



CHRONIC OBSTRUCTIVE PULMONARY DISEASE CLINICAL PRACTICE GUIDELINES

The following guideline is applicable for patients 18 and older who have a diagnosis of Chronic Obstructive Pulmonary Disease (COPD), Chronic Obstructive Airway Disease, Chronic Obstructive Bronchitis, and Emphysema.

I. Diagnosis

Evidence of Obstructive Lung Disease is diagnosed when air flow limitation is present on spirometry with post-bronchodilator $FEV_1 / FVC < 0.70$ (*FEV1 is forced expiratory volume in 1 second and FVC is forced vital capacity*)

II. Classification: Global Initiative for Chronic Obstructive Lung Disease (GOLD) severity classification of airflow limitation in COPD

- A. GOLD Severity 1: Mild $FEV_1 \geq 80\%$ predicted
- B. GOLD Severity 2: Moderate FEV_1 50% to 79% predicted
- C. GOLD Severity 3: Severe FEV_1 30% to 49% predicted
- D. GOLD Severity 4: Very Severe FEV_1 less than 30% predicted

III. Assessment

- A. Dyspnea, chronic cough or sputum production, severity of these symptoms
- B. History of exposures such as occupational irritants or cigarette smoking
- C. Spirometry outcome/ documented impairment

IV. Treatment:

- A. Spirometry with substantial increase in symptoms and/or complications
- B. For patients with a Stage I or Stage II classification, the treatment plan will include:
 - 1. Room air pulse oximetry
 - 2. Bronchodilator therapy with short-acting beta-2-agonist (SABA) or short-acting anticholinergic or an acceptable alternative as needed (rescue)
 - 3. Trial of inhaled corticosteroids if asthma is suspected or if frequent exacerbations or $FEV_1 < 60\%$
 - 4. Monotherapy with long-acting anticholinergics or long-acting beta-2-agonists (LABA) or their combination
 - 5. Slow- release theophylline if needed for increased symptom control
 - 6. A documented action plan for managing COPD to reduce symptoms and risk to patient
- C. For patients with Stage III or Stage IV a treatment plan will include:



1. Room air pulse oximetry and consider arterial blood gas measurement
2. Bronchodilator therapy with short-acting beta-2-agonist (SABA) or short-acting anticholinergic or an acceptable alternative as needed (rescue)
3. Inhaled corticosteroid (ICS) with long-acting beta-2-agonist (LABA) with or without PDE-4 inhibitor
4. Long-acting anticholinergic with or without PDE-4 Inhibitor
5. Combination long-acting bronchodilator therapy with or without inhaled corticosteroids
6. Slow-release theophylline if needed for increased symptom control
7. A documented action plan for managing COPD to reduce symptoms and risk to patient

D. Influenza and Pneumococcal vaccine as appropriate

F. Nonpharmacological treatment may include:

1. Oxygen therapy

- a. continuous oxygen therapy recommended for patients with COPD who have severe resting hypoxemia ($\text{PaO}_2 \leq 55$ mm Hg or oxygen saturation $\leq 88\%$) or PaO_2 56-59 mm Hg with consequences of tissue hypoxia, such as polycythemia or pulmonary hypertension
- b. long-term oxygen (either continuous or nocturnal only) may reduce mortality in patients with severe hypoxemia but does not appear to reduce mortality in patients with COPD with moderate hypoxia or arterial desaturation only at night
- c. continuous oxygen may reduce dyspnea in mildly hypoxemic and non-hypoxemic patients with COPD who would not otherwise qualify for home oxygen therapy

2. Pulmonary rehabilitation program of 6 weeks or longer for breathlessness walking at patient's own pace on level ground

3. Referral to nutritionist or dietitian, as needed

4. Consider surgical options (lung volume reduction surgery, lung transplantation, bullectomy) and CT of chest for surgical evaluation

V. Patient Education including information and instruction about:

A. Self- management

1. Signs and symptoms of acute exacerbation and initial action plan
2. Signs and symptoms of infection



3. Self-management strategies to minimize dyspnea and fatigue
4. Smoking cessation counseling with or without nicotine replacement therapy
5. Daily exercise, remaining active with regular physical activity as tolerated
6. Weight management
7. Advanced directives and end-of-life decisions

B. Medications

1. Carrying up-to-date medication list
2. Rationale for prescribed medications and their proper usage
3. Proper technique for inhaler use
4. Proper use of oxygen

References

Global Initiative for Chronic Obstructive Lung Disease (GOLD) - Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Pulmonary Disease, 2016

National Guideline Clearinghouse (NGC). Guideline summary: Diagnosis and management of stable chronic obstructive pulmonary disease: a clinical practice guideline update from the American College of Physicians, American College of Chest Physicians, American Thoracic Society, and European Respiratory Society. In: National Guideline Clearinghouse (NGC) [Web site]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2011 Aug 02. Retrieved 2016 October 10 from: <https://www.guideline.gov/summaries/summary/34205/diagnosis-and-management-of-stable-chronic-obstructive-pulmonary-disease-a-clinical-practice-guideline-update-from-the-american-college-of-physicians-american-college-of-chest-physicians-american-thoracic-society-and-european-respiratory-society?q=copd>

Qaseem, A., Wilt, T. J., Weinberger, S. E., Hanania, N. A., Criner, G., van der Molen, T., & ... Shekelle, P. (2011). Diagnosis and management of stable chronic obstructive pulmonary disease: a clinical practice guideline update from the American College of Physicians, American College of Chest Physicians, American Thoracic Society, and European Respiratory Society. *Annals of Internal Medicine*, 155(3), 179-191. doi: 10.7326/0003-4819-155-3-201108020-00008



Reviewed by: Dr. P. Sethi, M.D. 04/04/2017, CHP Quality Committee 04/20/2017

Approval by Community Healthcare Partners Quality Committee: 04/20/2017