

Chronic Obstructive Pulmonary Diseases: Journal of the COPD Foundation



COPD Treatment Guidelines

The COPD Foundation Pocket Consultant Guide

Byron Thomashow, MD,¹ James Crapo, MD,² Barbara Yawn, MD,³ Andrew McIvor, MD, FRCPC,⁴ Scott Cerreta,⁵ John Walsh,⁵ David Mannino, MD,⁶ Stephen Rennard, MD⁷

Abstract

The COPD Foundation Guide to COPD Diagnosis and Treatment is designed to provide practical advice for the health care provider. Available as a hard copy, online and as a mobile device application (app), the Guide serves as an accessible tool for clinicians. To date, over 400,000 cards have been distributed to health care providers nationwide at no charge. The Guide is updated as necessary and suggestions from the COPD physician and health care provider community are integrated into updates.

Abbreviations: mobile device application, **app**; American Thoracic Society, **ATS**; European Respiratory Society, **ERS**; National Clinical Guideline Centre, **NICE**; Global Initiative for chronic Obstructive Lung Disease, **GOLD**; American College of Physicians, **ACP**; American College of Chest Physicians, **ACCP**; forced volume capacity, **FVC**; forced expiratory volume in 1 second, **FEV1**; spirometry grade, **SG**; computed tomography, **CT**

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1. Department of Medicine, Columbia University College of Physicians and Surgeons, New York, NY
2. Division of Pulmonary, Critical Care and Sleep Medicine National Jewish Health, Denver, CO
3. Olmsted Medical Center, Department of Research, Rochester, MN
4. Firestone Institute for Respiratory Health, McMaster University, Hamilton, Ontario, Canada
5. COPD Foundation, Washington, DC
6. Departments of Preventive Medicine and Environmental Health, University of Kentucky, College of Public Health, Lexington
7. Pulmonary, Critical Care, Sleep and Allergy Division, Department of Internal Medicine, University of Nebraska Medical Center, Omaha

Address correspondence to:

Byron M. Thomashow, MD
161 Ft. Washington Avenue, Suite 3-311,
New York, NY 10032
Phone: (212) 305-5261
Email: bmt1@cumc.columbia.edu

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Introduction

Guidelines have evolved into large, evidence-based, textbook-like documents and are hence becoming less practical for the pragmatic physician. Little effort during guideline development is spent considering dissemination or implementation.

The COPD Foundation Guide to COPD Diagnosis and Treatment (the Guide) is designed to provide best practice advice for the clinician. Originally developed in partnership with the New York-Presbyterian Healthcare System and launched in 2006 as the Pocket Consultant Card, the Guide has been updated frequently as new treatments have been introduced and as the information base regarding COPD has increased.¹

The Guide is meant to be practical, easy-to-use and designed to address the key questions faced by a clinician. It is not a formal guideline. The Guide recommendations differ in several respects from other documents such as the American Thoracic Society/European Respiratory Society (ATS/ERS) COPD statement, the National Clinical Guideline Centre (NICE) recommendations and the Global Initiative for chronic Obstructive Lung Disease (GOLD)

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strategy document, which are excellent, but lengthy and often not very specific.²⁻⁶

Spirometry Recommendations

The Guide makes specific recommendations on who should have spirometry.¹ All agree that spirometry is warranted in individuals with symptoms of dyspnea on exertion, cough, sputum, decreased physical activity levels and fatigue. However, in contrast to the consensus statement from ATS/ERS/American College of Physicians (ACP)/American College of Chest Physicians (ACCP) in 2011 that recommended against performing spirometry in individuals at risk for COPD but without symptoms, the Guide recommends spirometry for individuals at-risk who have comorbidities associated with COPD.^{1,7}

This is recommended because many patients underappreciate symptoms or ascribe limitations based on their age, weight, deconditioning or allergies. Patients often do not report symptoms due to short health care provider visits. Comorbidities are extremely common in COPD and COPD appears to be an independent risk factor for a number of conditions including cardiovascular disease.^{8,9} Misdiagnosis is a problem of potential major importance for individual patients. The Guide suggests that spirometry be considered in individuals at-risk who have one or more significant comorbid diseases.¹ The Guide recommends testing all COPD patients for alpha-1 antitrypsin deficiency.¹⁰

The Guide's staging of spirometry was designed to be comprehensive. Five *spirometry grades* are described to ensure that all individuals fit into a group. The fact that many individuals are unclassified by other systems, but may have problems, has been an impediment for many clinicians (Figure 1).

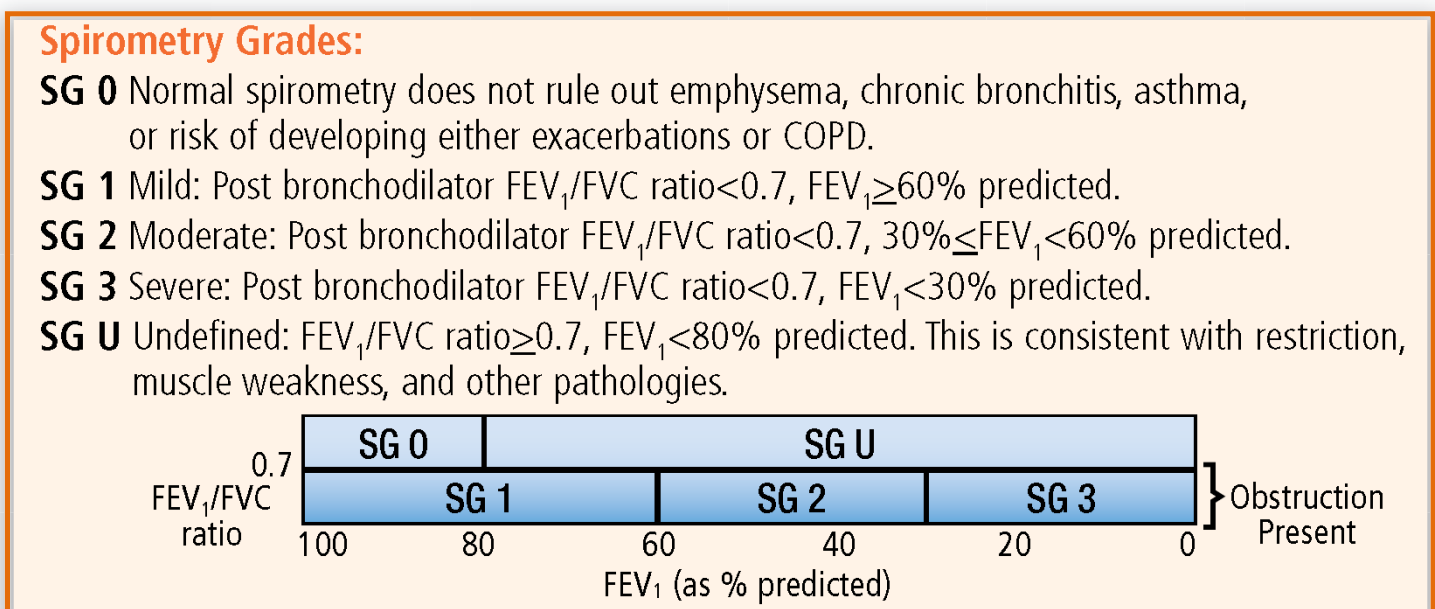
Spirometry grade 0 (SG-0) includes normal individuals as well as individuals who may have disease but whose measured values remain within the normal population boundary. SG-0 does not exclude the presence of emphysema, chronic bronchitis or the risk of developing exacerbations. Further, individuals within SG-0 may have symptoms requiring treatment.

Spirometry grade U (SG-U) includes those with a normal forced expiratory volume in 1 second to forced volume capacity (FEV₁/FVC) ratio but reduced FVC and FEV₁. This group has classically been described as having *restrictive* lung disease. Recent evidence shows that many of these individuals have emphysema and/or airway inflammation on computed tomography (CT) scanning.¹¹

The Guide describes three obstructive grades all with an FEV₁/FVC ratio <0.7 and follows the recommendations of the ATS/ERS/ACP/ACCP Consensus Statement⁷:

- Spirometry grade-1 (SG-1), mild, with FEV₁ ≥60% predicted
- Spirometry grade-2 (SG-2), moderate, with FEV₁ <60% predicted and ≥30% predicted
- Spirometry grade-3 (SG-3), severe, with FEV₁ <30% predicted

Figure 1. COPD Foundation Guide to COPD Diagnosis and Treatment Spirometry Grades¹



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The previously mentioned consensus statement stressed the importance of an FEV₁ of 60% in determining those who might benefit from regular maintenance therapy.⁷ The Guide has adjusted the spirometry grades to reflect this cut-off for those with *significant COPD* where management should be based on patient performance as well as symptoms.¹ Spirometric severity <30% is a reasonable guide to initiate management plans for those with severe disease, although spirometry is but one measure of COPD severity.

COPD Severity Domains

To address the heterogeneous clinical problems that beset COPD patients, the 2013 revision of the Guide suggested an approach based upon 7 severity domains: spirometry, symptoms, exacerbations, oxygenation, the presence of emphysema, the presence of chronic bronchitis, and comorbidities.¹ A Therapy Chart (Figure 2) listing the 7 severity domains in rows and recommended therapy options in columns is a new feature. This approach can guide clinicians to make decisions appropriate for the heterogeneous problems faced by COPD patients in a systematic and easily implemented fashion.

Accessibility of the Guide

The COPD Foundation is committed to making the Guide freely available in multiple formats. Pocket cards and mobile device applications (apps) are inexpensive tools to aid in practice change. The advantage of the online, eHealth format is the possibility it offers to easily alter, update or evolve and improve the information in a dynamic fashion.¹²

The Pocket Consultant Guide card is available in a 2-panel version that provides basic information on diagnosis and therapy and two 6-panel versions that include information on diagnostic tools and commonly used medications – one with generic names (Figure 3) and one with brand names. The Pocket Consultant Guide card is available to health care providers at no cost. Printed cards can be ordered from the COPD Foundation's online catalogue (<http://copd.oiondemand.com>).¹³

Electronic downloads can be obtained from the Pocket Consultant Guide Online Community site (<http://pocketconsultantguide.copdfoundation.org/>).¹⁴

In addition, the Foundation has launched a free i-Phone app that allows the Guide to be used in a more interactive format (Figure 4). The first edition of the app lists available generic medications. Subsequent editions will allow the user

Figure 2. COPD Foundation Guide to COPD Diagnosis and Treatment Therapy Chart¹

COPD Foundation Guide for COPD Treatment								
All patients should receive: Smoking cessation; vaccination for influenza, pneumococcus, pertussis, alpha-1 testing								
	short acting bronchodilator (as needed)	LAMA or LABA or LAMA plus LABA	ICS/LABA	roflumilast	oxygen	exercise/pulmonary rehabilitation	lung volume reduction surgery	azithromycin
Spirometry Grade SG1 Mild								
SG 2/3 Moderate/Severe								
Regular symptoms								
Exacerbation risk high								
Oxygenation severe hypoxemia								
episodic hypoxemia								
Emphysema								
Chronic bronchitis								
Comorbidities	Evaluate and treat identified comorbid conditions							

LAMA: Long-Acting Anticholinergic, LABA: Long-Acting Beta 2 Agonist, ICS/LABA: Inhaled Glucocorticosteroid plus Long-Acting Beta 2 Agonist.
 * Indicated if chronic bronchitis, high exacerbation risk, and spirometry grades 2/3 all present.
 ** Suggest regular exercise program for all with COPD, those with SG2/3 should be considered for pulmonary rehab.
 † If significant shortness of breath and SG1 consider other potential contributing factors including cardiac, deconditioning etc.
 ‡ Recommended in select cases with upper lobe predominant emphysema.
 †† LAMA, ICS/LABA, LAMA plus LABA or LAMA plus ICS/LABA all potential options depending upon frequency of exacerbations and severity of COPD.
 ††† Off label-consider potential cardiac risks and resistance concerns.

Therapy guided by **diagnosis** and **assessment of severity domains**

- Each Domain requires separate treatment consideration. Risks and benefits always need to be evaluated in every case.
- : Recommended-First line therapy. : Second line choices-suggested options in individual cases. The various treatments can generally be combined as needed, but fixed combinations should not be combined with equivalent individual components.
- Theophylline may be an additional option for some patients potentially improving lung function and symptoms.
- N-acetylcysteine (NAC) may be an additional option for reducing exacerbations in some patients.

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