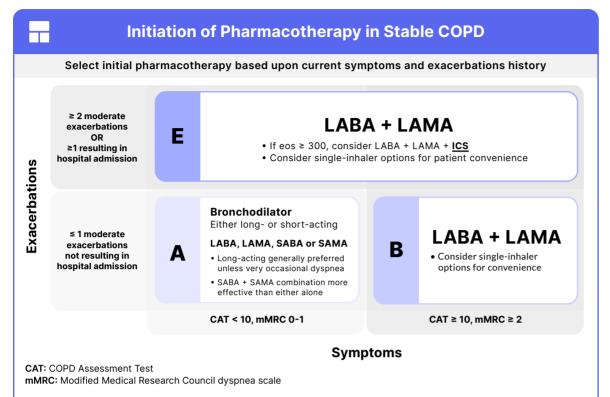
Pharmacotherapy for COPD

Based on the 2024 Global Initiative for Chronic Lung Disease (GOLD) Report

Reference: Global Initiative for Chronic Obstructive Lung Disease. Global Strategy for the Diagnosis, Management, and Prevention of

Chronic Obstructive Pulmonary Disease (2024 Report). https://goldcopd.org/2024-gold-report/





- <u>Improve:</u> symptoms, exercise tolerance, health
- Reduce risks of: disease progression, exacerbations, death

COPD Exacerbations

- Minimize the effects of the exacerbation
- Prevent future exacerbations

Pharmacotherapy Key Points

Inhaled Medications

- Choice of inhaler device should be individualized for optimal efficacy, access, cost, patient preference, and ability to properly use
- Must ensure proficiency in proper use of inhalers; educate and demonstrate Assess inhaler technique and adherence prior to therapy modification

Bronchodilators

- Bronchodilators are <u>first-line</u> for all diagnosed with COPD
- Long-acting agents (e.g., LABA, LAMA) are preferred over short-acting (e.g., SABA, SAMA), except in those with only occasional dyspnea and w immediate relief is needed in those on long-acting maintenance therapy
- Combination of [LAMA + LABA] is preferred when starting treatment with long-acting bronchodilators; patients not controlled on a single long-acting bronchodilator should be escalated to dual (more effecti
- · LAMAs provide greater exacerbation risk reduction than LABAs
- Combination of [SABA + SAMA] is more effective than either alone
- Inhaled bronchodilators are recommended over oral bronchodilators
- Theophylline is not recommended unless other bronchodilators are either unavailable or unaffordable for long-term treatment

Anti-Inflammatory Agents

- <u>Long-term monotherapy</u> with ICS/oral steroids is <u>not recommended;</u> low efficacy, increases risk for side effects (e.g., <u>pneumonia</u>)
- If ICS indicated, [ICS + LABA + LAMA] is <u>superior to & preferred over</u> [LABA + ICS];
 [ICS + LABA + LAMA] has proven <u>mortality benefit</u> versus [LABA + LAMA] in those with symptomatic COPD and history of exacerbations
- ICS can be added to [LABA + LAMA] regimens to improve symptoms and reduce exacerbations in those with signs of inflammation
- (e.g., comorbid asthma, eos ≥ 300 or present with an exacerbation history) ICS should be included if features of asthma are present
- Addition of PDE4 inhibitor to [LABA + LAMA (+/- ICS)] may be considered in those with severe to very severe airflow limitation, chronic bronchitis, and exacerbations
- In those with exacerbations despite appropriate therapy, macrolides (e.g., azithromycin) may be considered (especially in former smokers)

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Follow-Up Pharmacotherapy Management in Stable COPD

COPD management is an individualized, continuous cycle of assessment and treatment adjustment

Is COPD controlled?

Review:

- Symptoms (e.g., dyspnea)
- Exacerbations

- Inhaler technique and adherence
- Non-pharmacological interventions

- Consider escalation or de-escalation
- · Switch device or molecules



Continue current therapy



eos: Blood eosinophil count ICS: Inhaled corticosteroid

LABA: Long-acting beta-agonist LAMA: Long-acting muscarinic antagonist SABA: Short-acting beta-agonist SAMA: Short-acting muscarinic antagonist

Initial Treatment: SABA (with or without SAMA)

- Initiate maintenance with long-acting bronchodilators as soon as stable Consider adding ICS to [LAMA + LABA] if frequent exacerbations with ↑ eos
- If severe exacerbation, consider **systemic corticosteroids** (duration: generally **≤5 days**)
- If indicated (e.g., signs of bacterial infection), give antibiotics (duration: 5-7 days)



No

Primary Issue?* Dyspnea (shortness of breath)

LAMA or LABA

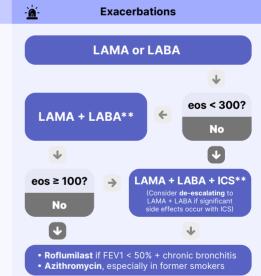


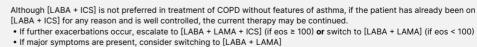
LAMA + LABA**



- Optimize non-pharmacological interventions
- Assess and address other causes of symptoms

Consider switching inhaler/medication





*If both dyspnea and exacerbation must be addressed, use the exacerbation pathway **For patients on [LAMA + LABA] or [LAMA + LABA + ICS], single-inhaler options should be considered for convenience

Pharmacotherapy Management of **Acute Exacerbations***

*Non life-threatening

