NHS
London
Clinical Networks

Guidance on symptom control using non-oral, non-parental routes of medication administration during COVID-19

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1. Introduction

The Coronavirus pandemic and the national response to it, including the need for social distancing and the increased use of tele/video consultations by primary and community health and care staff, have resulted in changes to the provision of care in the community setting. These changes pose particular challenges to the administration of medication for symptom control for those with advanced life-threatening illness, including in the last days of life, and to those with COVID-19.

- Where possible, medication to manage common symptoms such as pain, breathlessness, nausea and vomiting and cough should be administered via the oral or subcutaneous route, and local Palliative Care / symptom control guidelines should be followed wherever possible. The recently published NICE COVID-19 rapid guideline: managing symptoms (including at the end of life) in the community provides guidance on the management of common symptoms via the oral and parenteral route in patients with COVID-19. Following this, the CQC and BMA have issued a joint statement on the use of medicines that are unlicensed or outside the terms of their existing license, that supports the use of these guidelines.
- When standard routes of administration are not possible, other routes may be required, and unpaid/unregistered carers may need to administer medications, with remote support / training from GPs / district nursing / specialist palliative care teams.
- Healthcare professionals involved in a patient's care continue to have responsibility for advising those important to the patient how to use the medications that they have recommended / prescribed. The HELIX Centre has developed resources to support carer administration of subcutaneous medication.
- Local Medication and Administration records (MAAR) should continue to be used to record and administer such medication.
- It is also important to work with regional / local pharmacy partners to ensure that any medication prescribed is available.

In the pages that follow, the recommended medications for management of common symptoms via standard and alternative routes of administration are summarised. Of note, the order of the alternative medications listed in each table is not necessarily indicative of preferred order of use.

Pain

<table>
<tr><th>Treatment</th><th colspan="5">Dosage</th></tr>
<tr><td>Opioid</td><td colspan="5">Morphine sulphate 2.5 mg to 5 mg PO every 2 to 4-hours as needed.

Morphine sulphate modified release 5 mg to 10 mg BD regularly and continue with immediate release morphine for breakthrough doses at 1/6th total daily opioid dose. Titrate as needed.

If estimated glomerular filtration rate (eGFR) is less than 30 mL per minute, use equivalent doses of oxycodone instead of morphine sulphate (see Prescribing in palliative care in the BNF for more details)</td></tr>
<tr><td>Add parenteral morphine</td><td colspan="5">Morphine sulphate 2.5 mg to 5 mg subcutaneously every 2 to 4 hours as required.

If more than 2 doses required consider morphine sulphate 10 mg as a continuous subcutaneous infusion via a syringe pump over 24 hours. Titrate as needed.

If estimated glomerular filtration rate (eGFR) is less than 30 ml per minute, use equivalent doses of oxycodone instead of morphine sulphate
(See BNF for more details on dosages and prescribing in palliative care)</td></tr>
<tr><td rowspan="2">Alternatives (if oral or subcutaneous route not available)</td><td>Buccal</td><td>Sublingual</td><td>Via PEG/RIG/NG tube</td><td>Transdermal**</td><td>Rectal</td></tr>
<tr><td>X</td><td>Concentrated oral morphine (Oramorph concentrated solution 20mg/1ml®). 2 mg to 5 mg (0.1 mL to 0.25 mL) SL every 4-hours as required.

Concentrated Oxycodone (OxyNorm® Concentrate 10mg/ml oral solution®). 1 mg to 2 mg (0.1 mL to 0.2mL) SL every 4-hours as required (for use in renal impairment).

Morphine sulphate injection 10 mg/ mL. 2.5 mg to 5 mg SL every 4-hours as required.

Oxycodone injection 10 mg/ mL., 1.25 mg to 2.5 mg SL every 4-hours as required (for use in renal impairment).</td><td>MST Continus® Sachets 20mg/60mg/100mg BD

Zomorph® capsules 10/30/60/100mg BD (can be opened and contents flushed down tube 8Fr or greater)</td><td>Buprenorphine 5/10/20 mcg/ hour patches – change every 7 days.

Buprenorphine 35/52/70 mcg/ hour patches – change every 4 days.

Fentanyl 12/25/37.5/50/75/100 mcg/ hour patches – change every 3 days

**Cautions:
See BNF or SPC for relative potency**

ALL transdermal patches require time to reach steady state, not suitable for rapid titration or unstable pain**

Caution in fever – can cause increased absorption**</td><td>MST Continus® tablets 5 mg PR TWICE daily (increased as necessary to maximum 30mg daily).</td></tr>
</table>

Nausea and Vomiting

<table>
<tr><th>Treatment</th><th colspan="4">Dosage</th></tr>
<tr><td>Generalised nausea</td><td colspan="4">Haloperidol 500 micrograms to 1 mg PO/SC every 4 to 6 hours as required.
Or
Metoclopramide 10 mg PO/SC every 6 to 8 hours as required.
Or
Cyclizine 50 mg PO/SC every 6 to 8 hours as required.</td></tr>
<tr><td>Refractory nausea</td><td colspan="4">Levomepromazine 6.25 mg PO/SC every 4 to 6 hours as required.</td></tr>
<tr><td>Continuous subcutaneous infusion via syringe pump over 24 hours (if available)</td><td colspan="4">Haloperidol 2.5 mg to 10 mg (5 mg in frail/elderly).
Metoclopramide 30 mg.
Cyclizine 150 mg.
Levomepromazine 12.5 mg to 25 mg.</td></tr>
<tr><td rowspan="2">Alternatives (if oral or subcutaneous routes not available)</td><td>Buccal</td><td>Sublingual</td><td>Orodispersible</td><td>Transdermal</td></tr>
<tr><td>Prochlorperazine 3 mg buccal tablets.1 to 2 tablets buccally up to twice daily as required.</td><td>Levomepromazine (Levinan®) 6 mg tablets. 3 mg (1/2 tablet) SL 4 to 6-hourly as required.</td><td>Olanzapine orodispersible tablets 5 mg. 2.5 mg to 5 mg (half to one tablet) once daily.
(can be increased to twice daily if needed, max 10 mg/ 24 hours).

Ondansetron orodispersible tablets 4 mg. One tablet every 6 to 8 hours as required (max 16 mg/ 24hours).</td><td>Hyoscine hydrobromide patch (Scopoderm®) 1 patch every 72 hours.
Granisetron patch 3.1 mg/ 24 hours. One patch changed every 7 days.
Please note – not ideal given time for effect & lack of PRN option, should be used only when all other options have failed</td></tr>
</table>

Anxiety, Agitation and Delirium

<table>
<tr><th>Treatment</th><th colspan="5">Dosage</th></tr>
<tr><td>Anxiety or agitation and able to swallow: lorazepam tablets</td><td colspan="5">Lorazepam 0.5 mg to 1 mg 4 times a day as required (maximum 4 mg in 24 hours)
Reduce the dose to 0.25 mg to 0.5 mg in elderly or debilitated patients (maximum 2 mg in 24 hours)
Oral tablets can be used sublingually (off-label use)</td></tr>
<tr><td>Anxiety or agitation and unable to swallow: midazolam injection</td><td colspan="5">Midazolam 2.5 mg to 5 mg subcutaneously every 2 to 4 hours as required
If needed frequently (more than twice daily), a continuous subcutaneous infusion may be considered starting with midazolam 10 mg over 24 hours via a syringe pump (if available).
Reduce dose to 5 mg over 24 hours if estimated glomerular filtration rate (eGFR) is less than 30 mL per minute</td></tr>
<tr><td>Delirium and able to swallow: haloperidol tablets</td><td colspan="5">Haloperidol 0.5 mg to 1 mg at night and every 2 hours when required. Increase dose in 0.5 mg to 1 mg increments as required (maximum 10 mg daily, or 5 mg daily in elderly patients).
The same dose of haloperidol may be administered subcutaneously as required rather than orally, or a continuous subcutaneous infusion of 2.5 mg to 10 mg over 24 hours via a syringe pump.
Consider a higher starting dose (1.5 mg to 3 mg) if the patient is severely distressed or causing immediate danger to others.
Consider adding a benzodiazepine such as lorazepam or midazolam if the patient remains agitated (see dosages above).</td></tr>
<tr><td>Delirium and unable to swallow: levomepromazine injection</td><td colspan="5">Levomepromazine 12.5 mg to 25 mg stat and hourly as required (6.25 mg to 12.5 mg in the elderly).
Maintain with a continuous subcutaneous infusion of 50 mg to 200 mg over 24 hours via a syringe pump.
Consider midazolam alone or in combination with levomepromazine if the patient also has signs of anxiety (see dosages above).</td></tr>
<tr><td rowspan="2">Alternatives (if oral or subcutaneous routes not available)</td><th>Buccal</th><th>Sublingual</th><th>Orodispersible</th><th>PEG/RIG/NG Tube</th><th>Rectal</th></tr>
<tr><td>Buccal midazolam (Buccolam®) 2.5mg prefilled oral syringes. 2.5 mg 2-hourly as required.

Midazolam 10 mg/ 2mL injection. 2.5 mg buccally 2-hourly as required.</td><td>Levomepromazine 6 mg tablets (Levinan®). 3 mg to 6 mg SL 4 to 6-hourly as required.

Levomepromazine 25mg tablets.
6.25 mg SL 4 to 6 hourly as needed.

Levomepromazine 25 mg/ mL injection
12.5 mg to 25 mg SL 4 to 6-hourly as required.</td><td>Olanzapine orodispersible tablets 5 mg. 2.5 mg to 5 mg (1/2 to one tablet) ON (can be increased to BD if required, max 10 mg/ 24 hours).

Risperidone orodispersible tablet 0.5 mg OD (can be increased to BD if required).</td><td>Clonazepam liquid (500micrograms/5 mL or 2mg/5 mL)
500 micrograms to 1mg every 6 hours as required.

Levomepromazine 25mg tablets (crushed and dispursed in 10 mLs water).
6.25mg every 4 to 6 hours as required.

Levomepromazine injection 25mg/mL
12.5 mg to 25 mg SL 4 to 6-hourly as required.</td><td>Diazepam enema (2.5 mg or 5 mg). 2.5 mg to 5 mg PR 4 to 6-hourly as required.</td></tr>
</table>

Noisy Respiratory Secretions

Treatment	Dosage				
By subcutaneous injection	Hyoscine butylbromide 20 mg every 4 to 6-hours as required Or Glycopyrronium 200 micrograms every 4 to 6-hours as required.				
Continuous subcutaneous infusion via syringe pump over 24 hours (if available)	Hyoscine butylbromide 60 mg to 120 mg Or Glycopyrronium 600 micrograms to 1.2 mg				
Alternatives (if subcutaneous route not available)	**Buccal**	**Sublingual**	**Orodispersible**	**Transdermal**	**Via PEG/RIG/NG tube**
	Hyoscine Hydrobromide 300 microgram tablets (Kwells®) 300 micrograms buccally every 6 to 8 hours as required.	Hyoscine Hydrobromide 300 microgram tablets (Kwells®) 300 micrograms SL every 6 to 8 hours as required. Atropine 1% eye drops. 2 to 4 drops SL every 4 hours as required. Glycopyrronium injection. 100 micrograms to 200 micrograms SL every 6 hours as required.	X	Hyoscine hydrobromide patch (Scopoderm®) 1 patch every 72 hours. Patches can be cut into ¼ or ½ if dose reduction needed.	Glycopyrronium oral solution 1 mg/ 5 mL. 200 micrograms every 8 hours as required. Glycopyrronium injection 200micrograms/mL. 200micrograms every 8 hours as required.

Breathlessness at End of Life

Treatment	Dosage
Opioid naïve (not currently taking opioids) and able to swallow	Morphine sulphate immediate-release 2.5 mg to 5 mg every 2 to 4 hours as required **or** or morphine sulphate modified-release 5 mg twice a day, increased as necessary (maximum 30 mg daily).
Already taking regular opioids for other reasons (for example, pain relief) and able to swallow	Morphine sulphate immediate-release 5 mg to 10 mg every 2 to 4 hours as required or one twelfth of the 24-hour opioid (morphine equivalent) dose for pain, whichever is greater.
Opioid if unable to swallow	Morphine sulphate 10 mg over 24 hours as a continuous subcutaneous infusion via a syringe pump, increasing stepwise to morphine sulphate 30 mg over 24 hours as required. If already taking opioids contact specialist palliative care team for advice.
Benzodiazepine if required in addition to opioid	Midazolam 10 mg over 24 hours via the syringe driver, increasing stepwise to midazolam 60 mg over 24 hours as required
Add parenteral morphine or midazolam if required	Morphine sulphate 2.5 mg to 5 mg subcutaneously up to every 1 hour as required Midazolam 2.5 mg subcutaneously up to every 1 hour as required. (See BNF for more details on dosages).

Alternatives (if oral or subcutaneous routes not available)	Buccal	Sublingual	Via PEG/RIG/NG tube	Trans-dermal	Rectal
	Buccal midazolam (Buccolam®) 2.5 mg prefilled oral syringes. 2.5 mg 2-hourly as required. Midazolam 10 mg/ 2 mL injection. 2.5 mg 2-hourly as required.	Lorazepam 1 mg tablets. 0.5 mg SL up to four times daily as required. Concentrated oral morphine (Oramorph concentrated solution 20 mg/ 1 mL®). 2 mg to 5 mg (0.1 mL to 0. 25 mL) SL every 4-hours as required. Concentrated Oxycodone (OxyNorm Concentrate 10 mg/ mL oral solution). 1 mg to 2 mg (0.1 mL to 0.2 mL) SL every 4-hours as required (for use in renal impairment). Morphine sulphate injection 10 mg/ mL. 2.5 mg to 5 mg SL every 4-hours as required. Oxycodone injection, 10 mg/ mL, 1.25mg to 2.5 mg SL every 4-hours as required (for use in renal impairment).	Morphine sulphate liquid 2.5 mg to 10 mg every 2 to 4 hours as required.	X	MST Continus® tablets 5 mg PR TWICE daily (increased as necessary to maximum 30 mg daily)

Cough

<table>
<tr><th>Treatment</th><th colspan="5">Dosage</th></tr>
<tr><td>Initial management: use simple non-drug measures, for example taking honey</td><td colspan="5">A teaspoon of honey.</td></tr>
<tr><td>First choice, only if cough is distressing: codeine linctus (15 mg/ 5 mL) or codeine phosphate tablets (30 mg)</td><td colspan="5">15 mg to 30 mg every 4-hours as required, up to 4 doses in 24 hours.
If necessary, increase dose to a maximum of 30 mg to 60 mg 4 times a day (maximum 240 mg in 24 hours).</td></tr>
<tr><td>Second choice, only if cough is distressing: morphine sulphate oral solution (10 mg/ 5 mL)</td><td colspan="5">2.5 mg to 5 mg as required every 4 hours.
Increase up to 5 mg to 10 mg every 4 hours as required.
If the patient is already taking regular morphine increase the regular dose by a third.</td></tr>
<tr><td rowspan="2">Alternatives (if oral route not available)</td><td>Buccal</td><td>Sublingual</td><td>Orodispersible</td><td>Transdermal</td><td>Rectal</td></tr>
<tr><td>x</td><td>Concentrated oral morphine (Oramorph concentrated solution 20mg/ 1mL®)
2 mg to 5mg (0.1 mL to 0.25 mL) every 4-hours as required.</td><td>x</td><td>x</td><td>x</td></tr>
</table>

Fever

Treatment	Dosage				
Adults (18 years and over) and able to swallow	Paracetamol 0.5 g to 1 g every 4 to 6 hours as required, maximum 4 g per day.				
Alternatives (if oral route not available)	**Buccal**	**Sublingual**	**Orodispersible**	**Transdermal**	**Rectal**
			Calpol six plus® fastmelts (250 mg) 2 to 4 tablets every 4 to 6 hours as required.		Paracetamol suppositories 500 mg or 1g PR every 4 to 6-hours as required. Diclofenac suppositories 50 mg PR TDS (see MHRA guidance of use of NSAID in COVID-19 – considered appropriate if patient is dying).