

# Barriers and facilitators to treatment plan adoption and self-management in people with Chronic Obstructive Pulmonary Disease (COPD): A systematic search and narrative synthesis

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## ***Running header***

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# Abstract

## **Objective**

To review the literature relating to patient barriers and facilitators to self-management in chronic obstructive pulmonary disease.

## **Methods**

This review involved a systematic search and narrative synthesis. MEDLINE, CINAHL complete, PsycINFO and the Cochrane database of systematic reviews were systematically searched in March 2025. Search terms related to chronic obstructive pulmonary disease, self-management and potential barriers and facilitators to patient engagement or self-care. We reported according to PRISMA and analysis involved narrative synthesis.

## **Findings**

Sixty-three papers were included. Barriers and facilitators to self-management were grouped across the following themes: i) healthcare systems (including time in appointments, treatment use and financial gateways), ii) emotions (incorporating stigma or emotional distress, positive outlook and acceptance of diagnosis or treatment), iii) communication with healthcare professionals (comprising understanding and perceived sufficiency of information, smoking habits, health behaviours and memory, tailoring needs and trust and person-centred care), iv) social factors (including support from family or friends and cultural or social norms) and v) environment (concerning environmental triggers and socioeconomic factors). Within these, challenges and enablers of self-management were encountered. Challenges included a lack of time in appointments, emotional distress and insufficient information from healthcare professionals. Enablers included positive outlook, support from family and friends and person-centred care.

## **Conclusions**

This review has identified multiple patient barriers and facilitators to self-management in chronic obstructive pulmonary disease. Future interventions should be tailored to address the barriers whilst building upon the facilitators identified in this review.

## **Keywords**

Chronic obstructive pulmonary disease, self-management, self-care, treatment plan

# **Barriers and facilitators to treatment plan adoption and self-management in people with Chronic Obstructive Pulmonary Disease (COPD): A systematic search and narrative synthesis**

## **Introduction**

Chronic Obstructive Pulmonary Disease (COPD) is typically caused by smoking or exposure to other noxious particles in predisposed individuals. It is incurable <sup>1</sup> and causes persistent and often progressive symptoms of breathlessness, cough, sputum production and wheeze <sup>2</sup>. COPD is a long-term disease where lung function declines and symptoms increase over time <sup>2</sup>, being punctuated by episodes of acute symptom worsening, termed exacerbations, that are linked to both morbidity and mortality. COPD is debilitating and people describe being restricted by difficulties breathing which in turn limits people physically and socially, impairing their quality of life <sup>3</sup>. COPD can negatively impact individuals' mental health, with around 37% of people with COPD suffering depression <sup>4</sup>. Worldwide, around 392 million people have COPD <sup>5</sup> and it is the third leading cause of death <sup>3</sup>. In the UK, COPD costed the NHS £9 billion in 2023, and it accounts for approximately 1.8 million hospital beds annually <sup>6</sup>.

Optimal management of COPD can reduce exacerbation of symptoms and premature mortality <sup>7</sup>. Guidelines recommend optimal practices for diagnosis, managing stable COPD and managing exacerbations <sup>6</sup>. Non-pharmaceutical management of stable COPD includes advice and support on smoking cessation, routine vaccination for seasonal respiratory viruses, pulmonary rehabilitation, identification and management of anxiety and depression, advice on diet, exercise, self-care (including a self-management plan) and optimising treatment for co morbidities <sup>6</sup>. The National Institute for Health and Care Excellence (NICE) provide guidance and advice for the NHS and wider health and care system across the UK to inform evidence-based decision making. In this paper we define self-management as concordance with pharmacological treatment and recommended lifestyle behaviours such as physical activity, diet, smoking cessation and appropriate use of inhaled therapies <sup>2</sup>.

Recommended inhaled medication for the management of stable COPD varies according to the severity of the illness and whether or not the individual has had exacerbations, and includes the addition of Inhaled Corticosteroids (ICS) for those who have had 1 severe or 2 moderate exacerbations a year <sup>6</sup>, all with inhaler technique support and, if using pressurised metered dose inhalers (pMDI), use of a spacer device. It is also recommended that patients adhere to a self-management plan engage with pulmonary rehabilitation if relevant and attend follow-up appointments with healthcare professional <sup>6</sup>.

Despite the significant impact of COPD on individuals, and the clear treatment guidelines, practitioners' concordance with COPD guidelines is low globally<sup>8</sup>. Patient reluctance to engage in their treatment plan is frequently cited by practitioners as a challenge<sup>9-11</sup>. Previous reviews of patient barriers and facilitators to self-care in COPD have largely focussed on specific practices such as pulmonary rehabilitation<sup>5,12</sup> and physical activity<sup>13</sup> or for specific groups such as those recently discharged from hospital<sup>14</sup>. We identified one review of the barriers and facilitators to general self-management amongst COPD patients, but this was dated (including papers from 2002 to 2017)<sup>1</sup>. Since this review, there have been several updates to recommendations for the diagnosis and management of COPD<sup>6</sup>. These include a more personalised approach to treatment in which patient symptoms and steroid responsiveness are considered, and a greater emphasis on supporting self-management, including support with inhaler technique and smoking cessation. The latter point is particularly pertinent considering national ambitions announced in 2019<sup>7</sup> to create a smoke free generation by 2030. This suggests a recent shift in patient experiences of self-management and highlights the need for a more contemporary overview to inform how self-care is supported in COPD.

## **Materials and methods**

Our review question was: What are patient barriers and facilitators to self-management in COPD? We prospectively registered this on PROSPERO (CRD420251101593)<sup>15</sup>.

### ***Design***

This review is reported in accordance with PRISMA guidelines<sup>16</sup>. Our search methods were adapted from the Cochrane handbook of systematic reviews<sup>17</sup>.

### ***Search strategy and selection criteria***

We searched subject-specific databases MEDLINE, Cumulative Index to Nursing and Allied Health Literature, CINAHL complete, PsycINFO and the Cochrane database of systematic reviews to identify relevant studies published from October 2017 (after the period covered in a previous review of barriers and facilitators to general self-management amongst COPD patients up to September 2017<sup>1</sup>) in March 2025. We conducted a comprehensive search and included keywords and subject headings related to COPD, self-management and potential barriers and facilitators to patient engagement or self-care. A PRISMA approach<sup>16</sup> was taken to reporting and data were narratively synthesised.

The strategy combined both free-text terms and controlled vocabulary (e.g., MeSH terms) and was tailored to suit the indexing system of each database (supplementary materials 1). Boolean logic was applied, as shown in figure 1 below.

< Figure 1 here >

We completed forward and backward citation searches on included papers. We included only modifiable barriers and facilitators excluding papers that reported non-modifiable barriers or facilitators such as age, infections or genetic predisposition <sup>18</sup> since these cannot be adapted in practice. Inclusion and exclusion criteria are summarised in Table 1. We did not include studies on pulmonary rehabilitation due to the quantity of existing reviews on this topic <sup>19-21</sup>. Studies that solely reported on the experiences of healthcare professionals were excluded to ensure a comprehensive understanding of patient perspectives and inform the design of intervention strategies that are acceptable to this group. We included studies from any country to ensure a thorough understanding of patient barriers and facilitators to self-management. Palliative care settings were excluded due to our emphasis on self-management to ensure prevention of further deterioration in COPD. Studies that solely focus on smoking cessation were also excluded to ensure a comprehensive understanding of patient barriers and facilitators to the different self-care practices advocated by NICE <sup>6</sup>.

< Table 1 here >

### ***Selection process***

After removing duplicates manually, study details were downloaded into Microsoft Excel. Title and abstract screening were conducted by SR and JD independently. Full texts were independently screened for eligibility by SR, JD, HH JK and AC. Any disagreements were discussed to the point of resolution.

### ***Quality assessment***

Quality assessment was divided between SR, HH, JK and AC on all included papers using checklists from the Centre for Evidence based Medicine (CEBM) for qualitative studies <sup>22</sup> and the Center for Evidence-Based Management for surveys <sup>23</sup>. The tools facilitate an assessment of the reliability and validity of evidence through items related to methodological criteria (e.g. researcher position, transferability), with higher scores denoting more criteria met. It should be noted that some surveys were scored out of 11 where confidence intervals were not relevant. Quality appraisal informed interpretation of the findings, but was not used as an exclusion criterion. Exceptions to quality are reported in table 2, summary of included papers. This includes a summary score and exceptions to quality based upon criteria that were not met.

### ***Data extraction and analysis***

Data extraction was completed by all authors. Information was extracted using a bespoke data extraction sheet including the study aim, methods, health behaviour and findings relating to barriers and facilitators for patients to self-management in COPD. Quantitative data were coded descriptively and examined alongside codes generated for qualitative data. Due to participant and methodological heterogeneity, we combined all data through narrative synthesis<sup>24</sup> according to the focus of our review, barriers and facilitators to self-management in COPD, and according to specific self-management behaviours. This involved an inductive approach to thematic analysis which included familiarisation with the data, initial code generation, searching for themes based on self-management behaviours, reviewing themes, defining and naming themes and producing the report<sup>25</sup>.

< Figure 2 here >

### **Findings**

Overall, 5,960 records were identified across four separate databases. After removing 279 duplicate records, 5,681 unique records were screened. Of these, 5,556 were excluded based on title and abstract reviews. One hundred and twenty-five full-text articles were assessed for eligibility, with 62 excluded for reasons including irrelevant focus (n=37) and health behaviours beyond the scope of NICE recommendations (n=9). Sixty-three studies were included in the final review. Figure 2 illustrates the selection process.

#### ***Characteristics of included papers***

Sixty-three papers with a total number of 6,972 patients were included, which summarised a range of health behaviours. These included medication use, nutrition, physical activity, help-seeking from healthcare professionals and general self-management. Studies that reported on general COPD self-management captured a combination of the above behaviours and were most frequently reported (n=34), followed by medication use (n=15). Table 2 presents a breakdown of studies by theme, country and study methods. Table 3 provides a summary of included papers. Most studies involved qualitative methods including individual interviews (n=37) and focus groups (n=3) and were conducted in Western Europe (n=9).

< Table 2 here >

< Table 3 here >

### **Overview of themes**

Barriers and facilitators associated with self-management were grouped into five themes. These were related to: 1) healthcare systems, 2) emotions, 3) communication with healthcare professionals, 4) social factors and 5) environment. Findings are summarised in figure 3, and shaded according to whether they included mostly barriers, facilitators or a combination of these. Each theme is subsequently described. There were few differences in barriers and facilitators according to behaviour, but, where there were, these are noted in the narrative.

< Figure 3 here >

### **Theme 1: Healthcare systems**

This theme referred to patients' experiences of accessing healthcare and receiving treatment for COPD. It included the sub-themes: i) time in appointments, ii) treatment use and iii) financial gateways. Each is discussed below.

Some studies highlighted a lack of sufficient **time in appointments**<sup>26-29</sup>. Where reported, these referred to consultations with some GPs<sup>27,29</sup>. One study revealed structural challenges linked with accessing the hospital between visits, and delayed prescription or renewal of home respiratory therapies due to a lack of communication across providers<sup>30</sup>. Some described an overstretched healthcare system and the high workload of healthcare professionals. These served as barriers to self-management<sup>26,31</sup>. Inequities in access to information were also apparent when one study reported a lack of access to internet resources on lifestyle<sup>32</sup> and another revealed 75% of participants were not confident in locating reliable health information<sup>33</sup>. A minority of participants described positive experiences of provider or treatment-related systems that served as an enabler of self-management. These included sufficient time in appointments<sup>29</sup> and being involved in the inhaler selection process<sup>34</sup>. The latter reported enhanced adherence to treatment and a reduced number of mistakes in inhaler use, thereby lowering the number of exacerbations.

A small number of participants encountered side-effects from treatment, such as the aftertaste of inhaled medications that hindered adherence<sup>35-37</sup>. One study highlighted that **treatment use** was hindered by several factors, including prescribing and dispensing errors in hospitals, and an understanding of the quantity of doses in inhalers: "*The blue one, you just wait until it starts running out*"<sup>37</sup>. Two studies underlined practical challenges with home respiratory therapies such as the cumbersome nature of oxygen use and concerns about the cost of this<sup>38</sup> and device issues with

long-term oxygen therapy (LTOT) and home non-invasive ventilation (NIV)<sup>30</sup>. In the latter, some reported preferences for device improvements such as their being smaller and quieter, indicating a facilitator of self-management. Furthermore, surveys with patients revealed that easy handling of inhalers and short inhalation time of inhalers were particularly important, with mean ratings of 1.3 and 1.7 respectively (where 1 was very important and 4 was unimportant)<sup>96</sup>.

Several studies highlighted **financial** concerns regarding medications<sup>35 39</sup>, specialty visits<sup>39 40</sup> and transport to and from appointments<sup>39 41 42</sup>: *“And I had to pay \$35 for me to go home. I don’t have that kind of money.”*<sup>41</sup> Despite the challenges reported above, a minority of participants reported receiving financial support in accessing services or medications. These included assistance from the government or employers in accessing medications in Iran<sup>43</sup> and a medical card that allows access to many free healthcare services in Ireland<sup>26</sup>. As such, there was considerable divergence in participants’ views of healthcare systems in relation to self-management. This is likely to be linked with health care system variation.

## **Theme 2: Emotions**

This theme captures the diverse feelings participants reported as influencers of self-management. These included: i) stigma or emotional distress, ii) positive outlook and iii) acceptance of diagnosis or treatment.

Many participants shared feelings of **stigma** linked with their condition, which was a barrier to self-management. This affected a breadth of behaviours, including mobility aids (e.g. a walking frame<sup>44</sup>), inhaler use in public<sup>43 45</sup> and help-seeking from healthcare professionals<sup>27 42 46-48</sup>: *“This is a secret disease. . . you don’t want others to know that you have it. . .”*<sup>46</sup>. Fear of judgment from healthcare professionals were often connected with a sense of shame from beliefs that their condition was self-inflicted<sup>46</sup>. **Emotional distress** from feelings of isolation were a challenge that hindered oxygen use<sup>38</sup> and the ability to adapt to the condition in a rural community<sup>49</sup>. Many participants described emotional distress or a low mood as barriers to self-management behaviours, specifically, medication adherence<sup>50</sup>, disease exacerbation action plans<sup>51</sup>, physical activity<sup>52 53</sup>, healthy diet<sup>54</sup> and self-management in general<sup>36 55-58</sup>.

In some papers, participants described a **positive outlook** that supported self-management<sup>47 59-62</sup>. One participant shared: *“COPD is only a project. I have decided not to think about it in any other way”*<sup>62</sup>. Motivation to prevent deterioration of health was a common enabler of general self-management<sup>32 36 63 64</sup> or approaching a doctor when needed<sup>65</sup>. Several highlighted participants’ **acceptance of their diagnosis** that facilitated engagement with behaviours including engagement

with long-term oxygen therapy (LTOT) <sup>66</sup>, rollator use <sup>44</sup> and self-management in general <sup>46 47</sup>. Furthermore, experiencing the benefits of home respiratory therapies <sup>30</sup> enriched participants' understanding and acceptance of treatment. Three studies conveyed a lack of readiness for patients accepting their diagnosis and a reluctance to learn more about it as a barrier to self-management <sup>60 61 63</sup>.

### ***Theme 3: Communication with healthcare professionals***

Communication with healthcare providers was linked with i) understanding and perceived sufficiency of information, which were sometimes linked with ii) smoking habits, health behaviours and memory, iii) tailoring needs and iv) trust and person-centred care.

Self-management was often challenged by ***a lack of understanding of COPD*** and the details of how to manage this. In one study, 75% of individuals did not understand health information well enough to know what to do <sup>33</sup>. Another indicated a mean number of 5.3 days of medicine were missed due to patients' uncertainty of how to take this <sup>75</sup>. Other studies found a lack of understanding of nutrition <sup>36</sup>, the long-term impact of smoking <sup>40 42</sup> or the need for consistent medication use <sup>45</sup>. Furthermore, some participants did not believe their medication positively impacted their condition <sup>39 67</sup> and concerns about side-effects from medication were often reported <sup>36 43 68</sup>. Some participants described a perceived lack of control of breathlessness <sup>60</sup> sometimes under-estimating the severity of symptoms <sup>46</sup>. Many patients, did not believe lifestyle changes were necessary: *"My disease doesn't affect me yet, I'm not afraid of it. I need more symptoms before I act."* <sup>63</sup> and when they did, in the case of sedentary behaviour, they had difficulty changing <sup>53</sup>. Culturally informed or complementary therapy beliefs were evident in some studies, for example, in one study conducted in Africa, participants believed COPD was a result of witchcraft <sup>65</sup> or in an Asian study that it can be remedied through herbal remedies: *"I have been to many Hakeems [herbal practitioners]. Some days the herbal medicines relieve my symptoms, but then it starts again"* <sup>58</sup>.

The need for sufficient ***information*** or clear explanations about managing COPD was frequently described <sup>26 30 33 39 41 69 70</sup>. Where specified, these included respiratory nurses <sup>26</sup>, GPs and pulmonologists <sup>39</sup>, physicians <sup>41</sup>, community clinicians<sup>69</sup>. Poor knowledge of COPD was also apparent amongst patients from an Indigenous and non-Indigenous background (68% and 19% respectively) <sup>40</sup>. One study highlighted sex differences in the order of priority of the ten most often mentioned items of unmet information needs <sup>70</sup>. Here the wish for guidance on palliative care was significantly greater in women ( $p=0.04$ ), and men wanted advice on living with COPD in a relationship ( $p=0.02$ ) <sup>70</sup>. Fewer patients reported sound knowledge of behavioural components such as nutrition <sup>36 71</sup>, physical activity <sup>72</sup> or when to seek help <sup>49</sup>. These served as facilitators of their self-management.

Participants' understanding and need for information was sometimes connected with general health behaviours. For instance, several participants reported difficulties with smoking cessation<sup>32 57 63 73</sup>. Some were conflicted about quitting smoking, using cigarettes as a tool to support their mental wellbeing<sup>42 48</sup>. Health behaviours were often linked with the severity of COPD symptoms. For example, breathlessness often hindered engagement in physical activity<sup>32 36 45 52 53 59 62 64 74</sup>. A minority reported a lack of energy to exercise<sup>65</sup> or follow a healthy diet<sup>54</sup>. For a few participants, setting goals was shared as a strategy to manage breathlessness<sup>60</sup> and support engagement in activity: *"I walk for 40 minutes every morning,"*<sup>72</sup>. Adherence to prescribed medication was often a challenge and memory often cited as the determining factor<sup>35 37 67 75</sup>. The use of tools such as logs<sup>67</sup> or medication organisers<sup>37 76</sup> served as reminders that facilitated medication use. Other strategies included keeping medicine visible and building a routine<sup>37</sup>. Facilitators of physical activity and diet included adopting lighter exercises and being mindful of food triggers of COPD symptoms that were unspecified: *"I will take note of and remember if a type of food has an effect on me and not eat it again."*<sup>32</sup>. In one study, participants described managing breathlessness through tools such as their heart rate monitor, breathing techniques and mindfulness<sup>60</sup>.

Not all participants believed healthcare practitioners **tailored** their advice to individual's needs. Patients wanted communication without scientific terminology<sup>29</sup>, and in some studies there was wish for and lack of **person-centred care** from both GPs and hospital emergency staff<sup>60</sup> and perceptions that some strategies to support health behaviour change were inappropriate: *"And but he was probably hoping to scare the crapper out of me, but all it did was make me go home and smoke more"*<sup>27</sup>. Some participants reported not feeling listened to and wanting a more active role in treatment decisions<sup>26 29</sup>: *"I feel like every patient should have the right to be able to be involved in those conversations"*<sup>29</sup>. In other studies patients believed they were central to care decisions<sup>26 41</sup>: *"He really wanted to get to the actual root of the problem which is important"*<sup>26</sup>. When discussing how this might be improved, patients suggested written and verbal information in user-friendly formats and more time in appointments<sup>26 28</sup>.

In a minority of studies communication challenges arose from cultural<sup>28</sup> or linguistic differences<sup>57</sup>. There were some positive experiences of communication with healthcare providers. In one study, participants received access to written guidance on how to manage their condition<sup>69</sup>. Others described trust in healthcare professionals<sup>35 61 77</sup> and good relationships with them<sup>30 42</sup>. Continuity of care was a problem for some<sup>29 49 62 76</sup>: *"And then the next doctor comes in for the next shift—they say oh, what are you here for? Talk to each other instead of having to ask the patients."*<sup>49</sup>. A

minority described receiving good continuity of care<sup>26 42 49</sup> or said continuity was desirable<sup>62</sup>. One study highlighted proactive support with monitoring of medicine supplies from two pharmacies<sup>37</sup>.

#### **Theme 4: Social factors**

This theme referred to social influence on self-management, including i) support from family and friends and ii) cultural or social norms.

Many studies reported support from **family and friends** facilitated inhaler or medication adherence<sup>37 67 68 76</sup>, access to healthcare<sup>42 45</sup>, home respiratory therapies<sup>30</sup> and self-management in general<sup>36 41 43 48 62 73 78</sup>. However, a minority of participants in studies reported a lack of sufficient support<sup>32 33 43 57</sup> or reluctance to accept support<sup>58</sup>.

**Social and cultural factors** were varied. In one study, stigmatising experiences from neighbours led to social isolation: *“As soon as they came to know [about] my respiratory disease he will not allow her daughter to my house and stop talking to me”*<sup>45</sup>. Additional challenges included, social gatherings hindering diet<sup>36</sup> and a lack of social support to engage in physical activity<sup>76</sup>. **Cultural norms** could hinder, for example, norms related to fasting were a barrier to medication adherence<sup>57</sup> and in some cases help, for example, one study highlighted participants’ connection to their Aboriginal culture as an enabler of useful breathing practices: *“You can’t breathe? Go to the bush, it’ll give back to you because you have given to it.”*<sup>48</sup>.

#### **Theme 5: Environment**

Environmental factors included i) symptom triggers and ii) socioeconomic factors. **Environmental triggers**, causing shortness of breath or coughing, including the weather, smoke and fragrances were frequently described as a barrier to a healthy lifestyle<sup>32 39 41 54 56 64 65 72 77</sup>: *“I can’t breathe in smoke, pollen, and perfumes”*<sup>39</sup> and good weather was described as a facilitator of physical activity amongst a minority<sup>53 72</sup>. **Socioeconomic factors** included food insecurity or lack of access to safe spaces or facilities to exercise<sup>36 41 72</sup>: *“We don’t have sports fields and facilities in our village. . .”*<sup>72</sup> whereas having space at home and access to activities helped to reduce sedentary behaviour<sup>36 53</sup>.

## **Discussion**

This review of sixty-three studies published between October 2017 to September 2025 presents evidence on patient-reported barriers and facilitators to COPD self-management, in the context of the 2019 NICE guideline update<sup>6</sup>, which places greater emphasis on non-pharmacological care and structured self-management support than the former version. We found that patient accounts clustered around five overarching themes: healthcare systems, emotions, communication with healthcare professionals, social factors and the environment.

This review is comprehensive, however, although every effort was made to include all relevant studies, and our search strategy was robust, some papers may have been missed due to variability in <sup>79</sup> terminology used to describe COPD care. Despite these constraints, the size and quality of the evidence base is collectively strong enough to inform policy and practice. As this review shows, the nuances written into our findings section in relation to the diversity of countries, care settings and cultures should be considered when informing and implementing policy. The global emphasis of our review enables an understanding of international data, which can inform healthcare practice in the UK and elsewhere.

Despite changes in policy and culture, many of our findings are consistent with earlier reviews of patient perspectives on COPD self-management, which identified similar barriers and facilitators, including service constraints, variable quality of information and communication, the need for sustained support, and the influence of medication beliefs and other psychosocial factors <sup>1</sup>. However, we also note additional elements that appear more prominent than in previous reviews. These include challenges in adhering to prescribed treatments; financial barriers and supports influencing access to treatment; the facilitating role of patients' acceptance of their COPD diagnosis and need for treatment; patients' own strategies for managing symptoms; the importance of continuity of care; a positive outlook as a facilitator; and environmental triggers, which patients described as important barriers to everyday self-management.

Many of these patient-reported patterns are closely linked to studies reporting views of health care professionals. For example, the latter report an insufficient time in consultations, competing clinical priorities, and a lack of training and resources, all of which can constrain the self-management support available to patients <sup>80 81</sup>. Patient reports of an absence of continuity of care align with health care professional reported barriers of working within fragmented health services, where they often lack role clarity and confidence, and feel under-resourced and hindered by poorly connected care pathways <sup>81-83</sup>. Health care professionals recognise that patients' psychosocial concerns, health literacy needs and medication beliefs often receive insufficient attention in COPD self-management education and support <sup>70 84</sup>. Previous work has also shown healthcare professionals acknowledge that supporting self-management in patients is challenging and difficult to tailor due to patients with variable health needs and socio-economic constraints <sup>84</sup>.

When considering programmes to support self-management with COPD, systematic review evidence suggests existing programmes have little impact on patient outcome such as health-related quality of life and respiratory-related hospital admissions <sup>85 86</sup>. COPD specific, multi-component self-management programmes are increasingly delivered via digital platforms or are led by health care professionals, and typically combine structured education, individualised care planning and ongoing

follow-up<sup>87-90</sup>. From the perspective of our review, these interventions speak most directly to patient reported needs for accurate information, support to manage breathlessness and exacerbations, and ongoing contact. However, findings on the effectiveness of these interventions vary considerably between studies, and reporting of intervention content is often weak, with most trials not explicitly specifying the theoretical underpinning<sup>86,91</sup> or other key intervention features such as intensity, setting, providers or any tailoring of interventions<sup>92</sup>. Content to address psychosocial challenges to COPD care are infrequently reported or included in interventions<sup>92</sup>. Many of the patient reported barriers and facilitators identified in our review are not or are insufficiently addressed in existing interventions.

These findings point to a need for well-designed interventions, developed in conjunction with patients, that specify and report their intervention components, make behaviour change techniques explicit, and prioritise outcomes that matter to patients, so that effective self-management support can be provided at scale.

## **Conclusion**

Barriers to patient self-management in COPD included limited time with practitioners, lack of continuity of care, practical adherence challenges, stigma, isolation, low mood, doubts about medicine effectiveness and side-effects and environmental challenges. Facilitators of self-management were sufficient time, consistent follow-up, responsive communication from practitioners, clear and trustworthy information, and peer, community or financial support. Our synthesis suggests that self-management is most effective when there is reliable access to care, simple treatment plans, and support from family, peers, or community services. These expectations are endorsed by guidelines but inconsistently supported. Current interventions to support self-care do not consistently address the barriers and enhance facilitators experienced by patients. There is a clear need for comprehensive intervention strategies, designed in partnership with patients, to support optimal self-management in people living with COPD.

## **Abbreviations list**

BCT	Behaviour Change Techniques
CEBM	Centre for Evidence-Based Medicine
CINAHL	Cumulative Index to Nursing and Allied Health Literature
COPD	Chronic Obstructive Pulmonary Disease
HCP	Healthcare Practitioner
HMV	Home Mechanical Ventilation
ICS	Inhaled Corticosteroids
LABA	Long-Acting Beta-2 Agonist
LAMA	Long-Acting Muscarinic Antagonist
LTOT	Long-Term Oxygen Therapy
MEDLINE	Medical Literature Analysis and Retrieval System Online
MeSH	Medical Subject Headings
NICE	National Institute for Health and Care Excellence
PROSPERO	International Prospective Register of Systematic Reviews
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
SABA	Short-Acting Beta-Agonist
SAMA	Short-Acting Muscarinic Antagonist

## **Declarations**

### ***Ethics approval and consent***

Was not necessary for this review of literature.

### ***Author contribution***

JD and MC conceived the idea for the review; methods were designed by MC and JD. SR, HH, AC and JK extracted and AC and JD curated data. SR, JD and MC drafted the manuscript, and all named authors revised and approved the final version. All authors agree to be personally accountable for the accuracy and integrity of the work.

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### ***Disclosure of interest***

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AC – none to declare.

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***Data availability statement***

The authors confirm that the data supporting the findings of this study are available within the article.

## References

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Supplementary file 1

**MEDLINE**

Search ID	Search Terms	Search Options	Actions
S12	S3 AND S6 AND S9	<p><b>Limiters</b> - Published Date: 20150101-20251231</p> <p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Narrow by Language:</b> - english</p> <p><b>Search modes</b> - Proximity</p>	5,122
S11	S3 AND S6 AND S9	<p><b>Limiters</b> - Published Date: 20150101-20251231</p> <p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	5,244
S10	S3 AND S6 AND S9	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	8,256
S9	S7 OR S8	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	6,943,687
S8	Keyword (barrier* OR challenge* OR difficult* OR facilitat* OR enabl* OR hinder* OR overcom* OR promot* OR implement* OR adherence OR concord* OR compliance OR resistance)	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	6,943,687
S7	("MH Patient Compliance")	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	61,823
S6	S4 OR S5	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	4,001,823
S5	Keyword ("self-car*" OR "self-man*" OR "self-administ*" OR "attend*" OR "participat*" OR ""health N3 behav*"" OR "support*" OR "physical activity" OR "exercise")	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	4,001,823

S4	(MH "Self Care") OR (MH "Self-Management") OR (MH "Self Administration") OR (MH "Patient Participation") OR (MH "Health Behavior") OR (MH "Exercise")	<b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	284,769
S3	S1 OR S2	<b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	146,565
S2	Keyword ("chronic obstructive pulmonary disease") OR ("chronic obstructive airways disease") OR ("chronic obstructive lung disease") OR ("COPD") OR ("COAD") OR ("emphysema") OR ("chronic lung disease")	<b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	143,944
S1	(MH "Pulmonary Emphysema") OR (MH "Pulmonary Disease, Chronic Obstructive")	<b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	70,277

**CINAHL**

Search ID	Search Terms	Search Options	Actions
S12	S3 AND S6 AND S9	<p><b>Limiters</b> - Publication Date: 20150101-20251231</p> <p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Narrow by Language:</b> - english</p> <p><b>Search modes</b> - Proximity</p>	1,503
S11	S3 AND S6 AND S9	<p><b>Limiters</b> - Publication Date: 20150101-20251231</p> <p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	1,557
S10	S3 AND S6 AND S9	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	2,704
S9	S7 OR S8	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	1,406,616
S8	Keyword (barrier* OR challenge* OR difficult* OR facilitat* OR enabl* OR hinder* OR overcom* OR promot* OR implement* OR adherence OR concord* OR compliance OR resistance)	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	1,406,616
S7	("MH Patient Compliance")	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	36,815
S6	S4 OR S5	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	1,361,175
S5	Keyword ("self-car*" OR "self-man*" OR "self-administ*" OR "attend*" OR "participat*" OR "health N3 behav*" OR "support*" OR "physical activity" OR "exercise")	<p><b>Expanders</b> - Apply related words; Apply equivalent subjects</p> <p><b>Search modes</b> - Proximity</p>	1,361,175

S4	(MH "Self Care") OR (MH "Self-Management") OR (MH "Self Administration") OR (MH "Patient Participation") OR (MH "Health Behavior") OR (MH "Exercise")	<b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	171,545
S3	S1 OR S2	<b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	41,801
S2	Keyword ("chronic obstructive pulmonary disease" OR "chronic obstructive airways disease" OR "chronic obstructive lung disease" OR "COPD" OR "COAD" OR "emphysema" OR "chronic lung disease")	<b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	39,146
S1	(MH "Pulmonary Disease, Chronic Obstructive") OR (MH "Emphysema") OR (MH "Pulmonary Emphysema")	<b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	25,600

### Psycinfo

Search ID	Search Terms	Search Options	Actions
S12	S3 AND S6 AND S9	<b>Limiters</b> - Published Date: 20150101-20251231  <b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Narrow by Language:</b> - english  <b>Search modes</b> - Proximity	423
S11	S3 AND S6 AND S9	<b>Limiters</b> - Published Date: 20150101-20251231  <b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	429
S10	S3 AND S6 AND S9	<b>Expanders</b> - Apply related words; Apply equivalent subjects  <b>Search modes</b> - Proximity	781

S9	S7 OR S8	<b>Expanders</b> - Apply related words; Apply equivalent subjects <b>Search modes</b> - Proximity	1,461,914
S8	Keyword (barrier* OR challenge* OR difficult* OR facilitat* OR enabl* OR hinder* OR overcom* OR promot* OR implement* OR adherence OR concord* OR compliance OR resistance)	<b>Expanders</b> - Apply related words; Apply equivalent subjects <b>Search modes</b> - Proximity	1,461,914
S7	(DE "Patient compliance")	<b>Expanders</b> - Apply related words; Apply equivalent subjects <b>Search modes</b> - Proximity	11,021
S6	S4 OR S5	<b>Expanders</b> - Apply related words; Apply equivalent subjects <b>Search modes</b> - Proximity	1,468,541
S5	Keyword ("self-car*" OR "self-man*" OR "self-administ*" OR "attend*" OR "participat*" OR "health N3 behav*" OR "support*" OR "physical activity" OR "exercise")	<b>Expanders</b> - Apply related words; Apply equivalent subjects <b>Search modes</b> - Proximity	1,468,541
S4	(DE "Self Care") OR (DE "Self-Management") OR (DE "Patient Participation") OR (DE "Health Behavior") OR (DE "Exercise")	<b>Expanders</b> - Apply related words; Apply equivalent subjects <b>Search modes</b> - Proximity	96,608
S3	S1 OR S2	<b>Expanders</b> - Apply related words; Apply equivalent subjects <b>Search modes</b> - Proximity	4,201
S2	Keyword ("chronic obstructive pulmonary disease" OR "chronic obstructive airways disease" OR "chronic obstructive lung disease" OR COPD OR COAD OR emphysema OR "chronic lung disease")	<b>Expanders</b> - Apply related words; Apply equivalent subjects <b>Search modes</b> - Proximity	4,104
S1	(DE "Pulmonary Emphysema") OR (DE "Pulmonary Disease, Chronic Obstructive")	<b>Expanders</b> - Apply related words; Apply equivalent subjects <b>Search modes</b> - Proximity	1,265

## Cochrane Library

SEARCH ID	SEARCH TERMS	OPTIONS	HITS
#18	#4 AND #12 AND #13	with Publication Year from 2015 to 2025	2,546
#14	#4 AND #12 AND #13		3,267
#13	Keyword (barrier* OR challenge* OR difficult* OR facilitat* OR enabl* OR hinder* OR overcom* OR promot* OR implement* OR adherence OR concord* OR compliance OR resistance)		429,788
#12	#5 OR #11		357,688
#11	#6 OR #7 OR #8 OR #9 OR #10		95,296
#10	MeSH descriptor: [Patient Participation] explode all trees		2,204
#9	MeSH descriptor: [Exercise] explode all trees		40,295
#8	MeSH descriptor: [Health Behavior] explode all trees		52,159
#7	MeSH descriptor: [Self-Care] explode all trees		7895
#6	MeSH descriptor: [Self-Management] explode all trees		1423
#5	Keyword ("self-car*" OR "self-man*" OR "self-administ*" OR "attend*" OR "participat*" OR ""health NEXT behav*"" OR "support*" OR "physical activity" OR "exercise")		313,495
#4	#1 OR #2 OR #3		28,028
#3	MeSH descriptor: [Pulmonary Emphysema] explode all trees		394
#2	MeSH descriptor: [Pulmonary Disease, Chronic Obstructive] explode all trees		8,105
#1	Keyword ("chronic obstructive pulmonary disease") OR ("chronic obstructive airways disease") OR ("chronic obstructive lung disease") OR ("COPD") OR ("COAD") OR ("emphysema") OR ("chronic lung disease")		27,535

## Tables

**Table 1: Eligibility criteria for review**

<b>SPIDER element</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
<b>Sample</b>	Adults with COPD aged 18 or over	Individuals with COPD and under 18 or in palliative care settings
<b>Phenomenon of interest</b>	Patient barriers and facilitators to self-management	Healthcare professional perspectives of barriers and facilitators to self-management, studies reporting on pulmonary rehabilitation or solely focused on smoking cessation
<b>Design</b>	Any empirical studies (qualitative, quantitative or mixed-methods) from October 2017 onwards and published in English	Non-empirical papers (e.g., editorials and opinion papers)
<b>Evaluation</b>	COPD patient experiences, views and perceptions	Healthcare professionals' experiences, views and perceptions
<b>Research Type</b>	Any empirical studies (qualitative, quantitative or mixed-methods) from October 2017 onwards and published in English	Non-empirical papers (e.g., editorials and opinion papers)

**Table 2: Characteristics of included studies**

Characteristics	Health behaviour studied			
	General COPD self-management	Medication use	Nutrition/ physical activity	Information/help seeking, attending appointments and communication with HCPs
<b>Total number of included studies</b>	34	15	7	7
<b>Country</b>				
United Kingdom		1 <sup>37</sup>		3 <sup>29 42 69</sup>
Other areas of Western Europe (Denmark, Finland, Germany, Iceland, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden)	9 <sup>46 56 61-63 70 93-95</sup>	4 <sup>30 35 96 97</sup>	3 <sup>52 54 74</sup>	2 <sup>26 47</sup>
South or Eastern Europe (Romania)		1 <sup>34</sup>		
Africa (Egypt, Uganda)	1 <sup>65</sup>	1 <sup>31</sup>		
East Asia and Pacific (China, Korea, Nepal, Singapore)	6 <sup>32 33 55 57 77 98</sup>	1 <sup>68</sup>	1 <sup>72</sup>	
Southern/West Asia (India, Iran, Jordan, Pakistan)	5 <sup>43 45 58 59 73</sup>	1 <sup>50</sup>		
Latin America (Brazil)		1 <sup>66</sup>		
North America (USA, Canada)	6 <sup>28 36 39 41 99 100</sup>	5 <sup>38 67 75 76 101</sup>	3 <sup>44 53 71</sup>	1 <sup>102</sup>
Australia, New Zealand	4 <sup>40 48 49 60 64 78</sup>			1 <sup>27</sup>
Netherlands and Australia	3 <sup>51</sup>			
<b>Total</b>	<b>34</b>	<b>15</b>	<b>7</b>	<b>7</b>
<b>Study methods</b>				
Individual interviews	24 <sup>39-41 43 45 48 49 51 55-58 60-65 73 78 93-95 99</sup>	5 <sup>37 66 67 76 97</sup>	4 <sup>44 53 54 72</sup>	4 <sup>27 42 47 69</sup>
Focus groups	2 <sup>28 59</sup>	1 <sup>30</sup>		
Nominal group technique	1 <sup>100</sup>			
Narrative group interview	1 <sup>77</sup>			

Characteristics		Health behaviour studied			
		General COPD self-management	Medication use	Nutrition/physical activity	Information/help seeking, attending appointments and communication with HCPs
Surveys		3 <sup>33 70 98</sup>	5 <sup>31 50 68 75 101</sup>	1 <sup>74</sup>	1 <sup>102</sup>
Qualitative analysis of an open-ended question within an electronic survey			1 <sup>38</sup>		
Patient observation			1 <sup>34</sup>		
Multiple methods	Family focus group interviews and family-dyad interviews	1 <sup>46</sup>			
	Focus groups and individual interviews			1 <sup>71</sup>	2 <sup>26 29</sup>
	Surveys and individual interviews	1 <sup>36</sup>	1 <sup>35</sup>		
	Patient observation and survey		1 <sup>96</sup>		
	Survey and accelerometer data			1 <sup>52</sup>	
	Photovoice (photo taking and interviews)	1 <sup>32</sup>			
<b>Total</b>		<b>34</b>	<b>15</b>	<b>7</b>	<b>7</b>

**Table 3: Table of included studies**

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
AlMutairi 2018 USA <sup>38</sup>	Understand how patients perceive the challenges of using long-term oxygen therapy	Online survey	Community (n=311)	Oxygen use	<b>Barriers:</b> cumbersome cylinders, reduced mobility, isolation, loss of independence, poor quality of life, anxiety about oxygen running out	8/8
Bauer 2019 USA <sup>39</sup>	Explore factors impacting COPD self-management	Semi-structured Interviews	Community (n=28)	Self-management	<b>Barriers:</b> costs of medications and transport, low perceived benefit of some medications, lack of clear information, environmental triggers	7/8, researcher position not specified
Bivolaru 2023 Romania <sup>34</sup>	Identify errors in inhaler device use and impact on exacerbations	Observations	Secondary care (n=200)	Inhaler Adherence	<b>Facilitators:</b> involving patients in the inhaler selection process increased treatment and reduced error in device use leading to a reduced number of exacerbations	11/12, potential for selection bias
Bragadottir 2018 Iceland <sup>46</sup>	Explore experiences of COPD diagnosis	Focus groups and family-dyad interviews	Secondary care (n=37, 22 of whom were patients)	Self-management	<b>Barriers:</b> shame, guilt, embarrassment, nicotine addiction, fear of judgment, ignoring symptoms, hiding diagnosis. <b>Facilitators:</b> receiving a diagnosis, practical information, family support, acceptance	8/8
Bueno 2022 Brazil <sup>66</sup>	Understand older people with COPD experience of long-term oxygen therapy	Semi-structured interviews	Secondary care (n=7)	Use of long-term oxygen therapy (LTOT)	<b>Facilitators:</b> emotional and practical family support, normalisation and acceptance of LTOT	8/8
Caneiras 2022 Portugal <sup>30</sup>	Understand patients' and carers' experience of LTOT and home mechanical ventilation (HMV)	Focus groups	Community (n=24, 18 of whom were patients)	Use of LTOT and HMV	<b>Barriers:</b> insufficient discussion of home respiratory therapies, device issues (e.g. heavy wires), embarrassment, limited hospital access between visits, delayed prescriptions.	8/8

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
					<b>Facilitators:</b> support, better quality of life with use of devices, smaller and quieter devices	
Duarte-de-Araujo 2018 Portugal <sup>35</sup>	Understand adherence to inhaled medications	Survey and semi-structured interviews	Secondary care (n=319)	Inhaler Adherence	<b>Barriers:</b> memory, fear of side effects, poor routine, economic dependence on others, beliefs in medication need. <b>Facilitators:</b> trust in doctors and medications, caregiver, routine, previous exacerbations	Survey: 10/11 Potential for selection bias. Interviews: 7/8 researcher position unclear
Genoe 2018 Canada <sup>99</sup>	Understand COPD symptom management	Interviews	Community (n=8)	Self-management	<b>Facilitators:</b> acknowledging lifestyle limitations, symptom awareness, taking medicines, engaging in physical activity, anticipating challenges, being proactive to seek care, adapting activities, sharing and trading roles with family members	7/8, Researcher position unclear
Glenister 2019 Australia <sup>49</sup>	Explore patients' experiences of living with COPD	Semi-structured interviews	Secondary care (n=21)	Self-management	<b>Barriers:</b> loss of identity, lack of access and clarity from health care team, social isolation, financial burden. <b>Facilitators:</b> knowledge of when to seek help, extra effort from known doctor/health team, social support	8/8
Hakami 2018 Canada <sup>71</sup>	Examine perspectives on nutrition in COPD	Focus groups	Secondary care (n=53)	Nutrition, self-management	<b>Barriers:</b> access to information, absence of literacy skills, limited ability and supports to act on information, daily demands of managing COPD. <b>Facilitator:</b> knowledge	8/8
Halding 2018 Norway <sup>93</sup>	Explore the experience self-management in people with COPD	Interviews	Community (n=11)	Self-management	<b>Barriers:</b> lack of capability and flexibility of practitioners.	8/8

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
					<b>Facilitators:</b> quality of rehabilitation/follow up, self-management education, ability to adapt to changes	
Hanania 2018 USA <sup>101</sup>	Understand patient (and practitioner) perspectives on COPD inhalers	Survey	Community (n=499)	Inhaler Adherence	<b>Barriers:</b> understanding, concerns with medications, variable device training, physical difficulties. <b>Facilitators:</b> knowledge, device training	11/12, unclear if sample representative
Holz 2018 Canada <sup>44</sup>	Explore perceptions of rollator (wheeled walker) to support COPD	Semi-structured interviews	Secondary care (n=12)	Rollator use	<b>Barriers:</b> no training, poor knowledge, stigma, homes and community unsuitable, heavy. <b>Facilitators:</b> previous use and knowledge, training, acceptance	7/8, Researcher position unclear
Huang 2024 China <sup>55</sup>	Explore patients' illness perceptions and coping behaviours	Semi-structured interviews	Secondary care (n=32)	Self-management	<b>Barriers:</b> understanding need for medication adherence, poor inhaler technique, unhealthy habits (e.g. smoking), poor self-monitoring, economic burden, activity limitations, negative emotions	7/8, Researcher position unclear
Iyer 2024 USA <sup>100</sup>	Understand challenges of older adults with COPD and their carers	Nominal Group Technique	Secondary care (n=7)	Self-management	<b>Barriers:</b> access to care, impaired mobility, challenges of supplemental oxygen/portability, unwilling to change habits	8/8
Jarab 2018 Jordan <sup>59</sup>	Explore patients' views of COPD and impact on quality of life	Focus Groups	Secondary care (n=28)	Self-management	<b>Barriers:</b> poor knowledge of COPD, breathlessness, helplessness, reliance on others. <b>Facilitators:</b> knowledge of COPD, positive mindset	8/8
Jarab 2019 Jordan <sup>50</sup>	Examine factors associated with self-reported medication non-adherence	Survey	Secondary care (n=133)	Medication adherence	<b>Barriers:</b> depression, comorbidities, increase in frequency of medication, concerns about side effects	11/12 unclear sample size justification
Johansson 2019 Sweden <sup>56</sup>	Understand the impact of symptoms on daily life of people with COPD	Interviews	Secondary care (n=25)	Self-management	<b>Barriers:</b> environment, travel, reduced ability for activities, dependent on others, emotional burden, overprotective kin.	7/8, researcher position unclear

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
					<b>Facilitators:</b> support from kin, practical help from local authority (housing, transport, disabled parking permissions), societal support	
Kim 2020 Korea <sup>77</sup>	Explore experiences of men with COPD	Focus group	Secondary care (n=6)	Healthy Behaviours e.g., smoking, drinking	<b>Barriers:</b> environment, lack of resources. <b>Facilitators:</b> confidence in physicians, learning from past negative experiences	7/8, researcher position unclear
Kouijzer 2018 Netherlands <sup>94</sup>	Explore perspectives of fatigue on daily life of patients with COPD	Semi-structured interviews	Mixed (n=20)	Self-management	<b>Barriers:</b> inability to exercise, feelings ignored by HCPs. <b>Facilitators:</b> improvements in physical condition, social support	8/8
Krishnan 2024 USA <sup>41</sup>	Identify barriers and facilitators for cardiovascular disease prevention for black people with COPD	Semi-structured interviews	Secondary care (n=30)	Self-management	<b>Barriers:</b> poor HCP communication, accessing care, poor information. <b>Facilitators:</b> desire for education, holistic approach from HCPs, skills (e.g., self-advocacy), family/friends support	8/8
Ladner 2020 Egypt <sup>31</sup>	Identify factors influencing inhaler adherence in COPD patients	Survey	Mixed (n=1311)	Inhaler Adherence	<b>Facilitators:</b> social support, environment, workload of HCPs	11/12, sample size justification unclear
Lavesen 2024 Denmark <sup>95</sup>	Explore self-management of patients with advanced COPD	Semi-structured interview	Secondary care (n=11)	Self-management	<b>Barriers:</b> environment, emotion (avoid disruption of HCPs), unease with use of at-home medical technology. <b>Facilitators:</b> measurement tools for self-management	8/8
Liao 2024 China <sup>72</sup>	Explore determinants of physical activity	Semi-structured interviews	Secondary care (n=17)	Physical activity	<b>Barriers:</b> embarrassment, fear, inability, knowledge, environment/sports infrastructure.	8/8

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
	among patients with COPD				<b>Facilitators:</b> understanding benefits, confidence, passion, habit, family/friends	
Liu 2025 China <sup>68</sup>	Explore factors influencing inhaler use in older patients with COPD	Survey	Secondary care (n=305)	Inhaler Adherence	<b>Barriers:</b> concerns about medication. <b>Facilitators:</b> Illness perceptions, beliefs about necessity, family support	11/12, potential for selection bias
Luckett 2017 Australia <sup>60</sup>	Understand how ED admissions for breathlessness self-managed	Semi-structured interviews	Community (n=20, 15 had COPD)	Self-management	<b>Barriers:</b> lack of person-centred care, history of poor ED support, fear of distressing information, perceived lack of control of COPD. <b>Facilitators:</b> monitoring, breathing techniques, engagement with HCPs, confidence	8/8
Lundell 2020 Sweden <sup>47</sup>	Explore impact of COPD interactions with HCPs on self-management, coping and help seeking	Semi-structured interviews	Primary care (n=13)	Self-management and help seeking	<b>Barriers:</b> negative experiences with HCPs, stigma, shame and fear, insufficient information. <b>Facilitators:</b> positive experiences with HCPS, clear communication	8/8
Madawala 2023 Australia <sup>27</sup>	Explore healthcare experiences of COPD patients	Semi-structured interview	Primary care (n=13)	Help-seeking	<b>Barriers:</b> stigma, guilt, shame, poor knowledge of GP, busy healthcare system, scarce follow-ups	8/8
Meharg 2025 Australia <sup>48</sup>	Understand health experiences and impact of COPD	Semi-structured interviews	Aboriginal community health service (n=18)	Self-management	<b>Barriers:</b> fear, stigma, helplessness, poor knowledge of COPD, fear of taking medicines, smoking to manage stress, inpatient racism in hospital, fatigue. <b>Facilitators:</b> support from HCPs, connection to family/friend support	7/8, unclear if sample representative
Mitchell 2022 England <sup>42</sup>	Explore perspectives of primary healthcare from those with severe mental illness and COPD	Semi-structured interviews, discussion groups	Primary care (n=16)	Help-seeking	<b>Barriers:</b> social isolation, cost, disability, fear, breathlessness, health literacy, difficulty quitting smoking, stigma from HCPs, lack of integrated care. <b>Facilitators:</b> family/friends support, good relationships with HCPs	8/8

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
Molin 2020 Denmark <sup>63</sup>	Understand attitudes to COPD self-management	Semi-structured interviews	Primary care (n=14)	Self-management	<b>Barriers:</b> discomfort with exercise, difficulty quitting smoking, weight gain, costs of gym, poor guidance from HCP, denial of diagnosis, embarrassment. <b>Facilitators:</b> understanding benefit of exercise, motivation, HCP support	7/8, Researcher position not specified
Muellers 2024 USA <sup>36</sup>	Explore the barriers and facilitators to self-management amongst people with COPD and comorbidities	Semi-structured interviews and surveys	Primary and secondary care (n=18)	Self-management	<b>Barriers:</b> cost of medications, access to facilities, poor knowledge, emotional/social barriers to diet, breathlessness, weather, lack of time, side effects, beliefs about medications, life stressors. <b>Facilitators:</b> motivation, habits, nutrition knowledge, reminders from family/ alarm, symptom relief	7/8, Researcher position not specified
Nagourney 2020 Uganda <sup>65</sup>	Explore perspectives of patients with COPD	Semi-structured interviews	Community (n=12)	Self-management, help seeking	<b>Barriers:</b> environment (weather/dust), reduced energy, cost of medications, lack of transport. <b>Facilitator:</b> motivation	7/8, Researcher position unclear
Ngwenya 2021 England <sup>69</sup>	Explore patient views of HCPs communication and care in advanced COPD	Semi-structured interviews	Primary and secondary care (n=22)	Attending appointments	<b>Barriers:</b> lack of complete and timely information. <b>Facilitator:</b> guidance from HCPs	8/8
O'Connell 2021 Ireland <sup>26</sup>	Understand preferences regarding asthma and/or COPD self-management	Semi-structured interviews and focus groups	Community (n=10)	Self-management	<b>Barriers:</b> fear of hospitalisation, delayed care, busy HCPs, cost, poor awareness of services, lack of referral, poor information on COPD/treatments, feeling unheard. <b>Facilitators:</b> person-centred care, access to free care, continuity of HCP care	8/8

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
O'Toole 2022 USA <sup>67</sup>	Explore strategies for self-management of COPD and barriers and facilitators to medication adherence	Semi-structured interviews	Primary care (n=30)	Medication adherence	<b>Barriers:</b> awareness, cost, lack of HCP availability, forget medications, co-morbid drug/alcohol use, lack of guidance on inhaler use, embarrassment. <b>Facilitators:</b> support from pharmacy, test results from physician's office, support groups, medication reminders, family/support network.	8/8
Pal 2022 Australia <sup>40</sup>	Explore awareness of COPD	Structured interviews	Mixed (n=27)	Self-management	<b>Barriers:</b> poor knowledge of COPD, poor understanding of smoking impact, cost of travel for care, lack of local GP, preference for treatment in local clinic/ by family	7/8, Researcher position unclear
Paul 2021 India <sup>45</sup>	Understand experiences of patients with chronic respiratory disease	Focus groups and Interviews	Community (n=51)	Self-management	<b>Barriers:</b> poor guidance on breathing exercises, pain/ breathlessness, stigma, fear of inhaler use, lack of time/money to get care. <b>Facilitators:</b> understanding of condition, family support, desire to protect health, subsidised treatment	8/8
Poletti 2024 Italy <sup>61</sup>	Understand experiences of COPD	Semi-structured interviews	Secondary care (n=28)	Self-management	<b>Barriers:</b> poor knowledge of COPD, denial of symptoms/ diagnosis, poor health outlook. <b>Facilitators:</b> sense of responsibility, desire to improve health, trust in HCPs, positive outlook	8/8
Poureslami 2020 Canada <sup>28</sup>	Explore the link between health literacy and self-management of Asthma or COPD	Focus groups	Secondary care (n=53)	Self-management	<b>Barriers:</b> guidance from HCPs, difficulty understanding jargon, poor communication, lack of time and empathy from HCPs. <b>Facilitators:</b> time and tailored information in consultations, trust, perceived relevance of facts	8/8
Rafii 2024a Iran <sup>43</sup>	Explore the factors that influence self-management of COPD	Semi-structured interviews	Secondary Care (n=9)	Self-management	<b>Barriers:</b> poor understanding of medication, financial, lack of family support, difficulty getting medications, co-morbidities, low self-efficacy, shame.	8/8

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
					<b>Facilitators:</b> understanding COPD, education from HCPs/ family/ internet, family support, financial support	
Rafii 2024b Iran <sup>73</sup>	Explore self-management strategies of COPD	Semi-structured interviews	Secondary care (n=8)	Self-management	<b>Barriers:</b> symptoms, fear of exacerbation, difficulty with smoking cessation. <b>Facilitators:</b> concerns about health, valuing nutrition, enhancing emotions (e.g. prayer, keeping busy), using technology for monitoring and support	7/8, researcher position unclear
Schafheutle 2018 England <sup>37</sup>	Examine strategies to manage medicines after hospital discharge	Semi-structured interviews	Acute care (NHS) (n=12)	Medication adherence	<b>Barriers:</b> trouble swallowing pills, vomiting, dexterity issues, difficulty monitoring inhaler dose, prescribing/dispensing errors of hospital, forgetting. <b>Facilitators:</b> family support, monitoring strategies, building a routine, support from pharmacies with tracking supply	8/8
Schreiber 2020 Germany <sup>96</sup>	Explore factors influencing inhaler preferences amongst patients with Asthma and COPD	Survey and observation of inhaler technique	Secondary care (n=44)	Inhaler adherence	<b>Facilitators of inhaler use:</b> easy handling, short inhalation time	10/11, sample size not justified
Schrijver 2023 Australia & Netherlands <sup>51</sup>	Explore experiences, barriers and facilitators related to COPD and action plan adherence	Semi-structured interviews	Secondary care (n=10)	Adherence to multi-disease exacerbation action plans	<b>Barriers:</b> difficulty recognising symptoms, dislike of monitoring, diary/action plan complexity. <b>Facilitators:</b> understanding COPD and benefits of diary/action plan, support from case manager, responsibility for disease management	8/8
Sigurgeirsdottir 2019 Iceland <sup>62</sup>	Explore experiences, needs and coping strategies relating to self-management of COPD	Semi-structured interviews	Secondary care, (n=10)	Self-management and coping strategies	<b>Barriers:</b> breathlessness, lack of education/ information on the internet, poor continuity/ support from HCPs.	7/8, researcher position unclear

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
					<b>Facilitators:</b> desire to protect health, guidance from HCPs, good habits, continuity of care with HCPs, family/peer support	
Siltanen 2021 Finland <sup>70</sup>	Understand unmet information needs amongst people with COPD	Survey	Community (n=169)	Self-management	<b>Barriers:</b> insufficient information about COPD, recognising exacerbation symptoms, palliative care, managing anxiety and stress, social security	11/12, Confidence intervals not reported
Skerry 2023 Canada <sup>76</sup>	Understand the experiences medication adherence in people with COPD	Semi-structured interviews	Community (n=10)	Medication adherence	<b>Barriers:</b> lack of continuity of care/reminders /prevention emphasis/information from HCPs, cost of medication, poor social support, fear of symptoms. <b>Facilitators:</b> responsibility to protect health, guidance from pharmacists, habits, using organisers, prompts from family, peer support	8/8
Sritharan 2021 Denmark <sup>74</sup>	Explore barriers to physical activity	Survey	Mixed (n=493)	Physical activity	<b>Barriers:</b> low motivation, co-morbidity, fear of breathlessness.	10/12, sample size not justified
Stellefson 2018 USA <sup>102</sup>	Explore online health-seeking behaviour and health literacy in people with COPD	Survey	Community (n=176)	Access and appraisal of online health information	<b>Barriers:</b> poor understanding, quality of online information, lack of confidence in using internet. <b>Facilitators:</b> confidence in ability to find online resources, knowledge of COPD, self-efficacy	11/12, sample size not justified
Storgaard 2020 Denmark <sup>97</sup>	Explore experiences of high flow nasal cannula in long term oxygen treatment	Semi-structured interviews	Secondary care (n=12)	Home high flow nasal cannula use	<b>Barriers:</b> inconvenient at night/ post activities, warm air discomfort. <b>Facilitators:</b> improved breathing, enhanced sleep/relaxation, energy for activities, reduced symptoms, awareness of benefits	7/8, researcher position unclear
Sumner 2023 Singapore <sup>32</sup>	Understand the impact of COPD on daily activities	Photovoice (photo taking)	Secondary care (n=8)	Self-management	<b>Barriers:</b> hot weather, poor air quality, difficulty quitting smoking, lack of support, breathlessness.	8/8

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
		and interviews)			<b>Facilitators:</b> increased strength after physical activity, coping strategies	
ter Beek 2018 Netherlands <sup>54</sup>	Identify strategies for maintaining a healthy diet in people with COPD	Interviews	Secondary care (n=12)	Healthy diet	<b>Barriers:</b> symptoms, weather, lack of strength, immobility, overweight, costs, nervousness, fatigue, chest tightness, lack of appetite, stress. <b>Facilitators:</b> motivation, habits, family support	7/8, researcher position unclear
Tumilty 2020 New Zealand <sup>78</sup>	Understand experiences of living with severe COPD	Semi-structured interviews	Secondary care (n=23)	Self-management	<b>Barriers:</b> symptoms restricted activities, embarrassment. <b>Facilitators:</b> managing mood (e.g. getting out of house, faith), family/friends support	8/8
Unni 2021 USA <sup>75</sup>	Determine degree of non-adherence to medication	Survey	n=1632, community	Medication adherence	<b>Barriers:</b> forgetting, difficulty swallowing/inhaling, unclear on medication use	12/12
Valeiro 2025 Spain <sup>52</sup>	Explore physical activities barriers and enablers post COPD exacerbation	Survey	Secondary care (n=46)	Physical activity (daily steps)	<b>Barriers:</b> needing recovery after exacerbation, breathlessness, low mood. <b>Facilitators:</b> understanding health benefits	12/12
van der Meide 2020 Netherlands <sup>64</sup>	Explore daily experiences of COPD patients	Interviews	Community (n=9)	Self-management	<b>Barriers:</b> breathlessness, environmental triggers. <b>Facilitator:</b> motivation to protect health	8/8
Wang 2025 China <sup>98</sup>	Explore self-efficacy in self-care of patients with COPD	Survey	Secondary care (n=222)	Self-care, activity and treatment adherence	<b>Facilitators:</b> confidence in being able to relieve symptoms, recognition of symptoms as an exacerbation of COPD	11/12 sample size not justified
Wshah 2020 Canada <sup>53</sup>	Explore determinants of sedentary behaviour amongst people with COPD	Semi-structured interviews	Secondary care (n=14)	Physical activity	<b>Barriers:</b> breathlessness/ fatigue, weather, difficulty changing habits, lack of knowledge about sedentary behaviour, reduced fitness, low mood, sitting enjoyment.	8/8

First author Year Country	Aim	Methods	Patient/lay carer participants	Health behaviour in question	Findings	Quality rating and exceptions
					<b>Facilitators:</b> understanding benefits, social support, monitoring/planning, desire for education, access to activities, transport, enjoyment	
Yadav 2020a Nepal <sup>57</sup>	Explore the barriers and facilitators to self-management of COPD	In-depth interviews and observations	Community (n=10)	Self-management	<b>Barriers:</b> lack of awareness of COPD causes, prognosis, community advocacy of complementary medicine, cultural practices, lack of patient-centred care, language barriers, difficulties with smoking cessation. <b>Facilitators:</b> family support, support with smoking cessation	8/8
Yadav 2020b Nepal <sup>33</sup>	Explore levels of health literacy and self-efficacy amongst multi-morbid COPD patients	Surveys	Community (n=238)	Self-management	<b>Barriers:</b> lack of support and understanding from HCPs, lack of social support, insufficient information, limited understanding of health information	12/12
Zeb 2021 Pakistan <sup>58</sup>	Understand experiences of self-care and the role of the family in COPD	Semi-structured interviews	Secondary care (n=13)	Self-care	<b>Barriers:</b> physical challenges, distress, financial, reluctance to accept family support, belief in complementary therapies. <b>Facilitators:</b> family support, spiritual beliefs, connections with HCPs support from pharmacists	7/8, researcher position unclear
Zhang 2023 England <sup>29</sup>	Explore experiences of communication of people with COPD and practitioners	Focus groups, Interview	Community (n=13)	Communication with healthcare professionals	<b>Barriers:</b> repetitive questions, no involvement in treatment decisions, lack of tailored communication, jargon, difficulty accessing appointments and services, lack of information. <b>Facilitators:</b> peer support, HCP support, sufficient time in appointments	7/8, researcher position unclear

**Figure 1: Search terms used alongside database vocabulary**

AB ("Chronic obstructive pulmonary disease" OR "Chronic obstructive airways disease" OR "Chronic obstructive lung disease" OR COPD OR COAD OR emphysema OR "chronic lung disease") OR (MH "Pulmonary Emphysema") OR (MH "Pulmonary Disease, Chronic Obstructive")

AND

AB ("self-car\*" OR "self-man\*" OR "self-administ\*" OR "attend\*" OR "participat\*" OR "health N3 behav\*" OR "support\*" OR "physical activity" OR "exercise") OR (MH "Self Care") OR (MH "Self-Management") OR (MH "Self Administration") OR (MH "Patient Participation") OR (MH "Health Behavior") OR (MH "Exercise")

AND

AB (barrier\* OR challenge\* OR difficult\* OR facilitat\* OR enabl\* OR hinder\* OR overcom\* OR promot\* OR implement\* OR adherence OR concord\* OR compliance OR resistance) OR ("MH Patient Compliance")

Figure 2: PRISMA diagram

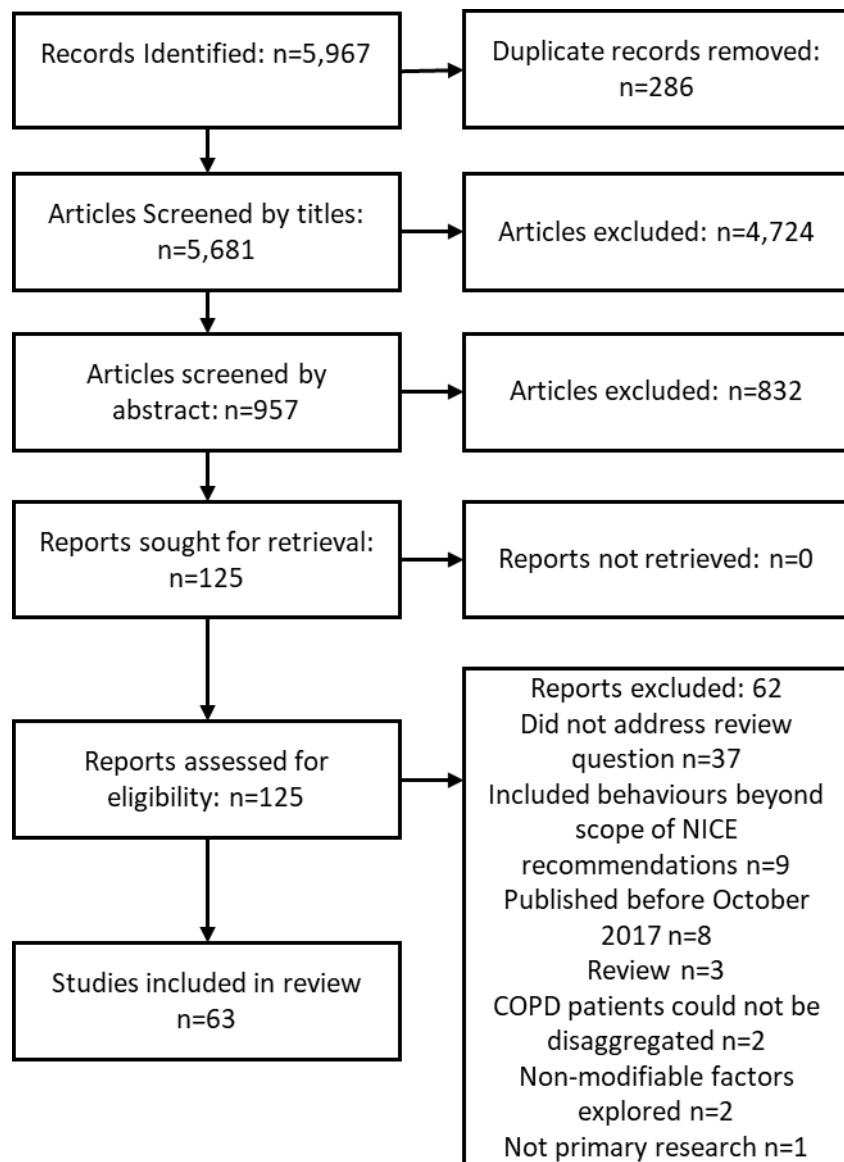
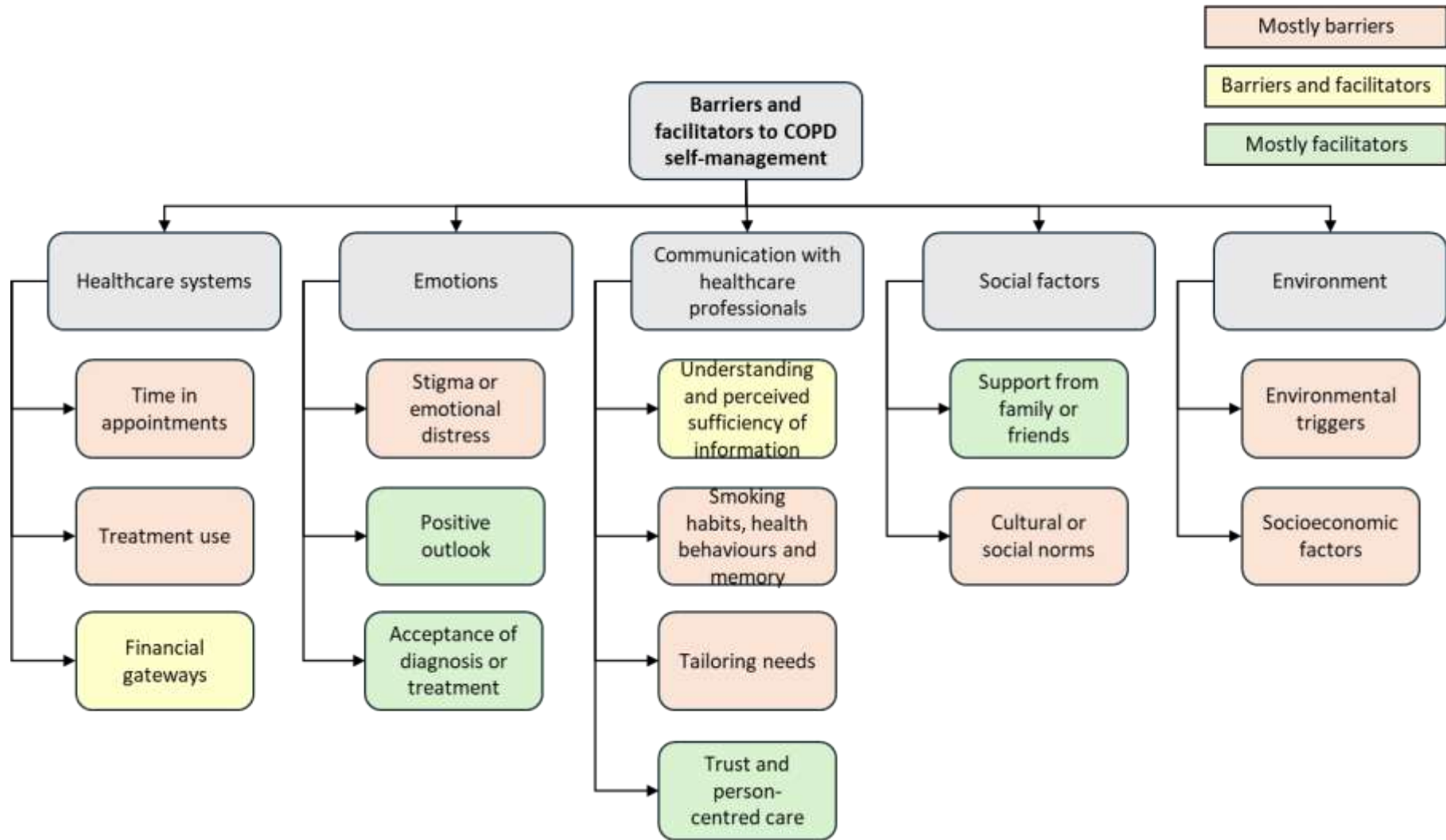


Figure 3: Summary of barriers and facilitators to self-management in COPD



**Figure captions**

***Figure 1: Search terms used alongside database vocabulary***

***Figure 2: PRISMA diagram***

***Figure 3: Summary of barriers and facilitators to self-management in COPD***