Nausea and Vomiting (N&V)

Exclude obstruction & biochemical abnormalities

Oral antiemetics

1) Metoclopramide[6] 10mg tds: Prokinetic
2) Haloperidol 500microgram to 3 mg nocte: Biochemical or opioid induced N &V
3) Cyclizine 25mg to 50mgs tds/ 8 hourly : ↑ ICP or obstruction
4) Levomepromazine 6.25 to 12.5mg nocte (¼ - ½ x 25mg tab) (Nozinan®) 6mg tablets available for named patient only

Combinations of antiemetics both orally or sc

- ***Can*** *use 2 & 3 or 1 & 4 together*
- ***Not advisable to use*** *1 & 2 or 1 & 3 together*

Subcutaneous antiemetics

Use water for injection unless indicated

1. Metoclopramide **Stat dose** sc 10mg
   SD[1] dose 30mg to 60mg/24hour
   Max dose 120mg (SD + prn)
2. Haloperidol **Stat dose** sc 500 microgram to 1mg
   SD[1] dose 1mg to 3mg/24hour
   Max 5mg (SD + prn)
3. Cyclizine **Stat dose** sc 25 to 50mg
   SD[1] dose 100mg to 150mg /24hour
   Max dose 150mg /24hour (SD + prn)
   Avoid/ reduce in liver/cardiac/ renal failure
4. Levomepromazine (Nozinan ®) **Broad spectrum antiemetic**
   Stat dose sc 5mg to 6.25mg
   SD[1] dose 5mg to 12.5mg/24hour
   Max dose 25mg/24hour for nausea

Diluent for Levomepromazine alone is 0.9% sodium chloride

Agitation

Consider treatable causes:
Constipation, urinary retention, hypercalcaemia, infection
Diazepam (oral) 2 to 5mg qds
Lorazepam (oral, sL) 500micrograms to 1mg, max 4mg
NB 1mg is equiv to 10mg diazepam
Diazepam PR (Stesolid) 5 to 10mg
Haloperidol **Stat dose** po or sc 1 to 3mg nocte
SD[1] dose sc 3mg to10mg/24hour

Terminal Restlessness

Midazolam **Stat dose** sc 2mg to 5mg
SD[1] dose sc 5mg to 60mg /24hour
Use lower stat and SD doses in renal failure 30mg max[7]

Alternatives

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

Thrush

Nystatin suspension 1mLqds but may need higher dose 5mLqds
(Chlorhexidine deactivates Nystatin leave ½ hour between doses)
Fluconazole 50mg od for 7 to 10 days
Miconazole gel

Respiratory secretions (Death rattle)

Hyoscine butylbromide (Buscopan®)
Stat dose sc 20mg **SD[1] dose** s/c 40mg to 120mg /24hour
Max dose 240mg (sc +SD dose)
Used in conscious patient as less sedating & causes less confusion than alternatives

Alternatives

Glycopyrronium (Robinul®): seek advice
Stat dose 200microgram sc
SD[1] dose sc 400mcg[2] to 1,200mcg/24hour
Max 1200 microgram/24hour
Hyoscine hydrobromide (to be avoided in renal failure)
Stat dose sc 200 microgram
SD[1] dose sc 400 to 2,400microgram/24hour
Hyoscine patch 1.5mg / 72hour

For specialist palliative care advice contact:

York

St Leonard's Hospice	Tel: (01904) 708553
Hospital Palliative Care Team	Tel: (01904) 725835
Community Palliative Care Team	Tel: (01904) 724476
Medicines Information	Tel: (01904) 725960

Scarborough

St Catherine's Hospice	Tel: (01723) 351421
Hospital Palliative Care Team	Tel: (01723) 342446
Community Palliative Care Team	Tel: (01723) 356043
Medicines Information	Tel: (01723) 385170

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.
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 1g qds **+/-**
Ibuprofen 200 to 600mg tds **or** Naproxen 500mg bd

Step 2: **Step 1 + weak opioid**
Weak opioids
Codeine 30mg to 60mg qds **or**
Dihydrocodeine 30 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 (Butrans® in micrograms / hour changed every 7 days)

Step 3: **Replace Step 2 opioid** with 4 hourly immediate release morphine sulphate (e.g.Oramorph®) +equivalent rescue dose. Titrate according to response

Then/or

Convert to12hour sustained release morphine/ alternative opioid

Conversion:

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

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

Morphine formulations

Zomorph SR®: (Formulary choice)
Capsules 10mg, 30mg, 60mg, 100mg, 200mg
(Capsule contents may be sprinkled on food)
MST® Continus sachet: 20mg, 30mg, 60mg, 100mg, 200mg
Immediate release morphine sulphate e.g. Oramorph liquid
10mg/5mL, **Oramorph concentrate** 100mg/5mL
For rescue or breakthrough pain
Prescribe immediate release Morphine equivalent to **1/6 of total daily dose (TDD)** of slow release Morphine.

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 Used in mild to moderate renal failure
Prescribed as MR12 hourly sustained release tablet with immediate release capsule or liquid breakthrough medication which may be taken every 4 hours, as needed
Prescribe according to CCG guidance in primary care
OxyCodone MR tabs5,10,15,20,30,40,80,120 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

Fentanyl TTS each patch **usually** lasts **72 hours**
(In some patients the patch needs changing every 48hours)
Fentanyl patches 12, 25, 50, 75, 100 micrograms/hour
Prescribe according to CCG guidance in primary care
Note

- Slow onset of action
- Cover with morphine/oxycodone for first 12 hours
- Residual effect up to 24hours as sub-dermal reservoir

Approximate conversion: 12mcg/hr =45mg morphine/24hr 25mcg/hr= 90mg morphine/24hr, 50mcg/hr =180mg/24hr

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

Subcutaneous opioids
(Remember to prescribe breakthrough doses 1/6 of total daily dose (TDD) when prescribing a syringe driver)
Morphine injection: first line if no contraindications.
Morphine inj 10mg/mL, 30mg/mL
Conversion Oral morphine to sc morphine **divide by 2**

Diamorphine is not used routinely in York or Scarborough.
Diamorphine inj 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 inj 500 micrograms /mL (2mL, 10mL)
(Used in renal impairment if GFR<15mL /min)

Adjuvants or Coanalgesics

Bone Pain:

Ibuprofen 400 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

Neuropathic Pain

Tricyclic antidepressants
Amitriptyline 10 to 150mg nocte
(Other antidepressants may have analgesic properties)
Anticonvulsants
Gabapentin 100mg nocte titrating by 100mg initially
Max dose 600mg tds.
Pregabalin 25mg bd
Max dose 300mg bd
Consult renal handbook in patients with renal impairment.
Clonazepam Seek Specialist Palliative Care advice
Steroids: Dexamethasone 4 to 8mg daily

Colic Stop stimulant laxative & prokinetic

Hyoscine butylbromide (Buscopan®)
Poorly absorbed orally
Stat dose 20mg prn 6hourly sc
SD[1] dose 40mg to 120mg /24hour sc
Max SD[1] dose 240mg sc

Liver Pain Dexamethasone 4 to 8mg daily & titrate down

Bowel obstruction

Is it constipation? Is it total or sub acute
Background pain: Morphine or alternative opioid
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] 60 to 120mg/ 24hour Max** dose 240mg/24hour
Octreotide is a somatastatin analogue reduces the volume of vomitus and used in complete bowel obstruction, helps nausea
Octreotide **SD[1] 300 to 600mcg[3] /24hour Max**1000 mcg[3]/ 24hour

Raised Intracranial Pressure (↑ICP)

Dexamethasone 8mg for brain secondaries Up to 16mg 1[o] brain
Titrate doses down as recommended by oncologists/ Doctors
Dexamethasone should be given as a **morning daily dose**
Do not give steroids after 6pm as **insomnia** may occur**.**
Monitor blood sugars. Consider **gastroprotection.**
High dose steroids may cause **agitation** or **psychosis**

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 100 to 200mg bd/tds

Osmotic Macrogol 1 to 2 sachet od/ bd (Max 8/day)
Prescribe according 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)

Impaction

- Rectal examination & AXR or CT scan to **exclude constipation & overflow or obstruction**
- Oral route alone is usually ineffective

Suppositories Bisacodyl 10 to 20mg **(stimulant) or**
Glycerin 1to 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
Oral Morphine 1 to 2mg 4 hourly and titrate opioids slowly according to response.
Benzodiazepines
Diazepam 2mg to 5mg po bd / tds
Lorazepam 500 micrograms sublingual prn up to tds
Midazolam **Stat dose** sc 2 to 5mg
SD[1] dose sc 5 to 10mg/24 hour
Higher doses may be required to address symptoms
Seek specialist palliative care advice