

Booklet No. _____ of _____ (in use)	Booklet start date: _____	Initial Prescriber Signature: _____	Update EPaCCS record and complete End of Life documentation (as appropriate)
	Initial Prescriber Name: _____	Initial Prescriber Registration No.: _____	

Symptom Control Prescription Drugs and Administration Record (with Palliative Care Advice)

Surname	Forenames	Date of Birth	NHS No.
Address		Drug Sensitivities & Allergies	
Tel. No.		Own G.P.	
Specialist Palliative Care Nurse Mon-Fri 9am - 5pm East Cheshire: 01625 663177 / Lung Team: 01625 661997 Central: see District Nurse contact details opposite		Practice Name	
		Tel. No. of Practice	
24 Hour Hospice Advice Line St. Luke's: 01606 555489 or Palliative Advice Centre East (PACE) / East Cheshire Hospice: 01625 666999		District Nurse Teams - 7 Days per Week Day (8am-5pm) Tel: Out of Hours (5pm-8am) Tel:	

List of Patient's CONTROLLED DRUGS NOT administered by REGISTERED PROFESSIONAL

Name of Drug	Dosage	Frequency	Route	Usually administered by

Review of the Blue Booklet should be within 3 months or sooner if clinically indicated

Reviewed on (date) _____	Name	Reviewed on (date) _____	Name
	Signature		Signature
	Registration No.		Registration No.
Reviewed on (date) _____	Name	Reviewed on (date) _____	Name
	Signature		Signature
	Registration No.		Registration No.

Prescriber

- Prescribers must complete signature & printed name for each drug prescribed within the booklet. **Always use indelible ink.**
- Use approved NAMES, BLOCK LETTERS, Metric Dosage (opioids by mg/microgram). **Avoid abbreviations.**
- Rewrite CHANGES. **Do not alter existing instructions.**
- DISCONTINUE a drug by drawing a line through the item, enter the cancellation date & initial.

Registered Professional Administering Medication

- Ensure all drugs are prescribed and signed by a prescriber.
- All drugs administered should be signed following administration.

“When Required” Symptom Control Medicines Requiring Registered Professional Administration

Where dose range is given usually start at lowest dose. See last two pages for further advice.

				Date	Date	Date	Date	Date
Drug	MORPHINE If alternative opioid req'd - prescribe below			Time (24hr. clock)				
Notes / Indication Pain / Dyspnoea				Dose				
Dose range [] TO []		Route SC	Frequency (See notes) 2-4 Hourly PRN	Max Dose over 24hr 6 doses	Signature Name			
Prescriber Signature		Print Name	Date	Signature Name				
				Drug stock record updated (please ✓)				
Drug	LEVOMEPRMAZINE			Time (24hr. clock)				
Notes / Indication Nausea				Dose				
Max Dose 25mg/ 24hrs to include Syringe Pump content				Signature Name				
Dose range 2.5mg TO 6.25mg		Route SC	Frequency 4 Hourly PRN	Max Dose over 24hr See Above	Signature Name			
Prescriber Signature		Print Name	Date	Signature Name				
				Drug stock record updated (please ✓)				
Drug	MIDAZOLAM			Time (24hr. clock)				
Notes / Indication Agitation/Restlessness				Dose				
Max Dose 60mg/24hr to include Syringe Pump content				Signature Name				
Dose range 2.5mg TO 5mg		Route SC	Frequency 2-4 Hourly PRN	Max Dose over 24hr 6 doses	Signature Name			
Prescriber Signature		Print Name	Date	Signature Name				
				Drug stock record updated (please ✓)				
Drug	GLYCOPYRRONIUM			Time (24hr. clock)				
Notes / Indication Excessive Resp Tract Secretions				Dose				
Max Dose 1200 micrograms/24hr to include Syringe Pump content				Signature Name				
Dose 200 microgram	Route SC	Frequency 2-4 Hourly PRN	Max Dose over 24hr See above	Signature Name				
Prescriber Signature		Print Name	Date	Signature Name				
				Drug stock record updated (please ✓)				
Drug (Diluent)	WATER FOR INJECTION			Time (24hr. clock)				
Notes / Indication Dilute/reconstitute injections (including diamorphine)				Dose				
Dose range 1 - 2 ml		Route SC	Frequency <i>when required</i>	Signature Name				
Prescriber Signature		Print Name	Date	Signature Name				
				Drug stock record updated (please ✓)				

	Date	Date	Date	Date
Time (24hr. clock)				
Dose				
Signature Name				
Signature Name				
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Additional “When Required” Symptom Control Medicines Requiring Registered Professional Administration

Where dose range is given usually start at lowest dose

					Date	Date	Date	Date	Date
Drug					Time (24hr. clock)				
Notes / Indication					Dose				
Dose range [] TO []	Route	Frequency	Max Dose over 24hr	Signature Name					
Prescriber Signature	Print Name	Date		Signature Name					
				Drug stock record updated (please ✓)					
Drug					Time (24hr. clock)				
Notes / Indication					Dose				
Dose range [] TO []	Route	Frequency	Max Dose over 24hr	Signature Name					
Prescriber Signature	Print Name	Date		Signature Name					
				Drug stock record updated (please ✓)					
Drug					Time (24hr. clock)				
Notes / Indication					Dose				
Dose range [] TO []	Route	Frequency	Max Dose over 24hr	Signature Name					
Prescriber Signature	Print Name	Date		Signature Name					
				Drug stock record updated (please ✓)					
Drug					Time (24hr. clock)				
Notes / Indication					Dose				
Dose range [] TO []	Route	Frequency	Max Dose over 24hr	Signature Name					
Prescriber Signature	Print Name	Date		Signature Name					
				Drug stock record updated (please ✓)					
Drug					Time (24hr. clock)				
Notes / Indication					Dose				
Dose range [] TO []	Route	Frequency	Max Dose over 24hr	Signature Name					
Prescriber Signature	Print Name	Date		Signature Name					
				Drug stock record updated (please ✓)					

	Date	Date	Date	Date
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Continuous Subcutaneous Infusion (CSCI) via Syringe Pump Medicines

Check compatibility, when prescribing multiple drugs in one CSCI

Opioid Patch in Situ: Yes / No. If yes, state type and dose _____

It is best practice to prescribe the contents of a CSCI at the time of need following a clinical review with consideration of reversible causes of deterioration, associated symptoms and evaluation of when required medications.

Only prescribe an anticipatory CSCI if in the last days of life/likely to deteriorate and lose the oral route **AND** already established on oral medication where the drug/dose is unlikely to change before the next review e.g. Levettiracetam via CSCI.

PRIOR to starting the CSCI, there must be a review of symptom relief and when required doses given. If the patient's needs have changed, contact the prescriber/seek specialist advice.

Prescribing a CSCI dose range which accommodates an increase by 1-2 when required doses may be appropriate but should be patient specific.

PRIOR to increasing a CSCI dose, there must be a review of symptom relief and when required doses given.

Where dose range is given usually start at lowest dose					Date	Date	Date	Date	Date
Drug (Diluent)	WATER FOR INJECTION			Time (24hr. clock)					
Notes / Indication - Dilute/reconstitute injections					Dose				
Dose Up to 20ml	Route SC	CSCI No.	Frequency Over 24 hours	Signature Name					
Prescriber Signature		Print Name	Date	Signature Name					
					Drug stock record updated (please ✓)				
Drug					Time (24hr. clock)				
Notes / Indication					Dose				
Dose	Route SC	CSCI No.	Frequency Over 24 hours	Signature Name					
Prescriber Signature		Print Name	Date	Signature Name					
					Drug stock record updated (please ✓)				
Drug					Time (24hr. clock)				
Notes / Indication					Dose				
Dose	Route SC	CSCI No.	Frequency Over 24 hours	Signature Name					
Prescriber Signature		Print Name	Date	Signature Name					
					Drug stock record updated (please ✓)				
Drug					Time (24hr. clock)				
Notes / Indication					Dose				
Dose	Route SC	CSCI No.	Frequency Over 24 hours	Signature Name					
Prescriber Signature		Print Name	Date	Signature Name					
					Drug stock record updated (please ✓)				
Line Change Y/N (follow Trust/Area policy)					Pump 1 Pump 2				
Syringe Pump Rate					Pump 1 Pump 2				
Syringe Pump site checked and documented Y/N					Pump 1 Pump 2				
Document Battery %					Pump 1 Pump 2				
Keypad Locked? Y/N					Pump 1 Pump 2				

Syringe Pump Serial No.	Date Serviced

	Date	Date	Date	Date
Time (24hr. clock)				
Dose				
Signature Name				
Signature Name				
Drug stock record updated (please ✓)				
Time (24hr. clock)				
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Additional CSCI via Syringe Pump Medicines

					Date	Date	Date	Date	Date
Drug (Diluent)				Time (24hr. clock)					
Notes / Indication				Dose					
Dose	Route SC	CSCI No.	Frequency Over 24 hours	Signature Name					
Prescriber Signature		Print Name	Date	Signature Name					
				Drug stock record updated (please ✓)					
Drug				Time (24hr. clock)					
Notes / Indication				Dose					
Dose	Route SC	CSCI No.	Frequency Over 24 hours	Signature Name					
Prescriber Signature		Print Name	Date	Signature Name					
				Drug stock record updated (please ✓)					
Drug				Time (24hr. clock)					
Notes / Indication				Dose					
Dose	Route SC	CSCI No.	Frequency Over 24 hours	Signature Name					
Prescriber Signature		Print Name	Date	Signature Name					
				Drug stock record updated (please ✓)					
Drug				Time (24hr. clock)					
Notes / Indication				Dose					
Dose	Route SC	CSCI No.	Frequency Over 24 hours	Signature Name					
Prescriber Signature		Print Name	Date	Signature Name					
				Drug stock record updated (please ✓)					
Drug				Time (24hr. clock)					
Notes / Indication				Dose					
Dose	Route SC	CSCI No.	Frequency Over 24 hours	Signature Name					
Prescriber Signature		Print Name	Date	Signature Name					
				Drug stock record updated (please ✓)					
Line Change Y/N (follow Trust/Area policy)				Pump 1 Pump 2					
Syringe Pump Rate				Pump 1 Pump 2					
Syringe Pump site checked and documented Y/N				Pump 1 Pump 2					
Document Battery %				Pump 1 Pump 2					
Keypad Locked? Y/N				Pump 1 Pump 2					

Regular Symptom Control Medicines Requiring Registered Professional Administration (Excluding CSCI)

for example: SC Dexamethasone or Fentanyl patch

				Date	Date	Date	Date	Date
Drug			Time (24hr. clock)					
Note			Dose					
Dose	Route	Frequency	Signature Name					
Prescriber Signature	Print Name	Date	Signature Name					
			Drug stock record updated (please ✓)					
Drug			Time (24hr. clock)					
Note			Dose					
Dose	Route	Frequency	Signature Name					
Prescriber Signature	Print Name	Date	Signature Name					
			Drug stock record updated (please ✓)					
Drug			Time (24hr. clock)					
Note			Dose					
Dose	Route	Frequency	Signature Name					
Prescriber Signature	Print Name	Date	Signature Name					
			Drug stock record updated (please ✓)					
Drug			Time (24hr. clock)					
Note			Dose					
Dose	Route	Frequency	Signature Name					
Prescriber Signature	Print Name	Date	Signature Name					
			Drug stock record updated (please ✓)					
Drug			Time (24hr. clock)					
Note			Dose					
Dose	Route	Frequency	Signature Name					
Prescriber Signature	Print Name	Date	Signature Name					
			Drug stock record updated (please ✓)					
Drug			Time (24hr. clock)					
Note			Dose					
Dose	Route	Frequency	Signature Name					
Prescriber Signature	Print Name	Date	Signature Name					
			Drug stock record updated (please ✓)					
Drug			Time (24hr. clock)					
Note			Dose					
Dose	Route	Frequency	Signature Name					
Prescriber Signature	Print Name	Date	Signature Name					
			Drug stock record updated (please ✓)					

	Date	Date	Date	Date	Date	Date	Date	Date
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Drug Stock Record - Community Staff Only
Please note that each drug and strength of drug needs to be in a separate table

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Drug Stock Record - Community Staff Only

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[illegible][illegible]

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[illegible][illegible]

Opioid Conversion Charts (note: - rounded to nearest convenient doses)

	Morphine mg				Oxycodone mg				Diamorphine mg		Alfentanil mg
Route	Oral		SC		Oral		SC		SC		SC
	24hr total	2 - 4 hrly	CSCI 24hr	2 - 4 hrly	24hr total	2 - 4 hrly	CSCI 24hr	2 - 4 hrly	CSCI 24hr	2 - 4 hrly	CSCI 24hr
Dose	20	2.5	10	1-2.5	10	1.25-2.5	5	1			0.5
	30	5	15	2.5	15	2.5	7.5	1-2.5	10	1-2.5	1
	40	5-7.5	20	2.5-5	20	2.5-5	10	1-2.5	13*	2.5	1.3
	60	10	30	5	30	5	15	2.5	20	2.5-5	2
	90	15	45	7.5	45	7.5	22.5*	2.5-5	30	5	3
	120	20	60	10	60	10	30	5	40	5-7.5	4
	Always seek specialist advice before titrating opioids above 120mg/24hrs oral morphine or equivalent. Pain is often poorly responsive to opioids above this dose and alternative analgesics may be required.										
	150	25	75	12.5	75	12.5	37.5*	5-7.5	50	7.5-10	5
	180	30	90	15	90	15	45	7.5	60	10	6
	240	40	120	20	120	20	60	10	80	12.5	8

Greyed out areas: For use only under specialist advice

*round up or down to the nearest 5mg depending on clinical judgement

CSCI = Continuous Subcutaneous Infusion

This table does not indicate incremental steps. Only increase background dose if pain is opioid-sensitive after clinical reassessment. Consider increase in dose of background opioid if 2 or more doses have been required as breakthrough over 24 hours. Increases should NOT exceed 30-50% of background opioid dose irrespective of number of breakthrough doses used in a 24 hour period.

Conversion factors:

From **oral Morphine** to **SC Morphine** - divide by 2

From **oral Morphine** to **SC Diamorphine** - divide by 3

From **oral Morphine** to **oral Oxycodone** - divide by 2

From **oral Oxycodone** to **SC Oxycodone** - divide by 2

From **oral Tramadol/Codeine/Dihydrocodeine** to **oral Morphine** - divide by 10

Dose of oral Morphine over 24hrs (mg)	Fentanyl Transdermal (micrograms/hr)
30	12
60	25
90	37
120	50
Always seek specialist advice before titrating opioids above 120mg/24hrs oral morphine or equivalent. Pain is often poorly responsive to opioids above this dose and alternative analgesics may be required.	
150	62
180	75
240	100

Dose of oral Morphine over 24hrs (mg)	Buprenorphine Transdermal (micrograms/hr)
12	5 (7 day patch)
24	10 (7 day patch)
36	15 (7 day patch)
48	20 (7 day patch)
84	35 (4 day patch)

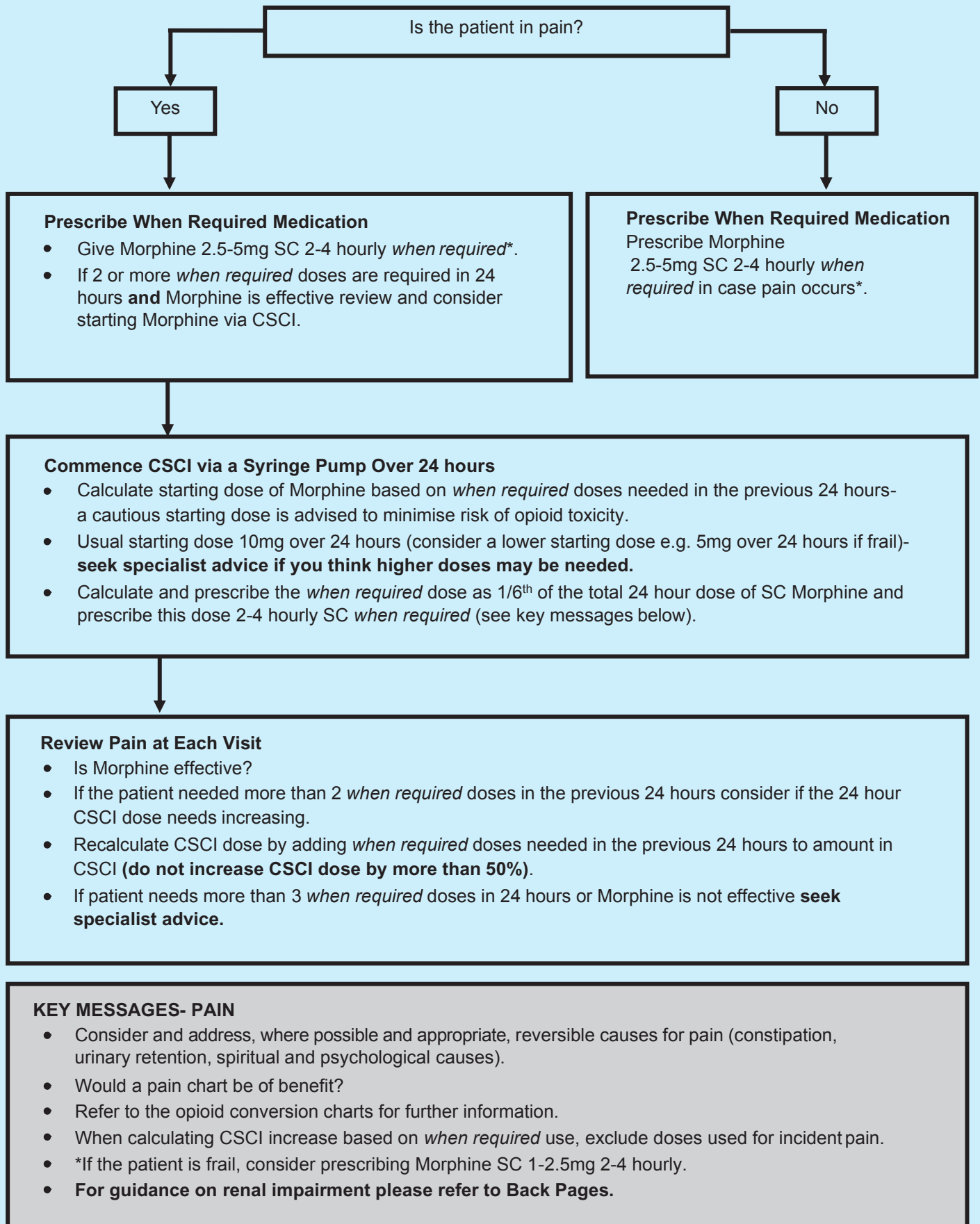
Do not start or alter doses of patches for patients in the final days of life or in patients who have unstable pain. Continue to replace patch as prescribed.

When making conversions always use caution in considering dose choices between opioids. Please seek specialist advice if required.

PAIN

In end of life opioid naïve patients for whom oral medications are not appropriate
(e.g. no regular Morphine, Oxycodone or Fentanyl)

If the patient is known to be intolerant to Morphine or Morphine not effective, **SEEK SPECIALIST ADVICE**



PAIN

In end of life patients taking regular oral Morphine/Oxycodone for whom oral medications are not appropriate

Is pain controlled on current dose?

Yes

No

Commence CSCI via a Syringe Pump Over 24 hours

- Convert the 24 hour dose of oral Morphine/Oxycodone to the SC equivalent (see key messages below).
- Calculate and prescribe the *when required* dose (see key messages below).

Commence CSCI via a Syringe Pump Over 24 hours

- Convert the 24 hour dose of oral Morphine/Oxycodone to the SC equivalent (see key messages below).
- Consider increasing total 24 hour dose of SC Morphine/Oxycodone by up to 30-50%.
- Give the increased total 24 hour dose of SC Morphine/Oxycodone via syringe pump over 24 hours.
- Calculate and prescribe the *when required* dose (see key messages below).

Review Pain at Each Visit

- Is Morphine/Oxycodone effective?
- If the patient needed more than 2 *when required* doses in the previous 24 hours consider if the 24 hour CSCI dose needs increasing.
- Recalculate CSCI dose by adding *when required* doses needed in the previous 24 hours to amount in CSCI (**do not increase CSCI dose by more than 50%**).
- If patient needs more than 3 *when required* doses in 24 hours or Morphine/Oxycodone is not effective **seek specialist advice**.

KEY MESSAGES- PRESCRIBING SUBCUTANEOUS MORPHINE/OXYCODONE

- To calculate the dose of SC Morphine, divide total dose of oral Morphine by 2.
- To calculate the dose of SC Oxycodone, divide total dose of oral Oxycodone by 2.
- Calculate and prescribe the *when required* dose of Morphine or Oxycodone as 1/6th of the total 24 hour dose and prescribe this dose 2-4 hourly SC *when required*.
- If symptoms are controlled start CSCI 2-4 hours before the next dose of regular oral opioid is due; if symptoms are not controlled, start CSCI immediately.
- If CSCI reaches Morphine 60mg/24hrs, or if pain is not opioid-sensitive, seek specialist advice.
- **For guidance on renal impairment please refer to Back Pages.**

WORKED EXAMPLE

Patient currently prescribed Morphine 20mg/24hrs in CSCI. Has required 2 x 2.5mg Morphine SC and 3 x 5mg Morphine SC *when required* doses in the past 24 hrs (which is a total extra of 20mg Morphine SC over 5 breakthrough dose episodes).

Assess patient. Consider reversible causes for pain e.g. urinary retention. If pain is opioid sensitive, increase by up to 30-50% of background dose – e.g. increase to Morphine 30mg/24hrs in CSCI.

New breakthrough dose is 1/6th of 30mg Morphine – so 5mg Morphine SC in the coming 24hrs.

If CSCI reaches Morphine 60mg/24hrs, or if pain is not opioid-sensitive, seek specialist advice.

PAIN

In end of life patients using opioid patches for whom oral medications are not appropriate

IMPORTANT DO NOT REMOVE CURRENT FENTANYL OR BUPRENORPHINE PATCHES.
CONTINUE PRESCRIPTION, CHANGING PATCHES AS PRESCRIBED.

Prescribe When Required Medication

- Calculate and prescribe SC opioid for pain 2-4 hourly *when required* in case pain occurs.
- If patient has been taking an oral opioid for breakthrough pain, the same drug should be prescribed SC.
- Calculate dose or consult conversion chart as a guide to determine the *when required* dose of SC opioid that is relevant for the strength of patch.

If pain not controlled or if needing 2 or more *when required* doses over 24 hours, consider a CSCI in addition to the patch- Seek Specialist Palliative Care advice.

For guidance on renal impairment please refer to Back Pages.

When calculating the *when required* dose, include the equivalent opioid dose of the patch – see example*.

CALCULATION EXAMPLE

Patient with a Fentanyl 25 micrograms/hr patch in situ- equivalent to 30mg of SC Morphine/24 hrs. Patient also prescribed 10mg Morphine orally 2-4 hourly *when required* and had 5 doses in the past 24hrs. 50mg of oral morphine is equivalent to 25mg SC Morphine/24hrs.

To ensure the background dose is not increased by more than 50%, prescribe a CSCI with maximum 15mg of Morphine/24hrs (even though they have required more than this in *when required* doses) in addition to the patch.

To calculate the NEW *when required* dose, add the equivalent amount of SC Morphine in the patch and the amount within the CSCI together to give a total of 45mg SC Morphine. Divide this total amount by 6 to give 7.5mg SC Morphine as the *when required* dose.

If you are a prescriber struggling with pain management, please seek specialist advice.

BREATHLESSNESS

In end of life patients for whom oral medications are not appropriate

Is the patient breathless?

Yes

No

General Measures

- Explanation/ Reassurance
- Companionship
- Fan/ open window
- Calm environment
- Nurse in upright position

Is there a reversible cause that can be managed given likely limited time?

Yes

No

Treat the cause e.g. nebulised bronchodilators for bronchospasm, diuretics for heart failure.

If still symptomatic aim to relieve symptoms of breathlessness.

Prescribe When Required Medication

- **If not currently taking a regular opioid** prescribe Morphine 2.5mg SC 2-4 hourly *when required* in case patient becomes breathless.
- **If currently taking a regular opioid** ensure correct *when required* dose is prescribed for pain and use this dose for breathlessness. However, if patient is already on greater than 30mg oral Morphine or equivalent, you may need to seek specialist advice for treatment of breathlessness.
- If a dose is given for breathlessness follow the pathway for the patient who is breathless.

Symptomatic Treatment

- **If not currently taking a regular opioid** prescribe Morphine 2.5mg SC 2-4 hourly *when required*. If 2 or more *when required* doses are required over 24 hrs assess the need for a CSCI.
- **If currently taking a regular opioid** ensure correct *when required* dose is prescribed for pain and use this dose for breathlessness. However, if patient is already on greater than 30mg oral Morphine or equivalent, you may need to seek specialist advice for treatment of breathlessness.
- If the patient has associated anxiety and fear consider adding Midazolam 2.5mg-5mg SC 2-4 hourly *when required*. If 2 or more doses of Midazolam are required over 24 hours consider adding to the CSCI.

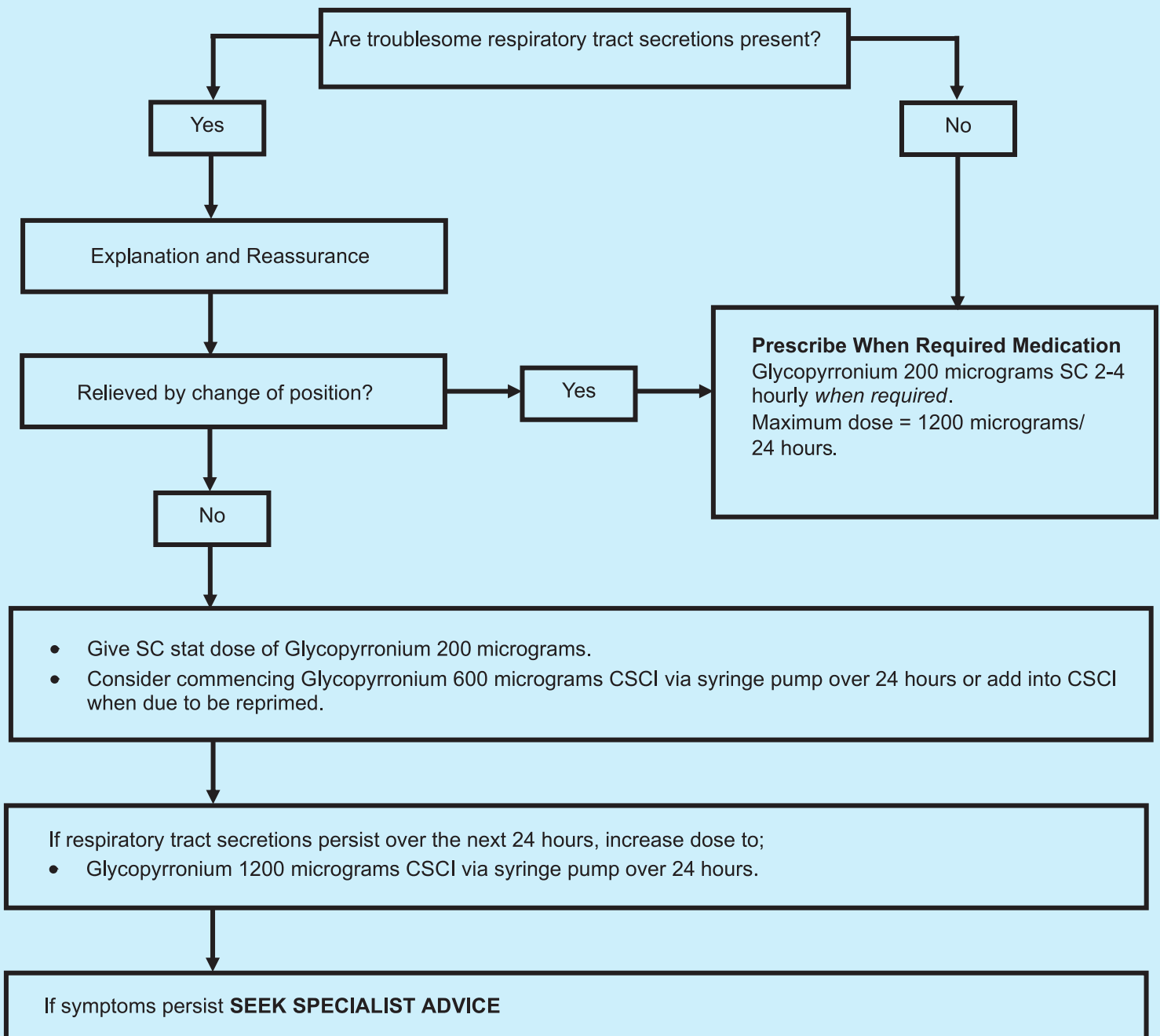
If symptoms persist **SEEK SPECIALIST ADVICE**

KEY MESSAGES- BREATHLESSNESS

- Treatment for reversible causes of breathlessness include: bronchodilators, diuretics and antibiotics.
- Simple measures such as a calm environment, a fan or open window can be as effective as medication.
- If 3 or more *when required* doses are required within 8 hours seek specialist advice.
- Consider having oral Morphine available for breathlessness at the end of life- Morphine sulphate liquid 2.5mg-5mg 2-4 hourly *when required* if the patient has a safe swallow.
- **For guidance on renal impairment please refer to Back Pages.**

EXCESSIVE RESPIRATORY TRACT SECRETIONS

In end of life patients for whom oral medications are not appropriate

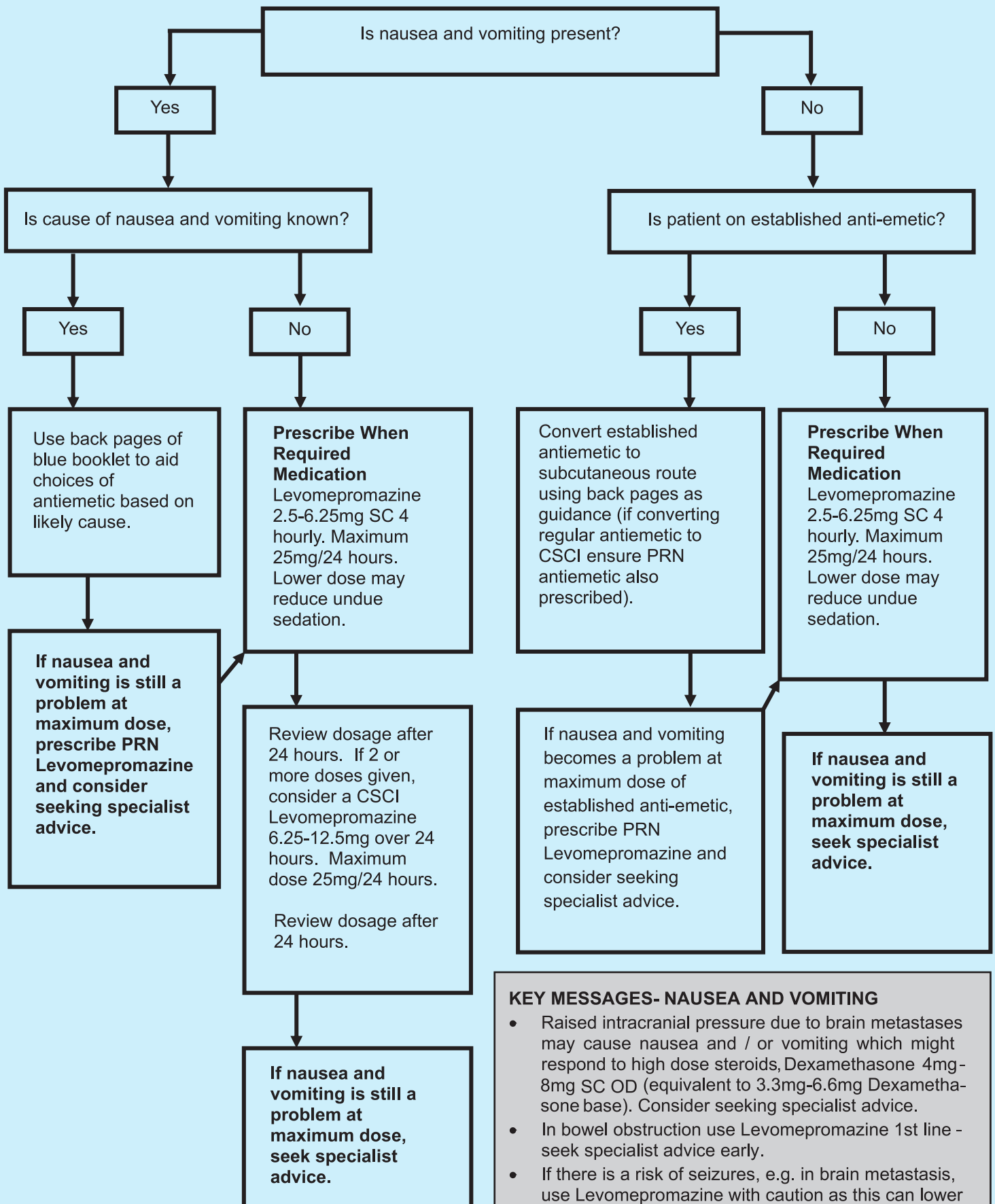


KEY MESSAGES-TROUBLESOME REPIRATORY SECRETIONS

- Troublesome respiratory secretions may be most upsetting for family and those close to the patient. **Explanation and reassurance** that they are a sign of diminished consciousness and many patients are unaware/untroubled by them is important.
- Treatment should be commenced at **onset** of secretions. Medication will only prevent new secretions being produced, it will not remove secretions already present. Therefore, treating **early** is often more successful.
- If there is a delay in commencing a CSCI when appropriate, administer regular Glycopyrronium 200 micrograms SC 2-4 hourly until CSCI available.
- Alternative antimuscarinic drugs can be used e.g. Hyoscine Butylbromide (Buscopan®) 20mg SC 2-4 hourly *when required* and/or 60-120mg CSCI over 24 hours.
- A conscious patient treated with these drugs will be aware of an uncomfortably dry mouth.

NAUSEA & VOMITING

In end of life patients for whom oral medications are not appropriate



AGITATION/TERMINAL RESTLESSNESS

In end of life patients for whom oral medications are not appropriate

Is the patient agitated/restless?

Yes

No

Assessment

Important: Document that reversible causes of agitation have been considered such as urinary retention, constipation, pain, fever or alcohol, nicotine, substance withdrawal.

If identified institute appropriate management plans e.g. catheter, enema, analgesia, anti-pyretic PR, nicotine patch.

If substance withdrawal is suspected, consider seeking specialist advice.

Consider, and where possible, address physical, psychological and spiritual factors, as well as environmental factors such as light/noise.

Prescribe When Required Medication

Midazolam 2.5 – 5mg SC 2 – 4 hourly.

KEY MESSAGES- AGITATION/ TERMINAL RESTLESSNESS

- Note: Be aware of risk of paradoxical agitation with Midazolam. This is more common at higher doses.
- **For guidance on renal impairment please refer to back pages.**

Prescribe When Required Medication

Midazolam 2.5 – 5mg SC 2 – 4 hourly.

If patient remains agitated/restless then give stat dose.

CATASTROPHIC TERMINAL EVENT E.G. HAEMORRHAGE

- Plan ahead where possible and document clearly.
- Discuss plan with patient and or those close to them and communicate to staff and key organisations.
- Anticipatory prescribing of Midazolam 10mg IM, SC or buccal.
- Note SC route may be less effective in catastrophic bleeds due to peripheral shutdown with unpredictable absorption of medications.

In addition, for catastrophic haemorrhage:

- Advise patient and those close to them regarding use of dark towels to disguise blood.
- If with a patient priority is for the member of staff to remain with the patient to provide support.

If patient requires two or more doses in 24 hours, or is unsettled

Consider prescribing Midazolam 5 – 20mg CSCI via syringe pump over 24 hours. When deciding CSCI starting dose consider clinical review of patient and *when required* medication use in previous 24 hours.

Consider prescribing Levomepromazine 6.25-12.5mg SC 2-4 hourly *when required* as second line option. Max 25mg/24hrs.

If symptoms persist...

If Midazolam is effective for agitation consider titrating CSCI, taking into account *when required* doses in the previous 24 hours.

Seek specialist advice if requiring more than 30mg in 24 hours.

If Levomepromazine is effective for agitation consider adding to CSCI, taking into account *when required* doses in previous 24 hours.

Seek specialist advice if requiring more than 25mg in 24 hours.

SEIZURES

In end of life patients for whom oral medications are not appropriate

Patient taking oral anti-epileptics for seizures becomes unable to swallow in the last days of life

Is patient having a seizure?

Was the patient taking oral levetiracetam?

Yes

No

Yes

No

Keep patient safe. Consider reversible causes e.g. checking blood glucose and treating hypoglycaemia.

If seizure does not resolve within 5 minutes of onset, give Midazolam 5mg-10mg SC or buccally. Repeat dose once after 5 minutes if seizure activity persists.

If seizures resolve commence Midazolam 10mg-20mg CSCI over 24-hours via a Syringe Pump. If further dosing advice is needed, contact specialist palliative care.

If seizures persist for more than 15 minutes despite 2 doses of Benzodiazepine (e.g. Midazolam) call 999 for further support with treatment.

Prescribe 5-10mg Midazolam SC or buccally when required for seizures.

Document in the notes/indications box within the prescription to repeat dose once after 5 minutes if seizures do not resolve.

Commence Levetiracetam CSCI via a Syringe Pump over 24-hours.

Conversion of oral to SC Levetiracetam is 1:1 (*See note below if Levetiracetam injection is not available).

Has the patient had a seizure in the last month or are they on another anti-epileptic?

Yes

No

Commence Midazolam 10-20mg CSCI via Syringe Pump over 24 hours.

Prescribe 5-10mg Midazolam SC or buccally when required for seizures.

Document in the notes/indications box within the prescription to repeat dose once after 5 minutes if seizures do not resolve.

KEY MESSAGES-SEIZURES

- CONSIDER SEEKING SPECIALIST ADVICE from palliative care if: new onset seizures; already on antiepileptic medications; or seizures are not controlled on the initial dose to guide titration of medication in CSCI.
- It may be necessary to prescribe a Levetiracetam CSCI in advance of need.
- *If Levetiracetam injection is not available, Midazolam maybe used as an alternative if the patient is thought to be dying imminently or whilst awaiting supplies.
- NOTE: Some anti-epileptics have a long half-life and may continue to be effective for 2-3 days after the last oral dose.

Starting Dose Guidance for Adults in the Last Days of Life

ANTICIPATORY MEDICINES	It is recommended that anticipatory medications are available at home for patients with an estimated prognosis of less than 3 months. Prescribe 10 ampoules each of: an opioid, midazolam, an antiemetic, glycopyrronium and water for injection 10ml (diluent).	
PAIN Please seek specialist advice if concerned re opioid toxicity	MORPHINE 1 st line	USE: ANALGESIA/DYSPNOEA SC DOSING: If opioid naïve; 2.5mg-5mg 2-4 hourly <i>when required</i> or 10mg over 24 hours via CSCI (consider a lower starting dose e.g. 1-2.5mg 2-4 hourly <i>when required</i> or 5mg over 24 hours if frail). PRESCRIBING INFORMATION: Available as: 10mg/1ml, 30mg/1ml amps. Pack size 10.
	OXYCODONE 2 nd line (if morphine allergy or eGFR <30ml/min)	USE: ANALGESIA/DYSPNOEA SC DOSING: If opioid naïve; 2.5mg 2-4 hourly <i>when required</i> or 5-10mg over 24 hours via CSCI (consider a lower starting dose e.g. 1-2.5mg 2-4 hourly <i>when required</i> if eGFR <30ml/min or frail). PRESCRIBING INFORMATION Available as: 10mg/1ml, 50mg/1ml amps. Pack size 5.
NAUSEA & VOMITING First determine the cause of the nausea to guide prescribing choice	LEVOMEPRMAZINE 1 st line if unknown cause	USE: NAUSEA & VOMITING. Useful as broad-spectrum or if sedation is desired. SC DOSING: 2.5mg - 6.25mg 4 hourly <i>when required</i> or 6.25mg - 12.5mg over 24 hours via CSCI. Max 25mg over 24 hours. Seek specialist advice if requiring higher doses. USE: TERMINAL AGITATION (2 nd line after Midazolam - NB if myoclonus present start with Midazolam). SC DOSING: Starting dose 6.25mg - 12.5mg 2-4 hourly <i>when required</i> . Consider prescribing CSCI if effective, taking into account <i>when required</i> doses in previous 24 hours. Seek specialist advice if requiring doses above 25mg over 24 hours. CONTRAINDICATIONS & DOSE ADJUSTMENTS: Caution in Parkinson's disease and Lewy Body Dementia. If there is a risk of seizures, e.g. in brain metastasis, use Levomepromazine with caution as this can lower the seizure threshold. Caution in ambulant patients as can cause sedation/postural hypotension. PRESCRIBING INFORMATION: Prescribe as: 25mg/1ml amps. Pack size 10. Can give in CSCI over 24 hours or as a once daily at night SC dose.
	CYCLIZINE	USE: NAUSEA & VOMITING. Useful for cerebral irritation, vertigo, raised intracranial pressure. SC DOSING: 25-50mg 8 hourly <i>when required</i> or 75mg-150mg via CSCI over 24 hours. Max 150mg over 24 hours. CONTRAINDICATIONS & DOSE ADJUSTMENTS: Caution in severe CCF (consider an alternative choice). PRESCRIBING INFORMATION: Constipating. Prescribe as: 50mg/1ml amps. Pack size 5 or 10 amps.
	HALOPERIDOL	USE: NAUSEA & VOMITING Useful for biochemical disturbance (drug, metabolic, toxic) / AGITATED DELIRIUM SC DOSING: Starting dose 0.5mg-1.5mg 4 hourly <i>when required</i> or 1.5mg-5mg via CSCI over 24 hours (usual max total dose in 24 hours is 5mg, seek specialist advice if requiring up to 10mg). CONTRAINDICATIONS & DOSE ADJUSTMENTS: Avoid in Parkinson's disease. Caution in epilepsy (can lower seizure threshold). PRESCRIBING INFORMATION: Can give in CSCI over 24 hours or as once daily SC dose. Prescribe: 5mg/1ml amps. Pack size 5 or 10.
	METOCLOPRAMIDE	USE: NAUSEA & VOMITING Useful for gastric stasis, reflux, "squashed stomach", ascites. SC DOSING: Starting dose 10mg 6 hourly (max three times a day) <i>when required</i> or 30mg over 24 hours via CSCI. Usual max total dose in 24 hours is 60mg. Seek specialist advice if dose over 30mg over 24 hours. CONTRAINDICATIONS & DOSE ADJUSTMENTS: Avoid in GI obstruction, perforation or haemorrhage, history of neuroleptic syndrome or metoclopramide-induced tardive dyskinesia, epilepsy, Parkinson's, caution in age <20years. Risk of extrapyramidal side-effects. PRESCRIBING INFORMATION: Max bolus at 1 site = 10mg/2ml. Prescribe as: 10mg/2ml amps. Pack size 10.

AGITATION NB Levomepromazine can also be used – see above	MIDAZOLAM	USE: AGITATION/RESTLESSNESS (1st line) or DYSPNOEA (2ND Line). SC DOSING: Starting dose 2.5mg - 5mg 2-4 hourly <i>when required</i> . Consider prescribing Midazolam via CSCI with starting dose between 5-20mg over 24 hours, taking into account clinical review and <i>when required</i> medication use in previous 24 hours. Consider adding anti-psychotic drug before increasing above 30mg in 24 hours. Seek specialist advice if requiring doses above 30mg in 24 hours. Paradoxical agitation/aggression may occur at higher doses. USE: CATASTROPHIC TERMINAL EVENT e.g. HAEMORRHAGE DOSING: IM or buccal route (more effective than SC route) 5mg-10mg titrated to requirements. Max 30mg per episode. Prescribe if patient at risk. PRESCRIBING INFORMATION: Max bolus dose at one site = 10mg/2ml. Prescribe as: 10mg/2ml amps. Pack size 10.
	GLYCOPYRRONIUM	USE: EXCESSIVE RESPIRATORY TRACT SECRETIONS (1st line)/anti-spasmodic. SC DOSING: 200 microgram 2-4 hourly <i>when required</i> or start 600 microgram over 24 hours via CSCI. Max 1200 micrograms over 24 hours. CONTRAINDICATIONS & DOSE ADJUSTMENTS: Caution in CCF/IHD/tachycardia (infusion via CSCI preferable to bolus doses) PRESCRIBING INFORMATION: Available as 200mcg/1ml. Pack size 10 amps.
EXCESSIVE RESPIRATORY TRACT SECRETIONS	HYOSCINE BUTYLBROMIDE	USE: EXCESSIVE RESPIRATORY TRACT SECRETIONS (2nd line if glycopyrronium unavailable). SC DOSING: 20mg 2-4 hourly <i>when required</i> or start 60mg over 24 hours via CSCI. Max 120mg over 24 hours. CONTRAINDICATIONS & DOSE ADJUSTMENTS: Caution in CCF/IHD/tachycardia (infusion via syringe pump preferable to bolus doses). PRESCRIBING INFORMATION: Prescribe as 20mg/1ml amps. Pack size 10.
	LEVETIRACETAM	USE: ANTI-CONVULSANT. SC DOSING: If already prescribed oral Levetiracetam & now unable to swallow, commence Levetiracetam via CSCI over 24 hours. Conversion of oral to SC dose is 1:1 (see seizure algorithm) PRESCRIBING INFORMATION: Use separate CSCI. Dilute with WFI or sodium chloride 0.9%. Prescribe as: 500mg/5mls. Pack size 10.
SEIZURES	MIDAZOLAM	USE: ANTI-CONVULSANT. SC DOSING: Starting dose 5-10mg <i>when required</i> & 10-20mg over 24 hours via CSCI. Seek specialist advice if requiring more than 30mg / 24hrs. PRESCRIBING INFORMATION: Max bolus at 1 site = 10mg/2ml. Prescribe as 10mg/2ml amps. Pack size 10.
	FRAILITY	Caution is needed when prescribing in frail patients as they are more likely to develop side effects. Use the lowest recommended starting dose and reassess benefits/side effects at every dose increase. Increasing dosing interval may suffice.
FURTHER INFORMATION Consider need for specialist input in severe liver and renal impairment	RENAL DYSFUNCTION (If eGFR known)	OPIOIDS: If the eGFR is below 30ml/min (CKD 4/5) there is an increased risk of toxic side effects with all opioids due to drug and metabolite accumulation. Opioids should therefore be used with caution and should be monitored on a regular basis. If eGFR <30ml/min, use Oxycodone first line and consider reducing dose by 50% and increasing dosing interval. If eGFR <10ml/min, Alfentanil is the safest analgesic to use but must be prescribed under specialist advice only. Watch for signs of opioid toxicity which may include hallucinations, myoclonic jerks, drowsiness or confusion. LEVOMEPRIMAZINE: eGFR <10ml/min use lower starting dose e.g. 2.5mg. HALOPERIDOL: eGFR <10ml/min use lower starting dose e.g. 250micrograms – 500micrograms. MIDAZOLAM: eGFR < 10ml/min consider reduced dose e.g. 1-2.5mg. Monitor for accumulation.
	LIVER DYSFUNCTION Indicators of severe: Bilirubin>100µmol/L Encephalopathy Ascites Raised INR/PT	OPIOIDS: Use Morphine in preference to Oxycodone and consider dose reduction and increased dosing interval, unless there is concurrent renal impairment, in which case, seek specialist advice. LEVOMEPRIMAZINE AND HALOPERIDOL: use lower starting doses and titrate slowly. METOCLOPRAMIDE: severe: start with 5mg twice daily, recommended maximum of 10mg twice daily. MIDAZOLAM: start with low dose e.g. 2.5mg, monitor for accumulation.

CONTINUOUS SUBCUTANEOUS INFUSIONS (CSCI)

- Consider using if the patient is unable to take oral medication due to difficulty swallowing or nausea/vomiting, intestinal obstruction or malabsorption (this list is not exhaustive). Document rationale and discussion with patient/relatives. If available, please see local policies for further guidance.
- It is best practice to prescribe the contents of a CSCI at the time of need following a clinical review with consideration of reversible causes of deterioration, associated symptoms and evaluation of *when required* medications.
- Only prescribe an anticipatory CSCI if in the last days of life/likely to deteriorate and lose the oral route **AND** already established on oral medication where the drug/dose is unlikely to change before the next review e.g. Levetiracetam via CSCI.
- PRIOR to starting the CSCI, there must be a review of symptom relief and *when required* doses given. If the patient's needs have changed, contact the prescriber/seek specialist advice.
- Prescribing a CSCI dose range which accommodates an increase by 1-2 *when required* doses may be appropriate but should be patient specific.
- PRIOR to increasing a CSCI dose, there must be a review of symptom relief and *when required* doses given.
- Always prescribe a DILUENT: Use water for injection 1st line. 10ml amps. Pack size 10. Sodium Chloride 0.9% is less irritant but may be incompatible with some drugs e.g. Cyclizine or Diamorphine. Sodium Chloride 0.9% (10ml amps), pack size 10.
- If using a McKinley T34 or Bodyguard T: max volume is approx. 17mls in a 20ml luer lock syringe or approx. 22mls in a 30ml luer lock syringe.
- Patients on transdermal opioids: Continue to use and change patch as before, adding only the additional analgesia required to the syringe pump. Take both patch and syringe pump into account when calculating breakthrough doses.

CSCI COMPATABILITY ISSUES (Not Exhaustive)

- Cyclizine: Dilute to maximum volume with water for injection. Incompatible with Sodium Chloride 0.9% (do not use as diluent) and Hyoscine Butylbromide (do not administer in same CSCI). Potential incompatibility at higher concentrations with Oxycodone, Alfentanil and Diamorphine. Use caution and seek further information (see below) before combining.
- Levomepromazine: Can turn purple in UV light – discard. To reduce likelihood of inflammatory reaction at the skin infusion site, dilute CSCI to largest volume and consider using Sodium Chloride 0.9% as diluent.
- Levetiracetam: Limited compatibility with other medicines. Use in a separate CSCI is recommended.
- Not all medications are compatible together. If available, refer to The Syringe Driver book (A.Dickman & J.Schneider), the PCF or <https://www.rightdecisions.scot.nhs.uk/shared-content/palliative-care-syringe-pumps/compatibility-and-stability-tables-for-subcutaneous-infusion-using-syringe-pumps-syringe-drivers/>. Alternatively, contact local hospital medicine information department via switchboard or 24-hour hospice advice line (see front of booklet).

Community Pharmacies Holding Stock of Essential Palliative Care Medicines

Visit: <https://www.cheshireandmerseyside.nhs.uk/your-health/helping-you-stay-well/nhs-pharmacies/pharmacies-holding-stock-of-palliative-care-medicines/> (local palliative medicines list) or 'Pharmacy Palliative Care Medication Stockholder' via <https://servicefinder.nhs.uk> (national palliative medicines list)

REFERENCES

- Palliative Care Clinical Practice Summary, North West Coast Clinical Network, 3rd Edition March 2025
- Palliative Care pain & symptom control guidelines for adults, Greater Manchester Integrated Care Partnership, 6th Edition April 2025
- Palliative Care Formulary, Wilcock et al., 9th Edition August 2025
- British National Formulary Online, NICE, April 2026 (<https://bnf.nice.org.uk>)
- Clinical Guideline: Symptom Control and End of Life Care in Adults with Advanced Liver Disease, British Association for the study of the Liver, 1st Edition

The guidance in this booklet represents consensus agreement for end of life prescribing. However, these are guidelines only and variation exists. Prescribing in palliative care should be patient centred and specialist advice is available for clinicians in individual circumstances, see contact details on front of booklet.

Further information is also available on ePaige: www.cheshire-epaige.nhs.uk.

Thank you to the membership of the East and Central Cheshire Palliative Care Prescribing Review Group 2025-2026 for their input developing Version 12 of this booklet.