

A Breath of Fresh Air! Targeted Screening and Management of COPD in Primary Care

Pearls for practice

Dr. Mohit Bhutani

Key Messages

- COPD is a debilitating, progressive and fatal respiratory disease. It is common and can be prevented. With proper management, there will be improved quality of life, a reduction in exacerbations and mortality.
- Tobacco exposure remains the number one cause for the development of COPD, other causes can be related to occupational exposure, indoor and outdoor pollution, family history of COPD (alpha 1-antitrypsin deficiency)
- As lung function declines, symptoms in COPD worsen. Dyspnea leads to deconditioning and further inactivity.
- The higher the dyspnea, the greater the risk for COPD exacerbations. Individuals are considered to be:
 - **Low risk** if they had 1 or less moderate exacerbation in the last year, and did not require an ED visit or hospitalization
 - **High risk** if they had 2 or more moderate or 1 or more severe exacerbation (requiring hospitalization or ED visit) in the last year
- Think COPD – consider risk factors, their symptoms and screen using spirometry for diagnosis
- The Canadian Lung Health test increases pretest probability. If YES to any of the questions, patient should be sent for screening spirometry.
- Spirometry is the gold standard for diagnosis of COPD. A full Pulmonary Function Test is NOT always required.
- Classification by Impairment of lung function: GOLD Grades

Canadian Lung Health Test ¹		
If you are over 40 and smoke or used to smoke, you may already have COPD. Take this quick test to screen for symptoms of COPD:		
	Yes	No
1. Do you cough regularly?	<input type="checkbox"/>	<input type="checkbox"/>
2. Do you cough up phlegm regularly?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do even simple chores make you short of breath?	<input type="checkbox"/>	<input type="checkbox"/>
4. Do you wheeze when you exert yourself (exercise, go upstairs)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Do you get many colds, and do your colds usually last longer than your friends' colds?	<input type="checkbox"/>	<input type="checkbox"/>

GOLD Grades and Severity of Airflow Obstruction in COPD (based on post-bronchodilator FEV1)		
Table 2.6		
In COPD patients (FEV1/FVC < 0.7):		
GOLD 1:	Mild	FEV1 ≥ 80% predicted
GOLD 2:	Moderate	50% ≤ FEV1 < 80% predicted
GOLD 3:	Severe	30% ≤ FEV1 < 50% predicted
GOLD 4:	Very Severe	FEV1 < 30% predicted

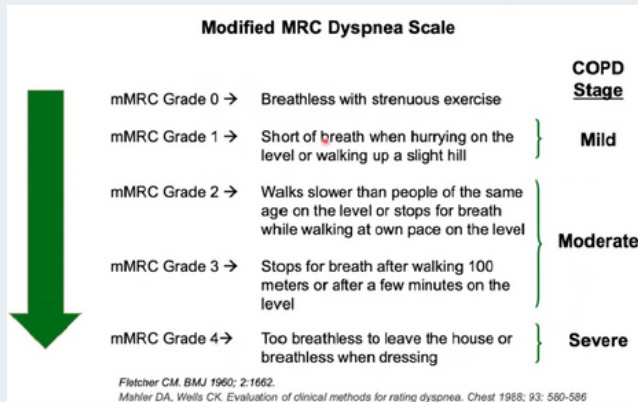
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There are 3 parameters to consider once a COPD diagnosis has been confirmed to ensure the right medication is given to the right patient at the right time:

- Assessment of their Dyspnea, using the mMRC score,
- Assessment of their Quality of Life (QoL) using the CAT score (reliable measure of the impact of COPD on a patient's health status, Score <10 low impact of COPD on health status)
- A patients future risk for COPD exacerbations.



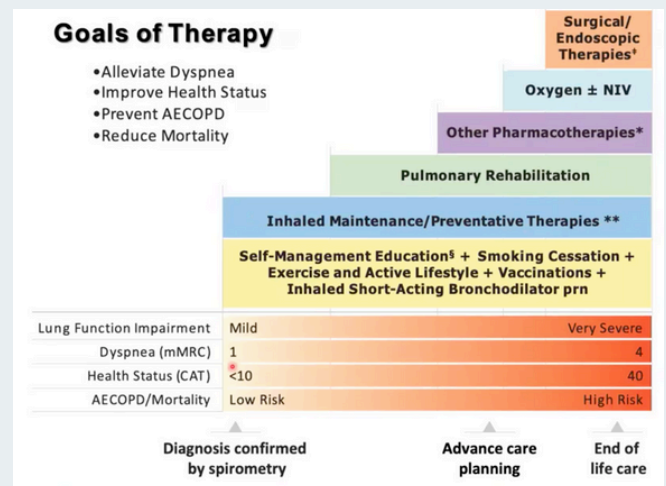
- **Goals of therapy:** alleviate dyspnea, improve health status, prevent exacerbations of COPD, reduce mortality.
- Delays in optimal treatment is associated with a 43% increase risk of future COPD related hospitalization and ED visits as well as mortality.
- An optimized triple therapy regimen in high risk populations reduces mortality and the risk of exacerbations (32%)

CAT™ Assessment Figure 2.2

For each item below, place a mark (x) in the box that best describes you currently. Be sure to only select one response for each question.

EXAMPLE: I am very happy	0	1	2	3	4	5	I am very sad	Score
I never cough	0	1	2	3	4	5	I cough all the time	
I have no phlegm (mucus) in my chest at all	0	1	2	3	4	5	My chest is completely full of phlegm (mucus)	
My chest does not feel tight at all	0	1	2	3	4	5	My chest feels very tight	
When I walk up a hill or one flight of stairs I am not breathless	0	1	2	3	4	5	When I walk up a hill or one flight of stairs I am very breathless	
I am not limited doing any activities at home	0	1	2	3	4	5	I am very limited doing activities at home	
I am confident leaving my home despite my lung condition	0	1	2	3	4	5	I am not at all confident leaving my home because of my lung condition	
I sleep soundly	0	1	2	3	4	5	I don't sleep soundly because of my lung condition	
I have lots of energy	0	1	2	3	4	5	I have no energy at all	

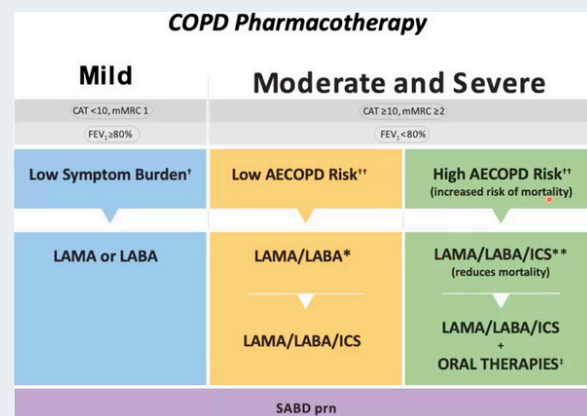
Reference: Jones et al. ERJ 2009; 34 (3): 648-54. TOTAL SCORE:



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- COPD Management for the vast majority of patients in clinical practice reduce to:
 - dual bronchodilators (LAMA & LABA)
 - 2 single inhalers triple therapy (ICS/LAMA/LABA)
 - Short acting Beta 2 agonist (SABA) for relief
 - Single Inhaler Triple Therapy (SITT) is preferred over Multi-Inhaler Triple Therapy (MITT). The decision to switch should be part of a shared decision making with the patient.



- Non-pharmacotherapy therapy is important as part of the management and prevention plan:
 - Self-management education; utilize Certified Respiratory Educators (42% reduction of exacerbations)
 - Smoking cessation
 - Vaccinations
 - Pulmonary rehabilitation (55% reduction of exacerbations after hospitalization)

Short-Acting Bronchodilators		Long-Acting Bronchodilators		Combination Inhalers	
SAMA (Short-Acting Muscarinic Antagonist) USE REGULARLY or PRN	SABA (Short-Acting Beta2-Agonist) USE REGULARLY or PRN	LAMA (Long-Acting Muscarinic Antagonist) USE REGULARLY	LABA (Long-Acting Beta2-Agonist) USE REGULARLY	ICS/LABA (Inhaled Corticosteroid/Long-Acting Beta2-Agonist) USE REGULARLY	SAMA and SABA USE REGULARLY
Abreva [®] MDI (ipratropium bromide) 20 mcg/inhalation Duration: 4-6h Company: BI *Inhaler also available	Alirin [®] MDI (salbutamol sulphate) 100 mcg/inhalation Duration: 4-6h Company: Valeant	Incruse [®] Ellipta [®] (umeclidinium bromide) 62.5 mcg/inhalation Duration: 24h Company: GSK	Foradil [®] Aerolizer [®] (formoterol fumarate) 12 mcg/inhalation Duration: 12h Company: Novartis	Advair [®] Diskus [®] (fluticasone propionate/salmeterol xinafoate) 100/50, 250/50, 500/50 mcg doses Duration: 12h Company: GSK *Inhaler also available	Combivent [®] Respimat [®] (ipratropium bromide/salbutamol sulphate) 20/100 mcg/inhalation Duration: 4-6h Company: BI *Inhaler also available
Company Key AZ - AstraZeneca Canada Inc. BI - Boehringer Ingelheim Canada Ltd. GSK - GlaxoSmithKline Inc. Novartis - Novartis Pharmaceuticals Canada Inc. Valeant - Valeant Canada Viatris - Viatris	Bricanyl [®] Turbuhaler [®] (terbutaline sulphate) 0.5 mg/inhalation Duration: 4-6h Company: AZ	Seebri [®] Breezbuhaler [®] (glycopyrronium bromide) 50 mcg/inhalation Duration: 24h Company: Novartis	Oxbreez [®] Breezbuhaler [®] (indacaterol maleate) 75 mcg/inhalation Duration: 24h Company: Novartis	Bree [®] Ellipta [®] (fluticasone furoate/vilanterol trifluoromethanesulfonyl fluoride) 100/25 mcg doses Duration: 24h Company: GSK	LAMA and LABA USE REGULARLY
Permission is granted to copy the document in its entirety in this document are copyrighted and may not be reproduced.	Ventolin [®] Diskus [®] (salbutamol sulphate) 200 mcg/inhalation Duration: 4-6h Company: GSK	Spiriva [®] Handihaler [®] (tiotropium bromide mesylate) 18 mcg/inhalation Duration: 24h Company: BI	Serevent [®] Diskus [®] (salmeterol xinafoate) 50 mcg/inhalation Duration: 12h Company: GSK	Symbicort [®] (budesonide/formoterol fumarate) 160/4.5, 320/9, 640/18 mcg doses Duration: 12h Company: AZ	Aero [®] Ellipta [®] (saccharin bromide/vilanterol trifluoromethanesulfonyl fluoride) 62.5/25 mcg/inhalation Duration: 24h Company: GSK
	Ventolin [®] MDI (salbutamol sulphate) 100 mcg/inhalation Duration: 4-6h Company: GSK *Inhaler and generic brands available	Spiriva [®] Respimat [®] (tiotropium bromide mesylate) 2.5 mcg/inhalation Duration: 24h Company: BI	Striverdi [®] Respimat [®] (vandeterol hydrochloride) 2.5 mcg/inhalation Duration: 24h Company: BI *Approved by Health Canada but not yet in Canada	Wixela [®] Inhaled [®] (fluticasone propionate/salmeterol xinafoate) 100/50, 250/50, 500/50 mcg doses Duration: 12h Company: Viatris	Desair [®] Genair [®] (salmeterol xinafoate/hydrocortisone acrylate) 400/12 mcg/inhalation Duration: 12h Company: AZ
		Spiriva [®] Respimat [®] (tiotropium bromide mesylate) 2.5 mcg/inhalation Duration: 24h Company: BI	Striverdi [®] Respimat [®] (vandeterol hydrochloride) 2.5 mcg/inhalation Duration: 24h Company: BI	Wixela [®] Inhaled [®] (fluticasone propionate/salmeterol xinafoate) 100/50, 250/50, 500/50 mcg doses Duration: 12h Company: Viatris	Inspiral [®] Respimat [®] (ipratropium bromide/salmeterol xinafoate/hydrocortisone acrylate) 2.5/2.5 mcg dose Duration: 24h Company: BI
		Tendorza [®] Genair [®] (salmeterol xinafoate) 400 mcg/inhalation Duration: 12h Company: AZ	Breetini [®] Aerosphere [®] (salmeterol xinafoate/propiprone/terbutaline sulphate) 162.5, 25.0 mcg/inhalation Duration: 12h Company: AZ	Trelegy [®] Ellipta [®] (fluticasone furoate/umeclidinium bromide/vilanterol trifluoromethanesulfonyl fluoride) 100/62.5/25 mcg/inhalation Duration: 24h Company: GSK	Utiqin [®] Breezbuhaler [®] (glycopyrronium bromide/indacaterol maleate) 50/110 mcg/inhalation Duration: 24h Company: Novartis

Resources:

- [2023 CTS COPD Pharmacotherapy Guidelines](#)
- [Canadian Lung Association](#)
- [Pulmonary Rehabilitation referral program](#)
- Jones et.al. ERJ 2009; 34 (3): 648-54
- Tkacz J et.al. int Chron Obstruct Pulmon Dis. 2022;17:329-342



Consider using **MyL3Plan**, a free online tool developed by the Office of Lifelong Learning (L3) that can be used to meet and support the 3 activities/action plans required by the PPIP-CPSA and earn up to 36 Mainpro+ certified credits. by completing the following cycles:

- Practice-driven quality improvement using objective data (CQI)
- Personal Development (PD)
- Standards of Practice Quality Improvement (SOP).

[Learn more here!](#)

Join NAPCReN! NAPCReN data can help you identify patients with chronic diseases commonly seen in your practice. The Physician Learning Program has partnered with NAPCReN and will send you reports with individualized and comparison data on selected topics. This data can inform quality improvement cycles and help you advance your practice.

