Document Type:	Guideline	
Reference Number : **1609**	Version Number: **7**	Next Review Date: **30 September 2025**
Title:	**Community Prescription Form For Syringe Pumps (Guidance From South Devon Formulary)**	
Document Author:	Consultant for Palliative Medicine	
Applicability:	Organisation Wide	

Contents **Page**

References

Palliative Care Formulary 7th Edition (PCF7)
South and West Devon Formulary
BNF
UK Medicines Information: How should conversion from oral morphine to fentanyl patches be carried out?
https://www.sps.nhs.uk/wp-content/uploads/2017/12/UKMI_QA_Conversion-from-oral-morphine-to-fentanyl-patches_November-2017_Final.docx

PRESCRIBER MUST COMPLETE PARTS 1 & 2 OF THIS FORM

DURING COVID PANDEMIC 2020 TRANSFER OF THIS PMAR IS TO TAKE PLACE ELECTRONICALLY FROM GENERAL PRACTICE TO THE LOCALITY COMMUNITY NURSING TEAM

Patient Name		**Date of Birth**		**GP**	
NHS /Unique Identification number		**Allergies**			

Part 1: COMMUNITY PRESCRIPTION FOR CONTINUOUS SUBCUTANEOUS SYRINGE PUMP INFUSIONS

For prescribing guidance see overleaf

DATE/TIME	Generic NAME of DRUG and DILUENT Blank rows are provided for prescribing of drugs not listed	24 HOUR DOSE mg/24hrs Consider prescribing dose ranges	PRESCRIBER NAME & SIGNATURE (IN FULL)
	MORPHINE sulfate- max of 30mg/ml due to solubility		
	Metoclopramide Hydrochloride		
	Levomepromazine		
	Midazolam		
	Hyoscine BUTYLbromide		
	Hyoscine HYDRObromide		
	Haloperidol		
	Water for injection		

Part 2: PRESCRIPTION FOR AS REQUIRED (PRN) DOSES

DATE/TIME	GENERIC NAME OF MEDICATION & ANY DILUENT	DOSE Consider prescribing dose ranges	FREQUENCY	ROUTE	PRESCRIBER NAME & SIGNATURE IN FULL
	MORPHINE sulfate				
	Metoclopramide Hydrochloride				
	Levomepromazine				
	Midazolam				
	Hyoscine BUTYLbromide				
	Hyoscine HYDRObromide				
	Haloperidol				

For prescribing guidance see overleaf

TORBAY & SOUTH DEVON SPECIALIST PALLIATIVE CARE SERVICE
INSTRUCTIONS FOR USE OF SUBCUTANEOUS SYRINGE PUMPS

Indications for using a subcutaneous syringe pump [SCSP]:

1. Altered level of consciousness in a dying patient
2. Persistent nausea and vomiting e.g. in bowel obstruction
3. Inability to swallow
4. Poor compliance with oral medication

The syringe pump is simply another method of administration of medication for patients who are symptomatic.

ANALGESICS

Morphine – dose per 24 hours: no ceiling dose but:

1. Start at 10-15mg/24 hours in opioid naïve patients (less in very elderly/frail)
2. See conversion table for calculating doses, changing from oral to SCSP use and using other opioids. See conversion table for calculating doses, changing from oral to SCSP use and using other opioids e.g. converting the total daily dose of oral morphine to the total daily dose of subcutaneous morphine by dividing by 2, e.g. MST 60mg bd=120mg/day =morphine 60mg/24 hours by SCSP.
3. **Caution:** in patients with **significant renal impairment (suspected eGFR <30)** aim to avoid morphine because of significant risk of opioid accumulation/toxicity. Alternative opioids such as oxycodone/fentanyl/alfentanil may be more appropriate. Please seek advice from Specialist Palliative Care team (see guidance on prescribing at end of life in renal failure)
4. **Patches** - Transdermal opioid patches should not be started in the terminal stage since it takes too long to titrate against a patient's pain. If the patient is already established on a patch it may be appropriate to continue with it and add in additional medications via the SCSP.

ANTIEMETICS

1. **Metoclopramide** useful for gastric stasis and upper gastrointestinal obstruction. Avoid in patients with colic. Non-sedating.
Dose per 24 hours: 30-60mg *(BNF dose range is 30-100mg/24h)*
Dose per prn injection: 10mg 6-8 hourly
2. **Haloperidol** useful in chemically induced vomiting (e.g. hypercalcaemia, renal failure), and/or in patients with psychotic features. Sedating at higher doses. Use lower dose in the elderly.
Dose per 24 hours: 2.5-5mg (up to 10mg if being used for sedation as well)
Dose per prn injection: 1-3mg od-bd
3. **Levomepromazine** good antiemetic especially with co-existing anxiety, very sedating at higher doses.
Dose per 24 hours: 6.25-25mg *(BNF dose range 5-25mg/24h)*
Dose per prn injection: 6.25mg 6-8 hourly
4**. Cyclizine** relatively non-sedating, useful in mechanical bowel obstruction or raised intracranial pressure, but precipitates out when mixed with Hyoscine Butylbromide.
Dose per 24 hours: 50-150mg **Dose per prn injection:** 50mg 8 hourly (max. 150mg/24hours)

ANTISPASMODICS

Hyoscine butylbromide (Buscopan)
Dose per 24 hrs: 60-120mg *(BNF dose range 60-300mg/24h)*
Dose per PRN injection 20mg 4 hourly

SEDATIVES

1. **Midazolam** useful for anxiety, breathlessness, restlessness and muscle stiffness in terminal phase. Also used as an anticonvulsant.
Dose per 24 hours: 10-60mg. Higher doses occasionally required. *(BNF start 10-20mg/24h usual dose 20-60mg/24h)*
Dose per prn injection: 2.5-10mg 4 hourly
Caution: respiratory depression is more likely when midazolam is given parenterally with morphine.

2. **Levomepromazine** useful as sedative but can lower fitting threshold
Dose per 24 hours: 12.5-50mg (higher doses occasionally required)
Dose per prn injection: 12.5-25mg 4 hourly

TERMINAL SECRETIONS

1. **Hyoscine butylbromide (Buscopan)** useful in respiratory secretions **when sedation not desired**
Dose per 24 hours: 60-120mg *(BNF dose range 20-120mg/24h)*
Dose per prn injection: 20mg 4 hourly
Suitable for use if suspected eGFR <30
2. **Hyoscine hydrobromide** useful in terminal stages **when sedation required** but can cause paradoxical agitation; usually given with a sedative, e.g. Levomepromazine or Midazolam. **Caution: avoid if suspected eGFR <30.**
Dose per 24 hours: 1.2-2.4mg *(BNF dose range 1.2-2mg/24h)*
Dose per prn injection: 0.4-0.6mg 4 hourly (max. 2.4mg/24 hours)

AS REQUIRED (PRN) DOSES MUST BE PRESCRIBED

- Always ensure that adequate prn doses are clearly written on the syringe pump prescription sheet so that any trained healthcare professional visiting the home who does not know the patient can give extra medication when indicated. These prn medications are not the same as Just In Case Bag (JICB) medication.
- JICB medication should be prescribed when a clinical deterioration is anticipated but the patient does not yet need a syringe pump for current symptom control.
- A syringe pump should be started when clinically indicated and should not be delayed because JICB medications are already available. There is no requirement to use JICB medication prior to setting up a syringe pump.
- Ideally there should be no more than a 4 hour delay between the request for starting a syringe pump and it being set up for the patient.

24 hour advice line (Rowcroft Hospice) tel no: **01803 210800.** Calls go through to the hospice. The senior nurse will be able to answer queries or ask the doctor on call to ring you back.
Rowcroft Community Specialist Palliative Care Team - Mon – Fri 9-5 tel no: 01803 210811 Sat – Sun, bank holidays 9-1 (tel advice) tel no: 01803 210812

Consultants in Palliative Medicine, Torbay and South Devon NHS Foundation Trust/Rowcroft Hospice

GP Facilitators in Palliative Care, South Devon and Torbay.
Updated October 2021 Review October 2024

PRESCRIBING IN PALLIATIVE CARE: A GUIDE TO EQUIVALENT DOSES FOR OPIOID DRUGS

This is to be used as **a guide** rather than a set of definitive equivalences. It is crucial to appreciate that conversion ratios are never more than an approximate guide (comprehensive data are lacking, inter-individual variation). 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, including adjustment of doses for liquid and injectable medications in order to optimise ability to dispense accurately.

PLEASE SEEK SPECIALIST ADVICE IF YOU ARE UNCERTAIN ABOUT WHAT TO PRESCRIBE AND/OR PATIENT NEEDING ESCALATNG OPIOID DOSES

Oral Morphine			Subcutaneous Morphine		Subcutaneous Diamorphine		Oral Oxycodone			Subcutaneous Oxycodone		Approximate TD Fentanyl patch micrograms/hr	Subcutaneous Alfentanil		Subcutaneous Fentanyl	
4 hr dose (mg)	12hr SR dose (mg)	24hr Total dose (mg)	4 hr dose (mg)	24 hr total dose (mg)	4 hr dose (mg)	24 hr total dose (mg)	4hr dose (mg)	12hr SR dose (mg)	24hr total dose (mg)	4 hr dose (mg)	24 hr total dose (mg)	Please see additional chart below for dose conversion ranges	4 hr dose (mg)	24hr total dose (mg)	4 hr dose (mcg)	24hr total dose (mcg)
5	15	30	2.5	15	1	10	2.5	7.5	15	1	7.5	12mcg	0.1	1	25	200-250
10	30	60	5	30	2.5-5	20	5	15	30	2.5	15	25mcg	0.2	2	50	400-500
15	45	90	7.5	45	5	30	7.5	25	50	4	25	25-37mcg	0.5	3	100	600-750
20	60	120	10	60	7.5	40	10	30	60	5	30	37-50mcg	0.7	4	Syringe pump volume issues likely above 500mcg/24hours because fentanyl injection available as 50micrograms/ml	
30	90	180	15	90	10	60	15	45	90	7.5	45	50-75mcg	1	6		
40	120	240	20	120	12.5	80	20	60	120	10	60	75-100mcg	1	8		
50	150	300	25	150	15	100	25	75	150	12.5	75	100-150mcg	1.5	10		
60	180	360	30	180	20	120	30	90	180	15	90	100-150mcg	2	12		
70	210	420	35	210	25	140	35	105	210	17.5	100	125-175mcg	2.5	14		
80	240	480	40	240	27.5	160	40	120	240	20	120	125-200mcg	2.5	16		

- Two thirds of palliative care patients need <180mg/24hrs of oral morphine
- The dose conversion ratio of morphine to oxycodone is approximately 1.5-2:1.For the purposes of this guidance we have adopted a 2:1 ratio
- The dose conversion ratio of SC diamorphine: SC alfentanil is from 6-10:1. It is prudent to use the more conservative ratio when switching from one to the other e.g. if switching from diamorphine to alfentanil, use dose conversion ratio 10:1 so that 10mg diamorphine = 1mg alfentanil. If switching from alfentanil to diamorphine use dose conversion ratio 6:1 so that 1mg alfentanil = 6mg diamorphine.
- The dose conversion ratio of SC Alfentanil: SC fentanyl is approximately 4-5:1

TRANSDERMAL (TD) OPIOID PATCHES

Fentanyl TD patch micrograms/hr	Approximate oral Morphine mg/24hours
12	30-45
25	60-90
37	90-135
50	120-180
62	150-225
75	180-270
100	240-360
125	300-450
150	360-540
175	420-630
200	480-720

Buprenorphine TD micrograms/hr	Approximate oral Morphine mg/24hrs
5	10-20
10	20-30
15	30-40
20	40-50
35.5	80-90
52.5	120-130
70	160-180
Maximum authorised dose is two 70micrograms/hr patches	

- A PO morphine:transdermal fentanyl dose conversion ratio of 100-150:1 is used (PCF7 & BNF 100:1, Public Health Education Opioids Aware Resource 150:1) resulting in a dose range of oral morphine per patch strength e.g. Fentanyl TD 25mcg/hr patch approximately= 60-90mg oral morphine/24hrs
- It is suggested that for conversions from oral morphine to fentanyl patches, the lower doses of fentanyl should be used for patients who have been on oral opioids for just weeks and the higher doses for people who have been on a stable and well tolerated oral opioid regimen for a longer period.
- Transdermal fentanyl patches are changed every 3 days (72 hours)
- A PO morphine: transdermal buprenorphine dose conversion of 100:1 is used (PCF7)
- A variety of transdermal buprenorphine patches are available, changed either every 3, 4 days or 7 days. Check carefully before prescribing & instructing the patient.

Resources: Palliative Care Formulary 7th Edition (PCF7)
BNF
UK Medicines Information: How should conversion from oral morphine to fentanyl patches be carried out?
https://www.sps.nhs.uk/wp-content/uploads/2017/12/UKMI_QA_Conversion-from-oral-morphine-to-fentanyl-patches_November-2017_Final.docx.
Updated October 2021 Review October 2024
Consultants in Palliative Medicine, Rowcroft Hospice, South Devon in collaboration with Hospiscare, Exeter, St Luke's Hospice, Plymouth and North Devon Hospice, Barnstaple.

TOP TIPS for prescribing opioids at end of life

- Use the lowest dose needed to achieve symptom control. Be prepared to adjust the dose up or down according to symptom relief and side effects. Review the patient regularly.
- Opioids are good for relief of pain and breathlessness, but should not be used for sedation.
- Always check conversion doses, especially when using unfamiliar opioids. It is usually helpful to calculate the equivalent oral morphine dose and continue from there.
- In opioid naïve patients, start with a subcutaneous syringe pump (SCSP) dose of morphine 10-15mg/24hrs (use lower doses for elderly, frail patients).
- In opioid naïve patients, consider adding in an antiemetic to the SCSP regimen. Nausea and vomiting is a common initial undesirable effect of opioids.
- For patients already using opioids calculate their equivalent SCSP opioid dose. Consider factoring in an increase if the patient's pain is not controlled.
- It is usual to continue with transdermal Fentanyl/Buprenorphine patches using the SCSP to add easily adjustable doses of opioids/medications.
- When adjusting the 24-hour dose of opioid, PRN use should be taken into account; dose increases should not exceed 1/3rd - 1/2 of total dose every 24hrs.
- Prescribe a PRN SC dose equivalent up to 1/6th of the 24hr dose. It may be helpful to prescribe a range:

e.g. morphine 60mg/24hrs via SCSP,
morphine 5-10mg SC PRN

Clarify permitted frequency (generally 2-4 hourly PRN but can be 1 hourly PRN when pain severe, or in the last few days of life).

- Do not forget to include the equivalent dose of transdermal patch PLUS the SCSP opioid dose when calculating PRN SC opioid dose:

E.g. fentanyl patch 25mcg/hour (approx. 60-90mg oral morphine/24hrs) + SCSP morphine 15mg/24hrs (approx. 30mg oral morphine/24hrs)
=
total oral morphine 90-120mg/24hrs = total SC morphine 45-60mg/24hrs.
Therefore, PRN SC morphine dose range = 5-10mg

- For patients in the community setting, it may be helpful to prescribe a dose range for the 24hr SCSP regime. Provide clear instructions on indication(s) for increasing the dose with suitable dose increments:

E.g. Morphine 60-100mg/24hrs. "Increase in increments of 10-20mg, depending on PRN use, if pain not controlled. Do not increase more frequently than every 24hrs".

- For patients with renal failure please see your local prescribing guidance and/or seek specialist advice

For more detailed guidance refer to Torbay and South Devon Care of the Dying Resources (includes information about symptom control, use of syringe pumps, prescribing in renal impairment and patient information):

https://www.rowcrofthospice.org.uk/how-we-can-help/referrals-access-services/clinical-resources/

Consultants in Palliative Medicine, Torbay and South Devon NHS Foundation Trust/Rowcroft Hospice
GP Facilitators in Palliative Care, South Devon and Torbay.
Updated October 2021 Review October 2024

Document Control Information

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Please note this document is only valid from the date approved below, and checks should be made that it is the most up to date version available.

If printed, this document is only valid for the day of printing.

This guidance has been registered with the Trust. The interpretation and application of guidance will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using clinical guidance after the review date, or outside of the Trust.

Ref No:	1609		
Document title:	Community Prescription Form For Syringe Pumps (Guidance From South Devon Formulary)		
Purpose of document:			
Date of issue:	30 September 2022	**Next review date:**	30 September 2025
Version:	7	**Last review date:**	June 2022
Author:	Consultant for Palliative Medicine		
Directorate:	Palliative Medicine		
Equality Impact:	The guidance contained in this document is intended to be inclusive for all patients within the clinical group specified, regardless of age, disability, gender, gender identity, sexual orientation, race and ethnicity & religion or belief		
Committee(s) approving the document:	ICO Clinical Lead for Palliative Care and Medical Director for Rowcroft Hospice Care and Clinicals Policies Group Clinical Director of Pharmacy		
Date approved:	11 May 2020 (V7 approved by Consultant in Palliative Care and pharmacy)		
Links or overlaps with other policies:			

Have you identified any issues on the Rapid (E)quality Impact Assessment. If so please detail on Rapid (E)QIA form.	Yes ☐	
	Please select *Yes*	*No*
Does this document have implications regarding the Care Act? *If yes please state:*	☐	☐
Does this document have training implications? *If yes please state:*	☐	☐
Does this document have financial implications? *If yes please state:*	☐	☐

Is this document a direct replacement for another? *If yes please state which documents are being replaced:*	☐	☐

Document Amendment History

Date	Version no.	Amendment summary	Ratified by:
2 January 2014	1	New	Consultant in Palliative Medicine Clinical Director of Pharmacy
8 January 2016	2	Title change (No changes to content)	Consultant in Palliative Medicine Clinical Director of Palliative Medicine
25 October 2019	3	Revised	ICO Clinical Lead for Palliative Care and Medical Director for Rowcroft Hospice Care and Clinicals Policies Group
3 April 2020	4	Amended (Community Prescription parts 1 and 2 amalgamated onto page 2. No amendment to medicines)	ICO Clinical Lead for Palliative Care and Medical Director for Rowcroft Hospice Care and Clinicals Policies Group Clinical Director of Pharmacy
19 February 2021	5	Minor amendments	Consultant in Palliative Medicine
1 October 2021	6	Title change and pharmacy amendments	Consultant in Palliative Care Medicine Clinical Director of Pharmacy
30 September 2022	7	Minor amendments to dates on pages 3, 5 and 7	Consultant in Palliative Care Clinical Director of Pharmacy

The Mental Capacity Act 2005

The Mental Capacity Act 2005 provides a statutory framework for people who lack capacity to make decisions for themselves, or who have capacity and want to make preparations for a time when they lack capacity in the future.

It sets out who can take decisions, in which situations, and how they should go about this. It covers a wide range of decision making from health and welfare decisions to finance and property decisions.

There is a legal duty placed upon all staff to apply the Mental Capacity Act 2005 in all circumstances where a person is required to consent to 'acts in connection with care and treatment' and where there is reason to doubt the person's mental capacity to do so.

Guidance can be accessed via Pages - Mental Capacity Act (torbayandsouthdevon.nhs.uk)

Infection Control

All staff will have access to Infection Control Policies and comply with the standards within them in the work place. All staff will attend Infection Control Training annually as part of their mandatory training programme.

Rapid (E)quality Impact Assessment (EqIA) *(for use when writing policies)*

Policy Title (and number)		Version and Date	
Policy Author			
An (e)quality impact assessment is a process designed to ensure that policies do not discriminate or disadvantage people whilst advancing equality. Consider the nature and extent of the impact, not the number of people affected.			
Who may be affected by this document?			
Patients/ Service Users ☐	Staff ☐	Other, please state…	☐
Could the policy treat people from protected groups less favourably than the general population? PLEASE NOTE: Any 'Yes' answers may trigger a full EIA and must be referred to the equality leads below			
Age	Yes ☐ No☐	Gender Reassignment	Yes ☐ No☐
Race	Yes ☐ No☐	Disability	Yes ☐ No☐
Gender	Yes ☐ No☐	Pregnancy/Maternity	Yes ☐ No☐
Sexual Orientation	Yes ☐ No☐		
Religion/Belief (non)	Yes ☐ No☐		
Marriage/ Civil Partnership	Yes ☐ No☐		
Is it likely that the policy could affect particular 'Inclusion Health' groups less favourably than the general population? (substance misuse; teenage mums; carers[1]; travellers[2]; homeless[3]; convictions; social isolation[4]; refugees)	Yes ☐ No☐		
Please provide details for each protected group where you have indicated 'Yes'.			
VISION AND VALUES: Policies must aim to remove unintentional barriers and promote inclusion			
Is inclusive language[5] used throughout?	Yes ☐ No☐ NA ☐		
Are the services outlined in the policy fully accessible[6]?	Yes ☐ No☐ NA ☐		
Does the policy encourage individualised and person-centred care?	Yes ☐ No☐ NA ☐		
Could there be an adverse impact on an individual's independence or autonomy[7]?	Yes ☐ No☐ NA ☐		
EXTERNAL FACTORS			
Is the policy a result of national legislation which cannot be modified in any way?	Yes ☐ No☐		
What is the reason for writing this policy? (Is it a result in a change of legislation/ national research?)			
Who was consulted when drafting this policy?			
Patients/ Service Users ☐	Trade Unions ☐	Protected Groups (including Trust Equality Groups)	☐
Staff ☐	General Public ☐	Other, please state…	☐
What were the recommendations/suggestions?			
Does this document require a service redesign or substantial amendments to an existing process? PLEASE NOTE: 'Yes' may trigger a full EIA, please refer to the equality leads below	Yes ☐ No☐		
ACTION PLAN: Please list all actions identified to address any impacts			
Action		Person responsible	Completion date
AUTHORISATION: By signing below, I confirm that the named person responsible above is aware of the actions assigned to them			
Name of person completing the form		Signature	
Validated by (line manager)		Signature	

Please contact the Equalities team for guidance:

For Devon CCG, please email d-ccg.equalityanddiversity@nhs.net & d-ccg.QEIA@nhs.net

For Torbay and South Devon NHS Trusts, please call 01803 656676 or email pfd.sdhct@nhs.net

This form should be published with the policy and a signed copy sent to your relevant organisation

Consider any additional needs of carers/ parents/ advocates etc, in addition to the service user

[2] Travelers may not be registered with a GP - consider how they may access/ be aware of services available to them

[3] Consider any provisions for those with no fixed abode, particularly relating to impact on discharge

[4] Consider how someone will be aware of (or access) a service if socially or geographically isolated

[5] Language must be relevant and appropriate, for example referring to partners, not husbands or wives

[6] Consider both physical access to services and how information/ communication in available in an accessible format

[7] Example: a telephone-based service may discriminate against people who are d/Deaf. Whilst someone may be able to act on their behalf, this does not promote independence or autonomy

Clinical and Non-Clinical Policies – Data Protection

Torbay and South Devon NHS Foundation Trust (TSDFT) has a commitment to ensure that all policies and procedures developed act in accordance with all relevant data protection regulations and guidance. This policy has been designed with the EU General Data Protection Regulation (GDPR) and Data Protection Act 2018 (DPA 18) in mind, and therefore provides the reader with assurance of effective information governance practice.

The UK data protection regime intends to strengthen and unify data protection for all persons; consequently, the rights of individuals have changed. It is assured that these rights have been considered throughout the development of this policy. Furthermore, data protection legislation requires that the Trust is open and transparent with its personal identifiable processing activities and this has a considerable effect on the way TSDFT holds, uses, and shares personal identifiable data.

Does this policy impact on how personal data is used, stored, shared or processed in your department? Yes ☐ No ☐

If yes has been ticked above it is assured that you must complete a data mapping exercise and possibly a Data Protection Impact Assessment (DPIA). You can find more information on our GDPR page on ICON (intranet)

For more information:

- Contact the Data Access and Disclosure Office on dataprotection.tsdft@nhs.net,
- See TSDFT's Data Protection & Access Policy,
- Visit our Data Protection site on the public internet.