BACKGROUND
The focus of this guideline and flowcharts is to reduce the suffering of those dying from Covid-19 itself. It should only be used when reversible causes for deterioration have been considered and addressed, and there is consensus that the patient is dying.

Symptoms may include:
- Breathlessness
- Cough
- Delirium
- Fever
- Distress

These guidelines do not replace existing local guidelines (see BAWC MCN Symptom Control in the Last Days of Life, and also Yorkshire and Humber Palliative Care Symptom Guide

REMEMBER TO:
- Correct the correctable
- Consider non-pharmacological approaches
- Reassess regularly

Typical starting doses are given but these need to be adapted to specific patient circumstances

For Specialist Palliative Care advice 24/7 contact:
On call Consultant in Palliative Medicine via Marie Curie Hospice (01274337000)
Or Manorlands Hospice (01535642308)
Management of Breathlessness at End of Life in Covid-19

**REVERSIBLE CAUSES**
Identify and treat reversible causes where possible, including treatment of superadded bacterial infection, and adequate management of underlying conditions such as COPD, asthma or heart failure.

**PHARMACOLOGICAL MEASURES**
- Is the patient benefiting from any oxygen prescribed? If not, consider discontinuing oxygen and using medication and non-pharmacological measures for symptom control.
- There is no evidence that oxygen will help breathlessness for a dying patient unless there is evidence of hypoxaemia (local consensus is that oxygen therapy should not be commenced unless sats <85%)

Avoid corticosteroids unless absolutely necessary to treat underlying condition, or to avoid steroid withdrawal.

Opioids may reduce the perception of breathlessness:
- Oramorph 2.5-5mg PO PRN if opioid naïve and eGFR >30
- Oxynorm 1.25-2.5mg PO PRN if opioid naïve and eGFR <30
- Morphine 1 - 2mg sc PRN if unable to swallow (or oxycodone 1mg sc)

In patients who are already receiving opioids use 1/6 of total daily opioid dose for as required dose.

Anxiolytics for associated anxiety or distress:
- Lorazepam 0.5mg SL PRN
- Midazolam 2.5-5mg sc PRN

Early commencement of a syringe pump may be needed:
- Morphine 5-10mg sc over 24 hours, increasing stepwise to morphine 30mg over 24 hours
  And/or
- Midazolam 5-10mg sc over 24 hour, increasing stepwise to midazolam 60mg over 24 hours

**Severe breathlessness (ADRS)**
Patients with severe symptoms, not expected to survive, may deteriorate very quickly over a short period of time. As a result they may need higher starting and maintenance doses of opiates/anxiolytics:
- Morphine 5-10mg sc 1 hourly prn (oxycodone 2.5 – 5mg sc 1 hourly prn if low GFR)
- Midazolam 5-10mg 1 hourly sc prn
- Consider morphine 10-20mg and / or midazolam 10-20mg over 24 hours in syringe pump

Syringe driver doses may need reviewing 8 hourly rather than every 24 hours, and titrated rapidly according to prn requirements

**NON-PHARMACOLOGICAL MEASURES**
- Positioning
- Relaxation techniques
- Reduce room temperature
- Cooling the face by using a cool flannel or cloth
- Fans should not be used in the context of Covid-19 as they increase aerosol spread of the virus

For Specialist Palliative Care advice 24/7 contact:
On call Consultant in Palliative Medicine via Marie Curie Hospice (01274337000)
Or Manorlands Hospice (01535642308)
Management of Cough at End of Life in Covid-19

REVERSIBLE CAUSES
Treat underlying causes such as superadded bacterial infection, or uncontrolled COPD, Heart Failure or asthma

NON-PHARMACOLOGICAL MEASURES
• Maintain oral fluids
• Honey and lemon in warm water
• Suck cough drops / hard sweets
• Elevate the head when sleeping
• Avoid smoking
• Humid air may help if it possible to provide this

PHARMACOLOGICAL MEASURES
• Simple linctus 5-10mg PO QDS OR
• Codeine linctus 30-60mg PO QDS OR
• Morphine sulphate 2.5-5mg PO PRN (if opioid naïve and eGFR >30
• Oxynorm 1.25-2.5mg PO PRN if opioid naïve and eGFR <30

If unable to swallow:
• Morphine sulphate 1.25-2.5mg sc PRN

If patient is already taking regular morphine, increase the regular dose by a third.

If severe, consider early use of syringe pump with morphine sulphate 10mg over 24 hours and 2.5-5mg sc up to hourly PRN

Call for advice if needing more than 2 doses of any prn medications in 6 hours

For Specialist Palliative Care advice 24/7 contact:
On call Consultant in Palliative Medicine via Marie Curie Hospice (01274337000)
Or Manorlands Hospice (01535642308)
IDENTIFY AND TREAT UNDERLYING CAUSES
These include:
• Superadded infection
• Drugs
• Dehydration
• Constipation
• Urinary retention
• Hypoxia

The delirium may be a direct symptom of Covid-19 and treatment options may therefore be limited

NON-PHARMACOLOGICAL MEASURES
• Ensure effective communication
• Avoid moving people within and between rooms or care settings where possible and keep stimulation at a minimum
• Ensure adequate lighting

PHARMACOLOGICAL MEASURES
• Haloperidol 0.5-1.5mg at night and every 2 hours when required (max 10mg daily)
• The same dose of haloperidol may be administered SC PRN rather than orally
• Consider a higher starting dose when a patient’s distress is severe and/or immediate danger to self or others (1.5-3mg PO/SC)

If the patient remains agitated, it may be necessary to add a benzodiazepine eg
• Lorazepam 0.5-1mg bd and PRN
  Or
• Midazolam 2.5-5mg SC PRN 1-2 hourly

Call for advice if needing more than 2 doses in 6 hours

PHARMACOLOGICAL MEASURES FOR TERMINAL AGITATION / RESTLESSNESS /DELIRIUM
• Midazolam 10-30mg (depending on previous 24 hour requirements) over 24 hours via syringe pump
  AND / OR
• Haloperidol 3-5mg over 24 hours via syringe pump

AND
• Midazolam 5mg SC PRN hourly

If symptoms persist, may need combination of levomepromazine and midazolam
• Levomepromazine 12.5-25mg SC stat and 1-2 hourly prn

Call for advice if needing more than 2 doses of any prn medication in 6 hours

For Specialist Palliative Care advice 24/7 contact:
On call Consultant in Palliative Medicine via Marie Curie Hospice (01274337000)
Or Manorlands Hospice (01535642308)
Significant fever is defined as a body temperature of:
• 37.5°C or greater (oral)
• 37.2°C or greater (axillary)
• 37.8°C or greater (tympanic)
• 38°C or greater (rectal)

NON-PHARMACOLOGICAL MEASURES
• Reduce the room temperature but not to the point of inducing shivering
• Wear loose clothing
• Cool the face using a cool flannel or cloth
• Oral fluids

Portable fans are NOT recommended in the context of Covid infection as they increase aerosol spread of the virus

PHARMACOLOGICAL MEASURES
• Paracetamol oral 1g PO / PR every 4-6 hours, maximum 4g daily
  Use 500mg dose if weight <50kg, hepatic impairment or history of alcohol excess
• Ensure consideration of patient’s individual risk factors, including cardiovascular and gastrointestinal illness, when prescribing NSAIDs
• Use lowest effective dose of ibuprofen for shortest possible duration necessary to control symptoms
• Diclofenac 75mg -150mg PO / PR daily in divided doses
  Or
• Ketorolac 60mg over 24 hours via syringe pump (dilute in normal saline), or 15-30mg SC PRN every 6-8 hours as required

For Specialist Palliative Care advice 24/7 contact:
On call Consultant in Palliative Medicine via Marie Curie Hospice (01274337000)
Or Manorlands Hospice (01535642308)
**PAINKILLERS**
Use morphine first line
If you can’t use, below are alternatives:

- Oxycodone 2.5mg SC hourly max 6 doses in 24hrs
- Buprenorphine 5mcg/hr patch takes around 12 hrs to work, equivalent to 10mg morphine over 24hrs NOT PRN
- Paracetamol rectal
- Diclofenac PR or ketorolac 15-30mg sc PRN or 60mg via syringe pump over 24 hours nb only at end of life

**TERMINAL AGITATION**
Use midazolam first line
If you can’t use, below are alternatives:

- Levomepromazine 12.5mg SC (you can use injection SL or buccal) 1-2 hrly
- Olanzapine orodispersable 2.5mg (5mg tablet in half) every 4 hours
- Haloperidol injection 1.5mg SC PRN up to 2 hourly (max 10mg daily)
- Haloperidol liquid 1.5mg sublingually every 4 hours
- Diazepam rectal tubes (2.5mg 5mg 10mg) use 2.5-5mg rectally every 4-6hrs

**RESPIRATORY SECRETIONS**
Use hyoscine butylbromide first line
If you can’t use, below are alternatives:

- Hyoscine hydrobromide 400microgram injection up to 1 hourly max 1600mcg/24hrs
- Hyoscine hydrobromide 1.5mg patches (scopoderm) over 72hrs NOT PRN
- Hyoscine hydrobromide 300 microgram tablets (kwells) SL or buccal 300microgram up to 1 hourly (max 5 tablets daily)

**NAUSEA AND VOMITING**
Use haloperidol first line (or existing antiemetic)
If you can’t use, below are alternatives:

- Metoclopramide 10mg oral or SC TDS
- Cyclizine 50mg oral or SC TDS
- Levomepromazine 2.5mg SC (you can use injection SL or buccal) 6 hourly
- Levomepromazine 6mg tablets
- Ondansetron orodispersible 4mg 6-8hrly max 16mg/24hrs
- Olanzapine orodispersable 2.5mg (5mg tablet in half) every 4 hours
- Hyoscine hydrobromide 1.5mg patches (scopoderm) over 72hrs NOT PRN
- Hyoscine hydrobromide 300 microgram tablets (kwells) SL or buccal 300microgram 6hrly

**THESE DOSES ARE ALL PRN UNLESS STATED**
# Alternative REGULAR SC Medication Dosing if NO 24hr Syringe Pump Available

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>Frequency</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>2.5mg</td>
<td>Every 4hrs</td>
<td>If already on opiate use their 24hr dose divided by 6</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>1mg</td>
<td>Every 4hrs</td>
<td>If already on opiate use their 24hr dose divided by 6</td>
</tr>
<tr>
<td>Midazolam</td>
<td>2.5mg</td>
<td>Every 1-6hours</td>
<td>For terminal agitation</td>
</tr>
<tr>
<td>Levomepromazine</td>
<td>12.5mg for agitation</td>
<td>Every 12hrs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5mg for N+V</td>
<td>Every 12hrs</td>
<td></td>
</tr>
<tr>
<td>Haloperidol</td>
<td>1.5mg-3mg</td>
<td>Every 24hrs</td>
<td>Dose for both agitation and N+V</td>
</tr>
<tr>
<td>Hyoscine Butylbromide</td>
<td>20mg</td>
<td>Every 4hrs</td>
<td>For bowel colic and respiratory secretions</td>
</tr>
<tr>
<td>Hyoscine Hydrobromide</td>
<td>400 micrograms</td>
<td>Every 6hrs</td>
<td>For N+V or respiratory secretions</td>
</tr>
<tr>
<td>Glycopyronnium</td>
<td>200 micrograms</td>
<td>Every 8hrs</td>
<td>For respiratory secretions</td>
</tr>
<tr>
<td>Metoclopramide</td>
<td>10mg</td>
<td>Every 8hrs</td>
<td>For N+V</td>
</tr>
<tr>
<td>Cyclizine</td>
<td>50mg</td>
<td>Every 8hrs</td>
<td>For N+V</td>
</tr>
</tbody>
</table>