

COPD-X Summary of Changes V2 71


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Snapshot of the evidence review cycle for V2 71 - July 2023

The latest update of The COPD-X Plan has been provided by Lung Foundation Australia following the July 2023 meeting of the COPD-X Guidelines Committee. There are **7** changes outlined in this summary.

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



3 out of **11**

changes are significant and likely to have an **impact on 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

CHANGE	SECTION	TYPE OF CHANGE	IF THERE IS A RELEVANT KEY RECOMMENDATION, THIS IS LISTED BELOW FOR EACH CHANGE	PAGE NUMBER
C2.3: Spirometry				
1	In a systematic review examining under and overdiagnosis in primary healthcare settings Perrett et al (2023) found that based on evidence from three studies of symptomatic smokers the prevalence of spirometry-confirmed COPD without a diagnosis documented in their health records was 14%–26%. The same review found substantial evidence of misdiagnosis. Based on four case series of COPD diagnosed documented in primary healthcare records, only between 50% and 75% of subjects had airflow obstruction on postbronchodilator spirometry performed by study researchers (Perrett 2023) [evidence level III-1].	New citation and paragraph added discussing results of a systematic review.	A thorough history and examination is the first step in COPD diagnosis [evidence level III-2, strong recommendation]	28

O: Optimise function

CHANGE	SECTION	TYPE OF CHANGE	IF THERE IS A RELEVANT KEY RECOMMENDATION, THIS IS LISTED BELOW FOR EACH CHANGE	PAGE NUMBER
O3.2 Inhaled Corticosteroids (ICS)				
2	A Cochrane systematic review (Yang 2023a) of studies of long-term (more than 6 months) ICS monotherapy compared to placebo, in people with stable COPD has found that ICS monotherapy likely reduces the rate of clinically relevant COPD exacerbations (0.05 exacerbations per participant per year, 95% CI -0.07 to -0.02; vs 0.88 exacerbations per participant per year, 95% CI 0.82 to 0.94), and probably slows the rate of decline of lung function (FEV1) (MD 6.31 mL/year benefit, 95% CI 1.76 to 10.85), although the magnitude of this change is of unclear clinical relevance. ICS as monotherapy likely results in a small improvement in health-related quality of life measures without meeting the threshold for a	New citation and paragraph added replacing previous systematic review (Yang 2012)	Not directly related to a key recommendation.	45

	clinically important difference (MD -1.22 units/year, 95% CI -1.83 to -0.60) but there is probably no reduction in all-cause mortality (OR) 0.94, 95% CI 0.84 to 1.07). The potential benefits of ICS as monotherapy must be weighed against the potential adverse events such as a likely increase in the risk of pneumonia (OR 1.38, 95% CI 1.02 to 1.88), increased risk of oropharyngeal candidiasis (OR 2.66, 95% CI 1.91 to 3.68) and hoarseness (OR 1.98, 95% CI 1.44 to 2.74) [evidence level I].			
O5.1 Inhaler Technique				
3	Consideration of cognitive impairment is important for the learning and retaining of inhaler technique (Baird 2017, Iamthanaporn 2023) [evidence level I]. Ongoing training for re-enforcement, or alternative inhaler device substitution, may be beneficial.	New citation and paragraph added discussing cognitive impairment and inhaler technique.	Not directly related to a key recommendation.	59
O5.2 Inhaler adherence				
4	A large retrospective study examined medication use data of patients with asthma and COPD from a digital health platform (smartphone App and electronic medication monitors). The authors compared adherence rates using a once daily controller regimen compared to twice daily. In 1791 patients with COPD, once daily was associated with higher median daily adherence than the twice daily regime 83.3% [IQR: 57.2 to 95.6] versus 64.7% [IQR: 32.8 to 88.9], $p < .001$). In COPD once daily regimen was also associated with an increased odds of achieving $\geq 80\%$ adherence [1.73 (95% CI: 1.38-2.17, $p < .001$)]. Patients received electronic reminders via a mobile app if the medication was not taken, therefore inflating real life adherence rates. These data highlight the importance of identifying the regimen most likely to lead to improved adherence (De Keyser 2023) [evidence level III-I].	New citation and paragraph added to present results of a retrospective study examining medicine adherence.	Not directly related to a key recommendation.	60
O6.1 Pulmonary rehabilitation				
5	A systematic review and meta-analysis of 19 RCTs comparing the effect of minimal equipment programs with usual care or with exercise equipment-based programs, demonstrated that pulmonary rehabilitation programs using minimal	New citation and wording added to existing paragraph	Non-pharmacological strategies (such as pulmonary rehabilitation)	62

	equipment elicit clinically significant improvements in 6-minute walk distance and health-related quality of life and are comparable with exercise equipment-based programs for improving 6-minute walk distance and upper limb and lower limb strength (Cheng 2023) [evidence level I].	describing results of a systematic review of minimal equipment programs.	and regular exercise) should be provided to all patients with COPD [evidence level I, strong recommendation]	
6	Physical activity promotion with a wearable activity monitor-based intervention (i.e., pedometer or accelerometer incorporated as a tool to monitor and provide feedback on step-count throughout the intervention), improved steps per day (median (IQR) 1153 (791-3199) steps per day) compared with usual care in a systematic review and meta-analysis (Reilly 2023 Armstrong 2019) [evidence level I].	New citation and wording added to existing paragraph replacing Armstrong 2019	Not directly related to a key recommendation.	68
07.2 Cardiac Disease				
7	Subsequently, subanalysis of the Canadian Cohort Obstructive Lung Disease (CanCOLD) data (n=1561) has demonstrated a higher prevalence (adjusted OR 1.55 (1.04-2.31), p=0.033) and incidence (HR 2.09 (1.10-3.98, p=0.024)) of CVD (defined as ischaemic heart disease or heart failure) in those with COPD (Krishnan 2023) [evidence level III-2].	New citation and wording added to existing paragraph describing subanalysis of the Canadian Cohort Obstructive Lung Disease (CanCOLD) data.	Comorbid conditions are common in patients with COPD [evidence level III-2, strong recommendation]	77
8	A systematic review and meta-analysis of RCTs in patients with moderate to severe COPD using inhaled LAMA combined with LABA (Yang 2023b) [evidence level I] reported an excess of major adverse CV events (MACE) (LAMA/LABA 1.2% vs 0.9% control, RR 1.24, 95% CI 1.06-1.44; triple therapy 1.5% vs 1.3% control, RR 1.27, 95% CI 1.03-1.58). This finding should be considered in conjunction with the existing evidence base (see O1.2.3 LAMA/LABA) for the efficacy of such medication to prevent COPD exacerbations, improve symptoms and quality of life in well-designed prospective RCTs powered to measure these outcomes. Similarly, the challenges of accurate MACE adjudication, inconsistency in the definitions of MACE across trials and the reduced reliability of data extraction processes from safety reporting should be borne in mind. Importantly, none of	New citation and wording added to existing paragraph describing results of a systematic review and meta-analysis of RCTs.	Not directly related to a key recommendation.	77

	<p>the individual trials identified was powered or designed to investigate CV outcomes. Hence, whilst these results provide grounds for careful individualised cardiovascular risk evaluation for patients with COPD, they do not necessitate change to current treatment recommendations. Despite being common clinical practice, there is even less evidence about the safety of high dose, combined bronchodilator therapy in the setting of exacerbation of COPD.</p>			
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O9.2 Lung volume reduction surgery and bronchoscopic interventions

9	<p>Buttery et al (Buttery 2023) performed the first RCT comparing endobronchial valves to surgical lung volume reduction in a highly selected group of 88 people with COPD who were suitable for both procedures. The trial was performed at 5 expert centres in the UK. At 12 months there was no significant difference in the primary end point, the 'i-BODE' score [evidence level II]. This composite disease severity measure includes BMI, airflow obstruction, dyspnoea and exercise capacity (incremental shuttle walk test). The CAT score was a secondary end point and the surgical lung volume reduction group experienced a larger reduction in CAT score (treatment effect -6, 95% CI -9- -2; p=0.005). The group undergoing lung volume reduction surgery had a longer median length of hospital stay (9 vs 3 days p = 0.006), however the group undergoing valve placement had a 30% pneumothorax rate and 15% required further procedures. There were no deaths within 30 days of treatment in either group. There was a death at day 44 in an individual that received valves due to complications of the procedure. This trial does not demonstrate that either approach is superior. A larger trial is currently underway.</p>	<p>New citation and paragraph added describing results of an RCT.</p>	<p>Not directly related to a key recommendation.</p>	93
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D: Develop a plan of care

CHANGE	SECTION	TYPE OF CHANGE	IF THERE IS A RELEVANT KEY RECOMMENDATION, THIS IS LISTED BELOW FOR EACH CHANGE	PAGE NUMBER
D3: Chronic diseases self-management				
10	A systematic review and meta-analysis of nurse-led COPD interventions concluded that such interventions were associated with improvements in 6MWD, activities of daily living, and anxiety and depression, but failed to reduce the number of hospital admissions or improve HRQoL measured using the SGRQ. Interventions carried out by hospital and respiratory nurse-led interventions were associated with greater effectiveness compared to community nurses (Aranburu-Imatz 2022) [evidence level I].	New wording and citation added to existing paragraph.	Patients may benefit from self-management support [evidence level I, strong recommendation]	128
D5: Assessment and management of anxiety and depression				
11	In a larger RCT, self help leaflets for anxiety management were compared to a brief nurse led CBT intervention with self help leaflets in 279 patients with COPD. At 3 months the CBT groups had greater improvements in the HADS Anxiety subscale [3.4 (95% CI 2.62–4.17, p<0.001)] compared to the active control (leaflets) [1.88 (95% CI 1.19–2.55, p<0.001)]. The effect was maintained at 12 months. The CBT intervention was also cost effective (Heslop-Marshall 2018).	New citation and wording added to existing paragraph describing results of an RCT.	Not directly related to a key recommendation.	135

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