

COPD-X Summary of Changes V2 73

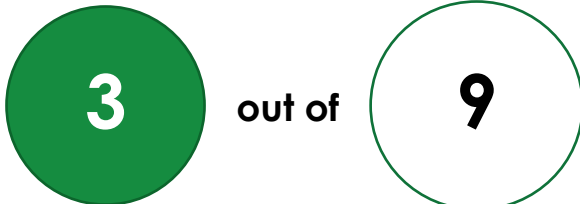
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Snapshot of the evidence review cycle for V2 73 - Dec 2023

The latest update of the COPD-X Plan has been provided by Lung Foundation Australia following the December 2023 meeting of the COPD-X Guidelines Committee. There are **9** changes outlined in this summary.

- 1 = Case finding and confirm diagnosis
- 2 = Optimise function
- 1 = Prevent deterioration
- 4 = Develop a plan of care
- 1 = Manage eXacerbations



3 out of **9**

**changes are significant and may
impact clinical practice.**

Implications for Clinical Practice

All changes made to the document are outlined below and those **highlighted in yellow** are differentiated as the most significant and likely to have an impact on clinical practice.

C: Case finding and confirm diagnosis

Section Item #	Change	Type of change	Related key Recommendation	Page
C2.3 Spirometry				
#1	<p>New paragraph:</p> <p>In 2022, the ERS/ATS technical standard on interpretive strategies for routine lung function tests recommended using z-scores (e.g. Global Lung Initiative equations) as a diagnostic tool for COPD (Stanojevic 2022). Z-scores express how far an observed value is from predicted value after accounting for age, sex, height, and ethnicity in standard deviations. The 5th and 95th percentile limits (-1.645 and +1.645 z-score) of the healthy population can be used to identify individuals with spirometry results outside of the normal range.</p> <p>A large and comprehensive study investigated the use of z-scores to identify individuals at high risk of developing COPD and other chronic lung diseases (Dharmage 2023) [evidence level III-2]. The findings of this study demonstrate how z-scores may be a valuable tool for improving early detection (Dharmage 2023; see section C1.1).</p> <p>However, there are a number of limitations to the use of z-scores for COPD diagnosis. First, z-scores are not as well validated as percent predicted values. Second, selecting the appropriate reference equation that considers an individual's sex, geographic, and ancestral background is complicated and can introduce uncertainty to interpreting their z-scores. Furthermore, risks associated with misdiagnosis and misclassification from fixed ratio thresholds are low, especially when spirometry is used in conjunction with other clinical indicators of COPD-like symptoms. Given the limitations of z-scores and the low risks and clinical convenience of the fixed ratio criteria, fixed ratio criteria remain the preferred method for COPD diagnosis in the COPD-X and GOLD 2023 guidelines (GOLD 2023).</p>	New citation (Stanojevic 2022) and discussion on spirometry interpretation.	<p>COPD is confirmed by the presence of persistent airflow limitation (post-bronchodilator FEV₁/FVC < 0.7)</p> <p>[evidence level III-2, strong recommendation]</p>	24

O: Optimise function

Section Item #	Change	Type of change	Related key Recommendation	Page
O6.5 Physical activity and sedentary behaviour				
#2	<p>New passage:</p> <p>Physical activity behavioural modification interventions of 4 to 24 weeks duration that employed a step counter and dynamic target goal setting had a positive effect on steps per day compared to usual care (n=13 studies, 1535 participants, mean difference 1035 steps/day, 95% CI 576 to 1493) (Megaritis 2023) [evidence level I] and this surpassed both MCIDs previously reported (600 to 1100 steps/day [Demeyer 2016] or 350–1100 steps/day [Teylan 2019]).</p>	<p>New citation (Megaritis 2023) and discussion, including reference to 2 previously uncited references (Demeyer 2016 and Teylan 2019).</p>	<p>Non-pharmacological strategies (such as pulmonary rehabilitation and regular exercise) should be provided to all patients with COPD [evidence level I, strong recommendation].</p>	62
O7.1 Increased risks from comorbidities in the presence of COPD				
#3	<p>New paragraph:</p> <p>A nationwide cohort study of patients with a first-time hospital-based diagnosis of COPD and age- and sex-matched individuals from the general population in Denmark found that mood, stress-related or anxiety disorders (25.2% for patients with COPD vs 13.1% for comparators), osteoporosis/hip fractures (17.4% vs 9.9%), diabetes (15.6% vs 10.5%), peripheral arterial disease (13.5% vs 4.9%), and heart failure (13.3% vs 4.0%) were the comorbidities with the highest prevalence in the COPD group (Skajaa 2023) [evidence level III-2]. The 5-year mortality was 58% in patients with COPD with 4 or more comorbidities, compared to 7% with no comorbidities (Skajaa 2023).</p>	<p>New citation (Skajaa 2023) and paragraph added discussing results of a randomised control trial.</p>	<p>Comorbid conditions are common in patients with COPD [evidence level III-2, strong recommendation].</p>	69

P: Prevent deterioration

P8. Humidification and nasal high flow (NHF) therapy

#4	<p>New paragraph:</p> <p>Two systematic reviews and meta-analyses from 2023 examined the role of high-flow nasal cannula in a range of settings for COPD (Yang 2023; Zhang 2023). However, both reviews comprised of poor quality, heterogeneous or non-relevant studies, limiting the reliability of the overall meta-analyses.</p>	Discussion regarding exclusion of 2 citations (Yang 2023; Zhang 2023)	Not directly related to a key recommendation.	103
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D: Develop a plan of care

Section Item #	Change	Type of change	Related key Recommendation	Page
D: Develop a plan of care introduction				
#5	<p>New paragraph:</p> <p>The 2023 GOLD guideline update proposed amending the existing “ABCD” disease severity stratification, to instead combine the highest risk groups “C” and “D” into a new single category GOLD E (for Exacerbation) (GOLD 2023). According to the findings of a 12-month cohort study of 690 participants using a COPD self-management mobile app, this proposed change risks over-combining groups with different disease trajectories, which could lead to a loss of clarity and over-treatment in clinical practice (Duckworth 2023) [evidence level III-1].</p>	New citation (Duckworth 2023) and paragraph added discussing disease severity stratification.	Good chronic disease care anticipates the wide range of needs in patients with COPD [evidence level I, strong recommendation].	108

D1.7: Clinical psychologist/psychiatrist

<p>#6</p>	<p>Removed outdated or unnecessary references:</p> <p>Anxiety and depression are common disorders in patients with COPD (Di Marco 2006, Gudmundsson 2006, Kunik 2005, Laurin 2007, Schane 2008), which worsen quality of life and add to disability (Gudmundsson 2005, Ng 2007, Xu 2008, Laurin 2009, Giardino 2010, Eisner 2010b) (Weiss, 2022; O'Toole, 2022) [evidence level III]. The prevalence of panic attacks and panic disorder in COPD are particularly high (Yellowlees 1987, Pollack 1996, Kunik 2005, Laurin 2007) [evidence level III].</p> <p>There is promising evidence that anxiety and depression can be treated by clinical psychologists and psychiatrists using approaches such as cognitive behaviour therapy (CBT) (Kunik 2001, de Gedeo 2003, Hynninen 2010, Yohannes 2017) [evidence level II]. Psychiatrists can also advise whether pharmacological treatment may be appropriate.</p> <p>A systematic review of various psychological interventions in patients with COPD showed some improvements in psychological outcomes, especially with CBT. In contrast, for physical outcomes, only mind-body interventions (e.g. mindfulness-based therapy, yoga, and relaxation) revealed a statistically significant effect. These findings favour psychosocial intervention as a tool in the management of COPD (Farver-Vestergaard 2015). A directed psychological intervention consisting of six sessions of group-based CBT delivered by a psychologist added to an eight-week pulmonary rehabilitation program, showed significant improvements in the CBT group in the 6-minute walk test (6MWT), fatigue, depression and stress measures (Luk 2017). Telephone-administered CBT can reduce depression symptoms in people with COPD. People with COPD who have mood disorders would prefer to have CBT than befriending (Doyle 2017).</p>	<p>Removed references from COPD-X: see</p> <p>Removed references (listed in alphabetical order)</p> <p>Removed from section, cited elsewhere in COPD-X: Eisner 2010b Gudmundsson 2005, Ng 2007, and Xu 2008.</p> <p>Added to section (cited elsewhere in COPD-X: Weiss 2022 and O'Toole 2022.</p>	<p>Clinical support teams working with the primary healthcare team can enhance quality of life and reduce disability for patients with COPD [evidence level III-2, weak recommendation].</p>	<p>111</p>
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D5: Assessment and management of anxiety and depression

#7	<p>Review and restructure of section D5: Assessment and management of anxiety and depression</p>	<p>Restructured information for logic and flow. Sub-sections for treatment related to cognitive behaviour therapy and pharmacotherapy.</p>	<p>Not directly related to a key recommendation.</p>	<p>122 to 123</p>
#8	<p>New paragraph:</p> <p>A 2023 multi-centre RCT investigated individualised CBT-based psychological intervention, for anxiety and depression symptoms in 430 people with COPD. Trained and supervised respiratory health professionals delivered the intervention (9 topics) over 6 to 8 weeks in weekly face-to-face or telephone sessions (45 to 60 minutes each session). Compared to usual care, the intervention showed no effect on the co-primary outcome of HADS-A (mean difference, 95% CI, -1.40 to 0.21) or HADS-D (mean difference -0.66, 95% CI -1.39 to 0.07) at six months. Nor did the intervention improve any of the secondary outcomes at 6 or 12 months or influence the completion of pulmonary rehabilitation. There were more deaths in the intervention arm 13/242 (5%) compared to the control arm 3/181 (2%), however none were associated with the intervention. A health economic analysis suggested the intervention was highly unlikely to be cost-effective (Taylor 2023) [evidence level II]. Despite the robust body of evidence supporting the role of CBT in managing symptoms of anxiety and depression for people with chronic conditions, this study found that CBT delivered by respiratory health professionals did not improve anxiety and depression symptoms in people with COPD. Studies investigating alternative models of care for anxiety and depression symptoms in COPD are needed, particularly those in which qualified mental health professionals are facilitating the prescribed psychological interventions.</p>	<p>New citation (Taylor 2023) and paragraph added discussing findings from a randomised control trial assessing efficacy and cost effectiveness of cognitive behaviour therapy (CBT) in reducing symptoms of anxiety and depression in COPD.</p>	<p>Not directly related to a key recommendation.</p>	<p>123</p>

X: Manage eXacerbations

Section Item #	Change	Type of change	Related key Recommendation	Page
X.3.2 Non-invasive ventilation				
#9	<p>Remove key recommendation:</p> <p>Non-invasive ventilation is effective for patients with rising PaCO₂ levels [evidence level I, strong recommendation].</p>	Remove a key recommendation that is already addressed by another key recommendation	<p>Non-invasive ventilation (NIV) should be strongly considered in patients with an exacerbation of COPD who present with hypercapnic respiratory failure as defined on an arterial blood gas with a PaCO₂ above 45mmHg and a pH less than 7.35 (Osadnik 2017) [evidence level I, strong recommendation].</p>	136

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