

These protocols are designed to implement standard guidelines, based on the best evidence, that provide a consistent clinical experience for AHC II Integrated Clinical Delivery Network patients and allow to quantitatively demonstrate to payers the high-value care provided. They are not intended to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.

**COPD is an umbrella term used to describe progressive lung diseases** including emphysema, chronic bronchitis, refractory (non-reversible) asthma, and some forms of bronchiectasis.

## SCREENING AND PREVENTION

Screening for COPD in the asymptomatic general population is not recommended.

An estimated 80% to 90% of COPD is due to cigarette smoking. Other risk factors may include second-hand smoke and occupational or other exposure to dust, vapors, irritants, and fumes.

$\alpha$ 1-antitrypsin deficiency is the best-described genetic risk factor to consider, especially when patients develop COPD before age 50 years<sup>1</sup>.

## DIAGNOSIS

**The Global Initiative for Chronic Obstructive Lung Disease (GOLD) classifications are used to determine the severity of the disease**, these classifications can help guide appropriate treatments to relieve symptoms and reduce risk.

Confirm the diagnosis by spirometry with a FEV<sub>1</sub>–FVC ratio < 0.70 measured after administration of a bronchodilator.

Consider measuring the  $\alpha$ 1-antitrypsin level in patients who present with early-onset COPD or in those with a compatible family history.

SEVERITY OF COPD BASED ON SPIROMETRY			
Stage	Severity	Postbronchodilator FEV <sub>1</sub> /FVC	FEV <sub>1</sub> % predicted
0	At-Risk	$\geq 0.7$	$\geq 80$
1	Mild	$\leq 0.7$	$\geq 80$
2	Moderate	$\leq 0.7$	50 – 79.9
3	Severe	$\leq 0.7$	30 – 49.9
4	Very Severe	$\leq 0.7$	< 30

*Patients who smoke or are exposed to pollutants; and have cough, sputum or dyspnea; or have family history of respiratory disease.*

*FEV<sub>1</sub>: forced expiratory volume in one second; FVC: forced vital capacity*

Breathlessness and functional limitation can be rated numerically with the simple Modified Medical Research Council (MMRC) dyspnea scale (See table below).

SEVERITY OF COPD BASED ON DYSPNEA		
Severity	Score	Degree of Breathlessness Related to Activities
None	0	Not troubled with breathlessness except with <b>strenuous exercise</b>
Mild	1	Troubled by shortness of breath when hurrying or walking up a <b>slight hill</b>
Moderate	2	Walks slower than people of the same age due to breathlessness or has to stop for breath when walking at own pace on the level
Severe	3	Stops for breath after walking approximately 100 meters or after a few minutes on the level

Very Severe	4	Too breathless to leave the house or breathless when dressing or undressing
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## COLLABORATIVE MANAGEMENT PLAN/INTEGRATED REFERRALS

1. Follow the flow diagram by provider on pages 3 – 4 for the following guidelines:  
Severity of based on dyspnea and/or spirometry results as listed in the flow diagrams  
Pharmacological guidelines:
2. Encourage patients to participate in their own care by encouraging:  
Exercise  
Those who smoke should be urged to stop and to enter a smoking cessation program.
3. Encourage influenza vaccine every year and pneumococcal vaccine.
4. Referral Considerations:  
Refer to pulmonary rehabilitation for help with reducing dyspnea, anxiety, and depression; improves exercise capacity and quality of life; and may reduce hospitalizations.  
COPD patients should be considered ideal candidates for Transitional Care Management (TCM) and Chronic Care Management (CCM) outreach. Providers can receive additional reimbursements for both TCM and CCM services. TCM requires an interactive patient contact within two business days post-discharge and an office visit within 7 to 14 days post-discharge. The TCM timeline is designed to better accommodate the patient's transition needs and prevent 30-day readmission.
5. When to consider referral to a pulmonary specialist

### Referral Considerations<sup>ix</sup>

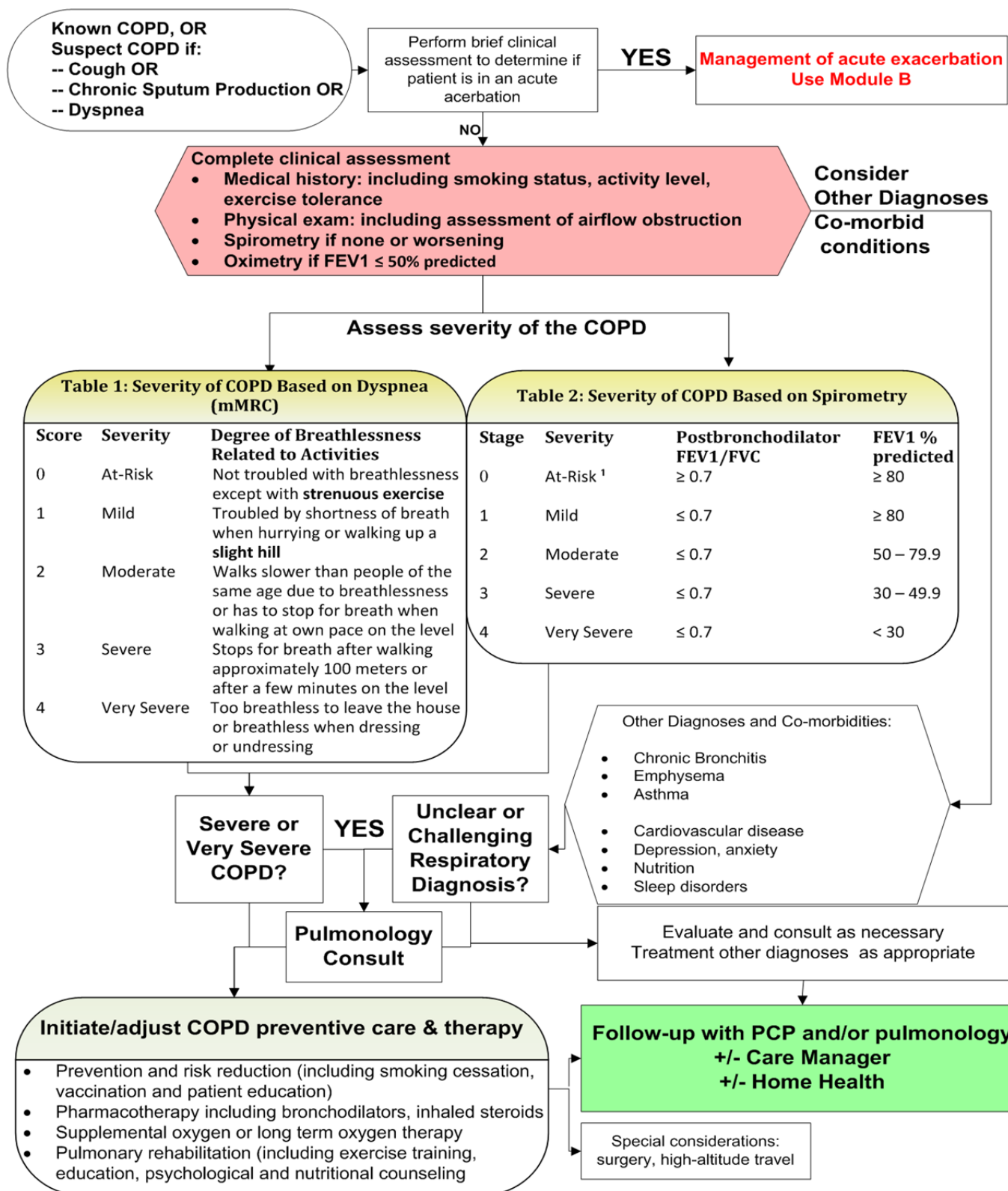
**Table 3. When to Consider Referral to a Pulmonary Specialist\***

Disease onset before 40 years of age
Frequent exacerbations (2 or more per year) despite adequate treatment
Rapidly progressive course of disease (decline in FEV <sub>1</sub> , progressive dyspnea, decreased exercise tolerance, unintentional weight loss)
Severe COPD (FEV <sub>1</sub> <50% predicted) despite optimal treatment
Need for oxygen therapy
Onset of comorbid condition (osteoporosis, heart failure, bronchiectasis, lung cancer)
Diagnostic uncertainty (for example, coexisting COPD and asthma)
Symptoms disproportionate to the severity of the airflow obstruction
Confirmed or suspected $\alpha_1$ -antitrypsin deficiency
Patient requests a second opinion
Patient is a potential candidate for lung transplantation or lung-volume reduction surgery
Patient has very severe disease and requires elective surgery that may impair respiratory function

\*Adapted and modified from American Thoracic Society/European Respiratory Society and Veterans' Affairs/Department of Defense guidelines (2, 3). COPD = chronic obstructive pulmonary disease.

## Collaborative Management Plan:

### Chronic Obstructive Pulmonary Disease: Module A, Diagnosis, Considerations and Referrals



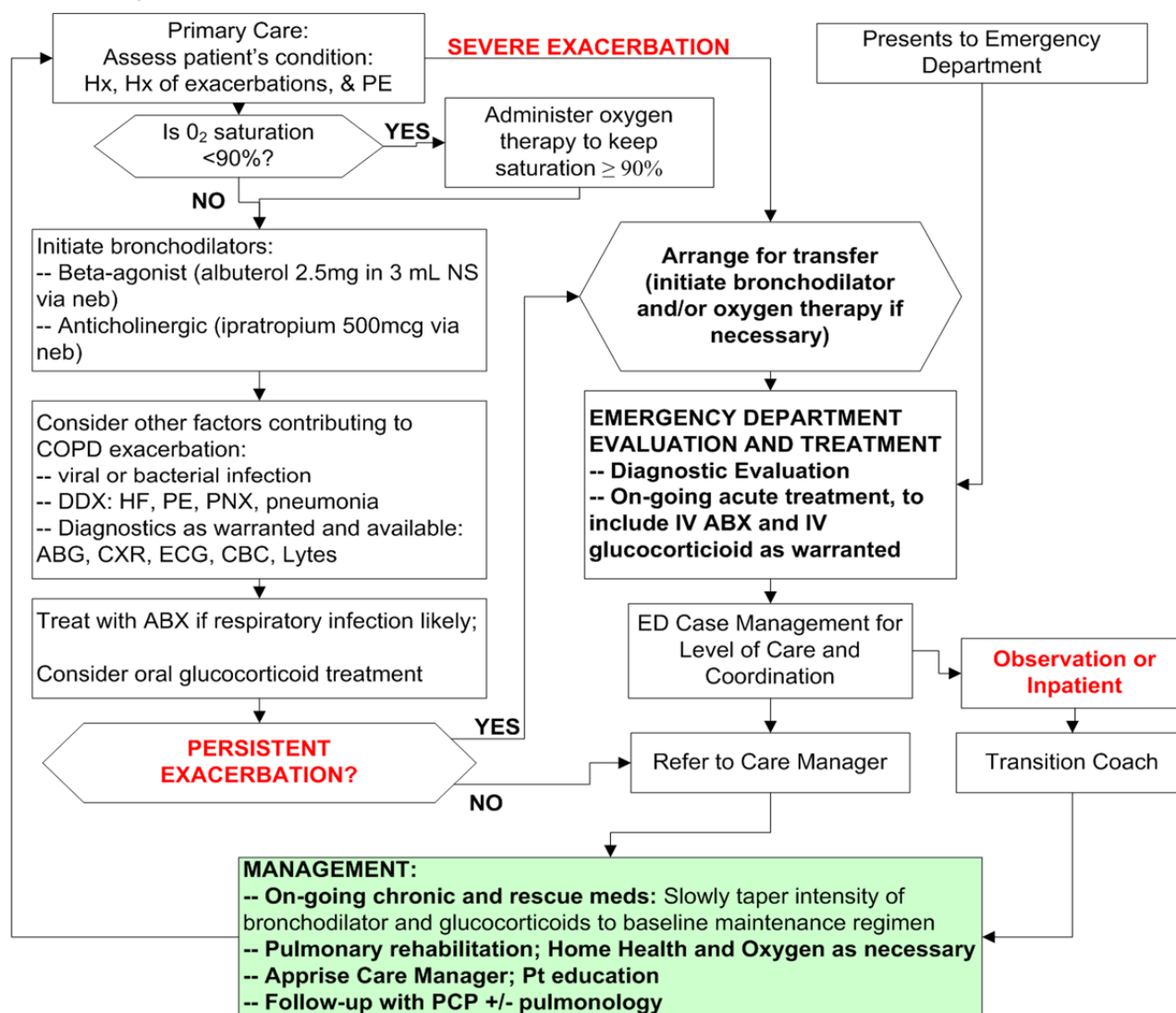
## Collaborative Management Plan Chronic Obstructive Pulmonary Disease:

### Module B, Treatment of Stable COPD

**Table 3: Therapy at each stage of COPD**

Stage	FEV1/FVC	FEV1 % predicted	Characteristics	Recommended Treatment
0	$\geq 0.7$	$\geq 80$	No symptoms	Flu Vax; Pneumovax; Avoid Risk Factors
1	$\leq 0.7$	$\geq 80$	+/- Symptoms	Add short-acting bronchodilator when needed
2	$\leq 0.7$	50 – 79.9	Dyspnea on exertion, +/- cough, sputum	<b>Add Pulmonary Rehabilitation</b> Add Regular Rx with long-acting bronchodilator(s)
3	$\leq 0.7$	30 – 49.9	Increased dyspnea, fatigue Reduced Exercise Capacity Repeated Exacerbations	Add inhaled glucocorticoids if significant symptoms, lung function response, or if repeated exacerbations
4	$\leq 0.7$	$< 30$	Likely in respiratory failure	Add long-term O2 if chronic respiratory failure Treat complications; consider surgical treatments

### Module C, Treatment of COPD Acute Exacerbation



## **KEY MEASURES OF PERFORMANCE**

Aligned with CMS' ACO/PQRS/Meaningful Use CQM measures and the NCQA Diabetes Recognition Program

### **1. Tobacco Use: Screening and Cessation Intervention (ACO #17; NQF #28; PQRS #226)**

Percentage of patients aged 18 years and older who were screened for tobacco use one or more times within 24 months AND who received cessation counseling intervention if identified as a tobacco user.

**Domain:** Population/Public Health

**Numerator:** Patients who were screened for tobacco use at least once within 24 months AND who received tobacco cessation counseling intervention if identified as a tobacco user.

**Denominator:** All patients aged 18 years and older.

### **2. Preventive Care and Screening: Influenza Immunization (ACO #14; NQF #41; PQRS #110)**

Percentage of patients aged 6 months and older seen for a visit between October 1 and March 31 who received an influenza immunization OR who reported previous receipt of an influenza immunization

**Domain:** Population/Public Health

**Numerator:** Patients who received an influenza immunization OR who reported previous receipt of an influenza immunization.

**Denominator:** All patients aged 6 months and older seen for a visit between October 1 and March 31.

### **3. Pneumonia Vaccination Status for Older Adults (ACO #15; NQF #43; PQRS #111)**

Percentage of patients 65 years of age and older who have ever received a pneumococcal vaccine.

**Domain:** Clinical Process/Effectiveness

**Numerator:** Patients who have **ever** received a pneumococcal vaccination.

**Denominator:** Patients 65 years of age and older with a visit during the measurement period.

## **Key tools and references**

American Lung Association – COPD <http://www.lung.org/lungdisease/copd/?referrer=https://www.google.com/>

Centers for Disease Control – COPD <http://www.cdc.gov/copd/index.html>

Global Initiative for Chronic Obstructive Lung Disease (GOLD) – Updated 2014

[http://www.goldcopd.org/uploads/users/files/GOLD\\_Report\\_2014\\_Jan23.pdf](http://www.goldcopd.org/uploads/users/files/GOLD_Report_2014_Jan23.pdf)

COPD Foundation <http://www.copdfoundation.org/>

Adopted and modified from American Thoracic Society/European Respiratory Society and Veterans' Affairs/Department of Defense guidelines (2, 3). COPD – Chronic Obstructive Pulmonary Disease

<sup>i</sup> Littner, MD, Michael R. In the Clinic. Chronic Obstructive Pulmonary Disease. Ann Intern Med. 2011; ITC4.

<sup>ii</sup> Ibid.