

# 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

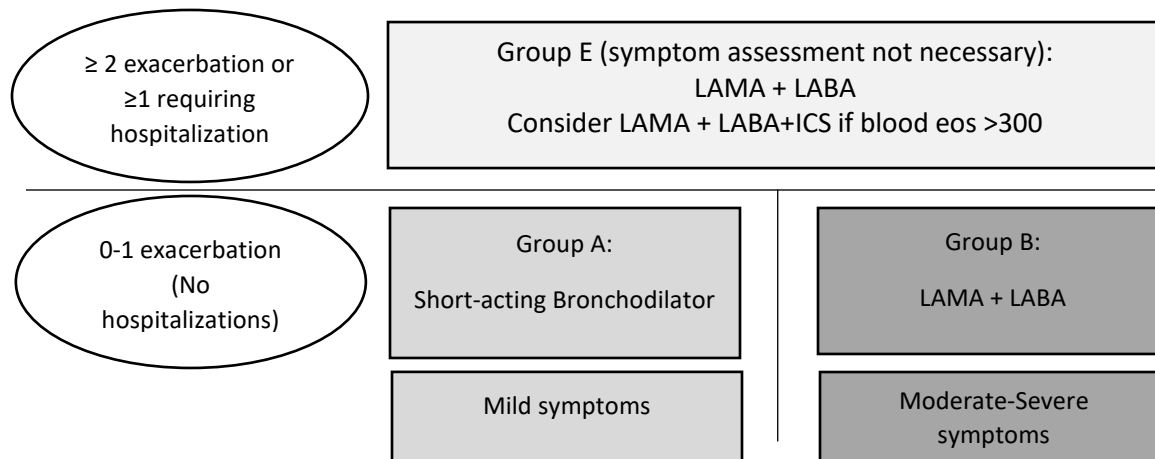
## 5) Acute Treatment/ COPD Exacerbations

- 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

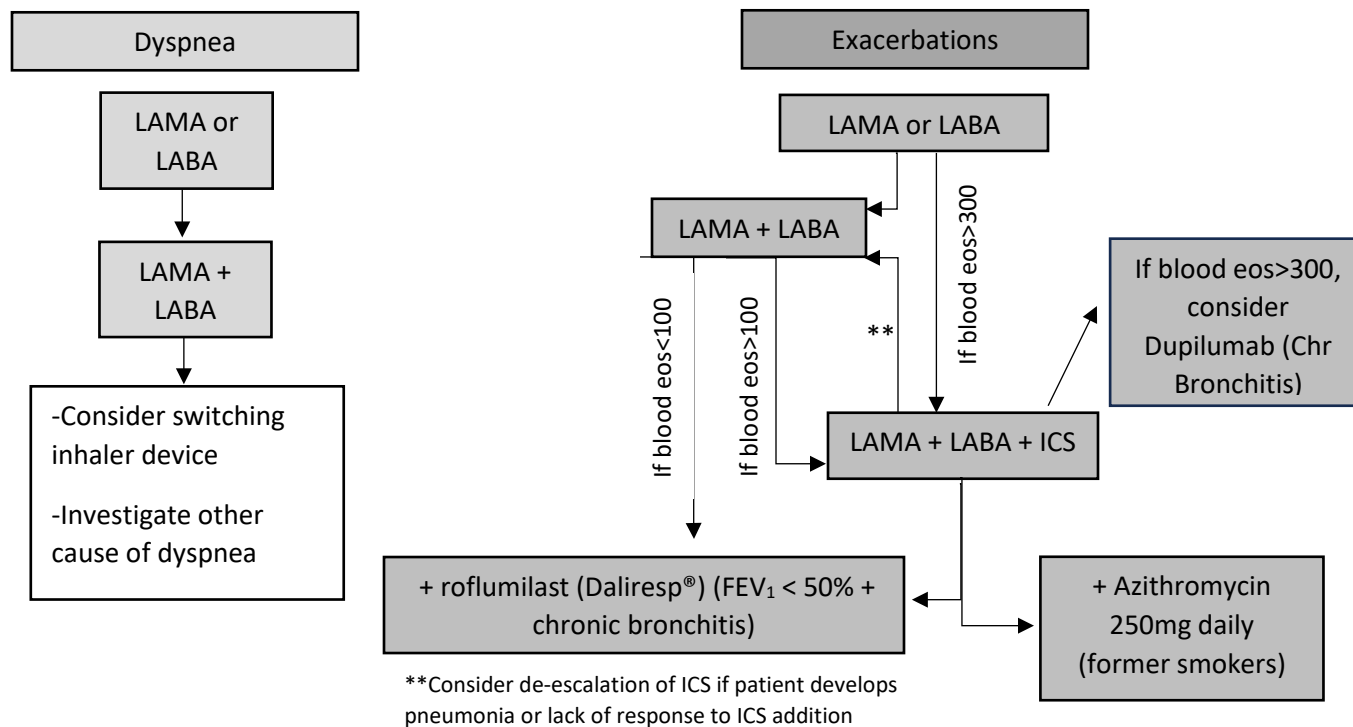
- a) PULMONARY REHAB for all patients
- b) Advanced Care Planning
- c) Consider providing on hand steroids +/- antibiotics
- d) Consider Pulmonary referral

### 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
<b>Spiriva HandiHaler/Respimat®</b> (tiotropium)	Once daily
Tudorza Pressair® (aclidinium)	Twice daily
Yupelri® (revefenacin for nebulizer)	Once daily
LABA (Long-Acting Beta <sub>2</sub> Agonist)	
<b>Brovana®</b> (arformoterol-nebulizer)	Twice daily
<b>Perforomist® (formoterol-nebulizer)</b>	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	
<b>Advair Diskus/HFA®</b> (fluticasone + salmeterol)	Twice daily
<b>AirDuo Respiclick/Digihaler®</b> (fluticasone + salmeterol-lower salmeterol dose than Advair)	Twice daily
<b>Breo Ellipta®</b> (fluticasone + vilanterol)	Once daily
Dulera® (mometasone + formoterol)	Twice daily
<b>Symbicort®</b> (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](http://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.