

Symptom Control and Anticipatory Prescribing (last days of life)

Pain

- Patient not currently taking opioids: prescribe 2.5 - 5mg MORPHINE subcutaneous (SC) when required (PRN) 1 hourly. If the oral route is available also prescribe MORPHINE 2.5 - 5mg PO PRN.
- If 2 or more SC doses are required in 24-hours start MORPHINE by continuous SC infusion* at the same dose as the total prn SC doses required in previous 24 hours. Then the SC PRN dose should be approximately 1/6 of 24hr syringe driver dose
- If the patient is also taking oral MORPHINE, calculate the subcutaneous equivalent daily dose (total oral daily dose divided by 2), and add this to the syringe driver. Then the SC PRN dose should be approximately 1/6 of 24hr syringe driver dose.
- Review the continuous subcutaneous infusion dose daily and consider increasing to include any additional PRN doses given.
- If the patient has a fentanyl (OR buprenorphine) patch leave this in place and prescribe the appropriate SC PRN dose of morphine

Dosing example:

Total daily dose MORPHINE orally (PO) is 60mg. The equivalent 24hr SC dose is 30mg. The PRN dose is 1/6 of this i.e. 5mg SC

NB The dose calculation is different for other opioids.

E.g. Oral Morphine 60mg = Oral oxycodone 30mg = subcutaneous oxycodone 15mg.

For PRN dose calculation or opioid dose conversion see the Palliative Network Guidelines: PANG (<http://book.pallcare.info>) or the Palliative Care Formulary

Nausea and Vomiting

- Continue any orally effective agents by subcutaneous infusion*, for example:
CYCLIZINE 50mg three times a day (TDS) PO = CYCLIZINE 75mg SC /24 hour
METOCLOPRAMIDE 10 mg TDS PO = METOCLOPRAMIDE 30mg SC /24 hours
- Higher doses of Cyclizine and metoclopramide can be used with caution. Please be aware of potential adverse effects and check compatibility when more than one drug is used in a syringe driver with Cyclizine. Seek advice if needed.
- If no prescription exists, or in addition to above, prescribe LEVOMEPRMAZINE 6.25mg - 12.5mg SC PRN 1-hourly
- If more than 2 PRN doses are required in 24 hours, add to the continuous subcutaneous infusion: LEVOMEPRMAZINE 12.5mg /24 hours and continue PRN prescription.
- If more than 2 PRN doses in the subsequent 24 hours, increase continuous subcutaneous infusion to LEVOMEPRMAZINE 25mg /24 hours.



Agitation and Delirium

- Consider treatable causes e.g. pain; urinary retention; faecal impaction.
- Prescribe MIDAZOLAM 2.5 - 5mg SC PRN 1 HOURLY or LEVOMEPRMAZINE 6.25-12.5mg SC PRN 1 HOURLY
- If more than 2 PRN doses in 24 hours, add MIDAZOLAM 10mg /24 hours or LEVOMEPRMAZINE 12.5-25mg / 24 hours to the continuous subcutaneous infusion.
- Delirium is best treated with a combination of benzodiazepine and antipsychotic.

Respiratory Tract Secretions

- Explain to the patient's relatives that noisy breathing is due to the inability of the patient to clear secretions, and that they are not choking. Advise to reposition the patient.
- Prescribe HYOSCINE BUTYLBROMIDE 20mg SC PRN 1 hourly.
- If any doses are required prescribe 40mg or 60mg /24 hours by subcutaneous infusion and continue PRN.
- If symptoms persist beyond 24 hours, increase the dose in the subcutaneous infusion to 120mg /24 hours.

Dyspnoea

- Consider cause and treat appropriately (e.g. hypoxia, pulmonary oedema, bronchospasm).
- Use non-drug measures such as explanation, reassurance, repositioning, fan, relaxation.
- If non pharmacological treatments are ineffective, use MORPHINE 2.5mg or MIDAZOLAM 2.5mg SC PRN 1 hourly.
- If more than 2 doses in last 24 hours, prescribe a continuous subcutaneous infusion over 24 hours, and continue PRN prescription. NB: See above morphine/midazolam dosing guidance under Pain/Agitation.

Concentrations and ampoule sizes of the medicines included above

Medicine	Concentration	Vial/ Amp Size	Pack Size	Cost (July 19 Drug Tariff)
Morphine (CD)	10mg/1ml	1ml	10	£11.68
	15mg/1ml	1ml	10	£10.74
	30mg/1ml	1ml	10	£11.49
	60mg/2ml	2ml	5	£10.07
Oxycodone (CD)	10mg/1ml	1ml	5	£8.00
	20mg/ 2ml	2ml	5	£16.00
	50mg/1ml**	1ml	5	£70.10
Cyclizine	50mg/1ml	1ml	5	£8.65
Levomepromazine	25mg/1ml	1ml	10	£20.13
Metoclopramide	10mg/2ml	2ml	10	£2.65
Hyoscine Butylbromide	20mg/1ml	1ml	10	£2.92
Midazolam (CD)	10mg/2ml	2ml	10	£5.00

** Only to be used when the lower concentrations of oxycodone will not fit in the syringe driver.



Specific Community Pharmacies participate in the Palliative Care Drugs Stockist Scheme. Details of participating pharmacies should be available locally. The supporting document from NHSE is on <https://www.nottsapc.nhs.uk/media/1234/palliative-care-drug-stockist-scheme-sla-2019-20.pdf>

*Continuous subcutaneous syringe infusions are administered using T34 syringe pumps. For further guidance see local syringe driver policy.

Ensure that patients requiring syringe drivers are also prescribed water for injections.

Check compatibility where more than one drug is used in a syringe driver.

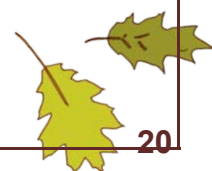
IF 2 CONSECUTIVE DOSES OF MEDICATION AN HOUR APART HAVE NOT BEEN EFFECTIVE TO CONTROL A SYMPTOM PLEASE SEEK MEDICAL ADVICE.

If symptoms are difficult to control, for education and advice contact your Specialist Palliative Care Team.

Ensure practice is in line with your local Anticipatory Medications Policy.

References: Palliative Adult Network Guidelines (PANG) are available at

<http://book.pallcare.info> PCF6 (Palliative Care Formulary version 6) www.palliativedrugs.com



Anticipatory Medications in Severe Renal Impairment Stage 4-5 Chronic Kidney Disease (eGFR<30ml/min)

Pain

FENTANYL is the opioid of choice (less renal excretion of parent drug and inactive metabolites) and may be recommended by specialists for patients with severe renal impairment.

Subsequently it may be prescribed by Primary Care Prescribers (classified Amber 2).

The information included here is intended as an example to aid prescribers. If in doubt contact your Specialist Palliative Care Team or Medicines Management support.

- Patient not taking a regular opioid: Prescribe FENTANYL 12.5 - 25 micrograms SC PRN 1 hourly
- If any PRN doses required consider continuous subcutaneous infusion* with a dose based on the PRN use
or up to FENTANYL 100 micrograms/24-hours. (1mg FENTANYL SC = 150mg oral morphine)
- If patient has a FENTANYL patch – continue patch and use FENTANYL SC prn in addition.
- If patient is taking other regular opioids and tolerating well without signs of opioid toxicity continue as a continuous SC infusion with appropriate dose conversion or convert to FENTANYL in syringe driver with FENTANYL SC prn at 1/6 to 1/10 of the total 24 hour continuous subcutaneous infusion dose (seek specialist advice for dose guidance and conversion)

Morphine can be used with caution if the patient is not opioid toxic. Start with small doses e.g. 2.5mg SC 4 hourly prn and titrate carefully, monitoring for toxicity. If there are no signs of toxicity, the PRN interval can be increased to 1 hourly dependent on how the individual patient responds.

If pain is difficult to control or for dose conversion advice please seek specialist advice

Opioid dose conversion guidance is available - Palliative Network Guidelines: PANG
<http://book.pallcare.info>Physical Symptoms and signs>pain> Opioid Potency Ratios>

Note: The previous version of this Guidance included Alfentanil and Fentanyl for severe renal failure. **Fentanyl is now the first line opioid for severe renal failure in Nottinghamshire.**

If volumes are an issue for administration, Alfentanil may be recommended by Specialist Palliative Care

Myoclonus or muscle stiffness/spasm

- MIDAZOLAM 5-10 mg / 24 hours by continuous subcutaneous infusion*, titrate up to 20mg if required.

Nausea and Vomiting

Nausea is common due to uraemia and comorbidity

- If already controlled with an oral anti-emetic, continue it as a continuous subcutaneous infusion* or use a long acting anti-emetic:
 - ◇ LEVOMEPRMAZINE 2.5 mg - 6.25 mg SC 12-hourly
 - ◇ HALOPERIDOL 0.5 -1 mg SC 12-hourly

References: <http://www.palliativecareguidelines.scot.nhs.uk> <http://www.renaldrugdatabase.com/>



Agitation and Delirium

- Prescribe MIDAZOLAM 2.5 mg SC PRN 1 hourly or LEVOMEPRMAZINE 2.5 – 6.25 mg SC PRN 1 hourly
- If PRN medication required consider subcutaneous infusion* with MIDAZOLAM 5-10 mg over 24 hours

Delirium is best treated with a combination of benzodiazepine and/or antipsychotic – with doses optimized for the individual. If agitation or delirium worsening seek advice. If volumes are an issue seek specialist palliative care advice to support conversion to other medications.

Respiratory Tract Secretions

Explain to the patient's relatives that noisy breathing is due to the inability of the patient to clear secretions, and that they are not choking. Consider repositioning the patient.

- Prescribe HYOSCINE BUTYLBROMIDE 20mg SC PRN 1 hourly
- If any doses are required prescribe 40mg or 60mg /24 hours by subcutaneous infusion* and continue PRN.
- If symptoms persist beyond 24 hours, increase the dose to 120mg /24 hours.

Dyspnoea

Consider cause and treat appropriately (e.g. hypoxia, pulmonary oedema, bronchospasm).

Use non-drug measures such as explanation, reassurance, repositioning, fan, relaxation.

- Continue any oral diuretic if able to swallow. Avoid fluid overload.
- Use MIDAZOLAM 2.5mg SC PRN or FENTANYL PRN as above.
- If more than 2 doses in last 24 hours, prescribe a continuous subcutaneous infusion* over 24 hours, and continue PRN prescription.

*Continuous subcutaneous syringe infusions are administered using T34 syringe pumps. For further guidance see local syringe driver policy. Ensure that patients requiring syringe drivers are also prescribed water for injections. Ensure practice is in line with your local Anticipatory Medications Policy.

Concentrations and ampoule sizes of the medicines included above

Medicine	Concentration	Vial/ Amp Size	Pack Size	Cost (Aug 19)
Fentanyl (CD)	50mcg/1ml	2ml	10	£4.50
Haloperidol	5mg/1ml	1ml	10	£8.65
Hyoscine Butylbromide	20mg/1ml	1ml	10	£2.92
Levomepromazine	25mg/1ml	1ml	10	£20.13
Midazolam (CD)	10mg/2ml	2ml	10	£5.00

Contacts:

John Eastwood Hospice	01623 622626
Hayward House	0115 9627619
Medicines Information at SFH	01623 672213
Medicines Information at NUH	0115 9709200
Bassetlaw Hospice	0115 955 5440
Lincolnshire - St Barnabas	01522 511566



Anticipatory Medications in Severe Hepatic Disease

Pain

FENTANYL may be recommended by specialists in patients with severe liver impairment, particularly when there is concurrent renal impairment (less renal excretion of parent drug and inactive metabolites).

Subsequently it may be prescribed by Primary Care Prescribers (classified Amber 2).

The information included here is intended as an example to aid prescribers. If in doubt contact your Specialist Palliative Care Team or Medicines Management support.

- Patient not taking a regular opioid: Prescribe FENTANYL 12.5 - 25 micrograms SC PRN 1 hourly
- If any PRN doses required consider continuous subcutaneous infusion* of FENTANYL with a dose based on the PRN use or up to 100 micrograms/24-hours as a starting dose (1mg FENTANYL SC = 150mg oral morphine).
- If patient has a FENTANYL patch – continue patch and use FENTANYL SC prn in addition.
- If patient is taking other regular low dose opioids and tolerating well without signs of opioid toxicity continue as a continuous SC infusion with appropriate dose conversion or convert to FENTANYL as a continuous subcutaneous infusion* in syringe driver with FENTANYL SC PRN at 1/6 to 1/10 of the total 24 hour continuous subcutaneous infusion dose.

Morphine can be used with caution if the patient is not opioid toxic. Start with small doses e.g. 2.5mg SC 4 hourly prn and titrate carefully, monitoring for toxicity. If there are no signs of toxicity, the PRN interval can be increased to 1 hourly dependent on how the individual patient responds.

If pain is difficult to control or for dose conversion advice please seek specialist advice

Opioid dose conversion guidance is available - Palliative Network Guidelines: PANG
<http://book.pallcare.info>Physical Symptoms and signs>pain> Opioid Potency Ratios>

If volumes are an issue for administration seek specialist palliative care advice to support conversion to other medications.



Nausea and Vomiting

- HALOPERIDOL 0.5 -1 mg SC PRN 1 hourly interval.

Agitation and Delirium

- MIDAZOLAM 1–2.5mg SC PRN 1 hourly interval for terminal agitation.
- HALOPERIDOL 0.5 -1 mg SC PRN 1 hourly interval for delirium. Midazolam may be required in addition to haloperidol.

Respiratory Tract Secretions

Explain to the patient's relatives that noisy breathing is due to the inability of the patient to clear secretions, and that they are not choking. Consider repositioning the patient.

- Prescribe HYOSCINE BUTYLBROMIDE 20mg SC PRN 1 hourly
- If any doses are required prescribe 40mg or 60mg /24 hours by subcutaneous infusion* and continue PRN.
- If symptoms persist beyond 24 hours, increase the dose to 120mg /24 hours.

Dyspnoea

- Consider cause and treat appropriately (e.g. hypoxia, pulmonary oedema, bronchospasm).
- Use non-drug measures such as explanation, reassurance, repositioning, fan, relaxation.
- If non pharmacological treatments are ineffective, use FENTANYL 12.5 - 25 micrograms SC 1 hourly; if concurrent anxiety combine with MIDAZOLAM 1-2.5mg SC 1 HOURLY.
- If more than 2 doses in last 24 hours, prescribe a continuous subcutaneous infusion over 24 hours and continue PRN prescription. NB: See above fentanyl/midazolam dosing guidance under Pain / Agitation.

*Continuous subcutaneous syringe infusions are administered using T34 syringe pumps. For further guidance see local syringe driver policy. Ensure that patients requiring syringe drivers are also prescribed water for injections. Ensure practice is in line with your local Anticipatory Medications Policy.

Concentrations and ampoule sizes of the medicines included above

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Hyoscine Butylbromide	20mg/1ml	1ml	10	£2.92
Midazolam (CD)	10mg/2ml	2ml	10	£5.00

