

Pharmacological Therapy and Treatment Options

Chronic Obstructive Pulmonary Disease (COPD)

447

Not all people with Chronic Obstructive Pulmonary Disease (COPD) have the same symptoms, and treatment may differ from person to person. Providers can work to create the best plan to address the COPD symptoms and an individual's personal needs. Please review the information below regarding pharmacological therapy and treatments for patients with COPD.

Non-pharmacologic approaches to treatment for **all Superior HealthPlan Medicaid (STAR, STAR Health, STAR Kids, STAR+PLUS), CHIP, STAR+PLUS Medicare-Medicaid Plan (MMP), Ambetter from Superior HealthPlan and Wellcare By Allwell (HMO and HMO SNP) members with COPD** include the following:

- Avoidance of risk factor(s) such as smoking^(1,2)
- Up-to-date with influenza, pneumococcal, COVID-19 and pertussis vaccinations⁽³⁻⁶⁾
- Regular physical activity
- Regular review/correction of inhaler technique⁷
- Long-term oxygen therapy if chronic hypoxemia⁷
- Pulmonary rehabilitation⁸

Management of stable COPD: Initiation of therapy based on the GOLD ABE assessment of symptoms and exacerbation⁹

Gold Group	Symptoms	Exacerbation History	Suggested Treatment
A	Less symptomatic (mMRC 0-1 OR CAT < 10)	0 or 1 (not leading to hospital admission)	Short- or a long-acting bronchodilator <i>(SABA, SAMA, LAMA, or LABA)</i>
B	More symptomatic (mMRC ≥ 2 OR CAT ≥ 10)	0 or 1 (not leading to hospital admission)	LABA + LAMA combination
E	Less symptomatic (mMRC 0-1 OR CAT < 10) OR More symptomatic (mMRC ≥ 2 OR CAT ≥ 10)	≥2 or ≥1 leading to hospital admission	LAMA + LABA <i>consider LABA+LAMA+ICS if blood eos are ≥ 300</i>

*mMRC: modified Medical Research Council dyspnea scale; CAT: COPD Assessment Test; SABA: short-acting beta2-agonist; SAMA: short-acting muscarinic antagonist; LABA: long-acting beta-agonist; LAMA: long-acting muscarinic antagonist; ICS: inhaled corticosteroids; eos: blood eosinophil count in cells per microliter

Follow-up Treatment Modification Based on Dyspnea⁹

Current	New Treatment
LAMA or LABA	LAMA + LABA

Follow-up Treatment Modification Based on Exacerbations⁹

Current Treatment	New Treatment
LAMA or LABA and if blood eos < 300	LAMA + LABA
LAMA or LABA and if blood eos \geq 300	LABA + LAMA + ICS
LAMA + LABA and if blood eos \geq 100	LABA + LAMA + ICS
LAMA + LABA and if blood eos < 100	Add roflumilast or azithromycin
LABA + LAMA + ICS	Add roflumilast or azithromycin

*At a minimum, all members should have a SABA inhaler for as needed basis rescue inhaler.

*If patient is under treatment with LABA + ICS and is well controlled, continuation with LABA + ICS is an option. If patient does develop further exacerbations, escalate therapy to LABA + LAMA + ICS if blood eos count is \geq 100 or LABA + LAMA if < 100. If major symptoms, switching to LABA + LAMA should be considered.

Commonly used medications in COPD:

- **SABA:** albuterol, levalbuterol, fenoterol
- **LABA:** salmeterol, olodaterol, arformoterol, formoterol, indacaterol
- **SAMA:** Ipratropium bromide
- **LAMA:** tiotropium, umeclidinium, glycopyrronium, aclidinium bromide
- **Combination LABA + LAMA:** olodaterol/tiotropium, vilanterol/umeclidinium, formoterol/glycopyrrolate, formoterol/aclidinium
- **Combination SABA+ SAMA:** albuterol/ipratropium
- **Combination LABA + ICS:** fluticasone/salmeterol, budesonide/formoterol, formoterol/mometasone
- **LABA + LAMA + ICS:** fluticasone/umeclidinium/vilanterol, budesonide/glycopyrrolate/formoterol, beclomethasone/glycopyrronium/formoterol

*Formulary options for all medications can be found on [Superior's website](#)

¹Eisner MD, Anthonisen N, Coultas D, et al. An official American Thoracic Society public policy statement: Novel risk factors and the global burden of chronic obstructive pulmonary disease. Am J Respir Crit Care Med 2010; 182(5): 693- 718. 11.

²Salvi SS, Barnes PJ. Chronic obstructive pulmonary disease in non-smokers. Lancet 2009; 374(9691): 733-43.

³Wongsurakiat P, Maranetra KN, Wasi C, Kositanont U, Dejsomritrutai W, Charoenratanakul S. Acute respiratory illness in patients with COPD and the effectiveness of influenza vaccination: a randomized controlled study. Chest 2004; 125(6): 2011-20

⁴Tomczyk S, Bennett NM, Stoecker C, et al. Use of 13-valent pneumococcal conjugate vaccine and 23-valent pneumococcal polysaccharide vaccine among adults aged \geq 65 years: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Morb Mortal Wkly Rep 2014; 63(37): 822-5.

⁵Centers for Disease Control and Prevention Mortality and Morbidity Weekly Report. Use of Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis Vaccines: Updated Recommendations of the Advisory Committee on Immunization Practices — United States, 2019, online article available here: <https://www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htm> [accessed Oct 2021].

⁶Thompson MG, Stenehjem E, Grannis S, et al. Effectiveness of Covid-19 Vaccines in Ambulatory and Inpatient Care Settings. N Engl J Med 2021.

⁷Cranston JM, Crockett AJ, Moss JR, Alpers JH. Domiciliary oxygen for chronic obstructive pulmonary disease. Cochrane Database Syst Rev 2005; (4): CD001744.

⁸Spruit MA, Singh SJ, Garvey C, et al. An official American Thoracic Society/European Respiratory Society statement: key concepts and advances in pulmonary rehabilitation. Am J Respir Crit Care Med 2013; 188(8): e13-64.

⁹Global Initiative for Chronic Obstructive Lung Disease. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease. Updated 2024. Global initiative for Chronic Obstructive Lung Disease website. Accessed 10/7/2024. https://goldcopd.org/wp-content/uploads/2024/02/GOLD-2024_v1.2-11Jan24_WMV.pdf