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[6] 10mg tds: Prokinetic
4. Cyclizine 25mg to 50mg tds/ 8 hourly: ↑ ICP or obstruction
5. **Parkinsons patients** avoid all dopamine antagonists1, 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 3 & 4 together*

Subcutaneous antiemetics

Use water for injection unless indicated

1. Haloperidol **Stat or prn dose** sc 500 microgram to 1mg
   SD[1] dose 1mg to 3mg/24hour
   Max 5mg (SD + prn)
2. Levomepromazine **Stat or prn dose** sc 2.5mg to 5mg
   SD[1] dose 5mg to 12.5mg/24hour
   Max dose 12.5mg/24hour for nausea

Diluent for levomepromazine alone is 0.9% sodium chloride

3. Metoclopramide[6] **Stat dose** sc 10mg
   SD[1] dose 30mg to 60mg/24hour
   Max dose 100mg (**SD[1]** + **prn**)
4. Cyclizine **Stat or prn dose** sc 25mg to 50mg
   SD[1] dose 100mg to 150mg /24hour
   Max dose 150mg /24hour (**SD[1]** + **prn**)
   Avoid/ reduce in liver/cardiac/ renal failure
5. Ondansetron **prn** 4 to 8mg, 8 to12 hourly **SD[1]**8 to16mg/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 500mcg[2] to 3mg nocte
SD[1] dose sc 3mg to 10mg/24hour.

Anxiety

Diazepam (oral) 2mg to 5mg tds
Lorazepam (oral, SL) 500micrograms to 1mg, max 4mg
NB 1mg lorazepam is equiv to 10mg diazepam

Terminal restlessness

Midazolam (10mg/2mL) **Stat or prn dose** sc 2mg to 5mg
SD[1] dose sc 5mg to 60mg /24hr
Use lower stat and **SD[1]** doses in renal failure 30mg max[7]

Alternatives

Levomepromazine **Stat or prn dose** sc 6.25mg to 12.5mg
SD[1] dose sc 6.25mg to 100mg/ 24hour**
** Seek specialist palliative care advice for higher doses
Seek advice Phenobarbitone sc **Stat dose** 100mg to 200mg

Thrush

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

Respiratory secretions (Death rattle)

Hyoscine butylbromide (Buscopan® 20mg/mL)
Stat or prn dose sc 10mg to 20mg
SD[1] dose sc 40mg to 120mg /24hour
Max dose 120mg (**SD[1]** dose + **prn**)
Causes less confusion and less sedating than alternatives

Alternatives seek advice
Glycopyrronium (Robinul®): 200microgram/mL
Stat or prn dose sc 200microgram
SD[1] dose sc 400mcg[2] to 1,200mcg/24hour
Max 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	Tel: (01904) 725960
Medicines Information for GPs	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
Scarborough	
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 midazolam in adults where possible as may lead to errors with hand written prescriptions / drug charts**
4. **If a range of medication is quoted in the guidance always start with lowest dose in the range**
5. **For any new products or change in product licence 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**

This formulary was produced by
York Teaching Hospitals Palliative Care Teams, York and Scarborough Palliative Care Pharmacy Group.
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York Teaching Hospital NHS
NHS Foundation Trust

Palliative Care Formulary

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)
If a range is quoted in guidance always start with lowest dose

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)
+/-Ibuprofen 200 to 600mg tds **or** Naproxen 500mg bd
Consider gastroprotection –see NSAIDs over page

Step 2: **Step 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 to12 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,**Sevredol® tabs** 10,20,50mg
For rescue 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, 120 mg
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 24hours as sub-dermal reservoir

Approximate conversion:12mcg^2/hr =45mg morphine/24hr
25mcg^2/hr = 90mg oral morphine/24hr
If patient dying keep patch on and change it every 72hrs

Buprenorphine patches
5, 10, 20 micrograms/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^1**)
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®) inj10mg/mL, 20mg/2mL, 50mg/mL
Conversion Oral oxycodone to sc oxycodone **divide by 2**

Alfentanil injection 500 micrograms /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 1^o brain, Dex 8mg for brain secondaries
Bowel obstruction 6mg sc daily
Titrate 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 20 to 40mg od
***High risk** elderly, cancer, previous peptic ulcer or GI bleed, Concomitant steroids, SSRIs, cardiovascular disease

Colic - Stop stimulant laxative & prokinetic

Hyoscine butylbromide (Buscopan®)
Poorly absorbed orally
Stat dose 10mg to 20mg **prn** 4 hourly sc
SD^1 dose 40mg to 120mg /24hour sc
Max SD^1 dose 120mg sc (**SD^1** 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 (Nozinan)
Colic: see Hyoscine butylbromide (Buscopan®) above
Antisecretory: Buscopan® and Octreotide
Buscopan® **SD^1** 40 to 120mg/ 24hour **Max** dose 120mg/24hour
Octreotide is a somatastatin analogue and reduces the volume of vomitus. Used in complete bowel obstruction, helps nausea
Octreotide **SD^1**300 to 600mcg^3 /24hour **Max**1000 mcg^2/ 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 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 nocte max 4 tab tds (30mg tds)
Sodium picosulfate 5 to 10mg od max 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 over night 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 500 micrograms sublingual prn up to tds
Midazolam **Stat or prn dose** sc 2 to 5mg
SD^1 dose sc 5mg to 10mg/24 hour
Higher doses may be required to address symptoms
Seek specialist palliative care advice