The authors and reviewers have made every attempt to ensure the information in the Family Medicine Clinical Cards is correct - it is possible that errors may exist. Accordingly, the source references or other authorities should be consulted to aid in determining the assessment and management plan of patients. The Cards are not meant to replace customized patient assessment nor clinical judgment. They are meant to highlight key considerations in particular clinical scenarios, largely informed by relevant guidelines in effect at the time of publication. The authors cannot assume any liability for patient outcomes when these cards are used.

# Canadian Family Medicine Clinical Card

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COPD

#### Diagnosis:

CONDUCT post bronchodilator spirometry if: Smokers >40yo with dyspnea, cough or frequent RTIs DIAGNOSIS confirmed if: FEV<sub>1</sub> <80% of the predicted normal value, and FEV<sub>1</sub>/FVC <0.70

### Assess Severity:

Mild on level or slight hill     MRC 2 on level or slight hill     FEV₁/FVC<0.70		CTS Classification	MRC scale	Classification by lung fxn
Mod flat, or forced to stop-100 m         MRC 3-4 predicted, FEV₁<80% predicted, FEV₁/FVC<0.7	Mild	Dyspnea when walking quickly	MRC 2	FEV <sub>1</sub> ≥80% predicted,
flat, or forced to stop-100 m  Severe Dyspnea with dressing, unable to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe to leave house, or the presence to leave house, or the presence to leave house. Severe house, or the presence to leave house, or the presence to leave house. Severe house, or the presence to leave house, or the presence to leave house. Severe house, the presence house h		on level or slight hill		FEV <sub>1</sub> /FVC<0.70
Severe Dyspnea with dressing, unable to leave house, or the presence MRC 5 30%≤FEV₁<50% predicted, FEV₁/FVC<0.7.	Mod		MRC 3-4	50%≤FEV <sub>1</sub> <80% predicted,
to leave house, or the presence FEV <sub>1</sub> /FVC<0.7.		flat, or forced to stop~100 m		
	Severe	Dyspnea with dressing, unable	MRC 5	
		to leave house, or the presence		FEV <sub>1</sub> /FVC<0.7.
of chronic resp failure or signs FEV <sub>1</sub> <30% predicted		of chronic resp failure or signs		FEV <sub>1</sub> <30% predicted
of right heart failure. classified as Very Severe.		of right heart failure.		classified as Very Severe.

## Management of Stable COPD:

- (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<sub>2</sub> 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	Mod /Severe
		with <1	with ≥1
		AECOPD/yr	AECOPD/yr
st	SABD	SABD prn +	SABD prn +
	prn	LAMA or	LAMA +
		LABA	ICS/LABA
nd	SABD	SABD prn +	SABD prn +
	prn +	LAMA + LABA	LAMA +
	LAMA		ICS/LABA +
	or		theophylline
	LABA		
rd		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:
  - 1 Assess ABCs. Consider O<sub>2</sub> therapy if risk of hypoxia
  - 2) Give increased dose of SABA+SAMA
  - ③ Oral or parenteral corticosteroids
  - Antibiotics for more severe purulent AECOPD

#### When to engage in endof-life discussions:

- FEV<sub>1</sub><30% predicted, inspiratory capacity
   80% predicted
- MRC grades 4-5 (see severity box above)
- Poor nutritional status (BMI<19kg/m²)</li>
- Presence of pulm htn
- Recurrent severe AECOPD requiring hospitalizations

Key Reference: 1) D.G. O'Donnell, et. al. Canadian Thoracic Society recommendations for management of COPD Guideland 200208 Update: highlights for primary care. Can Respir. J. 2008; 15(Sup). A); 1:A. A.S. Q. Idideline for The Management of AECOPD. Towards Optimized Practice 2006; 1:8. 3) Evenson AE, et al. Management of COPD exacerbations. Am Fam Physician. 2010; 81(5):607-13.