



A note about these guidelines:

These are unprecedented times. There is no roadmap yet. We are facing situations that we never expected or wanted to. Working together we can make it through with empathy, compassion and sense of service intact.

These guidelines have been rapidly assembled and should be seen as an acute response to a fast-moving pandemic. The situation is fluid, and best practice is likely to need to change quickly. As we learn more about the specific needs of people dying with COVID-19, these guidelines will be constantly updated, and we welcome your input and experience in helping to keep these as useful and relevant as possible.

Symptom control for people with COVID-19

For symptoms not covered in these guidelines, such as pain, refer to local palliative care service guidelines. These guidelines refer to adult patients and are designed to complement existing national guidelines for end-of-life care, such as Te Ara Whakapiri, as well as examples of other published best practice in response to the pandemic ⁵.

For paediatric patients, see <https://www.starship.org.nz/health-professionals/>

Breathlessness

General principles of management in chronic refractory breathlessness include:

1. Check for reversible causes
2. Use non-pharmacological management techniques (see detail below)
3. Use opioids (morphine)
 - Morphine is well-established for palliation of chronic refractory breathlessness at low doses¹
 - When used in low doses and titrated appropriately, morphine is safe, even in those with respiratory conditions²
 - Evidence for other opioids is lacking, therefore morphine is first choice in those with an eGFR > 30 ml/min/m²
 - See tables below for further guidance on dosing

Anxiety

- An element of anxiety or panic is almost universal when acute breathlessness is present. The anxiety is usually because of the breathlessness (not vice versa)
- Remain calm, reassure, stay with the person if resource allows
- Utilise non-pharmacological management strategies when the level of anxiety is low enough to allow this (see below)
- Mainstay of pharmacotherapy is benzodiazepines – see tables for dosing guidelines
- Avoid midazolam nasal spray as little evidence for effectiveness

Cough

- Ensure aggravating factors such as gastro-oesophageal reflux, asthma and post-nasal drip are well treated
- Opioids are the mainstay of therapy, use doses as per tables
- Nebulisers (such as salbutamol or lignocaine) are not recommended as aerosol generating



Respiratory tract secretions

- For those being actively treated, anticholinergic agents should be avoided as this may reduce the person's ability to clear secretions from the chest. Avoid saline nebulisers (aerosol generating)
- For those in the last days of life, follow local guidelines. Support of whanau is important, not all people find this distressing. Close attention to positioning may reduce secretion pooling. Use anti-cholinergic agents as per local guidelines. Avoid intravenous or subcutaneous fluids. Use suction as last-resort due to infection control issues

Oxygen

- Oxygen has not been shown to be beneficial for managing non-hypoxic breathlessness, and is not generally used in this setting for those with oxygen saturations >90%.
- Hypoxaemia (without other causes of breathlessness) has been described as a euphoric sensation which is not unpleasant. People may not be breathless even when oxygen saturations are low.
- Where oxygen provision is scarce (for those dying in community settings, for example) it should not routinely be provided.
- Where a diagnosis of dying has been made (last few days of life) and life-prolonging treatment has been reduced, a careful trial of downward titration should be considered. Oxygen may be able to be withdrawn completely. Treat according to subjective dyspnoea.
- Oxygen saturations should not be measured in the last days of life.
- Aim for low-flow nasal cannulae as a minimum to allow closer contact with family members whilst dying.

Delirium

- Delirium may occur in any patient with acute illness and is a poor prognostic sign
- Non-pharmacological management at end of life include treating reversible causes such as urinary retention, constipation, and hypoxia
- Manage in a low stimulus environment where possible. Having a family member present may help, but may not be possible if infection control measures do not allow
- In a low-resource setting, medication may be required to manage symptoms
- Use pharmacological therapy only if the patient
 - has distressing thoughts, hallucinations and/or
 - is agitated and a danger to self, or others
- In the absence of local guidelines, suggested medications:
 - First line antipsychotic: haloperidol 0.5mg PO/subcut q1h PRN to max 5 mg/24hr
 - Second line antipsychotic or where mild sedation required: levomepromazine 12.5 q4h PRN to max 50 mg/24hr (more sedating)
 - First line benzodiazepine: midazolam 2.5mg SC Q1H prn to max 10mg/24hrs or medical review
- A continuous infusion may be required for intractable symptoms combining both antipsychotic and benzodiazepine; Seek palliative care advice



Guidelines for Breathlessness Management (for locations where PO, SC or IV medications available)

Prognosis/treatment intent	Management	Medications and dosing <ul style="list-style-type: none"> ○ If eGFR <30, contact palliative care ○ Halve doses in frail or elderly ○ Opioid & benzodiazepine naïve patients only 	Palliative care referral
<p>Possibility of recovery alongside possibility of death in days/weeks</p> <p>Can be given alongside antibiotics/fluids/oxygen as needed for symptom control.</p>	<p>Correct underlying causes</p> <p>Address non-pharmacological management</p> <p>PRN oral opioids (or subcut if unable to swallow/absorb)</p> <p>PRN benzodiazepines for anxiety</p> <p>If PRNs frequent and effective, start regular opioid/benzodiazepine, in addition to PRNs</p>	<p>Morphine PO 2.5-5mg q1h PRN, or Morphine SC 1-2.5mg q1h PRN</p> <p>Lorazepam 0.5mg tds PO/SL PRN, or Clonazepam drops 2-3 drops (0.2-0.3mg) SL q8h PRN, or Midazolam SC 1-2.5mg q1h PRN</p> <p>Regular: Morphine SR (m-Eslon or Morphine LA) 10mg (or 20mg) PO BD, or Morphine 10 or 20mg/24hours via CSCI</p> <p>Lorazepam 0.5-1mg PO BD Clonazepam 3-5 drops (0.3-0.5mg) SL BD Midazolam 10mg/24hrs via CSCI</p>	<p>Not as routine: if uncertain refer</p> <p>Ensure goals of care and escalation plan are clear</p>
<p>Last days - hours of life, mild/moderate symptoms</p>	<p>As per local End-of-Life Care Guidelines e.g Te Ara Whakapiri (see Ministry of Health website)</p>	<p>As per local End-of-Life Care Guidelines Breathlessness: morphine SC 2.5-5mg q1h PRN as a minimum. Consider starting CSCI/24hours Morphine 10mg⁴ Anxiety/distress: midazolam SC 2.5-5mg q30min PRN as a minimum</p>	<p>Not as routine: If uncertain refer</p>
<p>Last days – hours of life In extremis - severe dyspnoea</p> <p>Goal is relief of suffering without major sedation</p>	<p>Remain calm, present and reassure</p> <p>SC (or IV) morphine and midazolam stat and then via CSCI</p>	<p>Stat SC morphine 5mg + SC 5mg midazolam, or Stat IV morphine 2.5mg + IV 2.5mg midazolam</p> <p>Start CSCI or CIVI/24hours Morphine 10mg + midazolam 10mg</p>	<p>Strongly recommended as soon as possible: do not delay treatment</p>
<p>Last days – hours of life Goal is sedation until death Intractable symptoms despite above measures</p> <p>If invasive ventilation for extubation, as per ICU guidelines.</p>	<p>IV or SC infusion will be required</p>	<p>Stat IV morphine 2mg Q2Mins (max 10mg) and midazolam 2.5mg Q2Min (max 5mg) titrated until relief, or Stat SC morphine 10mg + SC midazolam 10mg</p> <p>IV or SC infusion morphine /midazolam/levomepromazine as discussed with palliative care team See separate notes on palliative sedation</p>	<p>Strongly recommended as soon as possible</p>

Abbreviations: ICU = Intensive Care Unit, PRN = Pro Re Nata/as needed, SC= Subcutaneous, IV = Intravenous, CSCI = Continuous Subcutaneous Infusion, CIVI = Continuous Intravenous Infusion, PO = Per os/oral, SL = Sublingual, BD = Bis in die/twice a day



Breathlessness management - for locations where only oral meds available (no SC or IV resource)

Prognosis/treatment intent	Management	Medications and dosing	Palliative care referral
<p>Possibility of recovery alongside possibility death in days/weeks</p> <p>Can be given alongside antibiotics/fluids/oxygen as needed for symptom control.</p>	<p>Correct underlying causes.</p> <p>Address non-pharmacological management</p> <p>PRN oral opioids (or subcut if unable to swallow/absorb)</p> <p>PRN benzodiazepines for anxiety</p> <p>If PRNs frequent and effective, start regular opioid/benzodiazepine, in addition to PRNs</p>	<p>If eGFR <30, contact palliative care</p> <p>Halve doses in frail or elderly</p> <p>Opioid & benzodiazepine naïve patients only</p> <p>Morphine PO 2.5-5mg q1h PRN, or Morphine elixir 10mg/mL SL 2.5mg (0.25mL) q1h PRN</p> <p>Lorazepam 0.5mg tds PO/SL PRN, or Clonazepam drops 2-3 drops (0.2-0.3mg) SL q8h PRN, or Midazolam 15mg/3mL 1.25-2.5mg (0.25-0.5mL) SL q1h PRN</p> <p>Regular: Morphine SR (m-Eslon or Morphine LA) 10mg (or 20mg) PO BD (only if able to swallow)</p> <p>Lorazepam 0.5-1mg PO/SL BD Clonazepam 3-5 drops (0.3-0.5mg) SL BD</p>	<p>Not as routine: if uncertain ring to consult</p> <p>Ensure goals of care and escalation plan are clear</p>
<p>Last days - hours of life, mild/moderate symptoms</p>	<p>As per local End-of-Life Care Guidelines e.g Te Ara Whakapiri (see Ministry of Health website)</p>	<p>As per local End-of-Life Care Guidelines</p> <p>Morphine elixir 10mg/mL SL 2.5mg (0.25mL) q1h PRN, or Clonazepam drops 2-3 drops (0.2-0.3mg) SL q8h PRN, or Lorazepam 0.5mg tds PO/SL PRN</p>	<p>Not as routine: If uncertain ring to consult</p>
<p>Last days – hours of life In extremis - severe dyspnoea</p> <p>Goal is relief of suffering without major sedation</p>	<p>Remain calm, present and reassure</p>	<p>Continue above measures</p> <p>Add: Levomopromazine tablet 25mg Half to one tablet crushed (12.5mg – 25mg) SL q2-4h PRN</p>	<p>Strongly recommended to ring to consult</p>

Refer to Sublingual Medications Guidelines

Abbreviations: ICU = Intensive Care Unit, PRN = Pro Re Nata/as needed, SC= Subcutaneous, IV = Intravenous, CSCI = Continuous Subcutaneous Infusion, CIVI = Continuous Intravenous Infusion, PO = Per os/oral, SL = Sublingual, BD = Bis in die/twice a day



Opioids

- Where symptoms are mild/moderate and time allows, use PRN Q1H dosing to establish dose required
- Where resources are limited and PRN dosing is not practical, commence regular dosing
- Regular dosing may be achieved by:
 1. PO 'By the clock': IR morphine (sevredol tablets or elixir) q4h (6 doses/24 hours)
 2. SC 'By the clock': morphine q4h (6 doses/24 hours)
 3. Continuous subcutaneous infusion (CSCI) 24-hour infusion. Options for this include:
 - Niki T34 syringe pump (recommended if available)
 - Any syringe pump that takes a 50ml syringe - make syringe up to 24mls and deliver @ 1mL/hr, **OR** 48mLs and deliver @ 2mLs/hr
 4. PO long-acting morphine: M-Eslon SR or Morphine LA Q12H (Note: only suitable where symptoms are stable, may take 48 hours to reach steady state)
- Where regular dosing is used, prescribe PRN Q1H rescue dosing at 1/6th of the total 24hr dose
- Administration routes:
 - The oral route is recommended if able to swallow. Onset of action: 20-30 minutes
 - Subcutaneous administration if unable to swallow or absorb medications. Onset of action: 15 - 20 minutes. Sublingual administration may be used if subcutaneous is unavailable (see separate Sublingual Medications guidance)
 - Intravenous administration when in extremis. Onset of action: 5 - 10 minutes
- In those with eGFR <30 ml/min/m²:
 - Use fentanyl, which is not renally excreted, first line
 - Fentanyl PRN starting doses: 12.5 - 25mcg q1h SC or SL (12.5mcg if elderly)
 - Fentanyl CSCI/24hr starting dose: 100 – 300 mcg
 - If already using fentanyl patches prior to becoming unwell, continue at the same dose.
 - Do not use fentanyl patches for acute dyspnoea as unable to be rapidly titrated
 - If fentanyl not available, alternatives are methadone, or prn morphine with a longer dosing interval (q4-6h). Seek palliative care advice if methadone or morphine being considered.
- Chart laxatives for all those on opioids: e.g. Laxsol 1-2 tabs bd

Palliative sedation

- Palliative care advice is strongly recommended if sedation is being considered
- Defined as 'the monitored use of medications intended to induce a state of decreased or absent awareness (unconsciousness) in order to relieve the burden of otherwise intractable suffering in a manner that is ethically acceptable to the patient, family and health-care, providers'.³ The intent of palliative sedation is relief of suffering, and not to hasten death.
- Doses should be proportional to suffering and titrated up or down as necessary. There should be regular review, not less than every 24 hours.
- Usually requires continuous administration of medication (via CSCI or CIVI)
- Benzodiazepines such as midazolam are the backbone of sedation therapy, usually with levomepromazine as an adjunct
- Opioids are commonly included, depending on prior use and symptom burden



Non-pharmacological management of breathlessness

The following techniques are best used early, when breathlessness is less severe;

- Breathing techniques to ease breathlessness
 - 'Smell the roses, blow out the candles'
 - Focus on slow breathing from the tummy – rise the tummy with the in-breath
 - Focus on long relaxed breaths out
 - Pursed lip breathing for those with COPD
- Positioning
 - Sit upright, legs uncrossed, let shoulders droop, keep head up; lean forward
 - See illustration
- Distraction
 - Turn on the radio, or some music
 - Turn on the TV
 - Chat about hobbies or interests if able to talk
 - Phone a family member
- Relaxation
 - Focus on relaxing each individual muscle. Ask the person to close their eyes, or choose a spot in front of them to focus on
 - Visualise a relaxing scene or colour
- Reduce room temperature if possible, cool the face using a flannel or a cloth
- Anxiety reduction
 - Actively explore and address and fears or concerns
 - Fear of suffocation or choking is commonly described, but in practice almost never seen. Provide reassurance
- Fans - the use of fans for palliation of breathlessness in people with suspected or confirmed COVID-19 is controversial. Several countries advise against their use due to theoretical concerns around droplet spread. There is no evidence to base a decision on. For many patients, the practical limitations around the safe use of a fan may mean they are unable to be used. These limitations may be on the frequency of clinician contact into a COVID positive room/ward as much as patients' own practical limitations. The risks and benefits should be considered on a case-by-case basis. Where fans are chosen to be used, advice provided by MoH is that:
 - A minimum of 2 metres social distance should be maintained at all times while the fan is running
 - The fan is positioned such that the 'fan draft' is directed back to the person, rather than oscillating side to side. Handheld fans are preferred
 - The fan is switched off once symptoms settle or if close contact is required
 - Don PPE for close personal cares as per MoH guidance





References

1. Abernethy AP et al. Randomised, double blind, placebo-controlled crossover trial of sustained release morphine for the management of refractory dyspnoea. *BMJ* 2003;327:523–8.
2. Ekstrom et al. Safety of benzodiazepines and opioids in very severe respiratory disease: national prospective study. *BMJ* 2014;348:445
3. Cherny et al. European Association for Palliative Care (EAPC) recommended framework for the use of sedation in palliative care. *Palliative Medicine* 2009;23(7):581–593
4. Lovell N et al. Characteristics, Symptom Management, and Outcomes of 101 Patients With COVID-19 Referred for Hospital Palliative Care. *JPSM* 2020; <https://doi.org/10.1016/j.jpainsymman.2020.04.015>
5. Ting R et al. Palliative care for patients with severe covid-19. *BMJ* 2020;370:m2710 <http://dx.doi.org/10.1136/bmj.m2710>

Some principles of all COVID-19 guidelines produced by the Collaboration:

As with all guidelines, they are designed to support decision making and best practice alongside individual assessment and ongoing reassessment as possible.

No one size fits all, and the guideline recommendations should be tailored to individual circumstances. If local guidelines are available, these guidelines can be used in addition as appropriate. In some instances, these guidelines may not necessarily be appropriate or fitting.

Whilst these guidelines are aimed specifically for people with COVID-19, the principles may also apply to people who are dying of other conditions too during a crisis.

Please do not share these guidelines on social media: the information may be sensitive to the public if not given the appropriate context.

Please feedback with your experience, and what else needs to be added or changed, as we learn more about how best to help people needing palliative care in a COVID-19 pandemic. Please email rachel@hospice.org.nz