

Breathlessness Guidelines and Flowchart

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**Gippsland Region
Palliative Care Consortium
Clinical Practice Group**

<i>Policy No.</i>	GRPCC-CPG006_1.0_2013
<i>Title</i>	Breathlessness Guidelines and Management Flowchart
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<i>Ratified</i>	GRPCC Clinical Practice Group
<i>Effective Date</i>	October 2013
<i>Review Date</i>	Every two years from effective date.
<i>Purpose</i>	This policy has been endorsed by the GRPCC Clinical Practice Group and is based on current evidence-based practice and should be used to inform clinical practice, policies and procedures in health services. The intent of the policy is to promote region wide adoption of best practice. Enquiries can be directed to GRPCC by email enquiries@grpcc.com.au or 03 5623 0684.

Policy Statement

The management of breathlessness associated with end stage disease processes should be based on a comprehensive assessment of the physical and psychological factors and optimal management of reversible causes using both pharmacological and non-pharmacological measures.

Definitions

Breathlessness

The subjective experience of difficult or uncomfortable breathing. It consists of qualitatively distinct sensations that vary in intensity. The experience of dyspnoea involves interaction between multiple physiological, psychological, social and environmental factors and may induce secondary physiological and behavioural responses (American Thoracic Society 1999: Therapeutic Guidelines 2010).

Dyspnoea

Shortness of breath

Hypoxaemia

Reduced oxygen concentration in the blood with arterial partial pressure of oxygen less than 60mmHg or oxygen saturation of $\leq 90\%$.

Often presents without recognisable signs. Signs of hypoxemia if present can include neurological signs such as anxiety, agitation leading to confusion and ultimately loss of consciousness. Other signs include tachypnoea, nasal flaring, use of accessory breathing muscles, changes in vital signs and cyanosis.

Policy

1. Assessment

History

- When did symptoms begin? Clarify patterns of breathlessness
- Assess for precipitating /alleviating factors and associated symptoms; e.g. exertion, posture, anxiety, associated with pain.
- Evaluate impact on mobility or activities of daily living and quality of life.

Undertake a physical examination

- Record all vital signs and perform baseline Oxygen Saturation (to exclude need for oxygen therapy - ? to rule out hypoxaemia).
- Perform auscultation of cardiac and respiratory system (if confident to do so)
- Report any of the following to relevant medical staff i.e. general practitioner, medical specialist:
 - Pulmonary dullness
 - Crackles and/or wheezes
 - Reduced air entry or air entry absence
 - Cyanosis
 - Tachypnoea
 - Inability to clear secretions
 - Use of accessory muscles

- Stridor
- Oedema.

Examine possible causes

- Airway Obstruction
- Anaemia
- Anxiety
- Ascites
- Arrhythmias
- Bronchospasm
- Cardiac failure
- Hypoxaemia
- Infective exacerbation of COPD
- Infection
- Pleural/Pericardial Effusion
- Pulmonary Embolus
- Pulmonary Oedema
- Superior Vena Cava Obstruction.

Reversible causes are to be treated in keeping with the patient’s goals of care and prioritised accordingly.

2. Management

(If rapid response required refer to flowchart Appendix 1)

Management and interventions are to be tailored according to the identified patterns and determinants of the patient’s breathlessness.

Management is not necessarily prescriptive due to the variety of possibilities contributing to breathlessness.

Management will generally fall into the following categories:

1. Medical – report to officer
2. Nursing and Allied Health interventions
3. Pharmacological
4. Emergency specialist treatment including radiotherapy and surgical intervention.

Nursing and Allied Health interventions:

For breathlessness associated with posture, exertion, pain, anxiety and eating, management may be implemented through allied health and nursing interventions.

These may include:

- Positioning adjustment
- Controlled breathing techniques
- Aids and equipment
- Planning and pacing activities
- Pain and analgesia review
- Anxiety management use of relaxation and distraction techniques
- Dietician review
- Speech pathology review
- Room ventilation e.g. fan, open window
- Explanation, reassurance and education.

Pharmacological Interventions:

To help with expectoration and or cough.

- **Saline Nebuliser or bronchodilator** - cease if no symptomatic benefit

- **Trial of Dexamethasone/Prednisolone** therapy may be indicated for:
 - Infiltration pressure from primary or metastatic tumour on lung structures
 - Lymphangitis carcinomatosa
 - SVC obstruction (emergency treatment requiring specialist input if sudden onset and if patient not in the terminal phase).

Aspects to consider when instigating corticosteroids therapy:

- Therapy to be given in the morning
- Cease after one week if no relief to breathlessness
- Wean prescribed amount to lowest effective dose
- Monitor Blood sugar levels
- Observe for wakefulness, agitation, proximal myopathy.

- **Opioids**

Opioids generally used in lower doses and slow increments. Opioids can be titrated in the same way as when used for pain control. Particularly effective at rest and in the terminal phase.

Considerations when titrating opioids:

- Opiate naivety of patient
- Prescribing for patient already receiving Opioids
- Response
- Age: (≤ 14 or ≥ 75)
- Weight ($\leq 45\text{Kg}$)
- Renal function (GFR & creatinine clearance).

Monitor responses and side-effects (SE) (especially cognitive SE i.e. excessive drowsiness, confusion and emesis and constipation- always consider aperients).

Prescribe subcutaneous opioid if oral route problematic.

- **Benzodiazepines**

Benzodiazepines (anxiolytics) are helpful as second line agent when breathlessness is associated with anxiety.

- Lorazepam: fast acting sublingually (SL) for panic attacks
- Diazepam/oxazepam: consider nocte dose for long-standing continuous anxiety
- Midazolam: consider for subcutaneous (SC) infusion.

- **Anticholinergics**

Excessive respiratory secretions associated with breathlessness (often in the terminal stage of illness):

- Hyoscine Butyl bromide SC bolus or continuous SC infusion
- Glycopyrrylate SC
- Hyoscine hydrobromide SC.

- **Consider Oxygen therapy if hypoxaemia observed and proven low O2 saturation**

(Please note: access to O2 may not always be available - it does not mean patient requires hospital admission for this very reason. Oral or parenteral opioids and/or benzodiazepines can be just as effective to relief the subjective/distressing experience of breathlessness).

(Refer to *Oxygen Use in Palliative Care Guideline*, GRPCC Clinical Practice Group, July 2011).

Key Performance Indicators

If patient is not improving or continues to deteriorate, seek specialist advice.

Consultation and advice:

- If breathlessness not responsive to outlined management
- When there is uncertainty about drug therapy regimes
- When invasive procedures are indicated
- When radiotherapy or stenting is indicated eg. Bleeding, airway obstruction.

Optimally, the patient and carer/family should have access to timely support, information/explanation, education and coaching about the likely courses and treatment options to manage breathlessness.

References

1. Abernethy, A.P., McDonald, C.F., Frith, P.A., Clark, K., Herndon II, J. E., Marcello, J., Young, I.H., Bull, J., Wilcock, A., Booth, S., Wheeler, J.L., Tulsy, J. A., Crockett, A.J., Currow, D.C. (2010). Effect of palliative oxygen versus room air in relief of breathlessness in patients with refractory dyspnoea: a double-blind, randomised controlled trial. *Lancet*, 376 784-93.
2. Booth, S., & Wade, R. (2003). Oxygen or air for the palliation of breathlessness in advanced cancer. *Journal of the Royal Society of Medicine*, 96 215-218.
3. Creagh-Brown, B.C., & Shee, C. (2009). Palliative and end-of-life care for patients with COPD. *European Respiratory Journal*, 33 445-446.
4. Clemens, K.E., Quednau, I., Klaschik. (2009). Use of oxygen and opioids in the palliation of dyspnoea in hypoxic and non-hypoxic palliative care patients: a prospective study. *Support Care Cancer*, 17 367-377.
5. Currow D.C., Ward A.M., Abernethy, A.P. (2009) Advances in the pharmacological management of breathlessness. *Current Opinion in Supportive and Palliative Care*. 3 103-6.
6. Currow, D.C., Agar, M., Smith, J., Abernathy, A.P. (2009). Does palliative home oxygen improve dyspnoea? A consecutive cohort study. *Palliative Medicine*, 23 309-316.
7. Department of Health and Human Services Tasmania (2009), *Care Management Guidelines: Breathlessness*
www.dhhs.tas.gov.au/__data/assets/pdf_file/0009/36936/Breathlessness_Final290909_PCSubComm.pdf
8. Dorman, S., Byrne, A., Edwards, A. (2007). Which measurement scales should we use to measure breathlessness in palliative care? A systematic review. *Palliative Medicine*, 21 177-191.
9. Jennings, A.L., Davies, A. N., Higgins, J.P.T, Gibbs, J. S. R, Broadley, K. E. (2002). A systematic review of the use of opioids in the management of dyspnoea. *Thorax*, 57 939-944.
10. Johnson M.J, Abernathy, A.P, Currow, D.C. (2012) Gaps in the evidence base of opioids for refractory breathlessness. A future work plan? *Journal of pain and symptom management*, 43 614-624.
11. Maher, D., Hemming, L., (2006). Palliative Care for breathless patients in the community. *British Journal of Community Nursing*, 10(9) 414-418.
12. Navigante, A.H., Cerchietta L.C.A., Castro, M.A., Lutteral, M.A., Cabalar, M.E. (2006). Midazolam as Adjuvant Therapy to Morphine in the Alleviation of Severe Dyspnoea Perception in Patients with Advanced Cancer. *Journal of Pain and Symptom Management*, 31 (1) 38 – 44
13. Newton, P., Davidson, P., Macdonald, P., Ollerton, R., & Krum, H. (2008). Furosemide for the management of dyspnoea: does the evidence support its use? *Journal of pain and symptom management*, 36 424-441.
14. Nishino, T. (2011). Dyspnoea: underlying mechanisms and treatment. *British Journal of Anaesthesia*, 106, 463-74.
15. O'Rourke, M.E. (2007). Clinical Dilemma: Dyspnoea. *Seminars in Oncology Nursing*,

- 23(3) 225-231.
16. Quinten, C., Coens, C., Mauer, M., Comte, S., Sprangers, M., Cleeland, C.S., Osoba, D., Bjordal, K. & Bottomly, A. (2008). An examination into quality of life as a prognostic survival indicator. Results of a meta-analysis of over 10,000 patients covering 30 EORTC clinical trials. *Journal of Clinical Oncology*, 26 9516.
 17. Reddy, S. K., Parsons H.A., Elsayem, A., Palmer, J.L., Bruera, E. (2009), Characteristics and correlates of dyspnoea in patients with advanced cancer. *Journal of Palliative Medicine*, 12 29-36.
 18. Sachs, S., & Weinberg, R.L., (2009). Pulmonary rehabilitation for dyspnoea in the palliative-care setting. *Current Opinion in Supportive and Palliative Care*, 3 112–119.
 19. Simon, S.T., Higginson, I.J., Booth, S., Harding, R., Bausewein, C. (2010). Benzodiazepines for the relief of breathlessness in advanced malignant and non-malignant diseases in adults. *Cochrane database of systematic reviews*. Accessed May 10th 2012 from <http://summaries.cochrane.org/CD007354/benzodiazepines-for-the-relief-of-breathlessness-in-advanced-diseases-in-adults>
 20. Therapeutic Guidelines (2010). Palliative Care: Version 3
 21. Vora, V. (2004). Breathlessness: A palliative care perspective. *Indian Journal Palliative Care*, 10(12) 8.
 22. Wiese, C.H., Barrels, U.E., Graf, B.M., Hanekop G.G. (2009). Out-of-hospital opioid therapy of palliative care patients with "acute dyspnoea": a retrospective multicenter investigation. *Journal of Opioid Management*, 5 115-122.
 23. Zhao, I & Yates P (2008). Non-pharmacological interventions for breathlessness management in patients with lung cancer: a systematic review. *Palliative Medicine*, 22 693-701.

Breathlessness Management Flowchart

Appendix

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