BC Centre for Palliative Care

B.C. INTER-PROFESSIONAL PALLIATIVE SYMPTOM MANAGEMENT GUIDELINES

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TABLE OF CONTENTS

PURPOSE

To provide guidance, informed by evidence and endorsed by expert practice, on safe and effective dyspnea management practices for healthcare providers who are caring for adults with dyspnea related to advanced, life-limiting illness.

SCOPE

The focus of this guideline is the management of dyspnea in adults related to advanced, life-limiting illness. This guideline does not address the management of dyspnea unrelated to a life-limiting diagnosis.

Opioid Prescribing and Management in Palliative Care provides thorough practice guidance and should be **used as a companion** document for effective dyspnea management.

DEFINITIONS

Dyspnea is a subjective experience of breathing discomfort that consists of qualitatively distinct sensations that vary in intensity and is equivalent to breathlessness, shortness of breath, and air hunger[1] and may occur in the absence of objective changes.[2]

Hypoxemia refers to an oxygen saturation (SpO2) of less than or equal to 90% while breathing room air at rest, which is equivalent to PaO2 of 60 mmHg. [3]

PREVALENCE

Dyspnea in people* with advanced life-limiting illness is highly prevalent, regardless of primary diagnosis. [3–6] Intensity tends to worsen towards the end of life. [7–10]

IMPACT

Dyspnea results in multidimensional distress for people living with advanced life-limiting illness and their family**.[11,12] Quality of life and daily functions can be profoundly negatively impacted. Psychological effects include anxiety, panic, hopelessness, loss of enjoyment of life, and social isolation.[4,13] In advanced life-limiting illness, the presence of dyspnea is an indicator of poorer

* *Throughout this document, "people", "person", and "individual" refer to the recipient of care, the one who has a life-limiting condition. This includes terms such as "patient" or "client".*

** *"Family" is defined by the person and includes all who are identified by them as significant and involved or in their circle of care.*

prognosis.[9,14–17] Dyspnea is one of the most common refractory symptoms and reasons for palliative sedation therapy. [10,11]

CONSULTATION

- Consultation is available with experienced palliative care physicians/specialists and inter-professional palliative care teams. If there are no local or regional palliative care physicians available, one can be reached via the **BC Provincial Palliative Care Consultation Line (toll-free, 24/7) at 1-877-711-5757** (accessible only for physicians and nurse practitioners).
- Consultation with an experienced palliative care physician/specialist is recommended **when dyspnea is not managed after applying standard dyspnea guidelines and interventions**.
    - Consultation is strongly recommended when dyspnea is difficult to treat, to determine if dyspnea is refractory and palliative sedation therapy is required.
- Consult as appropriate with other specialists such as radiologists, oncologists, respirologists, or cardiologists.
- Consult a pharmacy for medication-related questions, including but not limited to, concerns regarding costs and formulations available, and interactions. Refer to drugsearch.ca for information about medication cost and coverage.
- Consultation with an addiction medicine specialist is recommended if the person has a substance use disorder or a history of opioid related overdose.[18]
- This guideline does not include pediatrics, though the content may have an application for children. Seek consultation from Canuck Place Children's Hospice regarding the care of a specific child, given the infrequency and specialty practice of pediatric palliative care.
    - Canuck Place Children's Hospice 24-hour line: 1-877-882-2288
    - On-call Pediatric Palliative Care physician: 1-604-875-2161

KEY RECOMMENDATIONS

Refer to the **Key Recommendations** of dyspnea management for a summary of the guidelines, and the associated **IDSA-ESMO Levels of Evidence and Strength of Recommendations.**

STEP 1 | GOALS OF CARE CONVERSATION

Determine current goals of care in conversation with the person, their family and inter-disciplinary team. See **Appendix C: Extra Dyspnea Resources** for tools to guide conversations. Goals of care may change over time and need to be reconsidered at times of transition, e.g., disease progression or transfer to another care setting.

The medical management and the symptom management pathways of dyspnea overlap. Understanding the person's goals in relation to treatment options is important. Explore the available options for care, including benefits and burdens, to ensure the person is making an informed decision regarding their care.

STEP 2 | ASSESSMENT

Screen for symptom distress and the presence of dyspnea on an ongoing basis using screening tools such as Edmonton Symptom Assessment System (ESAS-r). [19]

For those unable to self-report, assess behavioural indicators for dyspnea using observation and a rating scale such as the Respiratory Distress Observation Scale,[20] collateral history from others, and consider alternative presentations such as fatigue or decreased activity. See **Appendix C: Extra Dyspnea Resources** for assessment resources.

The depth of assessment depends on the person's presentation, and these assessment tools are not an exhaustive list.

Dyspnea History: Using Mnemonic O, P, Q, R, S, T, U and V[21]

Mnemonic Letter	**Assessment Questions:** *Whenever possible, ask the person directly. Involve family as desired by the individual.*
Onset	When did it begin? How long does it last? How often does it occur?
Provoking /Palliating	What brings it on? What makes it better? What makes it worse? Is it worse lying down or sitting?
Quality	What does it feel like? Can you describe it?
Region/Radiation	Not applicable.
Severity	How severe is this symptom? (Use a rating scale that works for the individual.) What would you rate it on a scale of 0-10 (0 being none and 10 being the worst possible)? Right now? At worst? On average? When you are walking? Or climbing stairs? Or doing activities of daily living?[4] How many stairs can you manage? Or how far/long can you walk? How bothered are you by this symptom? Are there any activities that you can't do that you would like to do? Are there any other symptom(s) that accompany this symptom (e.g., pain in your chest, anxiety, fatigue)? See assessment tools in **Appendix C: Extra Dyspnea Resources.**
Treatment	What medications and treatments are you currently using? Are you using any non-prescription treatments, herbal remedies, or traditional healing practices? How effective are these? Do you have any side effects from the medications and treatments? What have you tried in the past? Do you have concerns about side effects or cost of treatments?
Understanding	What do you believe is causing this symptom? How is it affecting you and/or your family? What is most concerning to you?

Values	What overall goals do we need to keep in mind as we manage this symptom? What is your acceptable level for this symptom (0-10)? Are there any beliefs, views or feelings about this symptom that are important to you and your family? What are you having trouble doing because of this symptom that you would like to do?

Physical Exam:

Perform a physical exam as appropriate.[22] This may include vital signs (heart rate, respiratory rate, blood pressure, temperature, and oxygen saturation), cardiac exam, respiratory exam, abdominal exam, as well as an assessment for volume overload, dehydration, and signs of infection.

Diagnostics:

Consider goals of care before ordering diagnostic testing.

If indicated, complete: blood count, electrolytes, renal function, albumin, protein levels, oxygen saturation by oximetry, chest x-ray and/or CT scan.

The choice of appropriate diagnostic tests should be guided by the underlying condition/s, the stage of disease, the prognosis, the balance of the benefits and burdens, treatment goals, the person's preferences, and the availability of specialized investigations. Tests are exhausting for people in a palliative care setting and may be of limited usefulness.[4,23,24]

STEP 3 | DETERMINE POSSIBLE CAUSES

Determine possible causes and reverse where possible as aligned with goals of care.

- Address underlying causes e.g., draining pleural effusions, providing blood transfusions for anemia and diuretics for pulmonary edema.
    - If applicable, refer to the Cough Guideline or Respiratory Congestion Guideline
- Address contributing factors such as anxiety, pain, and respiratory panic.[25]
- Maximize disease-modifying therapies,[4] i.e., bronchodilators such as salbutamol, ipratropium, and inhaled corticosteroids for asthma, COPD and associated flare-ups.
- If the cause of dyspnea is related to superior vena cava syndrome, treat as an emergency requiring prompt medical attention.

Possible causes and related conditions:

Airway obstruction: chronic obstructive pulmonary disease (COPD)/asthma, excessive secretions, tumour, lymphadenopathy, obstructive sleep apnea

Pulmonary parenchymal (lung tissue): fibrosis, tumour, metastases, pneumonia,

pneumonitis, damage from oncological treatment

Circulatory conditions (arterial, venous and lymphatic): pulmonary emboli, pulmonary hypertension, lymphangitic carcinomatosis, superior vena cava (SVC)

Cardiac conditions: coronary artery disease (CAD), congestive heart failure (CHF), arrythmias, pericardial disease (inflammation, infiltration, effusion)

Pleura: effusion, pneumothorax, tumour, inflammation

Respiratory/diaphragmatic muscle weakness: cachexia, electrolyte imbalance, steroid myopathy, phrenic nerve lesion, neuromuscular disease such as amyotrophic lateral sclerosis (ALS), cerebrovascular accident (CVA), poliomyelitis, myasthenia gravis

Decreased chest wall compliance: chest wall tumour, damage and/or scarring, ascites, hepatomegaly

Systemic: fatigue/deconditioning, weakness, severe anemia, infection, sedation, pain[2]

STEP 4 | INTERVENTIONS

For an overview of the approach, see **Appendix A: Dyspnea Management Algorithm**

PRINCIPLES OF MANAGEMENT

When considering a management approach, always balance the burden of a possible intervention against the likely benefit (e.g., does the intervention require transfer to another care setting, does an involved caregiver have the capacity to support the intervention).

- Optimize all three approaches, non-pharmacological, self-management and pharmacological strategies, to address underlying causes and the distress of dyspnea.[26,27]
- Use a person-centered and trauma-informed approach, considering the bio-psychosocial model of 'total dyspnea', recognizing the physical, psychological, spiritual, social and cultural factors affecting the person's experience of their dyspnea and those who support them.[28] Refer to the Nurturing Psychosocial and Spiritual Well-being Guideline.
- Address the multidimensional factors contributing to dyspnea and suffering, using an inter-professional approach. [29–31]
    - Consider referral to Occupational Therapy or Physiotherapy for equipment, energy conservation, pacing and exercise.
    - For people at home, consider referral to community and virtual-based programs (Nurse, RT, PT etc.), if available to provide self-management strategies, coaching and support - for the person and their family/caregivers.[32–35]
    - Use anticipatory planning to reduce respiratory distress.

- Although some strategies lack robust studies (e.g., traditional medicines, complementary therapies), where appropriate, support a person's choice to try strategies to relieve suffering and dyspnea, being mindful of potential risks and benefits (including cultural safety, medication costs and interactions).
- Ensure ongoing documentation of assessment findings, treatment plan and the person's response, which are essential for effective team communication and a consistent approach to dyspnea management.[36]

NON-PHARMACOLOGICAL INTERVENTIONS

Tailor non-pharmacological interventions to the individual, in alignment with goals of care, considering the underlying cause and pattern of dyspnea. These measures have a foundational role in effective dyspnea management, yet are generally underused. [37]

General strategies

Regardless of etiology of dyspnea, basic strategies useful to manage dyspnea include:

- **Airflow**
  - Strive for an air source that is fresh, cool, humidified and free of irritants.[38]
  - Promote air flow, including opening of windows, having a fan in the room and by directing air flow at the cheek with a room fan or a hand-held fan. [39–42]
- **Maintain a calm** approach and environment. [43]
- **Manage anxiety.** Problem solve to avoid panic.[30,44]
  - Develop strategies to address anxiety, consider referring to the Breathing, Thinking, Functioning clinical model.[30]
  - Use relaxation techniques such as guided imagery and therapeutic touch.[45]
  - When dyspnea is acute and distressing, provide a supportive presence; and when possible, do not leave the person alone.[43]
- **Use principles of energy conservation** and activity management.[30,44,46,47]
  - Identify and avoid provoking exertion triggers.[48]
  - Pace activities[47], including when providing care.
  - Use equipment such as commodes and raised toilet seats.
  - Consider walking aids.
    - Forward leaning on wheeled walkers may help ventilation.[4]
  - Ask YES and NO questions, rather than open-ended, if talking increases dyspnea.[43]
  - Where possible, encourage activity within their breath control to maintain strength.[49–51]
- **Incorporate breath control** methods considering the underlying causes of dyspnea.
  - Encourage pursed lip and diaphragmatic breathing for people with COPD and asthma.[4,52]
  - Guide the person to use controlled breathing with slowed movements.
  - Reduce pressure on the diaphragm by small, frequent meals.[43]
- **Use positioning** with consideration of the underlying condition and causes of dyspnea.[47]

  - Ribcage stabilization may help accessory muscles to engage and improve breathing. [53]
  - Sit upright, supported by pillow, or forward leaning with arms on table when standing.[54,55]
  - Elevate the head of the bed to a comfortable 15 to 45 degrees and elevate arms with pillows.[46,56,57]
  - Avoid compression of chest and abdomen, position for optimal lung expansion.
- **Consider complementary** holistic therapies such as acupressure, acupuncture, yoga, music therapy, as the risks are low and the impact may be helpful in alignment with the person's and caregiver's preferences and capacity.[46,47,58–70]

Supplemental Oxygen

- Provide supplemental oxygen to treat low blood oxygen levels (hypoxemia).[3,54,71]. Even with correction of hypoxemia, oxygen may not address the sensation of dyspnea, as hypoxemia is typically not the only contributor to dyspnea. [3]
  - When supplemental oxygen is used for some people who are non-hypoxic, such as those with end-stage heart disease, it may be harmful due to the effects of artificially high oxygen levels (hyperoxia).[72]
  - For non-hypoxemic people who do find supplemental oxygen helpful, using facial cooling with room air via fan, mask or nasal prongs is often as effective as the airflow effects of supplemental oxygen.[73,74]
- Titrate oxygen to a flow level that brings SpO2 >90%.[2]
  - Use caution when providing supplemental oxygen to people with COPD for risk of oxygen-induced CO2 retention, while targeting lower SpO2 (i.e., 88-92%). [75]
- Seek consultation if considering supplemental oxygen for hypoventilation in people with neuromuscular disease. Supplemental oxygen without ventilation support can lead to oxygen-induced CO2 retention. [76]
- In the last hours of life, oxygen saturation is expected to drop, therefore monitoring oxygen saturation may cause more harm than benefit. When there are no signs of respiratory distress, oxygen, if in use, may be re-evaluated and withdrawn. [77]
- Supplemental oxygen is not covered by Palliative Benefits.
  - For coverage by the BC Home Oxygen Program, medical eligibility must be met. A prescription for 'palliative oxygen' without meeting the eligibility will not be covered. See medical eligibility https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/copd_appendix_c.pdf.
  - Oxygen may be covered by third-party insurance providers with a provider's prescription.

Non-invasive ventilation

- Consider non-invasive ventilation (predominantly BiPAP) as time-limited respiratory support for potentially reversible causes of hypercapnic respiratory failure, such as with COPD exacerbations[78] or other infections, as well as potentially ongoing respiratory support with ALS or other neurodegenerative conditions. [79]

- Clinicians should discuss the risks and benefits of non-invasive ventilation, considering the etiology, prognosis, setting and goals of care. Goals of treatment should always be discussed before initiation of non-invasive ventilation. [3,54,80–82] This is usually initiated in consultation with a medical specialist.
- When discontinuing a non-invasive ventilation plan for management of dyspnea, seek consultation with a palliative physician/specialist as required.

Condition-specific interventions

- For people with COPD and longer prognosis (if appropriate and available), incorporate exercise and pulmonary rehabilitation,[49–51,83–85] Tai Chi,[86] and inspiratory muscle training.[73,74,84,85,87,88] Neuromuscular electric stimulation may be beneficial when there are no practical barriers and if a trained provider is available.[4,30]
- For people with conditions such as COPD, cystic fibrosis or motor neuron disease, consider the use of chest wall vibration to help loosen and mobilise mucus in the airways, if tolerated and a trained provider is available.[4,89–91]

PHARMACOLOGICAL INTERVENTIONS

Opioids

- Prescribe oral or parenteral opioids as a first-line pharmacologic treatment for dyspnea in people with **advanced** life-limiting disease, in conjunction with optimizing disease management and non-pharmacological approaches.[3,53,54,92–107]
    - Variability exists in international guidelines on the benefit of opioids for dyspnea for those with non-malignant respiratory disease.[26,27,108] In the context of advanced life-limiting disease, a trial of opioids to evaluate effectiveness is recommended.[4]
    - Low-dose opioids are generally safe to prescribe for people with persistent breathlessness, including those with COPD. [26,109,111]
- When initiating an opioid for dyspnea:
    - Consider cumulative effects with other sedative medications, particularly reassessing benzodiazepine use.[2]
    - Re-evaluate promptly and frequently for effectiveness, interactions or adverse effects. [4,109]
    - Monitor for effectiveness and sedation using Pasero Opioid-induced Sedation Scale.[29]
- Administering opioids by nebulizer has poor evidence and is not recommended.[112,113]
- For complete guidance for prescribing and managing opioids, refer to the **Opioid Prescribing and Management in Palliative Care Guideline.**

When prescribing opioids, consider the pattern and severity of dyspnea as follows:

Intermittent Predictable Dyspnea (Incident Dyspnea)

- Given the rapid recovery from episodic exertional dyspnea, it is best addressed with non-pharmacological strategies. [4]
- When dyspnea is predictably provoked by specific activities, such as bathing or morning care, and not addressed with non-pharmacological strategies, prescribe oral or parenteral opioid PRN dose 30-60 minutes prior to the triggering activity.[94]
- If the person is already taking regular opioids (for pain or dyspnea), the effective PRN dose for incident dyspnea may be greater than 10% of the total daily opioid dose. Monitor for efficacy and titrate to effect. [3,95,114,115] See **Appendix B: Medications for Dyspnea Table B1 Opioid Dosing Guidance**.
- If distress with incident dyspnea persists, consult with an experienced palliative care physician/specialist. Although evidence is limited, injectable formulations of fentanyl or sufentanil can be administered via the sublingual or intranasal route and may be useful for people with difficult-to-manage incident dyspnea.[4]
    - These are opioids with high potency and rapid onset but short duration of action. Because of these properties, they can be used as a pre-treatment to manage dyspnea without the lingering effects of longer-acting opioids. [53,116–118] Given the potency of these medications, an evidence-based protocol or guideline should be used when prescribing these medications and in monitoring for effectiveness, sedation, and opioid excess, starting with small doses and evaluating before increasing. Specific dosing recommendations are beyond the scope of this guideline.

Persistent Dyspnea (Baseline Dyspnea)

- For ongoing dyspnea, begin a regular opioid dose with a concurrent PRN.[3,26,54,119–122]
- Individualize the choice of systemic opioid, route, and formulation, guided by whether a person is already taking opioids, opioid tolerance, the previous opioid effect on dyspnea and adverse effects, comorbidities, risk profile, clinical setting, and practical considerations.[3]
- For starting doses for dyspnea, see **Appendix B: Medications for Dyspnea Table B1 Opioid Dosing Guidance**.
- Persistent dyspnea may include intermittent acute exacerbations not triggered by exertion. If oral breakthrough is not sufficient, consider changing to subcutaneous breakthrough and adjust the frequency of breakthrough to q30 minute PRN if needed for symptom control. [123]
- Continuously reassess underlying causes of dyspnea to ensure potentially reversible causes of dyspnea are treated appropriately.
- Monitor for efficacy and titrate to effect.[3,95] If a person is not benefiting from opioid dose increases, reassess and refer to a palliative care physician/specialist for consultation.
- For opioid titration and monitoring, refer to the **Opioid Prescribing and Management in Palliative Care Guideline.**

Dyspnea/Respiratory Crisis

- Dyspnea crisis is "sustained and severe resting breathing discomfort that occurs in patients with advanced, often life-limiting illness and overwhelms the patient and caregivers' ability to achieve symptom relief." A dyspnea crisis can occur suddenly and is characteristically without a reversible etiology.[124] The recommendations for dyspnea crisis address individuals with life-limiting illness, whose goals of care typically do not include endotracheal intubation and mechanical ventilation.
- A dyspnea crisis may reoccur and can immediately precede death. In the effective treatment of a dyspnea crisis, there may be consequential sedation.
- For people at risk of severe crisis dyspnea, refer early to palliative care physician/specialist to develop an action plan for a crisis event. Considering the capacity of caregivers and location of care, include written instructions for symptom controlling medications, non-pharmacological interventions and who to contact and when. [102]
    - Consider using the COMFORT mnemonic outlined by the American Thoracic Society reference as a guide for developing individualized action plans. [102]
    - Use incremental opioid titration until the person's dyspnea begins to ease, monitoring for effectiveness and sedation.
    - Prescribe parenteral opioids and adjuvant anxiolytics/sedatives for administration to rapidly respond to acute onset, severe dyspnea.[4] See **Appendix B: Medications for Dyspnea Table B2 Dyspnea/Respiratory Dosing Guidance.**
    - The frequency and dosing vary based on a person's factors, opioid tolerance and care setting.
    - If possible, be prepared to rapidly titrate opioids and administer a parenteral opioid at shortened intervals to result in a rapid increase in serum levels (stacking).
        - The ability to stack parenteral doses of opioids may only be possible in a care facility or when an experienced/palliative care nurse or provider is able to oversee treatment.
        - Once the person's dyspnea begins to ease, stop stacking doses, monitor, and reassess. With stacking, serum levels continue to rise for up to an hour following the last dose. Careful reassessment is required. Once dyspnea is fully settled, then a new regular Q4H dosing regimen should be established.[29]

Refractory Dyspnea

The term 'refractory dyspnea' is used in this recommendation to refer to symptoms causing unbearable suffering for the person and, after a thorough examination, further interventions to mitigate this suffering are determined to include one or more of the following:

- Inaccessible or incapable of relieving suffering,
- Associated with unacceptable side effects,

    - Unlikely to be effective within a reasonable time frame,
    - Not in keeping with the person's goals of care, and/or
    - Unacceptable to the person and/or family for other reasons.
- Before determining if a symptom is refractory rather than difficult, a full assessment and advanced symptom management must be done.
- Consultation with a palliative care physician/specialist is strongly recommended when dyspnea is difficult to treat, to determine if it is indeed refractory, and determine if palliative sedation therapy is an option. [3,125]
- Consider referrals to psychosocial clinicians to help support family and team members.
- Refer to the **Refractory Symptoms and Palliative Sedation Therapy Guideline** for complete guidance.

Benzodiazepines

- Typically, benzodiazepines should not be considered first line and should not be used as monotherapy for dyspnea management.[3,125,127]
    - Consider benzodiazepines in select people to treat anxiety or panic associated with the experience of dyspnea when opioids and non-pharmacological measures have failed to control breathlessness. [123,125]
- See **Appendix B: Medications for Dyspnea Table B3 Benzodiazepine Prescribing Guidance.**

Corticosteroids

- Consider corticosteroids to treat causes of dyspnea related to inflammation.
- Prescribe a time-limited course of dexamethasone or prednisone for specific indications to reduce the risk of adverse effects, and monitor for effect.[128,129]
- See **Appendix B: Medications for Dyspnea Table B4 Corticosteroid Prescribing Guidance**.

Monitoring and Titration

- Use practice tools to monitor dyspnea rating, adverse effects, and track the person's goal attainment. Consistently use the same numerical or descriptive dyspnea rating scale for comparison.[140] The goal is comfort, determined by effectiveness and tolerance.
- Reassess dyspnea at regular and frequent intervals: at expected peak action time of a breakthrough opioid, following the start of new treatment, with a new report of dyspnea, with a change in the presentation, and if not relieved by previously effective strategies.[122,141]
- Following the initiation of dyspnea medications for symptom relief, adjustment is frequently required. Individualize dosing readjustments, balancing effectiveness and tolerability to find the lowest effective dose.
- Titrate the opioid gradually, monitoring effectiveness as well as adverse effects. For monitoring and titration related to opioids, refer to **Opioid Prescribing and Management in Palliative Care Guideline**, as there are numerous considerations for safety, efficacy and managing adverse effects, including prescribing prophylactic laxatives for the persistent constipating opioid effect.

- Respiratory depression is rare with appropriate dosing[2]; however, the risk of respiratory depression because of opioids is greater for those with respiratory impairments (e.g., pneumonia, COPD), and for people taking additional sedative medications.
    - People usually become sedated from opioids before experiencing respiratory depression. Less opioid is required to produce sedation than to produce respiratory depression, making it a particularly sensitive indicator of impending respiratory depression.[142]
    - Monitor the person regularly for sedation and respiratory depression using a standardized monitoring assessment tool. See **Pasero Opioid-Induced Sedation Scale (POSS)** in Opioid Prescribing and Management in Palliative Care Guideline.[142–145]
    - Monitoring for sedation rather than waiting for reduced respiratory rate is key. A POSS score greater than 2 is an indicator of higher risk of respiratory depression.[143,144]
- Manage **adverse effects** by dose reduction, changing to a different medication or symptomatic management, e.g., anti-emetic, laxative use. For opioid adverse effects, refer to Opioid Prescribing and Management in Palliative Care Guideline.[146]

EDUCATING THE PERSON & FAMILY

During every step of dyspnea management, provide education to the person and/or family to ensure effective, appropriate, and safe medication use. This education promotes understanding of dyspnea management and supports adequate symptom control in alignment with goals of care.

- Use a person-centered approach incorporating harm reduction and trauma-informed principles, considering the individual's history and experience.
- Provide verbal and written information in a way that is accessible to the individual and/or caregivers and in a language they are fluent in.
- Use a teach-back method after education to ensure the person/family understand the instructions.
- Provide information on who to contact in case of questions and support, including after-hours.
- Advise individual and/or family contacting a clinician if there is a change in their dyspnea severity or pattern, as there may be new causes contributing to their shortness of breath.
- Teach about how to keep a record of dyspnea severity, medication use and effectiveness, for example, using a symptom diary. See **Appendix C: Extra Dyspnea Resources** for link.
- Teach safe and appropriate use of medications, including purpose, adverse effects, and how to manage, including managing constipation with opioids and the correct use of inhalers, if used.[30] See **Table 1: Resources for the person and/or family**.
- Clarify that opioids are effective for dyspnea, but do not change the underlying disease.
- Instruct about safe handling, storage, and pharmacy take-back disposal of opioids.[122]
- Use handouts and resources to increase the person's understanding of breathlessness and

support self-management. See **Table 1: Resources for the person and/or family**.

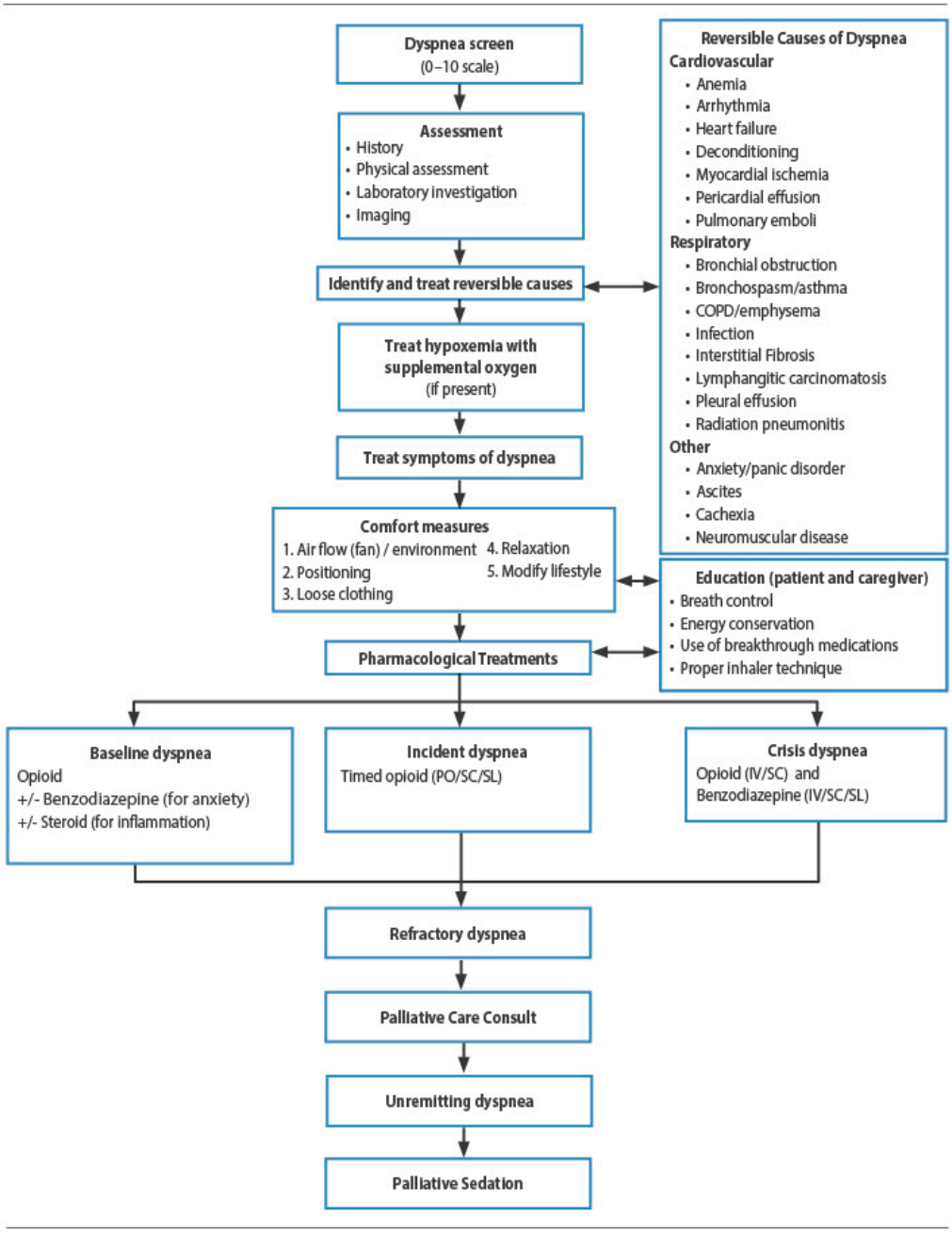
- Teach about the use of non-pharmacological management techniques and support the person and family to incorporate the selected strategies.
- Address any myths about oxygen, clarifying that dyspnea is not always caused by low oxygen levels and may not improve with oxygen. Fresh air via a fan, positioning and opioids may be more helpful than oxygen.
- Promote air flow, including opening of windows, having a fan in the room, or directing air flow at the face with a room fan or using a hand-held fan.[39–42]
- Build a documented plan, both for ongoing dyspnea and for acute dyspnea episodes.[1,4,48,147,148]
- If acute, severe episodes are anticipated, coach families in anticipation of this event to employ calmness and provide comfort through presence, verbally soothing, repositioning, physical touch and, if at home, administering medications as directed.
- Ask about cultural practices involving sacred tobacco and respect decisions to continue these practices.
- Encourage smoking cessation. Dyspnea can be lessened even after an early lung cancer diagnosis.[149]
- When nearing end of life, prepare the family that the person's respiratory rate and pattern changes are natural, expected changes in the last hours of life.

Table 1: Resources for the person and/or family

Dyspnea Management Resources	
Breathlessness Intervention Service Patient Information	Cambridge University Hospital
Shortness of Breath	Canadian Virtual Hospice
Managing Shortness of Breath	Island Health
Dyspnea and Breathing Pattern Changes (at End-of-Life)	Victoria Hospice Society
Disease-related Management Resources	
Breathlessness	BC Cancer
COPD Flare-up Action Plan	Doctors of BC
Asthma & COPD Inhaler Technique	Lung Saskatchewan
Living Well with COPD	Living Well with COPD
Palliative Approach for Advanced Heart Failure in Long Term Care	Canadian Virtual Hospice
Palliative Approach for Advanced Lung Disease in Long Term Care	Canadian Virtual Hospice
Self Check Plan for Heart Failure Management	American Heart Association

Appendix A: Dyspnea Management Algorithm[150]

Consultation with an experienced palliative care physician/specialist is recommended at any time dyspnea is not managed after applying standard dyspnea guidelines and interventions.



Algorithm adapted with permission from: Medical Services Commission of British Columbia, Guidelines and Protocols Advisory Committee. Palliative Care for the Patient with Incurable Cancer or Advanced Disease - Part 2: Pain and Symptom Management; 2017 [cited 2025 Oct 24]. Available from http://www.bcguidelines.ca/.

Appendix B: Medications For Dyspnea

Table B1: Opioid Dosing Guidance

Opioid tolerance	Regular Baseline /Scheduled Dose for Persistent Dyspnea	Breakthrough Dose for Persistent or Intermittent Dyspnea
Opioid naïve*	Morphine 2.5mg PO Q4H[26]or Morphine 1.25mg subcutaneous Q4H OR Hydromorphone 0.5mg PO Q4H or Hydromorphone 0.25mg subcutaneous Q4H	Morphine 1.25mg PO Q1H PRN or Morphine 0.5 – 0.75mg subcutaneous Q30 min PRN OR Hydromorphone 0.25mg PO Q1H PRN or Hydromorphone 0.125mg subcutaneous Q 30 PRN
Opioid tolerant	Individualized dosing	10% of regular oral opioid total daily dose PO Q1H PRN OR 10% of the regular subcutaneous opioid total daily dose q 30 min-1 H PRN

Refer to Opioid Prescribing and Management in Palliative Care Guideline, Appendix A for opioid dosing for person with renal impairment who is opioid naïve.

*Oral to parenteral dose ratio is generally 2:1, but there are circumstances, based on individual characteristics, which may require a 3:1 ratio.[123]

Table B2: Dyspnea/Respiratory CRISIS Dosing Guidance

Dyspnea/Respiratory Crisis	General Dosing Guideline:
	Opioids: Opioid tolerant - DOUBLE the current SUBCUTANEOUS breakthrough dose, give that dose Q20minutes PRN x maximum 2 doses for severe dyspnea then medical re-evaluation for further titration. OR Opioid naive - Hydromorphone 0.5 mg subcutaneous Q20minutes PRN x maximum 2 doses for severe dyspnea then medical re-evaluation for further titration. [29] **Benzodiazepines:** If required, add benzodiazepine in addition to opioid for anxiolysis or sedation Midazolam 2.5-5mg subcutaneous Q20 minutes PRN x maximum 2 doses, then medical re-evaluation if not settled. [126] OR Lorazepam 1-2 mg subcutaneous/SL Q30 minutes PRN x maximum 2 doses, then medical re-evaluation if not settled. [126] **Practice Tip**: Lorazepam SL tabs may be pre-dissolved in a couple of drops of warm water in a spoon and administered SL.

Table B3: Benzodiazepine Prescribing Guidance for Dyspnea

Medication Class	Medication Name Starting Dose	Indications, Adverse Effects, Precautions
Benzodiazepines	Lorazepam 0.5mg SL QID PRN [110] or Q4H PRN	**Indications**: Severe anxiety associated with dyspnea which persists despite addressing the underlying cause using disease-modifying therapy, using first-line opioids and non-pharmacological interventions for symptom management, and/or in the last days of life. [4,124,127] **Caution:** Consider cumulative side effects of opioids and benzodiazepines, including sedation, risk of falls and delirium. [3]
	Midazolam	May be used in a dyspnea crisis due to rapid onset of action, and injectable form. **See Dyspnea/Respiratory crisis above**

Table B4: Corticosteroid Prescribing Guidance for Dyspnea

Medication Name	Indications, Adverse Effects, Precautions
Dexamethasone and Prednisone Dose dependent on cause being treated and dosing may be higher. Consultation with respective specialties may be required. Dose once a day in the morning. If a person is not tolerating daily morning dose, then dose BID. Ensure doses are given before 4 pm to reduce effects of insomnia.	**Indications:** Consider a trial for dyspnea related to endotracheal and bronchial tumours, Superior Vena Cava syndrome, radiation, medication and/or immunotherapy-related pneumonitis, exacerbations of COPD, lymphangitic carcinomatosis, bronchospasm, and upper airway obstruction. [3,4,128,129] Consult primary oncologist before starting corticosteroids in people without a tissue diagnosis and in people who may start or who are receiving immunotherapy, as they may impact the diagnostic process and/or effectiveness of immune-based systemic cancer treatments.[130,131] **Initiation:** Considering individual factors, start at a high dose, then reduce to a maintenance level to the lowest effective dose to minimize adverse effects. Stop if no response within 5-7 days.[132] **Risks of adverse effects:** Increase with dose and duration of treatment;**Error! Bookmark not defined.** therefore, avoid prolonged use. If the benefits outweigh the risks, can continue indefinitely, in these cases find the lowest effective dose.[116,133] **Adverse effects:** Include gastric irritation/ dyspepsia*, insomnia, hyperglycemia**, water retention, delayed wound healing, purpura, visual blurring, immune suppression, proximal myopathy, osteopenia, increased appetite, hiccoughs, increased risk of VTE, mood lability and steroid psychosis***, Cushingoid features.[134,135] *PPIs are often considered to be used concurrently for gastric protection when higher doses or longer courses of steroids are required. Consider treating with

	concurrent PPI if the benefits of their use outweigh the risk associated with PPIs.[136] **Use caution for people with diabetes, monitor blood sugar. ***Use caution for people with psychiatric disorders (i.e., bipolar, schizophrenia). **Taper** steroid dose gradually if the treatment duration is more than 3 weeks, irrespective of dose.[134,137] For clinical practice in palliative care, a more cautious approach is recommended. Taper steroids for those taking greater than Dexamethasone 4 mg/day for more than 5 days.[138] Taper down to avoid withdrawal, reduce the risk of symptom recurrence, give time for intrinsic production of steroids to recommence and reduce corticosteroid-induced proximal myopathy.[134] If problems occur during dose reduction, consider increasing dexamethasone back to the dose where symptoms were controlled, considering each case individually. **Initially, taper rapidly** (halving the daily dose), but as it approaches the physiologic dose (Dexamethasone 1-2 mg/Prednisone 5-10mg po daily), taper much more slowly to allow the adrenals to recover.[29,139] Refer to Corticosteroid Reduction Regime.

Appendix C: Extra Dyspnea Resources

Assessment Tools

- Modified Medical Research Council (mMRC) Dyspnea Scale (non-cancer)
  https://www.pcrs-uk.org/sites/default/files/resources/MRC-Score.pdf

- NRS (Numerical Rating Scale), Visual Analog Scale (VAS) & Modified Borg Scale
  https://www.frontiersin.org/files/Articles/728772/fmed-08-728772-HTML/image_m/fmed-08-728772-g003.jpg

- Respiratory Distress Observation Scale (RDOS)
  https://www.interiorhealth.ca/sites/default/files/PDFS/826583-respiratory-distress-observation-scale.pdf

Resources Specific to Dyspnea

- American Thoracic Society: COMFORT (Sudden Breathlessness)
  https://www.thoracic.org/patients/patient-resources/resources/sudden-breathlessness.pdf#:~:text=%E2%80%9CCOMFORT%E2%80%9D%20Suggestions%20for%20your%20personalized%20plan.%20Here,and%20practice%20so%20that%20you%20are%20ready

- BC Cancer: Breathlessness
  https://www.bccancer.bc.ca/health-info/coping-with-cancer/managing-symptoms-side-effects/breathlessness

- BC Cancer Agency: Symptom management guidelines: Dyspnea
  http://www.bccancer.bc.ca/nursing-site/Documents/Dyspnea%20NCI%20v.%205%20Update%20with%20Bispecifics.pdf

- BC Guidelines: Dyspnea
  http://www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/palliative2_dyspnea.pdf

- Cambridge University Hospital: Breathlessness Intervention Service Patient Information
  https://www.cuh.nhs.uk/patient-information/?department=&service=202&keyword=Inhaler

- Canadian Virtual Hospice: Shortness of Breath
  https://www.virtualhospice.ca/en_US/Main+Site+Navigation/Home/Topics/Topics/Symptoms+_+Health+Concerns/Shortness+of+Breath.aspx

- Doctors of BC: COPD Flare-up Action Plan
  https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/copd-flare-

upactionplan.pdf

- First Nations Health Authority: "Respecting Tobacco" http://www.fnha.ca/wellness/wellness-and-the-first-nations-health-authority/wellness-streams/respecting-tobacco#keep-tobacco-sacred

- Island Health: Managing Shortness of Breath https://www.islandhealth.ca/sites/default/files/end-of-life/documents/managing-shortness-breath-information-patients-families.pdf

- Living Well with COPD https://www.livingwellwithcopd.com/

- Lung Saskatchewan https://www.lungsask.ca/education/programs-support/inhaler-resources

- University of Cambridge: Breathing, Thinking, Functioning (BTF) clinical model https://www.btf.phpc.cam.ac.uk/what-is-the-btf-model/

- Victoria Hospice Society: Dyspnea and Breathing Pattern Changes (at End-of-Life) https://www.islandhealth.ca/sites/default/files/end-of-life/documents/dyspnea-victoria-hospice.pdf

General Resources

- BC Centre for Palliative Care: Serious Illness Conversation Resources https://www.bc-cpc.ca/serious-illness-conversations-resources/

- BC Guidelines: Palliative Care for the Patient with Incurable Cancer or Advanced Disease https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/palliative-care-approach

- BC Palliative Care Benefits (Plan P): Information for prescribers https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/pharmacare/plans/plan-p-bc-palliative-care-benefits-program

- Canadian Association of Psychosocial Oncology: Algorithms for Cancer-related Distress, Depression and Global Anxiety https://www.capo.ca/guidelines

- National Centre for Complementary and Alternative Medicine (NCCAM) for additional information on the use of non-pharmacological interventions https://nccih.nih.gov/

Resources Specific to Population

- American Heart Association Self Check Plan for Heart Failure Management
  https://www.heart.org/-/media/Files/Health-Topics/Heart-Failure/HF-Symptom-Tracker.pdf

- ALS Society of Canada: A Guide to ALS care for primary care physicians
  https://als.ca/wp-content/uploads/2017/02/A-Guide-to-ALS-Patient-Care- For-Primary-Care-Physicians-English.pdf

- ALS Society of British Columbia 1-800-708-3228
  www.alsbc.ca

- BC Cancer Agency: Symptom management guidelines
  http://www.bccancer.bc.ca/health-professionals/clinical-resources/nursing/symptom-management

- BC Guidelines.ca: Chronic Obstructive Pulmonary Disease (COPD): Diagnosis and Management
  https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/copd#resources

- BC's Heart Failure Network – Diagnosis and Management
  Heart Failure - Diagnosis and Management - Province of British Columbia

- BC's Heart Failure Network: Heart Failure End of Life Appropriate Prescribing Guideline
  http://www.cardiacbc.ca/Documents/Appropriate-Prescribing.pdf

- BC Renal Agency: Conservative care pathway and symptom management
  http://www.bcrenal.ca/health-professionals/clinical-resources/palliative-care

- Canadian Virtual Hospice: The Palliative Approach for Advanced Heart Failure in Long Term Care:
  https://www.virtualhospice.ca/Assets/Heart_Jan21_2016_FINAL_20170720125009.PDF

- Canadian Virtual Hospice: The Palliative Approach for Advanced Lung Disease in Long Term Care:
  https://www.virtualhospice.ca/Assets/Lung_Jan21_2016_FINAL_20170720130218.PDF

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