Guidance for Anticipatory Prescribing and Symptom Control at the End-Of-Life

This table shows symptoms people commonly experience at the end of life with medications and suggested starting doses. When prescribing subcutaneous medication to support comfort at the end of life, the person's existing medication, current symptoms and medications to be used as needed (PRNs), should be reviewed and final prescription adjusted according to the person's needs.
If the person has renal impairment with eGFR<30, see renal anticipatory prescribing guidance.

Symptom	Drug	As needed (PRN) subcutaneous dose for symptoms that commonly occur	Syringe Driver starting dose to be prescribed subcutaneously over 24 hours via syringe driver	Maximum dose to be given subcutaneously via syringe driver over 24 hours	Vial Strengths
1. Pain/Breathlessness NB If already on oral opioids, see below for conversion from oral to subcutaneous dose. As needed (PRN) dose is 1/6th of the total opioid dose in 24 hours.	**Morphine**	2.5mg to 5mg 1 hourly (if not already taking opioids)	10mg (if not already taking opioids)	Guided by symptoms	10mg/ml
	Diamorphine	Diamorphine should only be used on specialist advice when morphine is not clinically indicated. There are ongoing long term stock shortages of Diamorphine.			
2. Nausea/vomiting First line: Opioid or centrally induced	**Haloperidol**	0.5mg to 1.5mg three times per day	1.5mg	10mg	5mg/ml
	Cyclizine*	25mg to 50mg three times per day	75mg	150mg	50mg/ml
First line: Prokinetic	**Metoclopramide**	10mg three times per day	30mg	80mg	10mg/2ml
Second line	**Levomepromazine**	6.25mg four times per day	6.25mg	25mg	25mg/ml
3. Agitation With anxiety	**Midazolam**	2.5mg to 5mg 1 hourly	10mg	60mg	10mg/2ml
With hallucinations or confusion	**Haloperidol**	0.5mg to 1.5mg three times per day	1.5mg	10mg	5mg/ml
Second line	**Levomepromazine**	6.25 to12.5mg four times per day	6.25mg	100mg	25mg/ml
4. Respiratory tract secretions First line	**Glycopyrronium Bromide**	200 micrograms 4 hourly	600 micrograms	1200 micrograms	600mcg 3ml
Second line These medications should be prescribed separately, not in combination.	**Hyoscine Hydrobromide**	400 micrograms 4 hourly	1200 micrograms	2400 micrograms	400mcg/ml
	Hyoscine Butylbromide*	10mg to 20mg 4 hourly	60mg	120mg	20mg/ml

**** Cyclizine is not compatible with Hyoscine Butylbromide or Oxycodone in a syringe driver.***

Advice is available 24 hours a day, 7 days a week to any healthcare professional from the SPECIALIST PALLIATIVE CARE ADVICE LINE 01736 757707

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Opioid Dose Conversion

This table is to support the conversion of an oral opioid dose into a subcutaneous opioid dose and to calculate the appropriate as required (PRN) dose for people requiring subcutaneous medication to support symptom control at the end of life. If you are changing the opioid medication, see additional guidance below.
When prescribing for people with renal impairment and an eGFR<30, see renal anticipatory prescribing guidance.

Oral Morphine (First line formulary choice)			**Subcutaneous morphine**		**Subcutaneous diamorphine**		**Oral oxycodone** (Second line if morphine not tolerated)			**Subcutaneous oxycodone**		**Subcutaneous alfentanil**		**Fentanyl Transdermal patch**
4 hour dose (mg)	12 hour MR dose (mg)	24 hour total dose (mg)	4 hour dose (mg)	24 hour total dose (mg)	4 hour dose (mg)	24 hour total dose (mg)	4 hour dose (mg)	12 hour MR dose (mg)	24 hour total dose (mg)	4 hour dose (mg)	24 hour total dose (mg)	4 hour dose (mg)	24 hour total dose (mg)	Stable pain Change 72hrly
5	15	30	2.5	15	1.25	10	2.5	7.5	15	1.25	7.5	0.125	1	12 mcg/hour
10	30	60	5	30	2.5	20	5	15	30	2.5	15	0.25	2	25 mcg/hour
15	45	90	7.5	45	5	30	7.5	25	50	3.75	25	0.5	3	25mcg/hour
20	60	120	10	60	7.5	40	10	30	60	5	30	0.75	4	37 mcg/hour
30	90	180	15	90	10	60	15	45	90	7.5	45	1	6	50 mcg/hour
Take particular care when prescribing at higher doses and seek advice with any prescription if unsure. Ask a colleague or use an opioid converter to double check calculations and conversions https://book.pallcare.info/index.php														
40	120	240	20	120	12.5	80	20	60	120	10	60	1.25	8	75 mcg/hour
50	150	300	25	150	15	100	25	75	150	12.5	75	1.5	10	75mcg/hour
60	180	360	30	180	20	120	30	90	180	15	90	2	12	100mcg/hour

DRUG	DRUG DOSE	APPROXIMATE CODEINE EQUIVALENCE	APPROXIMATE TRAMADOL EQUIVALENCE	APPROXIMATE ORAL MORPHINE EQUIVALENCE
Buprenorphine transdermal patch	5 micrograms/hour	100mg/24 hours	100mg/24hrs	10mg/ 24 hours

This is to be used as an approximate guide rather than a set of definitive equivalences. Some of these doses have been rounded up or down depending on the preparations available. Most data on doses are based on single dose studies so it is not necessarily applicable in chronic use. In addition, individual patients metabolise different drugs at varying rates. If rotating from one opioid to another, calculate doses using Morphine as standard and adjust them to suit the patient and the situation. When opioid rotating, especially at higher doses, consider dose reduction by 25-50%. Patients should be clinically reviewed and assessed after opioid changes because dose titration up or down may be required.

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