

COPD for Primary Care

COPD is umbrella term for various clinical entities with multiple causes of airflow obstruction that is not fully reversible.

1) Risk Factors:

- a) **Smoking-#1 cause and should be assessed and addressed at each visit**
- b) Others
 - i. Occupational exposure to dust/fumes/second-hand smoke
 - ii. Serious childhood respiratory infection
 - iii. GI Reflux
 - iv. Alpha-1 Antitrypsin deficiency

2) Signs/Symptoms

- a) Chronic Cough or cough with sputum production
- b) Dyspnea on exertion
- c) Wheezing and chest tightness
- d) Fatigue

3) Diagnosis

- a) Screening spirometry for anyone with symptoms above
- b) Asymptomatic screening not recommended
- c) **FEV1/FVC <0.7 confirms Airflow obstruction (BEGIN TREATMENT)**
- d) Follow up with yearly spirometry if symptoms persist

4) Chronic Treatment

- a) SMOKING CESSATION
 - i) Only treatment shown to prolong life and delay lung function decline
- b) Pulmonary Rehab
 - ii) Increases exercise tolerance, decreases all cause mortality after COPD exacerbation
- c) Oxygen therapy
 - iii) $pO_2 < 55$ or O_2 Saturation $< 88\%$ on Room Air
 - (1) will prolong life but not decrease symptoms
- d) Medications:
 - iv) See Next page for Medication flow chart
 - v) Short Acting Bronchodilator for all (inhaler and nebulizer)
 - vi) Best evidence with triple therapy (LAMA + LABA + ICS) for patients with symptoms AND history of frequent or severe exacerbations

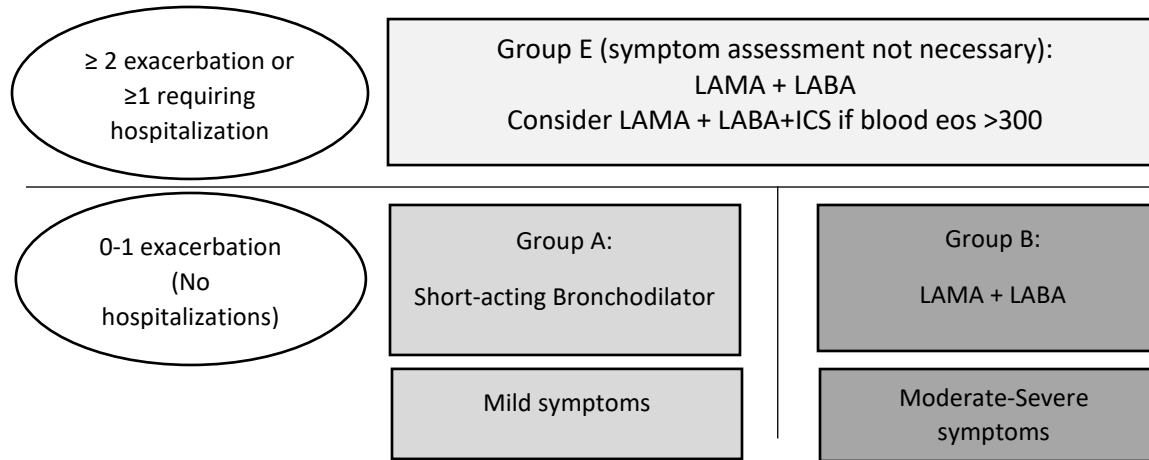
5) Acute Treatment/ COPD Exacerbations

- a) Short acting B_2 agonist (preferred by nebulization)
 - vii) 1 treatment every 30-45 min x 3 before going to ER
 - (1) Ensure patient has at home to use
- b) Systemic steroids
 - i) Prednisone 40mg daily x 5 days
 - (1) Higher doses/IV not proven to be better. Potentially prolongs hospitalization
- c) Antibiotics
 - i) Only if purulent sputum (change in color or volume) for duration of 5-14 days

6) Post-hospitalization

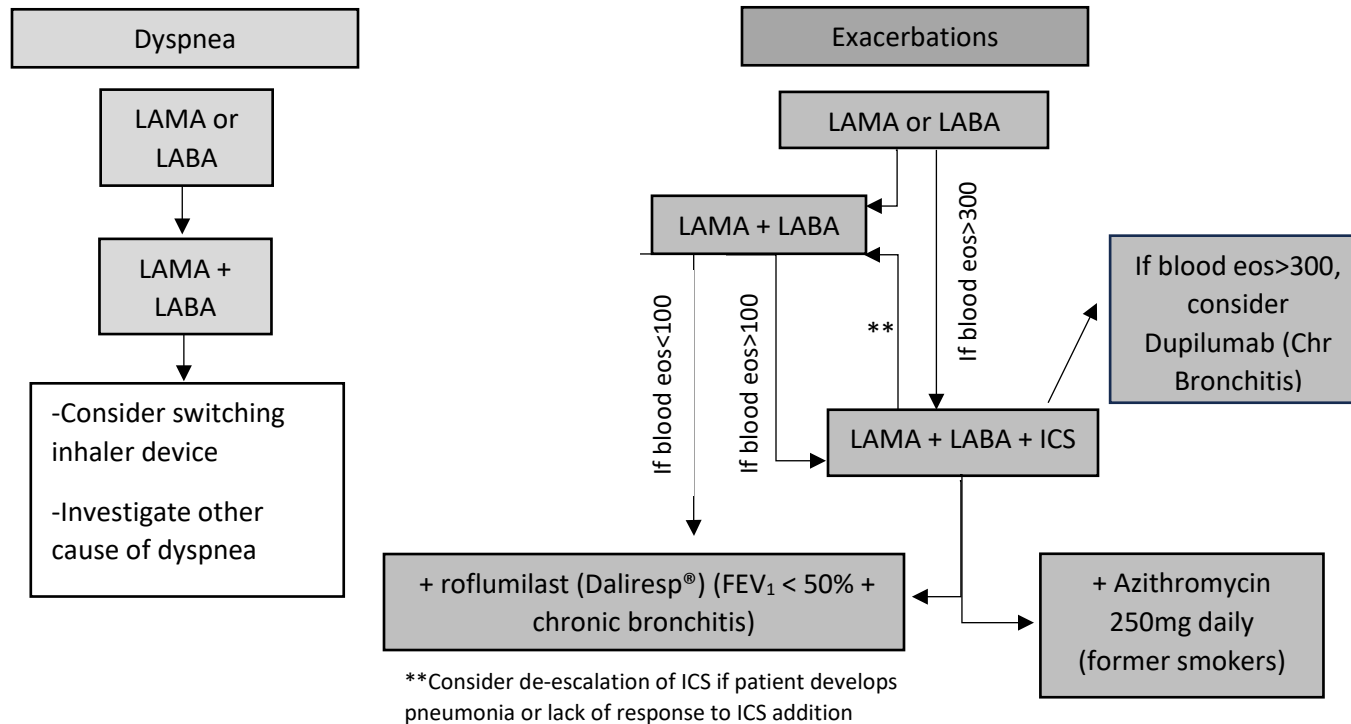
- a) PULMONARY REHAB for all patients
- b) Advanced Care Planning
- c) Consider providing on hand steroids +/- antibiotics
- d) Consider Pulmonary referral

Initial Pharmacologic Treatment (Per GOLD Guidelines 2024)



Follow-Up Pharmacological Treatment (Per GOLD Guidelines 2024)

- If response to initial treatment is appropriate, maintain that therapy
- If not, consider predominant trait and treat according to below flow chart
- At each visit, assess adherence and discuss inhaler technique (critical to efficacy)



LAMA (Long-Acting Muscarinic Antagonists)	
Incruse Ellipta® (umeclidinium)	Once daily
Spiriva HandiHaler/Respimat® (tiotropium)	Once daily
Tudorza Pressair® (aclidinium)	Twice daily
Yupelri® (revefenacin for nebulizer)	Once daily
LABA (Long-Acting Beta ₂ Agonist)	
Brovana® (arformoterol-nebulizer)	Twice daily
Perforomist® (formoterol-nebulizer)	Twice daily
Serevent Diskus® (salmeterol)	Twice daily
Striverdi® (olodaterol)	Once daily
LAMA + LABA Combination Inhalers	
Anoro Ellipta® (umeclidinium + vilanterol)	Once daily
Bevespi® (glycopyrrolate + formoterol)	Twice daily
Duaklir® (aclidinium + formoterol)	Twice daily
Stiolto® (tiotropium + olodaterol)	Once daily
Inhaled Corticosteroid (ICS) + LABA	
Advair Diskus/HFA® (fluticasone + salmeterol)	Twice daily
AirDuo Respiclick/Digihaler® (fluticasone + salmeterol-lower salmeterol dose than Advair)	Twice daily
Breo Ellipta® (fluticasone + vilanterol)	Once daily
Dulera® (mometasone + formoterol)	Twice daily
Symbicort® (Budesonide + formoterol)	Twice daily
Wixela Inhub® (fluticasone + salmeterol)	Twice daily
LAMA + LABA + ICS	
Breztri® (glycopyrrolate+ formoterol + budesonide)	Twice daily
Energair® (glycopyrrolate + indacaterol + mometasone)	Once daily
Trelegy Ellipta® (umeclidinium + vilanterol + fluticasone)	Once daily

Bolded products are available as generics, may be lower cost. Often formulation dependent

References

1. Global Initiative for Chronic Obstructive Lung Disease. www.goldcopd.org. Accessed 12/22/2024
2. Celli BR, Wedzicha JA. Update on Clinical Aspects of Chronic Obstructive Pulmonary Disease. *New England Journal of Medicine*. 2019;381(3):1257-1266.
3. Lindenauer PK, Stefan MS, Pekow PS, et al. Association between initiation of pulmonary rehabilitation after hospitalization for COPD and 1-year survival among medicare beneficiaries. *JAMA* 2020;323(18):1813.
4. Albert RK, Connett J, Bailey WC, et al. Azithromycin for Prevention of Exacerbation of COPD. *New England Journal of Medicine*. 2011;365:689-698.