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COPD

Diagnosis:

CONDUCT post bronchodilator spirometry if: Smokers >40yo with dyspnea, cough or frequent RTIs

DIAGNOSIS confirmed if: FEV_1 <80% of the predicted normal value, and FEV_1/FVC <0.70

Assess Severity:

	CTS Classification	MRC scale	Classification by lung fxn
Mild	Dyspnea when walking quickly on level or slight hill	MRC 2	$FEV_1 \geq 80\%$ predicted, $FEV_1/FVC < 0.70$
Mod	Dyspnea after a few min on flat, or forced to stop~100 m	MRC 3-4	$50\% \leq FEV_1 < 80\%$ predicted, $FEV_1/FVC < 0.7$
Severe	Dyspnea with dressing, unable to leave house, or the presence of chronic resp failure or signs of right heart failure.	MRC 5	$30\% \leq FEV_1 < 50\%$ predicted, $FEV_1/FVC < 0.7$. $FEV_1 < 30\%$ predicted classified as Very Severe.

Management of Stable COPD:

All Patients

① smoking cessation
② exercise & education
③ Influenza vaccine (annually)
④ pneumococcal vaccine – repeat every 5-10 years
⑤ bronchodilators

⑥ Pulmonary rehabilitation if dyspneic with limited exercise ability, despite good Rx.
⑦ Home O_2 if PaO2 ≤ 55 mmHg, or PaO2<60mmHg with bilateral ankle edema, cor pulmonale, or hematocrit of >56%.
⑧ Surgical treatment in some patient populations

	Bronchodilator Pharmacotherapy		
	Mild	Mod /Severe with <1 AECOPD/yr	Mod /Severe with ≥1 AECOPD/yr
1st Line	SABD prn	SABD prn + LAMA or LABA	SABD prn + LAMA + ICS/LABA
2nd Line	SABD prn + LAMA or LABA	SABD prn + LAMA + LABA	SABD prn + LAMA + ICS/LABA + theophylline
3rd Line		SABD prn + LAMA + LABA/ICS	

SABD=short acting bronchodilators incl. beta agonists and muscarinic antagonists. LAAC = long acting anti-cholinergic (a.k.a. Long acting anti-muscarinic antagonist (LAMA). LABA= long acting beta agonist. ICS= inhaled corticosteroids

Acute Exacerbations:

- Definition: Sustained worsening of one or more of **dyspnea, cough**, or **sputum production**, leading to change in Rx.
- ≥50% of AECOPD are infectious. Other causes: CHF, allergens, irritants, PE.
- **Indication for hospital admission**: Severe symptoms/signs, considerable comorbidities,
- inadequate home support. May require ICU transfer & BiPAP or invasive ventilation. **Hard to wean off.*
- **Principles of Management**:
  ①Assess ABCs. Consider O_2 therapy if risk of hypoxia
  ②Give increased dose of SABA+SAMA
  ③Oral or parenteral corticosteroids
  ④Antibiotics for more severe purulent AECOPD

When to engage in end-of-life discussions:

- FEV_1<30% predicted, inspiratory capacity <80% predicted
- MRC grades 4-5 (see severity box above)
- Poor nutritional status (BMI<19kg/m^2)
- Presence of pulm htn
- Recurrent severe AECOPD requiring hospitalizations

Key Reference: 1) DE O'Donnell, et al. Canadian Thoracic Society recommendations for management of COPD Guidelines-2008 Update -highlights for primary care. *Can Respir J* 2008:15(Suppl A):1A-8A. 2) Guideline for The Management of AECOPD. Towards Optimized Practice 2006; 1-8. 3) Evensen AE, et al. Management of COPD exacerbations. *Am Fam Physician*. 2010; 81(5)607-13.