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_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**:
  ① Assess ABCs, consider O_2 therapy if risk of hypoxia
  ② Give increased dose of SABA+SAMA
  ③ Oral or parenteral corticosteroids
  ④ Antibiotics 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 References: O'Donnell DE, 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. Guideline for The Management of AECOPD. *Towards Optimized Practice 2006*:1-8. Evensen AE, et al. Management of COPD exacerbations. *Am Fam Physician*. 2010; 81(5)607-13.