

Best Practice Message

June 2021

Focus on Equity: Chronic Obstructive Pulmonary Disease (COPD)

Practice changing moments

- New national guidelines for the management of COPD were published by the Asthma + Respiratory Foundation NZ in February.
- Before escalating therapy, review inhaler technique and adherence. Consider if the patient may benefit from switching inhaler device within the same class.
- LAMAs are now first line for patients with continuous COPD symptoms or exacerbations, despite regular and correct use of a short acting bronchodilator.
- Māori have a 2-3 times higher incidence of COPD, yet Hawke’s Bay dispensing data of LAMA inhalers does not reflect this.

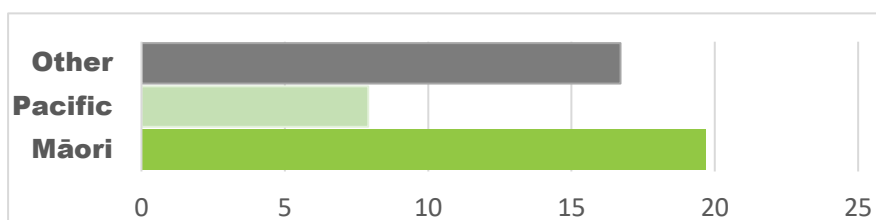
Background

The burden of COPD among Māori is one of the most significant health disparities in Aotearoa. Māori are burdened by COPD 15-20 years younger, the Māori hospitalisation rate is 3.5 times higher and Māori COPD mortality rate is 2.2 times higher than non-Māori, non-Pacific, and non-Asian rates. Pacific people are also disproportionately burdened, with 2.7 times higher hospitalisation rates than other groups^{1,2}. Māori have a 2-3 times higher incidence of COPD, yet Hawke’s Bay dispensing data of LAMA inhalers does not reflect this.

Non-pharmacological interventions, such as smoking cessation and promoting physical activity are still the primary intervention in COPD management. The focus of this article is pharmacological management. The aim of pharmacological management is improving quality of life, prevention of exacerbations and symptom control^{1,3,4,5}. Effects of treatment of dyspnoea should be apparent within six weeks, while effects of exacerbation frequency may take 6 to 12 months to become apparent¹.

Long-acting muscarinic antagonists (LAMAs) are now recommended as initial long-acting bronchodilator, based on reduced exacerbations and fewer adverse effects compared to long-acting beta₂-adrenergic agonist (LABAs)^{1,3,4}. New guidelines reserve inhaled corticosteroid (ICS) treatment for patients who experience frequent exacerbations, those with eosinophilic COPD and patients with Asthma/COPD overlap syndrome.

Graph 1: Three month average (Nov 2020 - Jan 2021) dispensing of LAMA and LAMA/LABA inhalers per 1000 enrolled patients



SAMA and LAMA bronchodilators

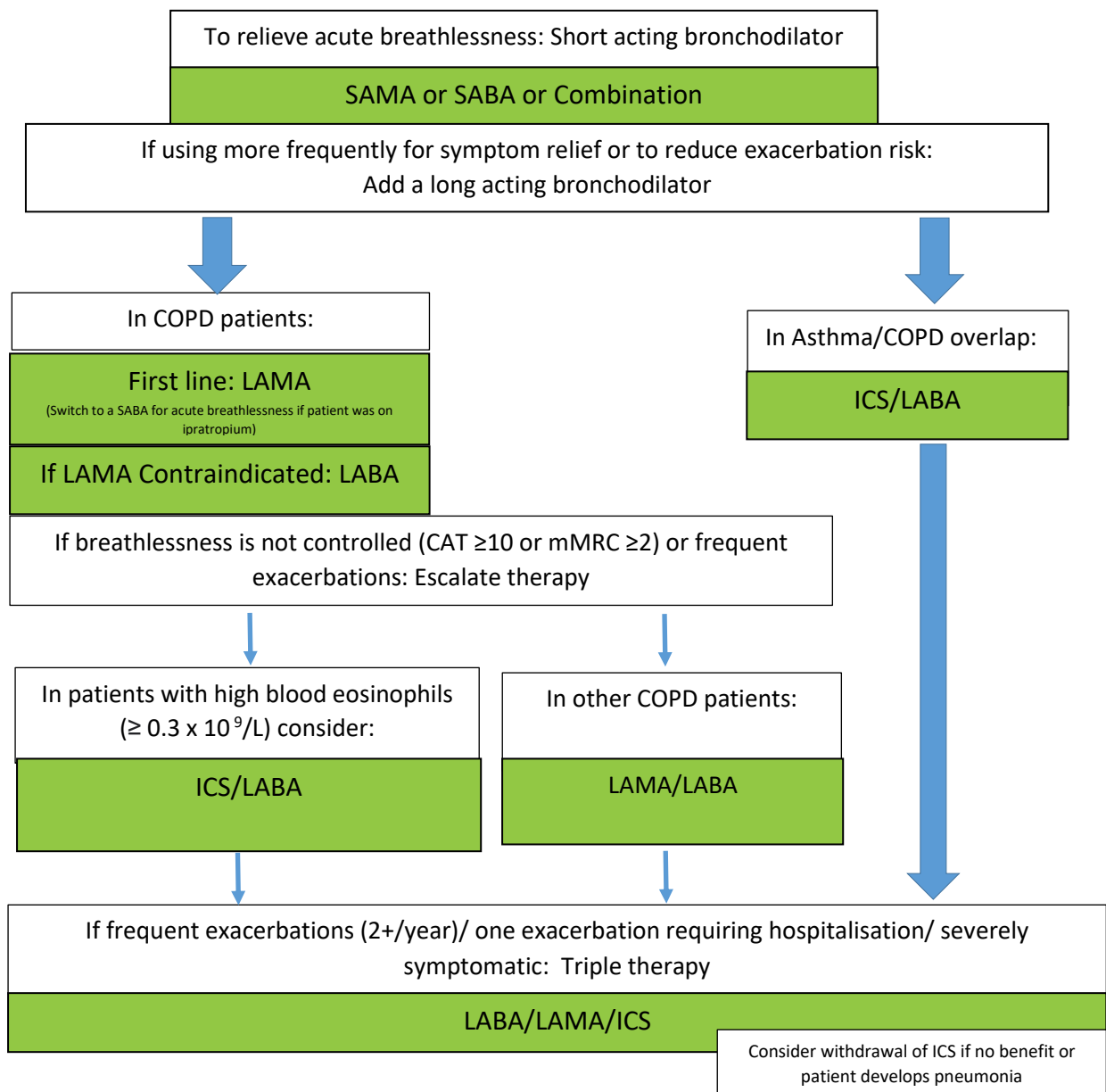
Antimuscarinics block the bronchoconstrictor effects of acetylcholine on M₃ muscarinic receptors expressed in airway smooth muscle³. Ipratropium is the only short-acting muscarinic antagonist

(SAMA) available in New Zealand. Tiotropium, glycopyrronium, and umeclidinium are available as long-acting muscarinic antagonists (LAMAs), stand-alone or in combination with long-acting beta₂-adrenergic agonist (LABAs)⁶ ([See Inhaler device identification chart](#)). When choosing which LAMA or LAMA/LABA to prescribe consider the device rather than specific medicine, including the patient in the decision making process.

Systemic absorption of SAMA/LAMA bronchodilators from the mouth and GI tract is low; however, some absorption from the lung does occur⁷. These inhalers should be used with caution in patients with bladder outflow obstruction or prostatic hyperplasia, due to the increased risk of acute urinary retention^{6,7}. Caution should also be taking in those susceptible to angle-closure glaucoma⁶. Some of the adverse effects are associated with all inhaled SAMA/LAMA bronchodilators are dry mouth and gastro-intestinal motility disorders cough. Less commonly, cardiac arrhythmias and paradoxical bronchospasm⁶.

Ipratropium should be withdrawn before initiating a LAMA due to the compounded risk of adverse effects. For as-needed symptom relief, patients may be prescribed a SABA.

The 1, 2, 3 of the Guideline Updates



Funding considerations and available products

PHARMAC requires all prescriptions for LAMAs alone to have an endorsement that the patient is being treated for diagnosed COPD. Spirometry is required to diagnose COPD. Asthma patients are not eligible for funding of LAMAs. The endorsement can be included in the instructions, for example: “Certified Condition” or “For COPD” or for Medtech® users there is an option to select the “Patient Meets Endorsement Criteria” box.

LABA/LAMA combinations require Special Authority with the criteria that patients be stabilised on a LAMA and that they are likely to receive additional benefit from a combination inhaler.

Tools available:

- Health Navigator NZ videos on how to correctly use a range of inhalers: <https://www.healthnavigator.org.nz/videos/i/inhaler-use/>
- Thalamus interactive dispensing data dashboard: <https://thalamus.nz/>
- Bpac^{nz} interactive COPD prescribing tool: <https://bpac.org.nz/copd-tool/>
- Māori health models: <https://www.health.govt.nz/our-work/populations/maori-health/maori-health-models>
- NZ Respiratory Guidelines COPD resources: <https://www.nzrespiratoryguidelines.co.nz/copdresources.html>
- Hawke’s Bay Pulmonary Rehabilitation service information: <http://www.ourhealthhb.nz/community-services/community-nursing-services/pulmonary-rehabilitation/pulmonary-long-term-management-programme/>
- COPD Assessment test (CAT): <https://www.catestonline.org/patient-site-test-page-english.html>

References:

1. Hancox R, Jones S, Baggott C, *et al.* New Zealand COPD guidelines: quick reference guide. NZMJ 2021;134 Available from: <https://www.nzrespiratoryguidelines.co.nz/copdguidelines.html> (Accessed April, 2021).
2. Barnard L, Zhang J. The impact of respiratory disease in New Zealand: 2018 update. 2019. Available from: www.asthmafoundation.org.nz/research/the-impact-of-respiratory-disease-in-new-zealand-2018-update (Accessed April, 2021).
3. Global Initiative for Chronic Obstructive Lung Disease. Global Strategy for the Diagnosis, Management and Prevention of Chronic Obstructive Pulmonary Disease: 2020 Report. 2020. Available from: <https://goldcopd.org/wp-content/uploads/2019/11/GOLD-2020-REPORT-ver1.0wms.pdf> (Accessed April, 2021).
4. Yang IA, Brown JL, George J, Jenkins S, McDonald CF, McDonald V, Smith B, Zwar N, Dabscheck E. The COPD-X Plan: Australian and New Zealand Guidelines for the management of Chronic Obstructive Pulmonary Disease 2020. Version 2.62, October 2020. Available from: <https://copdx.org.au/copd-x-plan/> (Accessed April, 2021).
5. bpac^{nz}. An update on the pharmacological management of stable COPD. bpac^{nz} June, 2020. Available from: <https://bpac.org.nz/2020/copd.aspx> (Accessed April, 2021).
6. New Zealand Formulary (NZF). Bronchodilators. NZFv106. 2021. Available from: https://nzf.org.nz/nzf_1674 (Accessed April, 2021).
7. Dweik, RA. Role of anticholinergic therapy in COPD. In: *UpToDate*, Post TW (Ed), UpToDate, Waltham, MA. (Accessed April, 2021).

RNZCGP CME activity:

Best Practice: Focus on Equity: Chronic Obstructive Pulmonary Disease (COPD) has been endorsed by The Royal New Zealand College of General Practitioners (RNZCGP) and has been approved for up to 0.5 CME credits for Continuing Professional Development (CPD) purposes. Reflect on your learning here: Complete [this quiz](#) to have your CME recorded.



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