Breathlessness is common in clinical practice, especially for those nurses providing palliative care in the community. It remains a devastating symptom and its management is an important yet often difficult task. However, by using the appropriate assessment tools and simple interventions, much can be done to improve the symptoms of breathlessness in patients requiring community-based palliative care.

The first part of this two-part series on breathlessness (JCN 28(5): 83–90) looked at the emotional and physical distress and social isolation caused by the condition for both patients and their families, as well as examining the assessment of the condition. Refractory breathlessness, i.e. that which persists even when measures to optimise the underlying condition have been implemented, is one of the most distressing symptoms experienced by patients with advanced life-limiting illnesses. This, the second part of the series, looks at how community nurses can successfully manage patients, including lifestyle changes, self-management, psychological therapy and pharmacology.

KEYWORDS:
Breathlessness ■ Advanced disease ■ Management ■ Pharmacology

Breathlessness is common in clinical practice, especially for those nurses providing palliative care in the community. It remains a devastating symptom and its management is an important yet often difficult task. However, by using the appropriate assessment tools and simple interventions, much can be done to improve the symptoms of breathlessness in patients requiring community-based palliative care.

The first article in this two-part series looked at the assessment of this condition, while here the author considers the management options.

MANAGEMENT OF BREATHLESSNESS IN ADVANCED DISEASE

A framework for guiding the palliation of breathlessness in the community has been previously described (Figure 1) (Yorke and White, 2013). Following the American Thoracic Society (ATS, 2012) definition of breathlessness, the framework involves both physical and psychological techniques — incorporating the person’s perception of breathlessness — and promotes the contribution of both pharmacological and non-pharmacological management strategies.

NON-PHARMACOLOGICAL INTERVENTIONS

For patients who experience breathlessness on exertion, non-pharmacological treatment is the mainstay of symptom management. This group of patients may live for many months or years, and non-pharmacological regimens have the potential to not only improve the symptom, but also the patient’s overall health (Bausewein et al, 2007). Non-pharmacological treatments involve a change in lifestyle or self-management, which usually evolve over time and potentially increase self-efficacy. As such, it is important that these techniques are introduced to patients early in the illness trajectory so that they and their carers can more easily draw on them in times of intense breathlessness, including towards the end of life.

Community clinicians providing end-of-life care will not have control over the stage at which patients are referred to them. If a patient is referred when death is near and he or she is experiencing uncontrolled breathlessness, the first priority is to achieve symptom control. At this stage, it is not likely that the patient will be able to learn new non-pharmacological techniques, however, an assessment of previously learned strategies may enable the nurse to encourage the patient and/or carer to take these up again.

The self-management of breathlessness can be divided into

BREATHLESSNESS — DEFINITION

The term ‘breathlessness’ is generally applied to describe the subjective experience of breathing discomfort. The most widely accepted definition is proposed by the American Thoracic Society (ATS, 2012), defining breathlessness as ‘a subjective experience of breathing discomfort that consists of qualitatively distinct sensations that vary in intensity. The experience is derived from interaction among multiple physiologic, psychological, social, and environmental factors and may induce secondary physiological and behavioural responses’. 

Credit: SOCIALisBETTER@flickr
STOPPED SMOKING
STARTED PLAYING

nicorette® Invisi Patch Prescribing information:
Presentation: Transdermal delivery system available in 3 sizes (22.5, 13.5 and 9cm²) releasing nicotine at a rate of 15mg/16 hours to achieve levels that are equivalent to smoking 10-15 cigarettes in any 24-hour period. Nicorette Invisi Patch is indicated in pregnant and lactating women making a quit attempt. If possible, NICORETTE® Invisi Patch should be used in conjunction with a behaviour modification programme. Dosage: If the patient is used through-the-waking-hours (approximately 16 hours) being applied on waking and removed at bedtime. Smoking Cessation: Adults (over 18 years of age): For the best results, most smokers are recommended to start at Step 2 (25mg/16 hours patch (Step 1) and use one patch daily for 4 weeks. Gradual increasing from the patch strength should then be occur. One 15mg/16 hours patch (Step 2) should be used daily for 2 weeks followed by one 10mg/16 hours patch (Step 3) daily for 2 weeks. Lighter smokers (i.e. those who smoke less than 10 cigarettes per day) are recommended to start at Step 1 (15mg) for 8 weeks and decrease the dose to 10mg for the final 4 weeks. Those who experience excessive side effects with the 25mg/16 hours Patch (Step 1), which do not resolve within a few days, should change to a 15mg patch (Step 2). This should be continued for the remainder of the 8-week course, before stepping down to the 10mg patch (Step 3) for 4 weeks. If symptoms persist the advice of a healthcare professional should be sought. Adolescents (12 to 18 years): Dose and method of use are as for adults however, recommended treatment duration is 12 weeks. If longer treatment is required, advice from a healthcare professional should be sought. Smoking Reduction/Pre-Quit: The patient should make every effort to stop smoking completely during treatment with Nicorette QuickMist. One or two sprays to be used whenever cigarettes would normally have been smoked or if cravings emerge. After the first spray cravings are not controlled within a few minutes, a second spray should be used. Up to 4 sprays per hour may be used; not exceeding 2 sprays per dosing episode and 64 sprays in any 24-hour period. Nicorette QuickMist should be used whenever the urge to smoke is felt or to prevent cravings in situations where these are likely to occur. Smokers willing or able to stop smoking immediately should initially replace all their cigarettes with the Nicorette QuickMist and as soon as they are able, reduce the number of sprays used until they have stopped completely. When making a quit attempt behaviour therapy, advice and support will normally improve the success rate. Smokers aiming to reduce cigarettes should use the Nicorette as needed, between smoking episodes to prevent smoke-free intervals and with the intention to reduce smoking as much as possible. Contraindications: Children under 12 years and Hypersensitivity. Precautions: Cardiovascular disease, diabetes mellitus, E. coli infection, uncontrolled hypertension, psychiatric disorders, and conditions where smoking may alter the metabolism of certain drugs. Transferred dependence is rare and both less harmful and easier to break than smoking dependence. May enhance the haemodynamic effects of, and pain response to, adenosine. Keep out of reach and sight of children and dispose of with care. Pregnancy and lactation: Only after consulting a healthcare professional. Side effects: Very common: dizziness, headache, nausea, vomiting, GI discomfort. Rare: hypertension, palpitations, atrial fibrillation. Very rare: reversible atrial fibrillation. See SPC for further details. NHS Cost: 25mg packs of 7: (£9.97); 25mg packs of 14: (£16.35); 15mg packs of 7: (£6.87); 10mg packs of 14: (£6.87). Legal category: GSL. PL holder: McNeil Products Ltd, Rondburgh Way, Maidstone, Berkshire, SL6 3UG. PL numbers: 15513/0159; 15513/0160; 15513/0161; 15513/0357. Date of preparation: April 2013
McNeil QuickMist Prescribing Information:
Presentation: oromucosal spray containing 13.2 ml solution. Each 0.07 ml contains 1 mg nicotine, corresponding to 1 mg nicotinyl tartrate. (d-heneicotine nickel salt) for preventing craving and nicotine withdrawal symptoms associated with tobacco dependence. It is indicated to aid smokers wishing to quit and reduce prior to quitting, to assist smokers who are unwilling or unable to quit, and as a safer alternative to smoking for smokers and those around them. NICORETTE® Invisi Patch is indicated in pregnant and lactating women making a quit attempt. If possible, NICORETTE® Invisi Patch should be used in conjunction with a behaviour modification programme. Dosage: It is intended that the patch is worn through-the-waking-hours (approximately 16 hours) being applied on waking and removed at bedtime. Smoking Cessation: Adults (over 18 years of age): For the best results, most smokers are recommended to start at Step 2 (25mg/16 hours patch (Step 1) and use one patch daily for 4 weeks. Gradual increasing from the patch strength should then be occur. One 15mg/16 hours patch (Step 2) should be used daily for 2 weeks followed by one 10mg/16 hours patch (Step 3) daily for 2 weeks. Lighter smokers (i.e. those who smoke less than 10 cigarettes per day) are recommended to start at Step 1 (15mg) for 8 weeks and decrease the dose to 10mg for the final 4 weeks. Those who experience excessive side effects with the 25mg/16 hours Patch (Step 1), which do not resolve within a few days, should change to a 15mg patch (Step 2). This should be continued for the remainder of the 8-week course, before stepping down to the 10mg patch (Step 3) for 4 weeks. If symptoms persist the advice of a healthcare professional should be sought. Adolescents (12 to 18 years): Dose and method of use are as for adults however, recommended treatment duration is 12 weeks. If longer treatment is required, advice from a healthcare professional should be sought. Smoking Reduction/Pre-Quit: The patient should make every effort to stop smoking completely during treatment with Nicorette QuickMist. One or two sprays to be used whenever cigarettes would normally have been smoked or if cravings emerge. After the first spray cravings are not controlled within a few minutes, a second spray should be used. Up to 4 sprays per hour may be used; not exceeding 2 sprays per dosing episode and 64 sprays in any 24-hour period. Nicorette QuickMist should be used whenever the urge to smoke is felt or to prevent cravings in situations where these are likely to occur. Smokers willing or able to stop smoking immediately should initially replace all their cigarettes with the Nicorette QuickMist and as soon as they are able, reduce the number of sprays used until they have stopped completely. When making a quit attempt behaviour therapy, advice and support will normally improve the success rate. Smokers aiming to reduce cigarettes should use the Nicorette as needed, between smoking episodes to prevent smoke-free intervals and with the intention to reduce smoking as much as possible. Contraindications: Children under 12 years and Hypersensitivity. Precautions: Cardiovascular disease, diabetes mellitus, E. coli infection, uncontrolled hypertension, psychiatric disorders, and conditions where smoking may alter the metabolism of certain drugs. Transferred dependence is rare and both less harmful and easier to break than smoking dependence. May enhance the haemodynamic effects of, and pain response to, adenosine. Keep out of reach and sight of children and dispose of with care. Pregnancy and lactation: Only after consulting a healthcare professional. Side effects: Very common: dizziness, headache, nausea, vomiting, GI discomfort. Rare: hypertension, palpitations, atrial fibrillation. Very rare: reversible atrial fibrillation. See SPC for further details. NHS Cost: 25mg packs of 7: (£9.97); 25mg packs of 14: (£16.35); 15mg packs of 7: (£6.87); 10mg packs of 14: (£6.87). Legal category: GSL. PL holder: McNeil Products Ltd, Rondburgh Way, Maidstone, Berkshire, SL6 3UG. PL numbers: 15513/0159; 15513/0160; 15513/0161; 15513/0357. Date of preparation: April 2013
Johnson & Johnson
FAMILY OF CONSUMER COMPANIES

Do something incredible
direct physical techniques and psychological strategies (Tables 1–3). Adaptions such as positioning and breathing techniques can be easily applied by patients in their own homes and are suitable for symptom palliation.

Psychological strategies to manage breathlessness aim to reduce distress associated with the symptom and empower the breathless patient to cope. A plethora of psychological strategies exist, although the evidence for their effectiveness in improving breathlessness is limited, especially in end-of-life care. A Cochrane systematic review evaluated a range of psychological interventions for the relief of breathlessness in the advanced stages of malignant and non-malignant disease (Bausewein et al, 2007). The types of interventions discussed included a range of relaxation techniques, hypnosis, counselling, cognitive-behavioural therapy and psychotherapy. However, the review concluded that there was not enough evidence to judge the effectiveness of these interventions for the management of breathlessness. Nonetheless, in the author’s opinion it stands to reason that interventions that aim to relieve the anxiety-breathlessness cycle do not pose significant risk and may improve the experience of intractable breathlessness.

Ideally, physical and psychological strategies should be used together as these techniques build self-confidence in the patient (‘I can cope with breathlessness; I know what to do’) (Callaghan, 2013). Patients should be encouraged to practise these strategies in a quiet and controlled environment when they are not feeling too short of breath — that way they will become more familiar with the techniques and be able to implement them when experiencing increased breathlessness.

**Hand-held fans**

Many patients who experience breathlessness find that a cool draft of air provided by a hand-held fan helps to reduce the sensation of breathlessness. However, more research is needed to establish the routine use of these.

**PHARMACOLOGICAL MANAGEMENT**

Thus far, opioids are the only drug interventions with a good evidence base for use in breathlessness, although others are emerging and some drugs remain in regular use without evidence (Booth et al, 2008; Johnson et al, 2012a).

The use of drugs in intractable breathlessness in advanced disease is an area that, similar to non-pharmacological interventions, has been under-researched. The balance and priority given to pharmacological and non-pharmacological treatments in the intervention is dependent on the severity of the breathlessness and the stage of the underlying illness.

When symptom management of breathlessness is required, drugs tend to be the second line of action.
Wound Care Today’s Product Pyramid

Detailed explanations of the different wound care product categories +

Listings of all products available within each category +

Links to relevant websites +

Extended product entries, including:
› Specifications, how to use, and performance indicators
› Key clinical evidence to underpin product use in clinical practice

= Comprehensive product information to guide formulary decision-making

⇒ www.woundcare-today.com

http://woundcare-today.com/categories-pyramid
Some of the red flag symptoms for breathlessness include:

- Sudden occurrence
- Agitation
- Fever
- Chest pain
- Haemoptysis (coughing up blood)
- Tachycardia/bradycardia
- Audible wheeze
- Cyanosis
- Noisy breathing (i.e. audible wheeze); stridor (loud, harsh, high pitched respiratory sound)

It has been stated that clinicians may find the decision to prescribe drugs to control breathlessness less controversial in advanced cancer, than in chronic disease (White, 2013). In advanced cancer, the patient’s life expectancy is dramatically reduced and the dying phase is easier to predict and recognise (Booth et al, 2008). In chronic disease, however, patients often experience exacerbations of their illness, making prognosis difficult. In such patients, drug treatments for the symptomatic control of breathlessness should not be introduced until the underlying disease has been optimally treated. Ideally, community nurses should seek advice from palliative care teams and specialist breathlessness clinics when treating breathless patients who need pharmacological symptom control in advanced disease.

Use of opiates in the community

Morphine has the best evidence base for the relief of breathlessness in advanced disease (Johnson et al, 2012b). The exact mechanism by which morphine alleviates breathlessness is unknown. One theory is that opioids decrease respiratory distress both by altering the perception of breathlessness, and also decreasing the ventilatory response to reduced oxygen levels and rising CO₂ (Mahler et al, 2009).

Morphine can be used by patients in their own home, but this should be closely supervised and monitored by an experienced palliative care clinician. Morphine has been shown to be effective in reducing breathlessness by oral and parenteral administration with daily doses of 10mg, which can sustain benefits for up to three months (Varkey, 2010). It is recommended that doses should be increased in 25% increments until

### Table 1: Positional strategies

- Take up a position that allows the shoulders and upper chest to relax and lets the diaphragm and abdomen expand. This is important because when patients are breathless the neck (sternocleidomastoid muscle) and the upper fibres of the trapezius muscle (known as accessory muscles) are recruited to help with inspiration (Bolt, 2013). However, these small muscles were not designed to be used for breathing. This is why many breathless patients also experience tight, stiff and sore neck and shoulder muscles. Relaxation techniques (described below) can also help to relieve these muscles.

- Breathless patients may find that leaning forward can help, for example by leaning their elbows on their knees; their arms on a chair or a table when seated; standing; or leaning against a wall (Figure 2). It may also be helpful for patients to rest their thumbs on hands in their pockets or waistband.

- The recovery position helps the abdominal contents to ‘fall away’ when a person lies on one side, allowing unencumbered diaphragmatic excursion — this position is most helpful in patients with restrictive lung problems (i.e. pulmonary fibrosis) (Bolt, 2013). For patients with hyperinflation (i.e. COPD) the recovery position will tend to push the abdominal content inwards and up on to the diaphragm, forcing it into a more ‘dome-like’ shape and improving respiratory muscle function (Bolt, 2013). Evidence of the clinical benefit of these different positions is anecdotal as clinical trials of their effectiveness have yet to be conducted. Often, helping patients to find a position that benefits them is a matter of trial and error.

### Table 2: Breathing strategies

- Gentle breathing means using the least possible effort. The idea is to support and relax the arms, shoulders and neck. It can help to teach the patient to lower their head slightly to enable the neck to relax. The patient should be instructed to breathe gently, trying to relax and expand with each exhalation, like blowing out a candle. Counting each inhalation (in for three counts – 1, 2, 3) and each exhalation (out for four – 1, 2, 3, 4) helps to prolong exhalation for longer than inspiration. This technique can help to slow exhalation, which in turn helps the patient to get more control over their breathing.

- Diaphragmatic breathing aims to make breathing as efficient as possible by focusing on breathing from the diaphragm and lower chest muscles. During an escalation of breathlessness severity, patients are likely to use their accessory muscles and breathe in a fast and shallow way, using up a lot of energy. Diaphragmatic breathing works by encouraging excursion of the diaphragm and minimal chest movement (Bott, 2013). Instructions for teaching diaphragmatic breathing are provided in Table 3.

- Exhalation on effort — also known as ‘blow as you go’ — can help conserve energy when exerting oneself. Most people hold their breath when exerting themselves without even noticing, such as reaching or bending, getting out of a chair, or lifting an object. This causes muscles to tense and in turn takes more energy. Teaching patients to exhale during physical effort can help to avoid these problems.

### Table 3: Steps for teaching diaphragmatic breathing

1. Take up a comfortable position — sitting with your neck, shoulders and back well supported — in an upright chair with armrests or against a wall.
2. Relax your shoulders, neck and arms.
3. Place your hands on your stomach, just above your belly button.
4. Give a little cough — the muscle you feel under your hand is your diaphragm.
5. As you breathe in, allow your stomach to swell — you will feel your hands rising and being pushed out by your diaphragm and stomach muscles.
6. As you breathe out, relax and let your stomach fall.
Welcome to JCN’s learning zone...

JCN’s online resource, which, together with the learning zone in the *Journal of Community Nursing*, helps you to develop your knowledge in vital areas of care, to keep up to date with clinical practice.

- Read the article
- Reflect on what you have learnt
- Review your knowledge with the online test

... Then, download your certificate to show that you have completed this e-learning unit and gained competency in this area of clinical practice.

JCN’s learning zone — an essential educational resource for all busy nurses working in the community.
Oxygen and breathlessness

Historically, breathless patients were routinely administered oxygen therapy. However, oxygen is only useful in the presence of hypoxaemia (O’Driscoll et al, 2011). Patients and carers (and some clinicians) perceive oxygen therapy as lifesaving or essential to help people breathe. However, there is no physiological rationale for administering oxygen therapy to patients who are not hypoxic, and patients who experience relief are more than likely experiencing a placebo effect from facial cooling (see use of hand-held fans above) and a reduction in anxiety. In the community setting, hypoxaemia can be screened with pulse oximetry, and, for those with oxygen saturation (SpO2) of less than 92%, arterial blood gases should be checked. This particularly applies to palliative care patients. However, treatment should not be delayed if it is impractical to assess arterial blood gases (White, 2013).

Oxygen can be ordered and delivered urgently in patients where there is evidence of hypoxaemia, however, in most cases of patients approaching end of life this will not be the case. Despite the evidence base for its use, oxygen remains a controversial issue in palliative care as many patients continue to be prescribed this treatment when it is not indicated. The author would advise community nurses to discuss different treatment options with patients and their families before the final stages of end-of-life care, as well as addressing any misunderstandings about the role of oxygen therapy in the relief of breathlessness.

CONCLUSION

Breathlessness remains a devastating symptom, which in the author’s opinion is rarely managed as well as it could be. In recent years, there has been greater emphasis on its management and an evidence base is developing.

Managing breathlessness in the community is an important yet often difficult task. A broad range of interventions and a holistic patient assessment are needed to ensure that the right approach is used. Community nurses can offer a great deal to these patients and their families, and, by using appropriate assessment tools and simple interventions, much can be done to improve the symptom experience of patients requiring community-based palliative care.

REFERENCES

review of pharmacological therapy.  


KEY POINTS

- Breathlessness is common in community clinical practice, especially when providing supportive and palliative care in the advanced stages of disease.

- Breathlessness remains a devastating symptom, which is rarely managed as well as it could be.

- Managing breathlessness in the community is an important yet often difficult task.

- A broad range of interventions and a holistic patient assessment are needed to ensure that the right approach is used.

- Community nurses can offer a great deal to these patients and their families by using appropriate assessment tools.

- For patients who experience breathlessness on exertion, non-pharmacological treatment is the mainstay of symptom management.