



The Medical Journal of Australia

## **Appendix**

**This appendix was part of the submitted manuscript and has been peer reviewed.  
It is posted as supplied by the authors.**

Appendix to: Yang I, Brown J, George J, et al. COPD-X Australian and New Zealand guidelines for the diagnosis and management of chronic obstructive pulmonary disease: 2017 update. *Med J Aust* 2017; 207: 436-442. doi: 10.5694/mja17.00686

**Table 1. Key changes from the 2006 *Medical Journal of Australia* COPD guidelines update<sup>1</sup>**

- Spirometry remains the gold standard for diagnosing airflow obstruction and COPD, since COPD cannot be diagnosed reliably on clinical features and/or chest x-ray findings alone.
- There is now strong evidence demonstrating that pulmonary rehabilitation – supervised exercise training alone or in conjunction with patient education or other non-pharmacological interventions – reduces symptoms, improves quality of life and reduces hospitalisations for exacerbations.
- A much wider choice of long-acting inhaled medicines is now available, compared to 2006, with new LAMA, LABA, LAMA/LABA and ICS/LABA inhalers. These should be added in a stepwise fashion to control symptoms and reduce risk: first with long-acting bronchodilators, and then consideration to adding an anti-inflammatory agent (ICS, to give ICS/LABA and LAMA). The increased risk of pneumonia with ICS use is now recognised in clinical trials.
- Given the wide range of inhaler devices available, inhaler technique and adherence should be checked regularly, to ensure optimal treatment.
- Smoking cessation strategies now include the use of varenicline and combination NRT as an option for pharmacotherapy for nicotine addiction.
- Influenza vaccination continues to be recommended, and pneumococcal vaccination reduces risk of pneumonia and exacerbation in patients with COPD.
- Identification and treatment of the comorbidities of COPD is now more strongly emphasised e.g. cardiovascular disease, anxiety and depression, osteoporosis and lung cancer.
- Lung volume reduction can now be performed with endobronchial valve placement as well as by the traditional surgical procedure. This is an option for a highly specific subpopulation with severe hyperinflation and dyspnoea, despite maximal medical treatment and pulmonary rehabilitation. Such patients should be referred to specialised centres.
- Long-term oxygen therapy use is recommended for at least 18 hr/day, for resting hypoxaemia.
- Supportive, palliative and end-of-life care are beneficial for patients with advanced disease.
- COPD action plans, with a short educational component and ongoing support for their use, reduce emergency department visits and hospital admissions.
- If used for exacerbations, oral prednisolone 30 to 50 mg should be taken in the morning for 5 days; tapering the dose is rarely necessary.
- High flow oxygen can significantly increase mortality in patients with COPD. If hypoxaemia is present, the target SpO<sub>2</sub> should be 88 to 92%.
- For patients hospitalised with an exacerbation, referral should be made to pulmonary rehabilitation as soon as the acute instability has resolved.
- Education of patients, carers and clinicians, and a strong partnership between primary and tertiary care, facilitate evidence-based management of COPD.

**Figure 1. Current inhaled medicines for COPD**



Green tick indicates therapies can be used together		SABA	SAMA	LAMA	LABA	LABA/LAMA	ICS/LABA
SABA	• salbutamol (Ventolin™, Airomir™, Asmol™) • terbutaline (Bricanyl™)		✔	✔	✔	✔	✔
SAMA	• ipratropium (Atrovent™)	✔			✔		✔
LAMA	• tiotropium (Spiriva™) • acclidinium (Bretaris™) • glycopyrronium (Seebri™) • umeclidinium (Incruse™)	✔			✔		✔
LABA	• salmeterol (Serevent™) • formoterol (Oxis™, Foradile™) • indacaterol (Onbrez™)	✔	✔	✔			
LABA/LAMA	• indacaterol/glycopyrronium (Ultibro™) • umeclidinium/vilanterol (Anoro™) • tiotropium/olodaterol (Spiolto™) • acclidinium/formoterol (Brimica™)	✔					
ICS/LABA	• fluticasone propionate/salmeterol (Seretide™) • budesonide/formoterol (Symbicort™) • fluticasone furoate/vilanterol (Breo™)	✔	✔	✔			

### Relievers

**SABA**



Ventolin® MDI    Asmol® MDI    #Airomir® MDI    Airomir™ Autohaler®    Bricanyl® Turbuhaler®

**SAMA**



Atrovent® MDI

### Maintenance

**LAMA**



Spiriva® HandiHaler®    Spiriva® Respimat®    Seebri® Breezhaler®    Bretaris® Genuair®

**LAMA/LABA**



Ultibro® Breezhaler®    Spiolto® Respimat®    Anoro® Ellipta®    Brimica® Genuair®

**ICS/LABA**



Symbicort® Turbuhaler®    Symbicort® Rapihaler™    Serevide® Accuhaler®    Serevide® MDI

**LABA**



Incruse® Ellipta®    Onbrez® Breezhaler®    \*Foradile® Aerolizer®    \*Oxis® Turbuhaler®    \*Serevent® Accuhaler®    Breo® Ellipta®

**ICS (For patients with COPD and Asthma)**



\*Flixotide® MDI    \*Flixotide® Accuhaler®    \*QVAR® MDI    \*Pulmicort® Turbuhaler®    \*Alvesco® MDI

**ICS/LABA**



\*Flutiform® MDI

### Flare Up Medicines

1. Antibiotics    2. Oral Steroids (Prednisone, Prednisolone)

### Notes

- Handihaler, Breezhaler and Aerolizer devices require a capsule to be loaded into the device. All other devices are preloaded.
- Spacers are recommended to be used with metered dose inhalers (MDI)
- ICS monotherapy is not indicated for COPD without asthma
- #Not PBS listed    • Shaded = \*PBS listed for asthma only



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## References

1. Abramson MJ, Crockett AJ, Frith PA, et al. COPDX: an update of guidelines for the management of chronic obstructive pulmonary disease with a review of recent evidence. *Med J Aust* 2006;184: 342-345. <https://www.mja.com.au/journal/2006/184/7/copdx-update-guidelines-management-chronic-obstructive-pulmonary-disease-review>