Symptom Control for People Dying with COVID-19

About These Guidelines:

These are hard and challenging times. We are facing situations that we hoped never to encounter. Working together we can make it through with empathy, compassion, kindness and sense of service intact.

These guidelines have been assembled from consensus and the papers that have been published to date: they should be seen as a fluid response to a fast-moving pandemic. As we learn more about the specific needs of people dying with COVID-19, these guidelines will be further updated, and we welcome your input and experience in helping to keep these as useful and relevant as possible.

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.

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[1], as well as examples of other published best practice in response to the pandemic[2].

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

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 to Rachel Wilson (rachel@hospice.org.nz) 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.

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Guideline Leads

Overview:

Evidence over the last 20 months from caring for people dying from COVID-19 has reported:

1. Most people die from respiratory or cardiac failure.
2. Breathlessness, agitation, drowsiness and delirium are the commonest symptoms.
3. Pain and retained secretions are not so common.
4. Symptom control is on balance no different from people dying from non-COVID illness[3] other than
    a. People are often on high flow oxygen/non-invasive ventilation (NIV) if dying in hospital[4].
    b. People can deteriorate very rapidly[5], and parenteral administration is needed more frequently.
    c. People are referred late in the course of their illness to palliative care, often within the last three days of life[6].
5. Benzodiazepines and opioids are the commonest medications used, with antipsychotics third.
6. Syringes drivers are often used and should be started early; frequent dose escalation is common in the last three days of life[2].

Breathlessness

General principles of management in chronic refractory breathlessness include:

1. Check and treat reversible causes.

2. Use non-pharmacological management techniques if appropriate (see detail below).

3. Use opioids (morphine) as first line pharmacological management:
    a. Morphine is well-established for palliation of chronic refractory breathlessness at low doses[7]
    b. When used in low doses and titrated appropriately, morphine is safe, even in those with respiratory conditions[8]
    c. Evidence for other opioids is lacking, therefore morphine is first choice in those with an eGFR>30 ml/min/m^2
    d. See tables below for further guidance on dosing

4. Use benzodiazepines (usually midazolam, sublingual or subcut) second line, or first line alongside an opioid if significant anxiety also present.

5. Anxiety and breathlessness:
    a. 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)
    b. Remain calm, reassure, stay with the person if resource allows
    c. Utilise non-pharmacological management strategies when the level of anxiety is low enough to allow this (see below)
    d. Mainstay of pharmacotherapy is benzodiazepines – see tables for dosing guidelines
    e. Avoid midazolam nasal spray as little evidence for effectiveness

6. Oxygen and breathlessness:

   a. Oxygen has not been shown to be beneficial for managing non-hypoxic breathlessness and is not generally used for those with oxygen saturations >90%.
   b. Hypoxaemia (without other causes of breathlessness) is common in COVID-19 with carbon dioxide levels often normal or low (Type 1 respiratory failure). People are often more alert than in Type 2 respiratory failure where hypercapnia can cause drowsiness.
   c. People may also not be breathless even when oxygen saturations are low, though air hunger (an awareness of an uncomfortable urge to breathe) is commonly described for which opioids may be helpful.
   d. Where oxygen provision is scarce (for those dying in community settings, for example) it should not **routinely** be provided, especially for non-hypoxic breathlessness.

7. Withdrawal of high-flow nasal cannulae oxygen or NIV:

   a. Where a diagnosis of dying has been made (last few days of life), a careful trial of downward titration should be considered. This may allow for lesser (non-aerosol) precautions to be used in the dying phase.
   b. Oxygen may be able to be withdrawn completely. Treat according to subjective dyspnoea rather than oxygen saturations. Wean gradually, aim for low-flow nasal cannulae as a minimum to allow closer contact with family members whilst dying.
   c. If considering withdrawal of NIV, deep sedation (unresponsive to voice) should be considered as respiratory distress can be anticipated upon withdrawal.[9] Administer stat doses as per final row of Table below, with repeated doses depending on response. Halve NIV pressures for 10-15 minutes prior to mask removal. Palliative Care advice strongly recommended.

Other Symptoms:

Cough

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

Respiratory tract secretions

a. 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)
b. 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.

Fever

a. Reportedly common
b. Use cooling cares
c. Paracetamol PO/PR/IV

Delirium

a. Delirium may occur in any patient with acute illness and is a poor prognostic sign
b. Non-pharmacological management at end of life include treating reversible causes such as urinary retention, constipation, and hypoxia
c. 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
d. In a low-resource setting, medication may be required to manage symptoms
e. Use pharmacological therapy only if the patient
    I. has distressing thoughts, hallucinations and/or
    II. is agitated and a danger to self, or others
f. In the absence of local guidelines, suggested medications:
    I. First line benzodiazepine: midazolam 2.5mg SC Q1H prn to max 10mg/24hrs or medical review
    II. First line antipsychotic: haloperidol 0.5mg PO/subcut q1h PRN to max 5 mg/24hr
    III. Second line antipsychotic or where sedation required: levomepromazine 12.5 q4h PRN to max 50 mg/24hr (more sedating)
g. A continuous infusion may be required for intractable symptoms combining both antipsychotic and benzodiazepine: seek palliative care advice

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

Prognosis/treatment intent	Management	Medications and dosing ○ If eGFR <30, contact palliative care ○ Halve doses in frail or elderly ○ Opioid & benzodiazepine naïve patients only	Palliative care referral
Possibility of recovery alongside possibility of death in days/weeks Can be given alongside antibiotics/fluids/oxygen as needed for symptom control.	Correct underlying causes Address non-pharmacological management PRN oral opioids (or subcut if unable to swallow/absorb) PRN benzodiazepines for anxiety If PRNs frequent and effective, start regular opioid/benzodiazepine, in addition to PRNs	Morphine PO 2.5-5mg q1h PRN, **or** Morphine SC 1-2.5mg q1h PRN 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 **Regular:** Morphine SR (m-Eslon or Morphine LA) 10mg (or 20mg) PO BD, **or** Morphine 10 or 20mg/24hours via CSCI Lorazepam 0.5-1mg PO BD Clonazepam 3-5 drops (0.3-0.5mg) SL BD Midazolam 10mg/24hrs via CSCI	Not as routine: if uncertain refer Ensure goals of care and escalation plan are clear
Last days - hours of life, mild/moderate symptoms	As per local End-of-Life Care Guidelines e.g Te Ara Whakapiri (see Ministry of Health website)	As per local End-of-Life Care Guidelines Breathlessness: morphine SC 2.5-5mg q1h PRN as a minimum. Consider starting CSCI/24hours Morphine 10mg [4] Anxiety/distress: midazolam SC 2.5-5mg q30min PRN as a minimum	Not as routine: If uncertain refer
Last days – hours of life In extremis - severe dyspnoea Goal is relief of suffering without major sedation	Remain calm, present and reassure SC (or IV) morphine and midazolam stat and then via CSCI	Stat SC morphine 5mg + SC 5mg midazolam, **or** Stat IV morphine 2.5mg + IV 2.5mg midazolam Start CSCI or CIVI/24hours Morphine 10mg + midazolam 10mg	Strongly recommended as soon as possible: do not delay treatment
Last days – hours of life. Goal is sedation until death Intractable symptoms present despite above measures If invasive ventilation for extubation, as per ICU guidelines.	IV or SC infusion will be required	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 IV or SC infusion morphine /midazolam/levomepromazine as discussed with palliative care team See separate notes on palliative sedation	Strongly recommended as soon as possible

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

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

Refer to Sublingual Medications Guidelines

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

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/m^2:
    - 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 <u>not</u> 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'[9]. 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 not used for sedation. They are usually continued if being used for pain/breathlessness.

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 is currently not recommended.

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