

# Prescription sheet for Subcutaneous Syringe Driver and Injectable Drugs



Cornwall Partnership

NHS Foundation Trust

*Patient details*

Name: .....  
 Address: .....  
 Date of birth: .....  
 NHS number: .....

GP name: .....

Drug sensitivities/allergies: \_\_\_\_\_  
 \_\_\_\_\_

## Current/Ongoing/Usual Opioids

Record here current prescription of opioid analgesia (include oral, buccal, transdermal). If the patient is terminally ill and already on a transdermal patch continue this and calculate subcutaneous (s/c) opioid for top-up analgesia only.

Name of drug	Form	Dose	Frequency	Total 24 hour dose

## A guide to equivalent doses for opioid drugs

NB - This is to be used as a **guide** rather than a set of definitive equivalences. Most data on doses is based on single dose studies so is not necessarily applicable in chronic use, also individual patients may metabolise different drugs at varying rates. The advice is always to calculate doses using morphine as standard and to adjust them to suit the patient and the situation. Some of these doses have by necessity been rounded up or down to fit in with the preparations available.

Oral Morphine			Subcutaneous Morphine		Subcutaneous Diamorphine		Oral Oxycodone			Subcutaneous Oxycodone		Fentanyl Transdermal	Subcutaneous Alfentanil	
4hr dose (mg)	12hr SR dose (mg)	24hr total dose (mg)	4hr dose (mg)	24hr total dose (mg)	4hr dose (mg)	24hr total dose (mg)	4hr dose (mg)	12hr SR dose (mg)	24hr total dose (mg)	4hr dose (mg)	24hr total dose (mg)	Patch strength (micrograms)	4hr dose (mg)	24hr total dose (mg)
5	15	30	2.5	15	1.25	10	2.5	7.5	15	1.25	7.5	12mcg	0.125	1
10	30	60	5	30	2.5 - 5	20	5	15	30	2.5	15	25mcg	0.25	2
15	45	90	7.5	45	5	30	7.5	25	50	3.75	25	25mcg	0.5	3
20	60	120	10	60	7.5	40	10	30	60	5	30	37mcg	0.75	4
30	90	180	15	90	10	60	15	45	90	7.5	45	50mcg	1	6
40	120	240	20	120	12.5	80	20	60	120	10	60	75mcg	1.25	8
50	150	300	25	150	15	100	25	75	150	12.5	75	75mcg	1.5	10
60	180	360	30	180	20	120	30	90	180	15	90	100mcg	2	12
70	210	420	35	210	25	140	35	105	210	17.5	100	125mcg	2.5	14
80	240	480	40	240	27.5	160	40	120	240	20	120	125mcg	2.5	16
90	270	540	45	270	30	180	45	135	270	22.5	135	150mcg	3	18
100	300	600	50	300	35	200	50	150	300	25	150	150mcg	3.5	20
110	330	660	55	330	37.5	220	55	165	330	27.5	165	175mcg	3.75	22
120	360	720	60	360	40	240	60	180	360	30	180	200mcg	4	24

Drug	Drug Dose (micrograms)	Approximate Codeine Equivalence	Approximate Oral Morphine Equivalence
Buprenorphine Transdermal			
BuTrans 5	5 micrograms/hour	60mg/24 hours	10mg/24 hours
BuTrans 10	10 micrograms/hour	120mg/24 hours	20mg/24 hours
BuTrans 20	20 micrograms/hour	240mg/24 hours	40mg/24 hours

## Prescribing information

- When first commencing a syringe driver it can take 4-6 hours for the medication to take effect. It is therefore important to prescribe s/c stat doses of all medicines required to manage pain relief and other symptoms. A separate Saf-T-Intima could be inserted for this purpose.
- Ensure where a dose increase is intended, that the calculated dose is safe for the patient. This should normally not be more than 50% higher than the previous dose. (NPSA/2008/RRR05- Reducing Dosing errors with Opioid Medicines)
- If patient is entering the terminal phase keep transdermal opioid patches in situ, and continue to change patch as usual i.e every 72 hours ([book.pallcare.info/index.php](http://book.pallcare.info/index.php)). Give additional s/c opiate when necessary (prn) for breakthrough pain. If more than 2 doses are needed in 24 hours then give additional opioid by syringe driver, starting with dose equal to sum of prn doses in past 24 hours.
- Naloxone - The recommended dose of Naloxone IV to reverse opioid induced respiratory depression in patients receiving end of life care is Naloxone IV 100-200micrograms (1.5micrograms -3micrograms/kg). If response is inadequate give subsequent dose of 100micrograms every two minutes. NHS England Patient Safety Alert (NHS/PSA/W/2014/016R).
- Intraspinal route - Occasionally syringe drivers are used to deliver medicines via the intraspinal route. When this occurs the management of the syringe driver is different and advice regarding this should be obtained from the hospice. Prior to seeking advice no changes should be made.

## Syringe driver information – McKinley T34 in the community

- If the syringe driver does not work give STAT doses (see guidance on conversion chart) and record on syringe driver record sheet doses and stock used. Leave a message for the District Nursing team regarding this.
- If the alarm is sounding, this can be stopped by removing the battery (the locked box does not need to be removed to do this). This will stop the infusion so stat doses may be required. Contact the District Nursing Team and ask them to recommence the machine and troubleshoot.
- Only reload the syringe driver if trained and competent with use of the McKinley T34 syringe driver.**

## Guidance for anticipatory prescribing and symptom control at the end-of-life

Symptom	Drug	PRN subcutaneous dose for anticipatory symptoms, as needed	Starting dose range over 24 hours in syringe driver (subcutaneous), if needed	Vial Strengths	Maximum dose over 24 hours
<b>1. Pain/Breathlessness</b> NB If already on oral opioids, see below for conversion. <b>If severe renal impairment, seek specialist advice</b>	<b>Diamorphine</b>	2.5mg 1 hourly if opioid naïve or 1/6th of 24 hr subcutaneous opioid dose	7.5mg-15mg (if not already taking opioids)	5,10,30 or 100mg amps	No upper limit
	<b>Morphine</b>	2.5mg-5mg 1 hourly prn if opioid naïve or 1/6th of 24 hr subcutaneous opioid dose	10mg-20mg (if not already taking opioids)	10mg/ml	No upper limit
<b>2. Nausea/vomiting</b> Opioid or centrally induced	<b>Haloperidol and/or</b>	1.5mg-3mg bd	3mg-5mg	5mg/ml	10mg
	<b>Cyclizine*</b>	50mg tds (if not on regular cyclizine)	150mg	50mg/ml	150mg
Prokinetic	<b>Metoclopramide</b>	10mg tds	30mg-60mg	10mg/2ml	80mg
Second Line	<b>Levomepromazine</b>	6.25mg qds	6.25mg-12.5mg	25mg/ml	25mg
<b>3. Agitation +anxiety (1st line)</b> +hallucinations or confusion	<b>Midazolam</b>	2.5mg-5mg initially 1 hourly prn	10mg-30mg	10mg/2ml	60mg
	<b>Haloperidol</b>	1.5mg-3mg bd	3mg-5mg	5mg/ml	10mg
	<b>Levomepromazine</b>	6.25mg-12.5mg (max qds)	6.25mg-12.5mg	25mg/ml	100mg
<b>4. Noisy breathing due to respiratory tract secretions</b>	<b>Glycopyrronium Bromide</b>	200 microgram 4 hourly	600 microgram - 1200 microgram	600 microgram /3ml	1200 microgram
	<b>Hyoscine Butylbromide*</b>	20mg 4 hourly	60mg-100mg	20mg/ml	120mg
	<b>Hyoscine Hydrobromide</b>	400 microgram 4 hourly	1.2mg-2.4mg	400 microgram /ml	2.4mg

The guidance above are well accepted drugs and doses used at the end-of-life. Call the Palliative Care Advice Line if advice is needed at any time. Conversion of oral opioids to parenteral opioids is overleaf. \* Cyclizine is not compatible with hyoscine butylbromide or oxycodone in a syringe driver.

## Further advice is available from:

Palliative Care Advice Line: Cornwall Hospice Care **01736 757707** - Advice is available 24 hours a day, 7 days a week to any Health Care Professional  
 Community Specialist Palliative Care Team 01208 251300  
 24 hour on-call pharmacist at RCHT 01872 252000  
 St Luke's Hospice 01752 401172

**References** Palliative Care Guidelines plus – [www.book.pallcare.info/index.php](http://www.book.pallcare.info/index.php) | BNF - [bnf.org](http://bnf.org)  
 Cornwall Joint Formulary – [www.eclipsesolutions.org/cornwall](http://www.eclipsesolutions.org/cornwall)

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Prescription sheet to be reviewed monthly

Date of review: .....

Prescription sheet start date: .....

Doctors signature: .....

**As required/PRN/anticipatory prescribing medications**

**As required medications (for Opioid this is generally a sixth of the 24 hour dose)**

Date & Time	Name of drug	Dose	Route	Frequency	Total STAT doses in 24hrs	Doctor's signature	Pharmacist

**Syringe Driver Medications over 24 hours**

Drugs that may be added to syringe driver depending on symptoms. It is essential to make sure the drugs are compatible or it may be necessary to run two syringe drivers.

([www.book.pallcare.info/index.php](http://www.book.pallcare.info/index.php) - advice on compatibility)

Date & time	Dose range	Print name & signature
	DILUENT OF CHOICE: _____ To a sufficient quantity	Name: Signature: Designation: <div style="text-align: right; border: 1px solid black; padding: 2px; width: fit-content; margin-left: auto;">Pharmacist</div>
	S/c _____ injection ____ mg in 24 hours via syringe driver increasing by ____ mg steps if necessary to a maximum of ____ mg in 24 hours Reason for use: _____	Name: Signature: Designation: <div style="text-align: right; border: 1px solid black; padding: 2px; width: fit-content; margin-left: auto;">Pharmacist</div>

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