogol 1 to 2 sachet od/bd (Max dose 8/day)
Prescribe according to CCG guidance in primary care
Dissolve each sachet in 125mL water
Caution in fluid restricted patients
Lactulose 15ml bd may cause bloating (useful in hepatic encephalopathy/ patient choice)

Stimulants Senna 2 to 4 noxte Max dose 4 tab tds (30mg tds)
Sodium picosulfate 5 to 10mg od Max dose 20mg
Bisacodyl 5mg to 20mg nocte (10mg PR)
Picolax may be required (picosulfate + Mg citrate)

Impaction
• Rectal examination & AXR or CT scan to exclude constipation with overflow or obstruction
• Oral route alone is usually ineffective
• Consult SPCT re Naloxogol for opioid induced constipation

Suppositories Bisacodyl 10mg to 20mg (stimulant) or Glycerin 1 to 2 (mainly softener)

Enemas Citrate micro enema 1 to 3 or Phosphate enema 1 mane (stimulant)

If above enema ineffective
Warm arachis oil (contains nuts do not use if nut allergy) administered overnight as a retention enema (softener) which need to be followed by a phosphate enema (stimulant)

Dyspnoea (breathlessness)
Exclude reversible causes and remember the importance of explanation and reassurance
Only use oxygen in patients with hypoxaemia
There is evidence that handheld fan may be beneficial
Opioids (if GFR<30mL/min use oxycodone)
Morphine MR 5mg to 10mg bd. Start low and titrate to 30mg daily
Alternatively morphine IR 1 to 2mg 4 hourly, titrate to 30mg daily

Benzodiazepines
Diazepam 2mg to 5mg po bd/tds
Lorazepam 500micrograms sublingual prn up to tds
Midazolam Stat or prn dose sc 2mg to 5mg
SD1 dose sc 5mg to 10mg/24 hour
Higher doses may be required to address symptoms
Seek specialist palliative care advice