Chronic Disease Management

Family physicians have a pivotal role in COPD management aiming at patient self-management. Patients with COPD will benefit from participation in a chronic disease management program that incorporates family physicians, COPD educators, specialists, and other health care professionals.

AECOPD

Acute Exacerbations of COPD

Acute exacerbations are the most frequent cause of medical visits, hospital admissions and death among patients with COPD. Apart from optimizing inhaled treatment, patients with purulent AECOPD benefit from antibiotics. Patients with COPD may require and benefit from a short course of systemic corticosteroids.

AECOPD Defined

A sustained worsening of dyspnea, cough or sputum production leading to an increase in the use of maintenance medications and/or supplementation medications. It is further classified as purulent or non-purulent.

AECOPD are preventable with optimal management of COPD.

• Smoking cessation + vaccinations
• Self-management education with written AECOPD action plan by case manager for health coaching
• Pulmonary rehabilitation
• Optimized pharmacotherapy (see Pharmacotherapy in COPD figure)
• Optimized treatment for AECOPD (short course of systemic steroids appropriate antibiotics for purulent exacerbation)

Advanced Care Planning and End of Life Care

COPD is a progressive, disabling condition that may lead to respiratory failure and death. Physicians have a responsibility to discuss end of life issues and to provide support to patients with COPD and their caregivers. Profile of a patient with COPD at risk of death: very severe airway obstruction (FEV$_1$ < 35% predicted), poor functional status (MRC 4–5), poor nutritional status (BMI < 19), recurrent severe AECOPD, older age, and/or pulmonary hypertension/cor pulmonale.

Bibliography


**What is COPD?**

COPD, a respiratory disorder largely caused by smoking, is characterized by progressive, partially reversible airway obstruction and lung hyperinflation, systemic manifestations, and increasing frequency and severity of exacerbations.

**Epidemiology of COPD**
- 3rd leading cause of death in the world, and 4th leading cause of death in Canada
- Prevalence continues to rise, particularly among women
- Highest rate for hospitalization among chronic conditions in Canada
- Imposes huge psychosocial and financial burdens on Canadians
- COPD is underdiagnosed

**Evaluation of COPD**

Disease severity can be assessed using the Medical Research Council Dyspnea Scale (MRC Scale, see below) and the COPD Assessment Test (CAT Score < 10 denotes Mild; ≥ 10 denotes Moderate-Severe impact of COPD on health status).

<table>
<thead>
<tr>
<th>COPD stage</th>
<th>Symptoms</th>
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</thead>
<tbody>
<tr>
<td>MILD</td>
<td>Shortness of breath when hurrying on the level or walking up a slight hill.</td>
</tr>
<tr>
<td>MODERATE</td>
<td>Shortness of breath causing the patient to stop after walking about 100 m (or after a few minutes) on the level.</td>
</tr>
<tr>
<td>SEVERE</td>
<td>Shortness of breath resulting in the patient too breathless to leave the house, breathlessness after dressing / undressing, or the presence of chronic respiratory failure or clinical signs of right heart failure.</td>
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**Management**

**Smoking cessation**
Smoking cessation is the single most effective intervention that reduces both the risk of developing COPD and slows its progression.

**COPD is amenable to therapy**

Management strategies should combine pharmacotherapy and non-pharmacotherapy interventions in order to improve symptoms, activity levels and quality of life.

Education of both the patient and their family is invaluable.

The goals of management of COPD are as follows:
- To prevent disease progression (smoking cessation);
- To alleviate breathlessness and other respiratory symptoms;
- To improve exercise tolerance and daily activity;
- To reduce frequency and severity of exacerbations;
- To prevent and treat exacerbations and complications;
- To improve health status; and
- To reduce mortality.

A comprehensive approach to the management of chronic obstructive pulmonary disease.

**Who should be targeted for screening?**
Smokers or ex-smokers more than 40 years old who answer yes to any question below:
1. Do you cough regularly?
2. Do you cough up phlegm regularly?
3. Do even simple chores make you short of breath?
4. Do you wheeze when you exert yourself or at night?
5. Do you get frequent colds that persist longer than those of other people?

**Early diagnosis confirmed by spirometry is key to optimal management.**

Definition of "airway obstruction":
A post-bronchodilator FEV₁ / FVC < 0.70 indicates airway obstruction.

FEV₁ = forced expiratory volume in one second
FVC = forced vital capacity

Adapted with permission from the American Thoracic Society (Am. J. Respir. Crit. Care Med.)