## Take 3 – Practical Practice Pointers© October 1, 2018 Edition

## The 2018 COPD Edition: GOLD Revisited and COPD Co-Management

## From the Guidelines and the American Thoracic Society

## 1) GOLD COPD Guidelines 2017 Revisited

In 2017, the American Thoracic Society released a major revision of their annual Global initiative for chronic Obstructive Lung Disease (GOLD) Guidelines. One of the key changes in the revision was the separation of symptom evaluation from spirometric assessment. Although spirometry remains necessary to make the diagnosis, assessment goals should focus on symptoms, risk for exacerbations, and determining the effect of the disease on the patient's overall health. Another addition to the new GOLD report is an in-depth discussion of escalation and de-escalation treatment strategies, whereas past reports primarily focused only on initial therapy recommendations.

Specific Key Points include the following:

**Diagnosis and Initial Assessment:**

- COPD should be considered in any patient with dyspnea, chronic cough or sputum production, and/or a history of exposure to risk factors.
- Spirometry is required to make the diagnosis; a post-bronchodilator $FEV_1/FVC < 0.70$ confirms the presence of persistent airflow limitation.
- The goals of COPD assessment are to determine the level of airflow limitation, the impact of disease on the patient's health status, and the risk of future events (such as exacerbations, hospital admissions, or death) to guide therapy.
- Concomitant chronic diseases occur frequently and should be treated because they can independently affect mortality and hospitalizations.

Disease pattern and severity is best assessed using the GOLD guide to therapy. This guide categorizes patients based on assessment of symptoms and risk of future exacerbations and hospitalizations. Each patient is classified as being in one of four categories (A,B,C,D) based on these features. Symptoms are assessed using a validated instrument, such as the modified Medical Research Council (mMRC) dyspnea scale or the COPD Assessment Test (CAT). Within Primary Care practices at Carilion Clinic, **we are recommending using the mMRC to inform the classification.**

The **mMRC (Modified Medical Research Council)** dyspnea scale is as follows:

Grade/Description of breathlessness

0 / I only get breathless with strenuous exercise
1 / I get short of breath when hurrying on level ground or walking up a slight hill
2 / On level ground, I walk slower than people of the same age because of breathlessness, or have to stop for breath when walking at my own pace
3 / I stop for breath after walking about 100 yards or after a few minutes on level ground
4 / I am too breathless to leave the house or I am breathless when dressing

Determination of future risk is based on the number of exacerbations and hospitalizations for exacerbations in the previous 12 months. A history of zero or one exacerbation in the past 12 months suggests a low future risk of exacerbations, while two or more exacerbations or a hospitalized exacerbation suggest a high future risk. **The symptom and risk components are combined into four groups as follows:**

**Group A:** Low risk, less symptoms: 0 to 1 exacerbation per year and no prior hospitalization for exacerbation; and mMRC grade 0 to 1.

**Treatment Recommendation:**

- Short-acting bronchodilator or combination of short-acting beta-agonist (SABA) and muscarinic (anticholinergic) (SAMA), as needed.
- Alternative: Long-acting bronchodilator (LABA) if beneficial.

**Group B:** Low risk, more symptoms: 0 to 1 exacerbation per year and no prior hospitalization for exacerbation; and mMRC grade ≥2.

**Treatment Recommendation:**

- First choice: Regular treatment with a long-acting agent, either a long-acting muscarinic (anticholinergic) agent (LAMA) or LABA, based on symptom relief. Short-acting bronchodilator available for symptom control as needed.
- For persistent symptoms: Regular treatment with a combination of LAMA and LABA.

**Group C:** High risk, less symptoms: ≥2 exacerbations per year or ≥1 hospitalization for exacerbation; and mMRC grade 0 to 1.

**Treatment Recommendation:**

- First choice: Regular treatment with a LAMA; SABA available for symptom control as needed.
- For further exacerbations: Regular treatment with a LAMA plus LABA OR (less preferred) LABA plus inhaled corticosteroid (ICS).

**Group D:** High risk, more symptoms: ≥2 exacerbations per year or ≥1 hospitalization for exacerbation; and mMRC grade ≥2.

**Treatment Recommendation:**

- First choice: Regular treatment with combination LABA plus LAMA. LABA plus inhaled corticosteroid may be preferred, if features of asthma/COPD overlap. SABA available for symptom control as needed. LAMA alone, if LABA contraindicated.
- For further exacerbations: Regular treatment with combination of LAMA plus LABA plus ICS OR (less preferred in absence of asthma overlap) switch to LABA plus ICS.
- If exacerbations continue despite triple therapy, additional options for selected patients include roflumilast (if chronic bronchitis and $FEV_1$ <50% predicted), theophylline, chronic therapy with a macrolide, and stopping the ICS.

Note that $FEV_1$ is no longer included in the ABCD assessment categories.

Follow-up spirometric assessment may, however, be helpful in therapeutic decision making when, for instance, there is a discrepancy between spirometry and level of symptoms or in determining the need to consider alternative diagnoses if symptoms are disproportionate to the degree of airflow obstruction.

Once the diagnosis of COPD has been made, several important initial steps are appropriate for the majority of patients, including:

- smoking cessation and avoidance of various other inhalational particulate exposures
- vaccination against respiratory infections (PPSV23 and yearly influenza if < 65)
- education about medication usage and inhaler technique, and initiation of a short-acting beta-agonist

**My Comment:**
I found this to be an incredibly helpful re-review. When I first read this and evaluated my own practice through the lens of the guideline, I found that I likely underutilized LAMAs and LABAs alone and LAMA/LABA in combination (although these are very expensive for many) as early treatment in comparison with LABA/ICS combinations, which are more preferred for long-term treatment in patients with persistent asthma. I also was underutilizing spirometry to make an initial diagnosis in at-risk patients.

Smoking cessation remains a key for both prevention and slowing progression. I can only wish that the pharma companies might take a moment to remind the public of this as they aggressively advertise their inhalers for symptom relief ….

**Reference:**
Vogelmeier C, et al. Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Lung Disease 2017 Report. AJRCCM;195(5):557-582. Guideline

## From the Carilion Clinic Specialty Council

## 2) Guide for Co-Managing patients with COPD

GOLD uses the ABCD classification as a broader guide to the management of COPD. At Carilion Clinic, we are also using it as a referral management tool. The initial desire of the COPD co-management tool is to get everyone using the same structure, GOLD ABCD, to guide referrals and reduce variation in referral thresholds.

In the past, COPD was viewed as a disease largely characterized by breathlessness. A simple measure of breathlessness such as the Modified British Medical Research Council (mMRC) Questionnaire was considered adequate, as the mMRC relates well to other measures of health status and predicts future mortality risk. For consistency, we are recommending the mMRC be used as our dyspnea assessment tool rather than the COPD Assessment Test (CAT).

However, in the refined assessment scheme, breathlessness is only one factor for management. A history of exacerbations is also important for determining optimal management.

Based on the assessment of both breathlessness (mMRC) and history of exacerbations in the past year, **referral to pulmonology is recommended** based on the following categorization (Patient risk groups B, C, D).

| Patient Group | Characteristics | Exacerbations per year | mMRC | |
|---|---|---|---|---|
| A | Low risk, less symptoms | ≤ 1 | 0 or 1 | |
| B | Low risk, more symptoms | ≤ 1 | ≥ 2 | **Refer to Pulmonary** |
| C | High risk, less symptoms | ≥ 2 | 0 or 1 | |
| D | High risk, more symptoms | ≥ 2 | ≥ 2 | |

**Additionally, referral to Pulmonology is recommended if any of the following:**

- Exacerbation with hospital admission
- Failure to respond to treatment
- Patient on oxygen
- Obstructive sleep apnea
- Overlapping severe asthma/allergies require injections like Xolair
- Alpha 1 Antitrypsin deficiency
- Chronic hypercapnia

**My Comment:**

When done well, effective co-management of patients takes the "best" of what each of us brings to their care and leverages this to insure they are provided optimal care. Being more explicit about expectations and creating a space for dialogue and feedback is intended to advance this process rapidly and is a bit of a "culture change." As such, feedback as to how it is or is not working is essential.

**Reference:**

- Carilion Clinic COPD Co-Management Agreement (attachment 2)

Feel free to forward Take 3 to your colleagues. Glad to add them to the distribution list.

*Mark*

**Carilion Clinic Department of Family and Community Medicine**

**Take 3: Practical Practice Pointers by Mark Greenawald, M.D.**
**Carilion Clinic and Virginia Tech School of Medicine-Family and Community Medicine**
**September 1, 2018 – November 30, 2018**
**Target Audience:** General Internal Medicine, Family and Community Medicine and Urgent Care Physicians. Other healthcare professionals, nurses, residents, and/or medical students may benefit from this educational offering as well.
**Objectives:**

- Participants will recognize how newly released guidelines apply to their clinical practice and translate this to the care of their individual patients.
- Participants will appraise the conclusions of current medical literature in the context of their clinical practice.
- Participants will synthesize new medical knowledge in the context of their current understanding.

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