



## The bpac<sup>nz</sup> COPD prescribing tool has been updated

The bpac<sup>nz</sup> COPD prescribing tool was developed based on the Global Initiative for Chronic Obstructive Lung Disease (GOLD 2016) strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease.<sup>1</sup> The GOLD guideline has been updated (2017) and now includes new assessment and treatment recommendations for patients with COPD (Table 1). The bpac<sup>nz</sup> COPD prescribing tool has been updated to incorporate these changes.

### FEV<sub>1</sub> no longer guides the choice of medicines

Forced expiratory volume in one second (FEV<sub>1</sub> – measured by spirometry) is no longer used by GOLD (2017) to help select inhaled medicines because symptoms and exacerbation rate are considered to be better guides. Furthermore, FEV<sub>1</sub> does not always correlate well with the patient's symptom severity or their exacerbation rate. Therefore, if spirometry is included in assessment, the severity of the patient's condition may be over or underestimated. Spirometry, however, remains an important factor in diagnosing and determining the prognosis of COPD, in combination with symptoms and exacerbation history.

### A short or long-acting bronchodilator can be prescribed for patients in category A

The bpac<sup>nz</sup> COPD prescribing tool uses the severity of the patient's symptoms and their exacerbation history to categorise patients from A – D. Patients in category A, i.e. less symptoms and low exacerbation risk, should be prescribed a

bronchodilator.<sup>2</sup> Treatment options for patients in category A include “as needed” use of either a SAMA, SABA or a fixed-dose combination SAMA/SABA, or daily use of a LAMA or LABA. A SABA/SAMA combination inhaler is more effective at improving symptom control and lung function than either medicine in isolation.<sup>2</sup> If patients do not obtain sufficient benefit from one bronchodilator, a switch to an alternative class of bronchodilator may be appropriate.<sup>2</sup>

### Treatment options are unchanged for patients in category B

For patients in category B, i.e. more symptoms and low exacerbation risk, a LAMA or a LABA is the first-line treatment option.<sup>2</sup> If the patient has persistent symptoms with a single long-acting bronchodilator, consider prescribing a LAMA/LABA combination inhaler.<sup>2</sup> These recommendations are unchanged from the GOLD (2016) guidelines.

### A LAMA is now the first-line treatment for patients in category C

Patients in category C, i.e. less symptoms and high exacerbation risk, should be prescribed a LAMA as a first-line treatment because:<sup>2</sup>

- LAMAs are superior to LABAs in preventing exacerbations
- The use of an ICS increases the risk of patients developing pneumonia

**Table 1:** Comparison of GOLD 2017 and GOLD 2016 COPD assessment and guidelines.

New GOLD (2017) guidance	Previous GOLD (2016) guidance
The patient's symptom severity and exacerbation rate are the sole guides when selecting inhaled medicines – forced expiratory volume in one second (FEV <sub>1</sub> ) is no longer used	The patient's symptom severity, exacerbation and FEV <sub>1</sub> were used to guide selection of inhaled medicines
For category A patients, either a SAMA, SABA, a fixed-dose combination SAMA/SABA, LAMA or a LABA are the first-line medicines	For category A patients, a SAMA, SABA, or a fixed-dose combination SAMA/SABA were the first-line medicines
For category C patients, a LAMA is the first-line medicine	For category C patients, a combination ICS/LABA or a LAMA were the first-line medicines
For category D patients, a combination LAMA/LABA is the first-line medicine	For category D patients, a combination ICS/LABA or a LAMA were the first-line medicines

A LAMA/LABA combination is the preferred treatment option for patients in category C who have persistent exacerbations with the use of a LAMA alone.<sup>2</sup> A combination LABA/ICS is still recommended in this category but now as a further second-line treatment option for patients in category C who have persistent exacerbations.

Previously (GOLD 2016), it was recommended that patients in category C be prescribed either a combination ICS/LABA or a LAMA as a first-line medicine.

### A LAMA/LABA is now the first-line treatment for patients in category D

Patients in category D have more symptoms than patients in category C and a high risk of exacerbations. These patients therefore require more intensive treatment and a combination LAMA/LABA is recommended as the first-line treatment because:<sup>2</sup>

- Combination LAMA/LABAs are superior to bronchodilator monotherapy in improving lung function, symptoms and quality of life
- There is evidence that LAMA/LABAs are superior to LABA/ICSs in preventing exacerbations and improving symptoms and quality of life
- Patients in Group D have a higher risk of pneumonia when treated with an ICS, compared to treatment with bronchodilators

If patients taking a LAMA/LABA continue to develop exacerbations GOLD recommends prescribing LAMA/LABA/ICS triple therapy or, as a secondary option they can be switched to an ICS/LABA.<sup>2</sup> If exacerbations persist in patients treated with LAMA/LABA/ICS triple therapy, consider withdrawing the ICS.<sup>2</sup>

Previously (GOLD 2016), it was recommended that patients in category D be prescribed a combination ICS/LABA or a

LAMA as a first-line medicine. The withdrawal of ICS treatment in patients with persistent exacerbations was not previously recommended.

### The risk of pneumonia associated with ICS use

There is good quality evidence that the use of an ICS increases the risk of patients with COPD developing pneumonia.<sup>2</sup> However, a combination ICS/LABA may still be an appropriate first-line treatment for some patients, e.g. those with asthma-COPD overlap.<sup>2</sup> Risk factors for pneumonia in patients with COPD when considering if treatment with an ICS is appropriate, include:<sup>2</sup>

- Current smoking
- Age over 55 years
- Prior history of exacerbations or pneumonia
- A body mass index (BMI) less than 25 kg/m<sup>2</sup>
- A high degree of breathlessness and/or severe airflow limitation

Patients who are prescribed an ICS/LABA who develop further exacerbations may benefit from the addition of a LAMA.<sup>2</sup>

### References

1. Global Initiative for Chronic Obstructive Lung Disease. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease (updated 2016). 2016. Available from: <http://goldcopd.org/global-strategy-diagnosis-management-prevention-copd-2016/> (Accessed Dec, 2017).
2. Global Initiative for Chronic Obstructive Lung Disease. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease. 2017. Available from: <http://goldcopd.org/gold-2017-global-strategy-diagnosis-management-prevention-copd/> (Accessed Dec, 2017).



The bpac<sup>nz</sup> COPD tool is available online at:  
[www.bpac.org.nz/copd](http://www.bpac.org.nz/copd)