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DESKTOP HELPER

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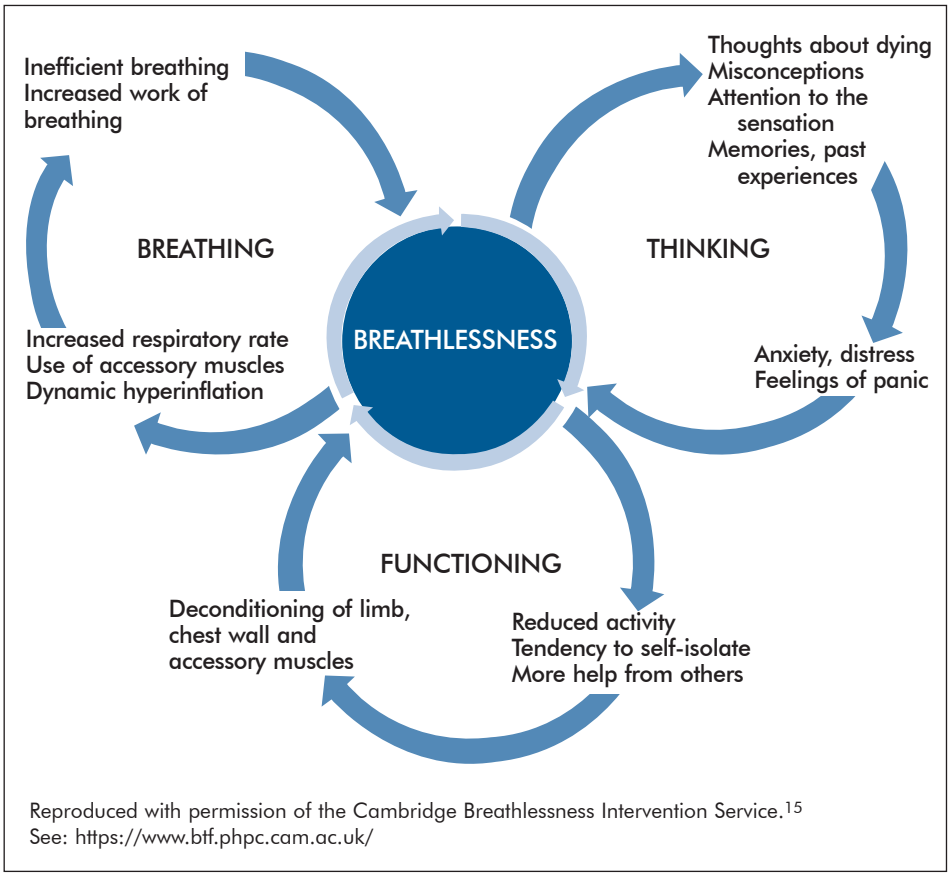
COPD and Mental Health: Holistic and Practical Guidance for Primary Care

This desktop helper aims to raise awareness of the challenge of identifying and managing mental health problems in people with chronic obstructive pulmonary disease (COPD) and to direct primary care professionals (PCPs) to assessment tools as well as non-pharmacological and pharmacological interventions.

INTRODUCTION

Mental health problems, including anxiety and depression, are common among people with COPD and substantially impact their quality of life (QoL). In countries where tobacco smoking is prevalent, tobacco dependence is an additional factor that can significantly impact on QoL of people with COPD. However, PCPs often have low confidence to treat these problems due to the complex inter-relationships between them and symptoms such as breathlessness, which make assessment and treatment challenging. Estimates suggest that about 30% of people with COPD have comorbid depression (increasing to up to 80% with increasing COPD severity), and between 10% and 50% have comorbid anxiety.[1–3] Prevalence increases with age and as symptoms of COPD worsen, and they can co-exist.[3–6] Globally, about 20% of people smoke tobacco,[7] although this varies by country, and about 20% of them will develop COPD.[8] Despite this increased risk, smoking rates remain high following a diagnosis of COPD.[9,10] Mono-disease guidelines that focus on only one element are inadequate and guidance for PCPs is lacking.



Reproduced with permission of the Cambridge Breathlessness Intervention Service.[15]
See: https://www.btf.phpc.cam.ac.uk/

COPD AND MENTAL HEALTH

Despite strong evidence of a high prevalence of depression and anxiety in people with COPD these comorbidities are underdiagnosed and undertreated. COPD-related depression and/or anxiety is associated with poorer QoL, more persistent smoking, worse adherence to treatment plans, more hospital admissions, readmissions and exacerbations, lower self-management rates, poorer survival and higher care costs than for people without psychological comorbidities.[11] Indeed, breathlessness, depression, anxiety and exercise tolerance are more correlated with health status than the widely used spirometric values.[12] People with COPD often report feelings of isolation and mental illness can increase this isolation due to societal and self-imposed stigma resulting in a cycle of decline which can impact QoL and impair adherence to COPD treatment.[13,14]

BREATHLESSNESS AND PSYCHOLOGICAL DISTRESS

Breathlessness is a core and complex symptom among people with COPD. It is not only the subjective perception of breathlessness but a person's reactions and responses to the sensation that matter.[15] The 'Thinking' negative cycle in the Breathing-Thinking-Functioning (BTF) model (see diagram above) offers a way of understanding how thoughts affect and are affected by breathing and also physical activity; it also suggests how we can break these cycles.[15]

Attention to the sensation of breathlessness, memories of past experiences, misconceptions and thoughts about dying can contribute to anxiety, feelings of panic, frustration, anger and low mood, which in turn reinforce unhelpful and unrealistic thoughts and images. Conversely, interventions to address these negative thoughts in relation to breathlessness and manage symptoms of anxiety and low mood have the potential to improve QoL and improve adherence to COPD treatment.

TOBACCO USE AND POOR MENTAL HEALTH

While smoking rates are not high among people with COPD in all countries, where ▶

◀ they are, the strong association between tobacco use and poor mental health should be considered. Tobacco smokers with mental health disorders tend to be more addicted to smoking, smoke more cigarettes and are more likely to relapse and therefore need support for repeated attempts at quitting.[16–19] Smoking, depression, and anxiety are all associated with higher risk of death in people with COPD. The risk of death, depression and anxiety increases with increasing duration of smoking (years) and cigarette pack-years.[20] Yet smoking cessation is effective and is the most important intervention to slow the progression of COPD, increase survival and reduce morbidity.[5,21,22] Contrary to popular belief, quitting reduces anxiety and depression. Indeed, the effect size is as large or larger than antidepressants for mood and anxiety disorders.[23,24] It can be challenging to differentiate between symptoms of anxiety and of withdrawal, so assess anxiety levels at each appointment.

ACTION POINTS TO IDENTIFY MENTAL HEALTH PROBLEMS IN PEOPLE WITH COPD

Good patient-centred consultation skills will help. Recognise depression and anxiety are common comorbidities that can influence COPD outcomes. Anticipate that the individual may have depression or anxiety or both. As you assess for mental health problems employ active listening and avoid interrupting, show empathy and observe carefully. Body language and non-verbal signals may offer useful information, for example, long pauses and lack of eye contact during conversation. When considering a diagnosis, take a patient-centred approach and consider whether a 'label' of depressed and/or anxious will be helpful, for example, for the patient's understanding of their situation and for their holistic management.

ASSESSMENT TOOLS

Be aware of physical symptoms such as poor concentration, impaired sleep, fatigue or headache, that may be associated with anxiety and depression, and consider using a validated questionnaire if the person has symptoms (see Table 1).

TREATMENT OF MENTAL HEALTH PROBLEMS IN PEOPLE WITH COPD

Care for people with COPD and mental health problems needs a very broad approach recognizing that mind, body, how we interact with people and the environment are all interrelated. A patient-centred approach that focuses on the desires, goals and preferences of the patient is important. Utilize OARS skills to establish and maintain rapport using verbal and non-verbal responses and behaviours (Table 2).

People with COPD often have low levels of self-compassion[25] and a holistic approach to well-being is essential to address such negative self-perceptions and address mental health problems. Here we consider the evidence for some non-pharmacological and pharmacological interventions feasible in primary care.

Table 1: Assessment of mental health problems in people with COPD

Many tools have been used in research settings, but in clinical practice PCPs are familiar with these easy-to-use tools:

- The WHO-recommended Patient Health Questionnaire 4 (PHQ-4) for very brief measurement of depression and anxiety. This tool can be completed online. Questions 1 and 2 are the GAD2 anxiety subscale; Q3 and Q4 are the PHQ2 depression subscale. A score of above 3 on either indicates further evaluation should be undertaken with, for example, the Patient Health Questionnaire 9 (PHQ9) or Generalised Anxiety Disorder Scale (GAD7).

Over the last 2 weeks how often have you been bothered by these problems: 0 = not at all; 1 = several days; 2 = more than half the days; 3 = nearly every day					
1. Feeling nervous, anxious or on edge	0	1	2	3	A score of 3 or more considered + for anxiety
2. Not being able to stop or control worrying	0	1	2	3	
3. Little interest or pleasure in doing things	0	1	2	3	A score of 3 or more considered + for depression
4. Feeling down, depressed or hopeless	0	1	2	3	

Categories of psychological distress based on total score:

- None: 0–2
- Mild: 3–5
- Moderate: 6–8
- Severe: 9–12

Source: https://qxmd.com/calculate/calculator_476/patient-health-questionnaire-4-phq-4.

- The PHQ9 is used to assess depression, consists of 9 items with a cut-off score of 5 and is available in multiple languages.
- The GAD7 is used to assess anxiety and is a 7-item self-report scale, with a cut-off score of 10 The GAD7 is also available in multiple languages.

These tools may be most useful in screening for depression and anxiety and in clarifying a suspected diagnosis.

Table 2: OARS

O	**Open questions**	To learn about their feelings and beliefs e.g. "Would you like to tell me more about how you feel?" "How do you experience breathlessness?"
A	**Affirmations**	Be positive and reinforcing; build a relationship and demonstrate empathy "It's great that you are willing to discuss your sadness, I am here to help you."
R	**Reflection**	"It sounds as though you have thought a lot about your symptoms and you know what to do."
S	**Summary**	"So let's make a summary of what we discussed."

Source: https://www.euro.who.int/__data/assets/pdf_file/0008/394208/Session-5.pdf

NON-PHARMACOLOGICAL INTERVENTIONS

Cochrane reviews concluded a structured cognitive behavioural therapy (CBT) approach may be effective in reducing depression and anxiety symptoms.[1,26] This approach is feasible and cost-effective in the community delivered by trained practitioners.[27] Incorporating a CBT approach to address breathlessness in COPD and supporting self-management has the potential to increase willingness to engage with treatment including behavioural activation and physical activity, which can also be helpful for anxiety and depression.[28–31]

Table 3 details a range of interventions that may be useful to address breathlessness. We appreciate not all of these are accessible, translated, validated, affordable or culturally acceptable in every country, but the list is varied so include those which might be accessible in your setting. For example, the Cambridge Breathlessness Intervention Service offers a range of interventions to address breathlessness related to the "thinking" vicious cycle.[15]

Holistic care of the person with COPD and comorbidities such as anxiety and depression may be delivered via a multidisciplinary team, where available, who can deliver some or all of the interventions outlined above as well as ▶

Table 3: Interventions to address breathlessness

Intervention	Purpose/aim	Supporting evidence
Cognitive behavioural therapy	Problem-solving approach that challenges unhelpful thoughts/behaviours; reduces anxiety in COPD in short term; increases pulmonary rehabilitation attendance.	Yohannes AM, et al. *J Am Med Dir Assoc* 2017;18: 1096.e1-1096.e17. Heslop-Marshall K, et al. *ERJ Open Res* 2018;4: 0094-2018. Pumar MI, et al. *J Thorac Dis* 2019;11(Suppl 17): S2238–S2253.
Mindfulness/ meditation	20-minute mindful breathing reduces breathlessness in lung disease, and anxiety/depression in advanced disease; enhances non-evaluative attention and may increase self-efficacy.	Seetee S, et al. *J Med Assoc Thai* 2016;99:828–8. Malpass A, et al. *BMJ Open Respir Res* 2018;5:e000309. Tan SB, et al. *J Pain Symptom Manage* 2019;57:802–8. Look ML, et al. *BMJ Supportive & Palliative Care* 2021; 11:433–9.
Relaxation techniques	Some evidence that relaxation interventions can help anxiety, breathlessness and fatigue in COPD. Guided imagery ('thinking of a nice place'), progressive muscular relaxation and counting are most acceptable.	Hyland ME, et al. *Int J Chron Obstruct Pulmon Dis* 2016; 11:2315–9. Yilmaz CK, Kapucu S. *Holist Nurs Pract* 2017;31:369–77. Volpato E, et al. *Evid Based Complement Alternat Med* 2015;2015:628365.
Acupuncture/ pressure	Improves breathlessness in advanced disease and may reduce anxiety.	von Trott P, et al. *J Pain Symptom Manage* 2020;59: 327–338.e3.
Singing therapy	Most evidence suggest singing therapy can improve lung function; some evidence suggest it may improve anxiety and QoL; anecdotal evidence of value.	Gimenes Bonilha A, et al. *Int J Chron Obstruct Pulmon Dis* 2009;4:1–8. Lord VM, et al. *BMC Pulm Med* 2010;10:41. McNamara RJ, et al. *Cochrane Database Syst Rev* 2017; 12:CD012296.
Positive psychology giving sense of control/ confidence	Not evidence-based. However, holistic breathlessness services reduce anxiety/depression and use positive psychology, improving self-efficacy.	Brighton LJ, et al. *Thorax* 2019;74:270–81. Lovell N, et al. *J Pain Symptom Manage* 2019;57: 140–155.e2.
Social presence	Experimental evidence in healthy volunteers for social presence reducing breathless perception; patients describe reassurance from presence of others.	Herzog M, et al. *Biol Psychol* 2019;140:48–54.

pulmonary rehabilitation (PR). PR improves anxiety and depression symptoms.[32] However, practitioners under-refer, and people with COPD commonly fail to attend, or complete, their PR course; we await results of the TANDEM trial which is incorporating CBT to improve PR uptake.[2] Exercise in the natural environment has many therapeutic benefits, for both mental and physical health.[33] Taking part in nature-based activities helps people who are suffering from mental ill-health and can contribute to a reduction in levels of anxiety, stress and depression.[34] There are no specific studies in people with COPD.

Pharmacological interventions

Effective management of breathlessness using bronchodilator therapy[5] will contribute to easing psychological distress. Treat tobacco dependence with available pharmacotherapy as well as counselling. Recommendations regarding antidepressant medications for people with COPD are lacking.[11] However, we suggest reasonable approaches to management include the use of selective serotonin reuptake inhibitors (SSRIs; preferred) or, if not available or not appropriate for other clinical reasons, tricyclic antidepressants (TCAs) may be a second-line option for the treatment of depression.[11] Avoid using TCAs in people with severe COPD, due to an increased risk of respiratory centre depression and respiratory failure. Anxiety may be managed using SSRIs but the evidence is weak.[35] Despite widespread use of benzodiazepines for COPD, evidence suggests it does not help with breathlessness and should not be used for this indication.[36] They may be considered for people with acute distressing anxiety for short-term use (no more than 4 weeks) and at the lowest dose possible.[37] Metabolism of antidepressants and anti-anxiety drugs is increased in tobacco smokers who are therefore likely to need higher doses than non-smokers. Success in quitting means you may need to reduce the dose to compensate for this.[38]

WHEN TO REFER

Refer (or direct) people with COPD to appropriate mental health services where available, including psychology if the patient expresses a preference for non-pharmacological care, or the management of anxiety or depression is not achieved with the interventions available to you. People with COPD and psychosis or suicidal ideation require immediate referral to specialised mental health services.

CONCLUSIONS

Improvement of mental health improves COPD outcomes. PCPs caring for people with COPD need communication flexibility and skills to identify depression and anxiety particularly in current smokers and those trying to quit who are at the greatest risk of poor outcomes. Offer smoking cessation support (see the IPCRG Desktop Helper helping patients quit tobacco[39]) and consider CBT. Draw on available local services to support mental well-being. The value of pharmacological treatment needs more evidence.

NOTES

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Additional resources and full references can be accessed via the online version of this Desktop Helper www.ipcrg.org/dth12

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