NHS
North Cumbria Integrated Care
NHS Foundation Trust

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Form 4 (v4) SYRINGE DRIVER AUTHORISATION CHART

Syringe driver……..…of……..…..(use one chart per syringe driver)

ALERT STICKER

SURNAME:	**FORENAME:**	**GP:**
ADDRESS:		
DOB:	**NHS NUMBER:**	
DISCARD THE JUST IN CASE MEDICATION SHEET WHEN YOU COMMENCE A SYRINGE DRIVER - ENSURE PRN DOSES WRITTEN BELOW		

ALLERGY
Drug:
Reaction:
SYRINGE DRIVER NEEDS TO BE PROTECTED FROM LIGHT

CODES FOR STOPPING: 1. Dose increased 2. Ineffective 3. Side effects 4. Incompatible

DATE	TIME	DRUG(S) Maximum 3 to be mixed unless under SPC advice	24 HOUR DOSE	Prescribers Name, Date and Registration No (GMC/NMC/GPhC)	STOPPED BY: Prescribers name, date and code Reason
		WATER FOR INJECTION (make up maximum 17ml in 20ml syringe or 23ml in 30ml syringe)			

COMPATIBILITY CHECKED: YES / NO FENTANYL / BUPRENORPHINE TRANSDERMAL PATCH YES / NO

S/C PRN Doses Below (for once only and as required doses)

DATE	DRUGS	DOSE	INDICATION & FREQUENCY	Prescribers Name, Date and Registration No (GMC/NMC/GPhC)	STOPPED BY: Prescribers name, date and code Reason

GUIDANCE FOR SYRINGE DRIVER: Palliative and End of Life are guidelines (2021, North England clinical networks)

Do's and Don'ts for mixing drugs

Maximum of three drugs mixed should be mixed together unless advised by Specialist palliative care team.
Use the minimum dose of the fewest drugs to control current symptoms
Use water for injection first line as the diluent (the specialist palliative care team may advise sodium chloride on occasion).
There is little meaningful data on compatibilities.
The usual doses of morphine, levomepromazine and midazolam are compatible.
Be careful with cyclizine as this is temperamental when mixed with other medication. **Do not use cyclizine with sodium chloride.**
Dexamethasone should not be mixed with other drugs in the syringe driver.
A lock box should always be used (larger syringes do not fit into the lock box so should not be used).
* The T34 driver will accommodate a maximum total volume of 17mls (if using a 20ml syringe) or 23ml (if using a 30ml syringe) with a locked box

OPIOIDS

Morphine is the first choice injectable opioid (unless there is a previous intolerance or caution for use).
Calculate the **total** oral morphine dose taken over the last 24 hours (including prn doses) by any route. Divide any oral doses by 2 to give the equivalent s/c dose. Add this to any S/C doses given over the last 24 hours. Prescribe the total dose for the syringe driver. **Prescribe ONE SIXTH of this S/C as the PRN/STAT dose.**
If higher doses are needed than given in the table below, contact the Specialist Palliative Care team for advice
If the patient cannot tolerate morphine or is already taking an alternative opioid refer to the table below for equivalent doses. Seek advice from the Specialist Palliative Care team if needed.
Fentanyl or buprenorphine patches should be continued, renewing the patch as per prescription. Any additional opioid S/C doses are used to top up this background dose

APPROXIMATE EQUIVALENT 24 hour DOSES: (N.B. you must use clinical judgment in addition to looking up the doses)
4 hourly (JIC) doses would be ONE SIXTH of the 24 hour dose.

ORAL Morphine 24 hr dose	**ORAL Oxycodone** 24 hr dose	**S/C Morphine** 24 hr dose	**S/C Oxycodone** 24 hr dose	**S/C Alfentanil** 24 hr dose	**TRANSDERMAL Fentanyl** Change every 3 days	**TRANSDERMAL Buprenorphine** Change as below
20mg	15mg	10mg	7.5mg	500 microgram		10 microgram/hr (7 day patch)
30mg	20mg	15mg	10mg	1mg	12 microgram/hr	15 microgram/hr (7 day patch)
60mg	40mg	30mg	20mg	2mg	25 microgram/hr	25 microgram/hr (7 day patch)
120mg	80mg	60mg	40mg	4mg	50 microgram/hr	52.5 microgram/hr (3 or 4 day patch)
180mg	120mg	90mg	60mg	6mg	75 microgram/hr	70 microgram/hr (3 or 4 day patch)
240mg	160mg	120mg	80mg	8mg	100 microgram/hr	105 microgram/hr (3 or 4 day patch)
300mg	200mg	150mg	100mg	10mg	125 microgram/hr	
360mg	240mg	180mg	120mg	12mg	150 microgram/hr	
480mg	320mg	240mg	160mg	16mg	200 microgram/hr	
600mg	400mg	300mg	200mg	20mg	250 microgram/hr	
720mg	480mg	360mg	240mg	24mg	300 microgram/hr	

ANTIEMETICS: Levomepromazine: 2.5 mg - 5mg SC 6 hourly prn (2.5mg- 12.5mg/24h CSCI) is a broader spectrum anti-emetic drug now being used more widely; it is sedating, even at low doses.
Cyclizine: 25mg **-** 50mg PO/SC 8 hourly prn (150mg/24 hours CSCI) Maximum dose by any route is 150mg daily. Contra-indicated in severe heart failure, caution in renal and hepatic failure
Haloperidol 500 micrograms SC 8 hourly prn (1.5mg - 5mg/24h CSCI) is another alternative.

AGITATION: Midazolam (use the concentrated preparation; i.e.**10mg in 2ml** ampoules) 2.5mg - 5mg up to hourly prn, If 3 or more doses are needed consider a syringe driver: 10mg to 30mg/24h. If >30mg/24h required, consider adding haloperidol or levomepromazine. NB before administration, common causes of agitation e.g. pain, urinary retention or faecal impaction should be managed or excluded, also check whether sedation is acceptable to the patient.

SECRETIONS: Glycopyrronium 200micrograms 4 hourly followed by 600micrograms – 1.2mg over 24 hours via CSCI.
Hyoscine butylbromide (Buscopan ®)(20mg SC hourly prn followed by 60-120mg/24h CSCI) is a non-sedating alternative.
Hyoscine hydrobromide is sedating, but can cause paradoxical agitation so is no longer a first line choice.