

Covid19 - End of life care

Managing Shortages of Medications and/or T34 pumps
Guidance for Palliative Care Clinicians and Pharmacists

Medication supply problems: recommended alternatives			
Current guideline option	1 st line alternative	2 nd line alternative	Comments
Fentanyl 12mcg/hr patch	Buprenorphine 10mcg/hr patch	Fentanyl 12.5mcg/hr (using half a fentanyl 25mcg/hr matrix patch [cut diagonally in half])	Cutting matrix patches was an established off-label practice in palliative care before the 12 sizes were released. There is little data on the use of buprenorphine for breathlessness, but benefit is likely to be a class effect
Oral morphine (10mg/5mL) solution	Oxycodone (1mg/1mL) oral solution. Take 2.5mg 4 hourly as required (100mL bottle)	Buccal buprenorphine 200 micrograms	
Morphine sulfate (10mg/1mL) injection ampoules	Oxycodone (10mg/1mL) 2.5 to 5mg SC PRN	Fentanyl (100mcg/2mL) 50-100mcg SC PRN	Minimum intervals and total number of doses/day as for morphine
Scopolamine (hyoscine hydrobromide) 1mg/24hr patch	Propantheline 15mg BD to TDS (dissolve in 10mL of water)	Amitriptyline 25mg nocte	The oral bioavailability of hyoscine butylbromide is negligible suggesting PO use would have no impact on the respiratory system. The bioavailability of propantheline is ~50%
Hyoscine hydrobromide 300 microgram tablets			
Hyoscine butylbromide (20mg/1mL) injection ampoules	Glycopyrronium 200mcg SC TDS and PRN		Glycopyrronium has a shorter half-life (1-1.5hrs; compared to 5-10hrs for hyoscine butylbromide) so would need to give more regularly than BD
Olanzapine (5mg) oro-dispersible tablets	Haloperidol 5mg/5mL liquid 0.5-1.5mg PRN TDS	Quetiapine tablets can be crushed/dissolved	All antipsychotics are likely to be beneficial for terminal agitation so choice will be influenced by availability. PCF gives approximate dose equivalences (at the end of antipsychotics monograph)
Levomepromazine (25mg/1mL) ampoules	Haloperidol (5mg) ampoules: give 0.5-1.5mg SC PRN TDS		There is no experience with SC administration of any other UK preparations. Chlorpromazine is too irritant for SC use.
Lorazepam (1mg) tablets	Diazepam 2-5mg		Lorazepam 0.5mg PO is approximately equivalent to diazepam 5mg PO
Midazolam (10mg/2mL) ampoules	Levomepromazine (for anxiety, dose as for agitation)	Lorazepam for injection 0.5-1mg SC PRN	Lorazepam is well tolerated subcutaneously. Although it cannot be combined with other medications in syringe drivers, it's longer half-life (10-20hrs) is sufficient to allow once or twice daily SC dosing. Midazolam 2.5mg SC approximately equivalent to lorazepam 0.5mg SC

T34 pump availability problems: recommended alternatives to SC infusions

Options include both transdermal patches and use of SC boluses of medicines with longer half-lives

Symptom	1 st line alternative to a syringe driver	Comments
Chest secretions	Where SC injections can be given BD/TDS (hospital/NHs), give hyoscine butylbromide 40mg SC BD; increase to 40mg SC TDS if secretions persist	Hyoscine butylbromide's half-life 5-10hrs, allowing dosing twice daily or more frequently
	In the home or care home setting, give hyoscine hydrobromide (scopolamine) 1mg/24hr patch	
Terminal agitation	Levomopromazine 12.5-25mg SC nocte (or a dose based on preceding PRN requirements). Consider giving higher doses BD where possible.	<ul style="list-style-type: none"> - Levomopromazine and haloperidol can be given once daily (half-lives 15-30 and 12-38hrs, respectively) - If a benzodiazepine is required, lorazepam's half-life (10-20hrs) allows twice daily SC dosing. Midazolam's half-life is much shorter (1-4hrs) - Phenobarbital (specialist only) can be administered once daily (half-life 2-6 days): give in sodium chloride 0.9% 100mL over 30 minutes as a SC infusion
Breathlessness or pain	Where PRN opioids are required <i>and are effective</i> , start a transdermal opioid (either fentanyl or buprenorphine) based on prior opioid dose requirements	Where conventional opioids have been <i>ineffective</i> for pain, and there is no oral route for usual adjuvants, alternative SC analgesics with long enough half-lives to give once daily include parecoxib and methadone (specialist only)