LRI ED guidance for adult patients attending on a T34 pump (syringe driver)

Background

- We sometimes encounter patients attending our ED on T34 pumps delivering high daily doses of opiates and other drugs that might be unfamiliar to us
- These patients are not always nearing the end of their life; some merely have long term complex specialist palliative care needs and are on syringe drivers for symptom control
- To ensure that symptom control is uninterrupted if the syringe runs out, ED staff need to know how to re-prescribe and prepare the medicines and know how to operate the T34 pumps

Notes for prescribers

- See next page for step-by-step instructions on how to prescribe the syringe driver medicines in NC Meds
- If Nervecentre is offline, prescribe all syringe driver medicines on the 'REGULAR MEDICINES' pages of the UHL paper drug chart, using a circular arrow in the 'Time' column to denote 24h infusion as shown
- Write 'via T34 pump together with [names of any other drugs]' in the prescription's
 'SPECIAL INSTRUCTIONS' box as shown
- If symptoms are not controlled, or if you are unsure about the safety of the prescribed doses (e.g. 100mg of morphine in 24h) or the complexity of a particular drug regimen, please seek palliative care specialist advice:



- 09:00 17:00 including weekends and bank holidays, contact the Palliative Care Clinical Nurse Specialist (CNS) via NC e-referral or by calling 07814 364 595
- 17:00 09:00, contact the Palliative Care Consultant on-call via switchboard

Date 27.	4-21	Route SC	PRESCRIBER'S SIGNATURE & NAIVIE
Enter Dose against Time	Time	Dose	
	Stin	12.5mg	
Morning	A	-	
Midday			
Teatime			
Bedtime			

Notes for nurses

- If you and your shift colleagues are unfamiliar with operating the T34 pump, you will
 usually be able to find someone who knows what to do on one of the Emergency Floor wards
- You can also obtain advice from the Palliative Care CNS (see above for working hours and contact details) by creating an 'ED Referral Palliative Care' on Nervecentre or via mobile
- The medicines prescribed in the ED must be given via an LRI T34: DO NOT use the patient own pump
- Keys for the T34 pump lockable cases are located in the ER CD cupboard
- During hours, T34 pumps are requested via Medical Physics. After hours, use Navenio.
- Draw up the medicines neat in a Luer lock 20mL syringe, then add water for injection to a total volume of 17mL.
 NB: If the volume of neat drug exceeds 17mL (i.e. very large dose of opioid), seek Palliative Care team advice.
- In NC, the prescription will appear within the 'Continuous infusions' section. NB: when starting the infusion, you may click 'Confirm' without entering any information in the Diluent and Dose Rate boxes.
- A <u>Quick Guide to the T34 pump and consumables</u> is available
- <u>Video operating instructions</u> are available on Vimeo
- NB: F2F training is offered by Medical Physics speak to your NIC about how to access this
- An e-learning module is available via HELM; search for 'T34'



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Prescribing in NC

(illustrative example for a syringe driver containing morphine 100mg and levomepromazine 12.5mg over 24h) In NC Meds, go to Emergency Medicine (ED) > zz Palliative meds (ED) > Palliative Care Syringe Driver (adults) – For Inpatient use ONLY (Desktop use ONLY) > New syringe driver

foups	Groups >> IV fluids (ED) Addiction management (ED)	Groups Palliative Care Syringe Driver (Adults) - For Inpatient use ONLY (Desktop use ONLY)	Syringe drivers New syringe driver	 Subcutaneous syringe driver Prescribe the syringe driver before adding dose sentences from this folder to it
ADMISSION PROTOCOL- ***MANDATORY***FOR NEW ADMISSIONS Emergency Medicine (ED)	Analgesia (ED) Antibiotics (ED) Anticoagulation (ED) Antidotes (ED)	Anticipatory medications (Uncertain recovery / last weeks of life) Symptom control medications	Groups Palliative (Adults) (specialist advice ONLY) - For Inpatient use ONLY	Total volume: mL or Litres • Dose duration: Data
Medical Emergencies Specialty Insulins	Antiemetics / GI meds (ED) Bleeding / reversal meds (ED)		Dose sentences Alfentanil	Start time:
Fluids	Common scenarios (ED)		Syringe Driver, over 24 hours	Indication:

Dressings
Nutrition
COVID-19
Palliative Care (Adults)
Palliative Care Syringe Driver (Adults) - For Inpatient use ONLY (Desktop use ONLY)

immunisations (ED) Infection management (UHL) Oxygen (ED) Prescribe & adminster (ED) Time-critical meds (ED) Vasoactive meds (ED) zz Palliative meds (ED)

Morphine sulfate

Subcutaneous, continuous

Prescriber

Indication:

Prescribe

information:

Cyclizine Syringe Driver, over 24 hours Clonazepam Syringe Driver, over 24 hours Furosemide Syringe Driver, over 24 hours Glycopyrronium bromide Syringe Driver, over 24 hours

Instructions:

Prescribe

1. Enter '24 hours' into the dose duration box, then hit **Prescribe**



Toups	
Palliative (Adults) (specialist advice ONLY) - For Inpatient use ONLY	

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Alfentanil

Syringe Driver, over 24 hours

Cyclizine Syringe Driver, over 24 hours

Clonazepam

Syringe Driver, over 24 hours

Furosemide Syringe Driver, over 24 hours

Glycopyrronium bromide Syringe Driver, over 24 hours

Seek palliative care advice if needed. Please
prescribe using the palliative (specialist advice ONLY)
section if a higher dose is needed. Check dose
conversions for strong opioids. Consider laxatives

Do not allow syringe driver to run out. Do not discontinue unless a clear medical plan how and why to do so.





Levomepromazine hydrochloride Subcutaneous, continuous

Prescriber information:

4. Select

Seek palliative care advice if needed. Please prescribe using the palliative (specialist advice ONLY) section if a higher dose is needed Do not allow syringe driver to run out. Do not discontinue unless a clear medical plan how and why to do so.

12.5 mg Delirium/agitation



3. Enter `100mg' Morphine into the dose quantity box and select the appropriate indication; hit Prescribe

Syringe Driver, over 24 hours
Hyoseine butylbromide Syringe Driver, over 24 hours
Levomepromazine hydrochloride Syringe Driver, over 24 hours
Levetiracetam Syringe Driver, over 24 hours
Metoclopromide Syringe Driver, over 24 hours
Midazolam Syringe Driver, over 24 hours
Morphine sulfate Syringe Driver, over 24 hours

e drivers

Levomepromazine

5. Enter '12.5mg' into the dose quantity box and select the appropriate indication; hit Prescribe



Palliative (Adults) (specialist advice ONLY) - For Inpatient use ONLY

Dose sentences Alfentanil Syringe Driver, over 24 hours Cyclizine Syringe Driver, over 24 hours

Clonazepam Syringe Driver, over 24 hours Furosemide Syringe Driver, over 24 hours

evomepromazine hydrochloride Subcutaneous, continuous

sulfate

Prescriber information:

Dose quantity:

Indication:

Seek palliative care advice if needed. Please prescribe using the palliative (specialist advice ONLY) section if a higher dose is needed Do not allow syringe driver to run out. Do not discontinue unless a clear medical plan how and why to do so.

12.5 mg Delirium/agitation

oups Palliative (Adults) (specialist advice ONLY) - For Inpatient use ONLY

Dose sentences

Alfentanil Syringe Driver, over 24 hours

Cyclizine Syringe Driver, over 24 hours Clonazepam Syringe Driver, over 24 hours Furosemide Syringe Driver, over 24 hours Glycopyrronium bromide Syringe Driver, over 24 hours Haloperidol Syringe Driver, over 24 hours

Syringe driver: Levomepromazine hydrochloride 12.5 mg

Subcutaneous, continuous over 24 hours

Alerts

No alerts

 $\mathbf{\mathbb{Z}}$

 $\mathbf{\mathbb{Z}}$

Notes

as per UHL guiddance

Stockley Drug-Drug interactions

Glycopyrronium bromide Syringe Driver, over 24 hours

Haloperidol Syringe Driver, over 24 hours

Hyoscine butylbromide Syringe Driver, over 24 hours

Levomepromazine hydrochloride ge Driver, over 24 hours

Levetiracetam Syringe Driver, over 24 hours

Metoclopromide Syringe Driver, over 24 hours

Midazolam Syringe Driver, over 24 hours

Morphine sulfate Syringe Driver, over 24 hours Ondansetron

Syringe Driver, over 24 hours

Oxycodone Syringe Driver, over 24 hours

Tranexamic acid Syringe Driver, over 24 hours Added to syringe driver. Add ALL drugs before signing.



6. Hit 'Sign now'

Hyoscine butylbromide Syringe Driver, over 24 hours

Levomepromazine hydrochloride nge Driver, over 24 hours

Levetiracetam Syringe Driver, over 24 hours

Metoclopromide Syringe Driver, over 24 hours

Midazolam Syringe Driver, over 24 hours O Morphine sulfate Syringe Driver, over 24 hours Ondansetron Syringe Driver, over 24 hours

Oxycodone Syringe Driver, over 24 hours

Tranexamic acid Syringe Driver, over 24 hours

Levomepromazine hydrochloride interaction with aripiprazole. Avoid concurrent use. Both levomepromazine and aripiprazole have some risk of prolonging the QT interval, which might lead to the potentially fatal torsade de pointes arrhythmia. Dangerous QT prolongation might occur if they are used together.

Levomepromazine hydrochloride interaction with morphine. Be alert for these adverse effects and adjust the doses accordingly. Opioids may enhance the hypotensive, sedative and respiratory depressant effects of phenothiazines.

> 7. Acknowledge interactions, then hit 'Sign'



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