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Management of Chronic Obstructive Pulmonary Disease (COPD)



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Introduction

Chronic obstructive pulmonary disease (COPD) impacts huge numbers of people in the UK. But its influence doesn't just ripple across the lives of patients. It affects family members, carers, communities, and entire neighbourhoods (NICE, 2019) (Asthma, 2023). The objectives of this booklet to provide information that enables individuals living with COPD or those caring for patients to learn about the options available to them for a fulfilling life (Ek, 2008).

We will explain what COPD is, provide real-world stories to illustrate experiences, and review evidence-based tactics for both treatment and self-management. You will see graphics and references to important UK guidelines along the way.

What Is COPD?

COPD is a term used to describe a variety of conditions affecting the lungs (Mannino, 2003). These conditions are primarily characterized by chronic bronchitis and emphysema (NICE, 2019). They cause breathing difficulties. Symptoms can include coughing, difficulty breathing, feeling tight-chested, or shortness of breath. These are largely irreversible conditions. They take a considerable amount of time to develop. They are related to smoking or exposure to pollutants (Boschetto, 2006). In the UK, COPD ranks as the second most prevalent respiratory condition after asthma. Meanwhile, it is estimated that up to two million people may not be diagnosed because their symptoms are like those of other breathing conditions (Quaderi, 2018).

Epidemiology and Prevalence in the UK

COPD is considered the second most common respiratory condition after asthma. It affects an estimated 1.2 million people, although this figure may be higher due to insufficient diagnosis (Society, 2016). COPD is a contributor to 30,000 annual deaths in England. It is accountable for 10% admissions due to respiratory problems (Simpson, 2010).

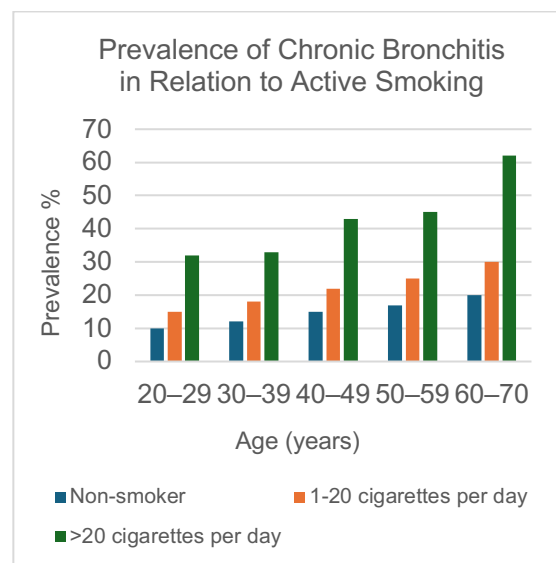


Figure 1: Prevalence of chronic bronchitis among different smoking groups (nonsmokers, 1–10, 11–20, and >20 cigarettes per day) across various age ranges.

The above graph highlights the percentage of chronic bronchitis found in smoking categories corresponding to different age groups. These smoking categories include non-smokers, individuals smoking 1-10 cigarettes per day, 11-20 cigarettes per day, and more than 20 cigarettes a day. As age and cigarette smoking increase, the percentage of chronic bronchitis rises (Raherison, 2009).

Physical, Psychological, and Social Effects:

COPD does not just impact one area which is respiration. On a physical level, sufferers can feel fatigued, weak, and have trouble exercising (Harrison, 2015). Episodes (exacerbations) can indicate a deteriorating condition, necessitating hospital stays (NICE, 2019). Emotionally, Anxiety and depression have been known to increase due to concerns with shortness of breath or fearing ill health (Kunik, 2008). Friends and family must deal with psychological strain in coping with COPD sufferers.

Table 1: Impact of COPD in regular life

Impact	Description	Examples
Physical	Limited mobility, fatigue	Unable to walk far, needs frequent rests
Psychological	Anxiety, depression	Fear of leaving home, sadness, frustration
Social	Isolation, dependence	Misses work/social events, relies on carers

Living With COPD:

Common Feelings

- Anxiety and depression are possible consequences, especially if symptoms become more severe.
- Fear of flare-ups causes some people to stay indoors.
- Frustration occurs when breathlessness interferes with

routines or hobbies (Harrison, 2015).

Access to support and open communication can reduce much of that stress (Barnett, 2018). Many people find that joining a support group or calling an NHS helpline makes them realize that they are not alone (Asthma, 2023).

Table 2: Common symptoms of COPD

Symptom	How it feels
Breathlessness	"Like walking up a hill"
Rest breaks, inhaler	
Persistent cough	Chest feels heavy
Drink water, rest	
Frequent chest infections	Weak, tired, anxious
Doctor review, antibiotics	

Treatment Strategies: UK Guidelines

Diagnosis typically occurs after consultation with a doctor regarding symptoms and breathing tests (spirometry) (NICE, 2019). During spirometry, your exhale effort is assessed based on how much you are blowing out in one sitting and how fast you blow. Blood tests, chest x-rays, or CT scans are used to establish or rule out other conditions (Hurst, 2010).

Patients are usually over 35 years old with a history of smoking or exposure to dust, fumes, or chemicals (NICE, 2019).

1. Non-Pharmacological

- Smoking cessation. Stopping smoking remains the best way to slow the progression of COPD.
- Vaccinations: Annual influenza and one-time pneumonia shots prevent infections (Pesek, 2011).
- Pulmonary Rehabilitation: A supervised exercise and education program can help improve symptoms of breathlessness (Spruit, 2013).
- Personalised self-management plan: To be co-communicated/designed by both patient and family (Cravo, 2022).
- Optimising comorbidities: The condition encompasses heart conditions, diabetes.

2. Pharmacological

COPD is initially managed with short-acting inhalers for bronchodilators, including beta-2 agonists salbutamol and terbutaline, which work by relaxing and opening air passages (Vincken, 2005). However, in COPD patients with chronic symptoms, long-acting bronchodilators, including muscarinic antagonists (LAMAs) and beta-2 agonists (LABAs), can be added alone or in combination. Finally, for COPD patients with regular exacerbations or with more severe symptoms, anti-inflammatory inhalers containing corticosteroids (ICS) can be prescribed. These are combined with LABAs and LAMAs in triple therapies for managing COPD (Vincken, 2005).

The treatment approach varies for individual patients according to symptoms and chances of recurrence (Effing, 2012).

- **Bronchodilators:** Inhalers that widen airways (Short-acting beta agonists, long-acting muscarinic antagonists or beta agonists).

- **Inhaled Corticosteroids (ICS):** For those with frequent exacerbations or asthmatic (Barnes, 2010).
- **Combination inhalers:** Sometimes needed if single inhalers aren't enough.
- **Oral steroids:** For short bursts in flare-ups, typically a 5-day course (not long-term).
- **Antibiotics:** Only for suspected chest infections during an exacerbation.

Table 3: Pharmacological medications

Medicine Type	When used
Bronchodilators	All stages, as inhalers
Corticosteroids	Frequent flare-ups
Antibiotics	Acute infections

3. Oxygen and Other Therapies

Oxygen therapy can be beneficial when oxygen levels are low, but it is prescribed with caution. Nebulized treatment may be considered if inhalers are not effective. Non-invasive ventilation can be required for severe symptoms (Dhand, 2012).

Individualized Plans and Self-Management

Everyone with COPD should have a personal plan, usually drawn up jointly with a nursing staff member or GP, which explains what to do on a day-by-day basis, how to identify warning symptoms, and how to know what to do in emergencies (Effing, 2012). Such plans typically include:

- Medication schedules
- What to do during flare-ups
- Emergency Contact Numbers
- Date Reviews for Follow-Ups
- Exercise, nutrition, and mental health tips

Table 4: Use case and side effects of medications

Medication	Use	Side Effects
Bronchodilators	Daily/flare-ups	Shakes, fast heartbeat
Steroids (inhaled)	Persistent symptoms	Thrush, hoarse voice
Oral steroids	Severe flare-ups	Weight gain, mood changes
Antibiotics	Chest infections	Diarrhoea, allergic reaction

Support for COPD patients

1. Psychological and Carer Support

COPD is a challenging condition psychologically. Anxiety, depression, and loss of independence occur (Kunik, 2008).

- NHS provides mental health checks, counselling, and CBT.
- Carers can gain benefits through respite care, education, and emotional support.
- Support groups: These can be accessed through Asthma + Lung

UK, British Lung Foundation, and hospitals (Harrison, 2015).

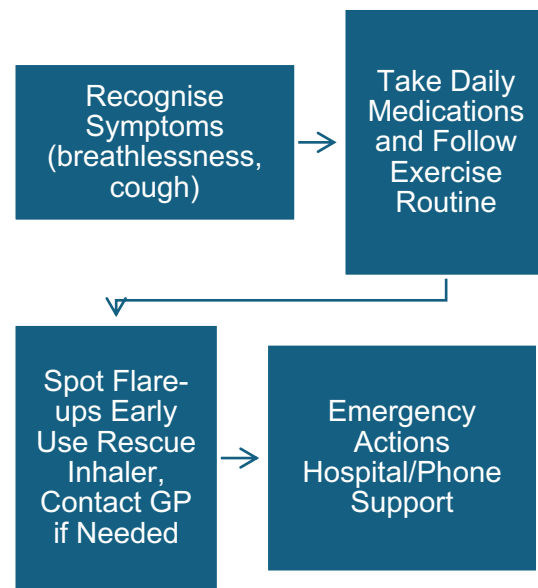


Figure 2: NHS support for COPD Self-Management

Quotes from UK Patients:

"Some days I feel trapped by my breathing, but sharing my worries at rehab helped me see I'm not alone."

"My wife is my rock, but we both needed outside help to cope with my flare-ups."

2. Social Support

The emotional burden of COPD is often overlooked. Many patients live with Anxiety, depression, or a sense of loss (Jones, 2015). NHS guidelines recommend routine mental health checks, support groups, and referrals for CBT (cognitive behavioural therapy) (NHS, 2025). Family members also need information and support—they might act as carers, and their own health can suffer.

Methods for improving mental stability:

- Discussing symptoms and fears openly
- Participating in peer or local support groups

- Practicing relaxation skills (mindfulness, gentle yoga)

Helpful tip: "Some individuals keep a 'COPD diary' on which to record moods, activity levels, and symptoms. They then can determine what works best for them and their family (Fraser, 2006)."

3. Effects on Families

COPD will affect not only the patient but also spouses, children, and friends. COPD flare-ups can be stressful and require immediate attention. Caregivers may experience exhaustion, stress, or feelings of powerlessness. Support for caregivers is available through both the NHS and local authority networks (NHS, 2025). They can provide respite care and help in emergencies. (Network, 2022)

Listening, sharing work, and maintaining a positive attitude can help.

Policies Concerning COPD in the UK

COPD care practices in the UK are informed by NICE guidelines NG115 and the NHS Long Term Plan, British Thoracic Society guidance, and local Integrated Care Boards (NHS, 2025) (NICE, 2019).

- NICE guideline NG115 outlines how to prevent, diagnose, treat, and manage this condition.
- The NHS Long Term Plan focuses on improvement in areas such as prevention, early diagnosis, co-ordinated care, and digital-supported self-management.
- Gold Standards Framework care plans for end-of-life care, and annual care bundle reviews, promote quality.

Theoretical models for COPD management:

Evidence-supported approaches include the Chronic Care Model (integration of care

for chronic illnesses, including self-management and community-oriented care), Behaviour Change (such as smoking cessation and promoting healthy lifestyles), and Shared Decision Making (patient participation in care) (Effing, 2012) (Barnett, 2018).

- Chronic Care Model: Combines primary care, self-management by patients, and coordinated hospital care.
- Behaviour Change Theory: Utilised by NHS smoking cessation programmes.
- Shared Decision-Making: Encourages joint creation of self-management plans and respect for individual preferences.



Figure 3: COPD Care Pathway

Pulmonary Rehabilitation: The Team Approach and Self-Management

Pulmonary rehabilitation is a highly recommended activity that involves exercise supervision, education, nutrition counselling, and psychological support. Most NHS hospitals hold regular courses for patients with moderate to severe symptoms (McCarthy, 2015) (Spruit, 2013).

It's commonly reported that individuals feel more energetic, confident, and are coping well after completing rehab, even if they have a severe disease. Rehabilitation is available for people with functional impairment or frequent hospitalization.

Rehab Programme Includes:

- Supervised physical activity (walking, cycling, strength training) (NHS, 2025)
- Breathing techniques
- Educational talks
- Peer support
- Progress reviews

Preventing Flare-Ups:

Proper COPD care is focused on avoiding acute exacerbations, which occur when symptoms rapidly deteriorate. Patients in the UK are advised to:

- Take medications as advised
- Keep rescue medications in your home
- Get annual vaccinations
- Avoid known irritants (smoke, fumes, cold).
- Contact your doctors if any new symptoms occur

These self-management plans can include "emergency supply packs" of short courses

of steroids or antibiotics for immediate use at home, provided a healthcare professional advises them (Osadnik, 2017).

End-of-Life and Palliative Care

Those with severe COPD, who must be admitted to hospital repeatedly or have challenging symptoms, can be aided by palliative teams with respect to shortness of breath, pain, and Anxiety (England, 2019). The patient and family can then agree on priorities for care. Talking about end-of-life issues (such as completing DNACPR forms) is done with care, so all can express opinions and worries (Turner, 2014).

Living Well with COPD: Person-Centred Strategies:

Each person with COPD is unique. NHS and charities offer tools to help live better:



Figure 4: Tools offered by NHS and charities

Quick Tips for Self-Management

- Check inhaler technique regularly with nurse or pharmacist.
- Stay up to date with all vaccinations.
- Add brief, gentle exercise routines to your day.
- Use written action plans and diaries to spot patterns.
- Ask for help of family, friends and professionals all want to support you.
- Join online or local support communities for educational programmes.

Educational programs may include:



Figure 5: Educational programmes for self-management of COPD (Cravo, 2022)

Case Study: John's Story

John, 68, from Derbyshire, was diagnosed with COPD after years of working in construction and smoking. Although the first few months after diagnosis were challenging, he found pulmonary rehabilitation at his local hospital helpful.

John worked with his nurse to create a personalized action plan, including steps for managing flare-ups. His wife attended some sessions, learning how to support

him without taking over his responsibilities. John started gentle exercise, got his vaccines up to date, and joined a local walking group. He says, "I can't do everything I used to, but I live better and worry less (Cassady, 2019)."

Table 5: COPD Management

Step	Goal	Who Supports?
Diagnosis	Confirm COPD	GP, Respiratory Nurse
Smoking Cessation	Slow progression	NHS Stop Smoking Service
Vaccinations	Prevent infections	GP, Nurse
Pulmonary rehab	Improve function and mood	Hospital, Peer Support
Medication management	Control symptoms	GP, Pharmacist
Written self-management	Avoid flare-ups	GP, Carers
Psychological support	Mental wellbeing	Counsellor, Peer Group
End-of-life care	Dignity, comfort	Palliative Team, Carer

Current Theoretical Perspectives:

When discussing the management of long-term illnesses such as COPD, it is necessary to examine not only models developed in the UK but also international models. Looking at models developed in the UK, one that is prominent is The House of Care model. The model strongly advocates for person-centered care, multidisciplinary team collaboration, and supporting patients in self-management by providing tailored care plans to everyone, working closely with healthcare providers (Barnett, 2018).

From an international perspective, one model that plays a significant role in chronic disease management worldwide is the Chronic Care Model (CCM), which was developed in the United States. The Chronic Care Model concentrates on six elements: healthcare organization, community, self-management support, design of the healthcare delivery system, decision support, and clinical information systems. These models and approaches aim to transition from reactive to proactive care, focusing on delivering continuous and comprehensive care to all patients with chronic illnesses, such as COPD (Hurst, 2010).

Implementation of local and national political health and social care agendas

Assessing the implementation process for healthcare and social care strategies, both locally and nationally, reveals a significant level of complexity, as well as opportunities for improvement in managing long-term, chronic conditions. Currently, in the UK, there are national strategies, such as the NHS Long Term Plan, which have a clear focus on managing chronic conditions, including COPD, through means like integrated care, early diagnosis, care

planning, and self-management (NHS, 2025). These strategies have been developed in response to the increasing prevalence and burden of chronic diseases.

At a local authority level, Integrated Care Systems and Health and Wellbeing Boards have been charged with implementing policy within service delivery. Ideally, for this to work, there must be collaboration among primary, secondary, and community care (Porter, 2021). Notably, current local flexibility is often disrupted by issues related to funding, staffing levels, and service integration. At a political level, issues such as shifts in policy priorities and resource limitations have been known to impede the process and lead to variations in accessibility and quality across the UK (Porter, 2021).

Crucially, although having robust national and local drivers is essential for providing a starting point for development strategies, it is only through continued investment in worker training, information technology, and public engagement that these drivers can be leveraged for innovative approaches to person-centered care. Only then can individuals with long-term conditions be enabled to take control of managing their health (ICB, 2025).

Recommendations for improvement in person-centred care approaches

Care delivered in a person-centred way means that every individual's values and circumstances are considered in every decision. Many recommendations have been made for improving outcomes for long-term sufferers like COPD patients.

Enhance Self-Management Support: All patients should have individualized self-management plans developed jointly with their multidisciplinary team. An

individualized self-management plan should encompass daily habits, symptom management, accessing help during exacerbations, as well as education and psychological support. Patients should have regular opportunities to revise their plans in accordance with their evolving needs and circumstances (Effing, 2012).

Enhance Communication and Shared Decision-Making: Foster open communication among patients, their families, and healthcare professionals (Fraser, 2006). Training healthcare staff in active listening and shared decision-making skills will empower patients to communicate their concerns and preferences, particularly in complex and end-of-life decisions.

Access to Digital and Community Resources: Enhance access to digital symptom management programs, telehealth care, and peer support groups to mitigate issues with location, physical mobility, or isolation. Collaboration with voluntary organizations adds value (Network, 2022).

Integrated and Seamless Care Pathways: Enable integrated working between primary, secondary, and community healthcare providers to ensure that transitions, whether post-hospital discharge or during palliative episodes, are both smooth and supportive, minimizing anxiety and avoidable hospital admissions (Society, 2016).

Care planning for end-of-life: Engage patients and families early in open and sensitive discussions about advance care planning, preferred place of death, and prioritization of symptoms (Ek, 2008). Use models such as the Gold Standards Framework to promote patient comfort, dignity, and psychological care during the palliative phase. Support for Carers and Families: Train carers in skills to manage

symptoms, enhance resilience, and cope with crises. Respite care, counselling, and emergency contacts are essential (Kunik, 2008). By implementing these recommendations, patients with chronic illnesses will receive better care practices that are more respectful, proactive, and responsive to their individual needs, empowering them with confidence to live well and experience dignified care (Ek, 2008).



Figure 6: Improvement of COPD through lifestyle modifications.

Quick Review Checklist

- Do you have an up-to-date written self-management plan?
- Are you confident in your inhaler technique?
- Have you attended pulmonary rehab?
- Are your vaccines current?
- Do you know your emergency plan for exacerbations?
- Is your GP or nurse reviewing your care annually?

Conclusion

Life with COPD is a journey that can require knowledge, understanding, and a readiness to change. With a clear plan that incorporates information, NHS advice, local resources, and personal objectives, individuals can effectively manage COPD and maintain their independence.

Remember, your team is there to help you: your doctors, nurses, family, caregivers, and others are team members who support you in your healthcare. Do not be afraid to ask questions and for help when you need it. This is true for many individuals with chronic COPD who have been managing effectively for several years.

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