Optimising chronic obstructive pulmonary disease care: an overview for the community nurse

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Abstract

Chronic obstructive pulmonary disease (COPD) refers to a group of diseases that includes chronic bronchitis and emphysema, which is caused by damage to the airways or other parts of the lung that blocks airflow and eventually makes it difficult for the patient to breathe. As COPD is terminal, the primary goals of treatment are to control symptoms, improve quality of life and reduce exacerbations and mortality. Community nurses can play a vital role in maintaining patients' quality of life and daily functioning, but the ability to access further education in the domain of COPD treatment and allocate dedicated time to patient care is necessary to achieving good outcomes. Francesca Ramadan provides an overview of the mainstays of COPD care, as a foundation for further education.

Keywords: COPD • chronic inflammation • treatment • therapies

Chronic obstructive pulmonary disease (COPD) refers to a group of diseases that includes chronic bronchitis and emphysema, which is caused by damage to the airways or other parts of the lung. This blocks airflow and eventually makes it difficult for the patient to breathe. COPD is associated with structural lung changes owing to chronic inflammation from prolonged exposure to noxious particles or gases, most commonly cigarette smoke, and often presents with symptoms of cough, dyspnoea and sputum (phlegm or mucus) production (Agarwal et al, 2024). Chronic inflammation causes airway narrowing and decreased lung recoil, which refers to the lung's intrinsic tendency to deflate following inflation; the inability to fully exhale will gradually cause elevations in carbon dioxide levels and lead to oxygen deprivation (Agarwal et al, 2024).

There is currently no cure for COPD, which is characterised as a terminal condition. COPD is listed as the third leading cause of death and the seventh leading cause of poor health worldwide by the World Health Organization (WHO) (2023), causing 3.23 million deaths in 2019. Unlike many other common chronic conditions, the prevalence of COPD has not declined in recent years. In the UK, COPD is recorded as the second largest cause of emergency admissions; it has been reported to affect approximately 3 million people, with 2 million of these being undiagnosed, and accounts for around 1.4 million GP consultations per year (National Institute for Health and Care Excellence, 2023).

It is, therefore, inevitable that community nurses will encounter individuals with COPD in their practice. As COPD is terminal, the primary goals of treatment are to control symptoms, improve quality of life and reduce exacerbations and mortality (Agarwal et al, 2024). Prior to the palliative stage, community healthcare professionals are essential to maintain the patient's comfort and wellbeing throughout the disease trajectory. Indeed, the literature suggests that patient outcomes are similar if care is provided by a doctor or a nurse in the community setting, as opposed to in hospital; furthermore, patient satisfaction was increased when care was delivered by a nurse in the community (Higginson and Parry, 2018). However, it must be noted that these improved outcomes were achieved when the patient was cared for by specially trained respiratory nurses, indicating that nurses working in the community or residential homes should be given the opportunity to develop their respiratory care skills if unnecessary hospital admissions are to be avoided and patient outcomes are to be optimised (Higginson and Parry, 2018).

The barriers to effective care

In qualitative interviews with 10 asthma and COPD specialised nurses, two primary barriers were identified: the patient–nurse relationship and available resources (Gustafsson and Nordeman, 2018). Several challenges emerged when connecting with patients, and the nurses found it difficult to individualise care. For example, the nurses reported that some patients had difficulties comprehending information about their condition and its effect on their daily lives, despite repeated visits; this was overcome by the nurses working to build a relationship with the patient on a foundation of confidence and trust, which was achieved through the provision of well-informed advice on physical activity, smoking, medicine, nutrition and vaccination. This, in turn, improved the patient's quality of life, and the utilisation of the nurses' unique insight into the patient's situation to create a sense of security and continuity (Gustafsson and Nordeman, 2018). As they had more intimate and sustained contact with the patient throughout their disease trajectory than other healthcare professionals, the nurses felt that they

could play an important role in patients' lives, with their capacity to provide a listening ear and continuity helping patients with smoking cessation, being more physically active and improving compliance to medication (Gustafsson and Nordeman, 2018).

Patient visits involved activities such as spirometry, symptom evaluation, smoking cessation support, inhalation technique and advice on physical activity and nutrition, which were individualised based on patient needs and disease severity; however, the ability to provide personalised care was greatly impacted by inadequate time allocation and education. The pharmaceutical industry often supplied further education, rather than the nurses' employers, with classes and informational sessions often conducted in the evenings; some participants reported that searching for new knowledge and research is important and interesting, yet difficult to perform in the time available (Gustafsson and Nordeman, 2018). A lack of support from and collaboration with the other members of the multidisciplinary team was also identified as a barrier to the provision of effective and personalised care (Gustafsson and Nordeman, 2018).

Overcoming the challenges

Some mainstays of COPD care are included below, as a foundation for further education.

Inhaled drug therapies

Inhaled medication is the mainstay of pharmacological treatment for patients with COPD; inhalers need to be selected on the basis of the medication prescribed and patients' ability to use them with a competent technique. Patients should be advised to inhale a single dose at a time using tidal breathing or a single breath; tidal breathing technique may be more suitable during episodes of breathlessness, when it is easier to take several (usually five) ordinary-sized breaths without the need for a breath hold. It is helpful to use combination devices where appropriate to minimise the number of inhalers a patient needs (Gundry, 2019).

Oral therapy

Oral corticosteroids are not recommended for routine maintenance treatment and are suggested for use during acute exacerbations only; patients who cannot be weaned off steroids should have their dose reduced to as low as possible and be started on osteoporosis prophylaxis, to counter the side effects of steroid use (Gundry, 2019). Antibiotics may be necessary during an exacerbation where infection is suspected: first-line oral antibiotic treatment with amoxicillin, doxycycline or clarithromycin is recommended (Gundry, 2019). Oral slow-release theophylline can be used in patients who are unable to manage inhalers, although there is a lack of consensus regarding its efficacy in COPD (Gundry, 2019).

Oxygen therapy

Oxygen therapy is used to correct hypoxaemia, rather than prevent or treat breathlessness; it should be prescribed with caution in patients with COPD after arterial blood-gas assessment (Gundry, 2019). An indication to refer a patient for long-term oxygen therapy assessment is a reliable pulse oximetry reading <92% (Gundry, 2019). Long-term oxygen therapy is indicated in patients with an arterial partial pressure of oxygen of <7.3 kPa when stable, or <8 kPa with comorbid symptoms of peripheral oedema, pulmonary hypertension or secondary polycythaemia (a high concentration of red blood cells in blood) (Gundry, 2019). Nurses need to be alert to the safety issues associated with oxygen therapy, particularly the risk of burns and fire, and falls and trips (Gundry, 2019).

Conclusions

COPD's terminal nature means that community nurses can play a vital role in maintaining patients' quality of life and daily functioning, but the ability to access further education in the domain of COPD treatment and allocate dedicated time to patient care is necessary to achieving good outcomes.

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Declaration of interest: None

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