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Regional Palliative Care Services

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Management of Dyspnea in Palliative Care

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Symptom management is a crucial part of palliative care, making it important to understand how to manage common symptoms in this setting. Dyspnea is a common symptom which is often experienced by patients living with life-limiting illness. Dyspnea is defined as "the sensation of struggling to breathe." (Murray, 2017). In fact, "it is one of the most common symptoms reported in patients with terminal cancer in the last six months of life." (Dundgeon, 2024). Dyspnea is a subjective experience, in which physiological findings may not reflect a patient's experience of dyspnea. Patients may describe dyspnea as breathlessness, air hunger, shortness of breath, being short of breath, chest tightness, or a feeling of suffocation (Dundgeon, 2024).

Dyspnea is also highly prevalent in patients living with COPD, CHF, ALS, dementia and stroke. (Murray, 2017). Throughout this article we will discuss the assessment of dyspnea, some of the underlying causes of dyspnea, and finally, we will discuss the non-pharmacological and pharmacological approaches for managing dyspnea.

Assessment of Dyspnea

Dyspnea is a distressing symptom for patients. It is essential for focused and systematic assessment of dyspnea to take place; the assessment of dyspnea can pose difficulties because physiological findings such as heart rate, respiration rate or oxygen saturation may remain unchanged even when the patient is reporting dyspnea. One of the best ways to assess dyspnea is to use a validated scoring system (Crombeen & Lilly, 2020). The assessment tool used in Northern Health is the Edmonton Symptom Assessment System (ESAS), see figure 2 below. This is an

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effective way to keep an ongoing record of all symptoms the patient is experiencing and can be used regularly to evaluate the effectiveness of newly implemented treatments. The ESAS is a self-reporting tool which the patient can complete on their own or with the assistance of family members or care providers. In conjunction with the ESAS, it is important to assess the patient's total experience of dyspnea. To assist in understanding how dyspnea is affecting the patient's quality of life, the use of a mnemonic, "O-V" can also be used alongside the ESAS. The O-V mnemonic has seven categories including onset, provoking/palliating, quality, severity, treatment, understanding and values (BCIPSMG, 2019). Figure 1 below shows the assessment mnemonic catered to dyspnea. On top of the validated scoring system and utilizing the assessment mnemonic O-V, a physical assessment should be completed. These physical assessments can range from visualizing the

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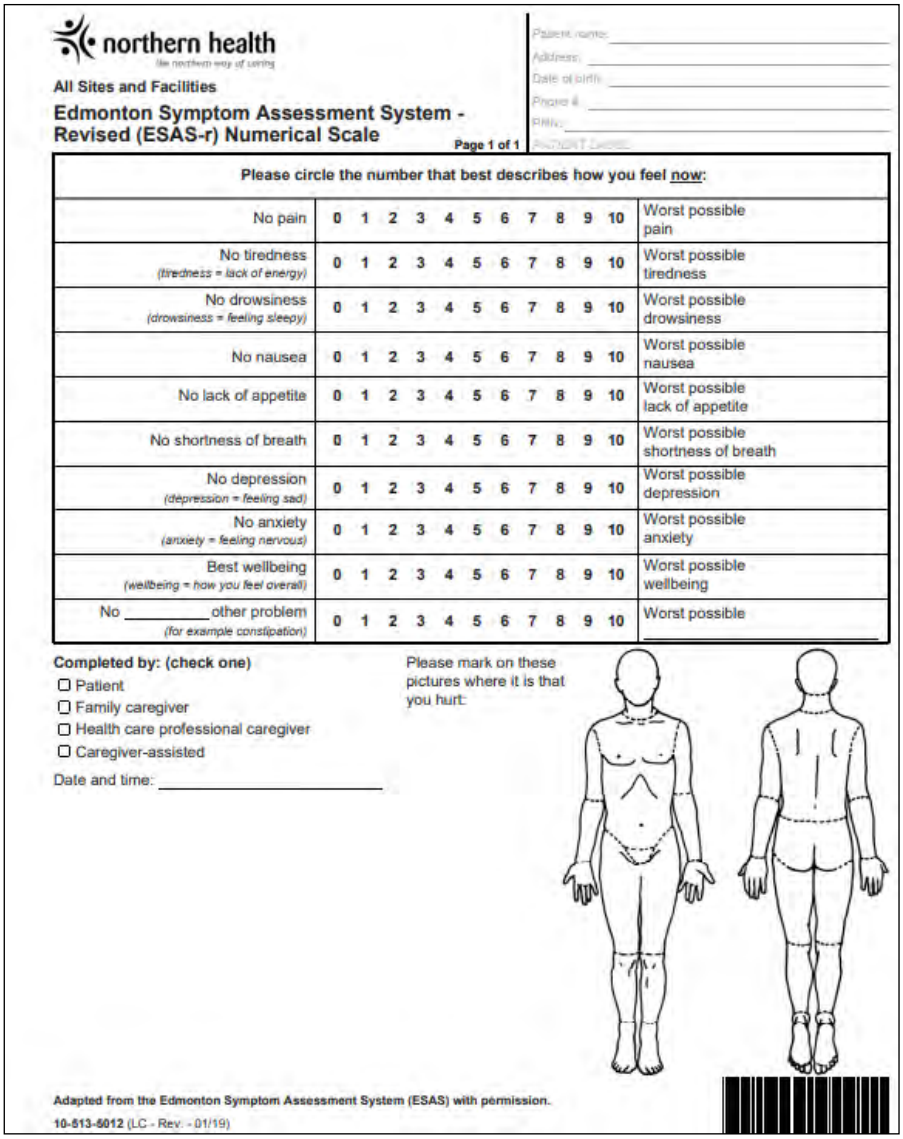
Figure 1: Dyspnea Assessment

Dyspnea assessment: Using Mnemonic O, P, Q, R, S, T, U and V[47]

Mnemonic Letter	**Assessment Questions** *Whenever possible, ask the patient directly. Involve family as appropriate and desired by the patient.*
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?
Quality	What does it feel like? Can you describe it? Is it worse lying down or sitting?
Region/Radiation	Not applicable.
Severity	How severe is this symptom? 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?[1] How bothered are you by this symptom? Are there any other symptom(s) that accompany this symptom (e.g., pain in your chest, anxiety, fatigue)?
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?

Source: BC Centre for Palliative Care Inter-Professional Palliative Symptom Management Guidelines, 2019

Figure 2: Edmonton Symptom Assessment System



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All Sites and Facilities

Edmonton Symptom Assessment System - Revised (ESAS-r) Numerical Scale

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Patient name: _____
Address: _____
Date of birth: _____
Phone #: _____
PHN: _____
PATIENT LABEL

Please circle the number that best describes how you feel now:

No pain	0 1 2 3 4 5 6 7 8 9 10	Worst possible pain
No tiredness *(tiredness = lack of energy)*	0 1 2 3 4 5 6 7 8 9 10	Worst possible tiredness
No drowsiness *(drowsiness = feeling sleepy)*	0 1 2 3 4 5 6 7 8 9 10	Worst possible drowsiness
No nausea	0 1 2 3 4 5 6 7 8 9 10	Worst possible nausea
No lack of appetite	0 1 2 3 4 5 6 7 8 9 10	Worst possible lack of appetite
No shortness of breath	0 1 2 3 4 5 6 7 8 9 10	Worst possible shortness of breath
No depression *(depression = feeling sad)*	0 1 2 3 4 5 6 7 8 9 10	Worst possible depression
No anxiety *(anxiety = feeling nervous)*	0 1 2 3 4 5 6 7 8 9 10	Worst possible anxiety
Best wellbeing *(wellbeing = how you feel overall)*	0 1 2 3 4 5 6 7 8 9 10	Worst possible wellbeing
No _____ other problem *(for example constipation)*	0 1 2 3 4 5 6 7 8 9 10	Worst possible _____

Completed by: (check one)
- ☐ Patient
- ☐ Family caregiver
- ☐ Health care professional caregiver
- ☐ Caregiver-assisted

Date and time: _____

Please mark on these pictures where it is that you hurt:

Adapted from the Edmonton Symptom Assessment System (ESAS) with permission.

10-513-5012 (LC - Rev: - 01/19)

Source: Northern Health Authority, 2019

patient to note distress, to auscultating lung fields. The type of physical assessment is based on the patient's level of intervention and goals of care.

Causes of Dyspnea

Knowing some of the underlying causes of dyspnea is important to understand the approaches for treating dyspnea. Treating underlying causes of dyspnea is dependent on the patient's goals of care and where the patient is in their illness trajectory. Treating the underlying cause of dyspnea should be a priority to manage dyspnea, unless this is not within the patient's goals of care, or is an untreatable cause (Downing & Wainwright, 2006). There are many causes of dyspnea. Dyspnea may originate from pulmonary, cardiac, neuromuscular or external causes (BCIPSMG, 2019). The causes of dyspnea include but are not limited to COPD, pleural effusion, pulmonary tumors, CHF, anxiety, infection and peritoneal effusions (BCIPSMG, 2019). Having a goals of care discussion with the patient and family before investigating the underlying cause of dyspnea is essential. If management of the patient would not change then a diagnostic work up would not be a realistic next step for the patient. Diagnostic

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testing, especially in the palliative setting, can be exhausting and may not be readily available in the patient's current location (BCIPSMG, 2019). Some treatments for these underlying causes may include antibiotics, diuretics, thoracentesis, radiation or paracentesis (Downing & Wainwright, 2006).

Non-pharmacological Approaches

Non-pharmacological measures can be implemented simultaneously with other management approaches for best relief of the patient's dyspnea. Here are some options:

- **Fan Therapy:** Blowing room air towards the patient's face can provide short-term relief. The patient can use a handheld fan, a floor fan, or a fan attached to a bedside table. Research shows that a fan blowing air on the patient's face can stimulate the trigeminal nerve, reducing anxiety and feelings of suffocation (Crombeen & Lily, 2020; Downing & Wainwright, 2006).
- **Exercise and Pulmonary Rehabilitation:** For COPD patients, exercise programs and pulmonary rehabilitation have been shown to improve dyspnea symptoms (Crombeen & Lily 2020).
- **Positioning:** Upright positioning with arms supported on pillows can reduce the feeling of dyspnea. For patients with one-sided lung diseases, positioning on the affected side can increase perfusion and ventilation, helping with dyspnea (Puntillo et al., 2014).
- **Breathing Exercises:** Techniques such as pursed-lip breathing, abdominal breathing, or timed breathing may be beneficial, although the level of evidence is low. These exercises require no extra equipment and can be done independently by the patient (Hui et al., 2021).

Pharmacological Approaches

When dyspnea continues to be unmanaged with treatment of underlying causes and non-pharmacological measures, pharmacological interventions should be considered. Medications may also be used alongside other management approaches. There are two pharmacological approaches which are focused on, they include:

- **Opioids:** Opioids are the first-line medication for treating dyspnea in the palliative setting. (Downing & Wainwright, 2006). Research shows that opioids reduce the feeling of dyspnea in advanced illness. Opioids act on carbon dioxide receptors in the brain which reduces the sensation of breathlessness. They also bind to airway opioid receptors, allowing the airway to relax and reduce the work of breathing. Additionally, opioids cause vasodilation of cardiac vessels, decreasing signals from the aorta that alert the brain to dyspnea (Murray, 2017).
- **Oxygen Therapy:** Oxygen therapy may be helpful for patients who are hypoxemic or have been on long-term oxygen therapy. It can benefit those with COPD or CHF who were on oxygen before receiving a palliative approach (Downing & Wainwright, 2006). For patients with an oxygen saturation of less than 90%, a trial of oxygen therapy for the purpose of symptom relief (not maintaining a specific oxygen saturation level) may be warranted. Oxygen can be continued if the patient reports reduced dyspnea and increased comfort (Downing & Wainwright, 2006). However, introducing oxygen therapy in the palliative setting may cause distress due to the nasal prongs or facial mask (Murray, 2017).

Conclusion

In conclusion, dyspnea is a common symptom seen in the palliative care setting. Dyspnea is very distressing for patients, and appropriate management is essential. Using standardized assessment tool such as the ESAS alongside the O-V assessment mnemonic is crucial to understanding the patient's experience of dyspnea. Underlying causes should be managed based on the patient's goals of care and where they are in their illness trajectory. Non-pharmacological and pharmacological approaches should be used to reduce the patient's distress related to their dyspnea.

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Upcoming Palliative Care Education

The Northern Health Palliative Care Consultation Team is excited to offer a variety of upcoming palliative care education in both in person and online formats. If you are interested or have questions about our upcoming training please e-mail Palliative.Care.Consult.Team@northernhealth.ca.

Online

Session:	Date:	Time:	Who can register:
ECHO—Basic	Sessions monthly	14:30-15:30 PST	Primary Care Providers
Essentials in Hospice and Palliative Care: A Practical Resource for Every Nurse	Start anytime– self-paced	Online	RNs and LPNs

In partnership with Pallium Canada, the BC Centre for Palliative Care serves as the Provincial Hub for the Palliative Care ECHO Project in British Columbia.

For more on ECHO sessions facilitated by the BC Centre for Palliative Care, please click here.

BC Centre for Palliative Care

Please Welcome Back Kelsey, Palliative Care Nurse Consultant

Please join us in welcoming back Palliative Care Nurse Consultant Kelsey Lindeman. Kelsey is excited to be back with the team helping offer palliative support to patients and clinicians.

You can contact her by email Kelsey.Lindeman@northernhealth.ca or by phone 250-645-3791.

Welcome back Kelsey!

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