



Chronic Obstructive Pulmonary Disease (COPD)

OBJECTIVE

The objective of this Clinical Practice Guideline (CPG) is to provide evidence-based practice recommendations for the treatment of Chronic Obstructive Pulmonary Disease (COPD). The CPG discusses the importance of developing and following a *COPD Action Plan* as well as items related to integrated care management of COPD such as behavioral health implications. In addition, the CPG outlines the organizations that WellCare aligns with regarding COPD and relevant Measureable Health Outcomes.

OVERVIEW

Chronic obstructive pulmonary disease (COPD) is a common respiratory condition involving the lungs and characterized by trouble breathing. It is sometimes also called emphysema. COPD is a slowly progressive lung disease involving the airways and/or pulmonary parenchyma, resulting in a gradual loss of lung function. Symptoms of COPD range from chronic cough, sputum production, and wheezing to more severe symptoms (e.g., dyspnea, poor exercise tolerance, signs or symptoms of right-sided heart failure). It affects more than 5 percent of the population and is associated with high rates for disability and death. It is the third-ranked cause of death in the United States, killing more than 120,000 individuals each year. As a consequence of its high prevalence and chronicity, COPD causes high resource utilization with frequent clinician office visits, frequent hospitalizations due to acute exacerbations, and the need for chronic therapy (e.g. supplemental oxygen therapy, medication). Risk factors for COPD include:

- Tobacco smoke (cigarette, pipe, cigar, and other types of tobacco).
- Prolonged exposure to occupational dusts and chemicals (vapors, irritants, and fumes).
- Indoor air pollution (biomass fuel used for heating and cooking in poorly vented dwellings).
- Outdoor air pollution (heat, ozone, and pollens).
- Factors that affect lung growth during gestation and childhood (e.g., low birth weight, respiratory infections).
- Genetic risk factor is a severe hereditary deficiency of alpha-1 antitrypsin.

For screening information related to COPD, visit the United States Preventive Services Task Force (USPSTF) website at <https://www.uspreventiveservicestaskforce.org>. In addition, refer to the following preventive CPGs: *Adult Preventive Health: HS-1019*, *Pediatric Preventive Health: HS-1019*, *Adolescent Preventive Health: HS-1051*, and *Preventive Health for Older Adults: HS-1063*.

Hierarchy of Support

GUIDELINE HIERARCHY

CPGs are updated annually or as necessary due to updates made to guidelines or recommendations by the American College of Physicians (ACP), the American College of Chest Physicians (ACCP), the American Thoracic Society (ATS), the European Respiratory Society (ERS), and Global Initiative for Chronic Obstructive Lung Disease. When there are differing opinions noted by national organizations, WellCare will default to the member's benefit structure as deemed by state contracts and Medicaid / Medicare regulations. If there is no specific language pertaining to COPD, WellCare will default (in order) to the following:

- National Committee for Quality Assurance (NCQA);

- United States Preventive Services Task Force (USPSTF), National Quality Strategy (NQS), Agency for Healthcare Research and Quality (AHRQ);
- Specialty associations, colleges, societies, etc. (e.g., American Academy of Family Physicians, American Congress of Obstetricians and Gynecologists, American Cancer Society, etc.).

Links to websites within the CPGs are provided for the convenience of Providers. Listings do not imply endorsement by WellCare of the information contained on these websites. NOTE: All links are current and accessible at the time of MPC approval.

WellCare aligns with the ACP, ACCP, ATS, ERS, and the Global Initiative for Chronic Obstructive Lung Disease on the topic of COPD. Highlights from their respective publications are noted below.

ACP, ACCP, ATS, ERS¹

In 2011, the **American College of Physicians (ACP)**, the **American College of Chest Physicians (ACCP)**, the **American Thoracic Society (ATS)**, and **European Respiratory Society (ERS)** issued a guideline for COPD that addresses the value of history and physical examination for predicting airflow obstruction; the value of spirometry for screening or diagnosis of COPD; and COPD management strategies (specifically evaluation of various inhaled therapies, pulmonary rehabilitation programs, and supplemental oxygen therapy). The report can be found [here](#).¹

GLOBAL INITIATIVE FOR CHRONIC OBSTRUCTIVE LUNG DISEASE²

The **Global Initiative for Chronic Obstructive Lung Disease** published a 2016 update to the report, *A Global Strategy for Diagnosis, Management, and Prevention of COPD*. Components of the report include assessing and monitoring disease, reducing risk factors, managing stable COPD, and managing exacerbations. The full report can be accessed at <http://goldcopd.org/global-strategy-diagnosis-management-prevention-copd-2016/>.

Evidence Based Practice

MEASUREMENT OF COMPLIANCE

WellCare is committed to adhering to the measures and standards published by the Centers for Medicare and Medicaid Services (CMS) and the National Committee for Quality Assurance (NCQA). Please reference WellCare's Clinical Policy Guiding Document titled *Measures of Compliance*.

NOTE: To access Clinical Policy Guiding Documents visit www.wellcare.com – select the Provider tab, then “Tools” and “Clinical Guidelines”.

Care Management

The goals for Care Management is to support the member's ability to self-manage their disease, minimize risks of chronic obstructive pulmonary disease, and remove barriers preventing the member from achieving those goals. Primary symptoms to educate member on include:³

Member follows *COPD Action Plan* and calls physician right away to report:

- More breathless than usual
- less energy for my daily activities
- Increased or thicker phlegm/mucus
- Swelling of ankles more than usual
- More coughing than usual
- Feels like a “chest cold”
- Poor sleep and my symptoms woke me up
- Poor appetite
- Medicine is not helping

Member should seek immediate medical care for:

- Severe shortness of breath even at rest
- Not able to do any activity because of breathing
- Not able to sleep because of breathing
- Fever or shaking chills
- Feeling confused or very drowsy
- Chest pains
- Coughing up blood

Integrated care management of COPD involves:

- Identifying and removing triggers from the member's environment. This may involve other family members, especially those who are smokers.
- Ensuring efficacy of and adherence to maintenance medications.

- Vaccinating against influenza and pneumonia.
- Developing a *COPD Action Plan*.
- Screening for anxiety and depression and initiate appropriate treatment or continued monitoring.

MEASURABLE HEALTH OUTCOMES

Targeted Health Outcomes (Extended Program Goals) result from successful Member self-management (see Case Management Objectives).

- The member is able to maintain or improve activity level over a specific period of time after the start of Case Management engagement. Member-specific goals should identify the activities targeted for improvement. Case Management uses member's response to daily activity assessment responses, comparing initial to subsequent assessment responses.
- The member reports fewer or lessening symptoms over a specific period of time after the start of Case Management engagement. Member-specific goals should reference member's individual symptoms. Case Management uses member's response to symptom assessment responses, comparing initial to subsequent assessment responses.
- The Member experiences fewer COPD exacerbations requiring acute medical care and intervention. The case manager compares the recent utilization frequency for COPD to the frequency prior to CM engagement. Case Management monitors for ED and inpatient authorization/utilization related to the primary diagnosis of COPD. In absence of ED and inpatient utilization, authorizations and claims data, or to otherwise demonstrate fewer exacerbations requiring medical intervention, CM may use Provider and/or Member narrative.

CASE MANAGEMENT GOALS

Case Goals should target specific care gaps and/or adherence issues, and measure the Member's progress towards self-management and adherence which will lead to the targeted health outcomes above. Examples:

- Member's prescription refills demonstrate at least an 80% adherence rate (verified by claims or Member/Provider narrative for [bronchodilator, inhaled glucocorticosteroids, systemic corticosteroid, other] over last 30 days).
- Member describes prescribed and safe use of oxygen at home and / or while away from home over the last 30 days, meeting physician prescribed oxygen regime and / or matching Member's *COPD Action Plan*.
- Member describes the use of infection prevention measures (such as handwashing) over the last 30 days and has received annual flu vaccine and pneumococcal vaccine if appropriate for age and risk factors.
- Specific for Members requiring hospitalization: The Member participates in provider follow-up visit within 7 days of hospital discharge.

Member is able to describe steps taken to minimize exposure to and/or avoid COPD triggers and irritants as measured by Member's description of known triggers and avoidance strategies (pre- and post- case management intervention).

CASE MANAGEMENT OBJECTIVES

Case Management Objectives should focus on improving the Member's self-management skills including:

- Implementing a *COPD Action Plan*
- Using oxygen safely
- Using airway clearing and/or pursed lip breathing techniques
- Tobacco cessation
- Avoiding fumes, dust, second-hand smoke and other lung irritants
- Staying as active as possible
- Taking medications as prescribed including control medications and rescue inhalers / treatments
- Attending all appointments as scheduled
- Frequent handwashing to prevent infection

The care team should also conduct risk screening and treat co-morbid anxiety and depression, if applicable. Additional Care Management training items are located in the Addendum of this CPG.

OTHER CONSIDERATIONS

The following are important behavioral health concerns when managing those with COPD:⁴

- Intense anxiety can mimic a COPD exacerbation, and giving bronchodilators will worsen the anxiety.
- Physical symptoms such as loss of appetite and weight, trouble sleeping due to agitation, low energy, and poor concentration can be very responsive to antidepressant medications.
- Substance use disorders may be co-occurring as smoking (nicotine dependence) frequently is accompanied by alcohol use/dependence.
- Excessive worry can lead to demoralization, which is a persistent failure to cope with a chronic stressor. In one ER study, those treated with an inhaler for asthma improved their rating of comfort, even when their oxygen saturation levels did not increase.

MEMBER EDUCATIONAL RESOURCES

WellCare contracts with Krames/StayWell for Member educational materials utilized by Case Managers. Items are available to review with Members to address knowledge gaps. Case Managers verbally educate Members on the topics below related to COPD. (Titles may also be sent to the member).

NOTE: Links are internal for WellCare Care Management staff.

- [What Is COPD](#)
- [Chronic Lung Disease- Preventing Lung Infections](#)
- [Chronic Lung Disease- Maximizing Your Energy](#)
- [Chronic Lung Disease- Controlling Stress](#)
- [Chronic Lung Disease- Your Emotional Well-Being](#)
- [Exercising- Increasing Endurance](#)
- [Flexibility Exercises - Chronic Lung Disease](#)
- [Exercising- Increasing Strength](#)
- [Exercising-Taking the First Steps](#)
- [Exercising-Using the Dyspnea Scale](#)
- [Good Nutrition for Chronic Lung Disease](#)
- [Chronic Lung Disease- Avoiding Irritants and Allergens](#)
- [Medications for Chronic Lung Disease](#)
- [Caring For Your Inhaler - COPD](#)
- [COPD- Using Inhalers](#)
- [Using Oxygen Safely](#)
- [Using Oxygen at Home](#)
- [Traveling with Oxygen](#)
- [Pursed-Lip Breathing](#)
- [Airway Clearance Techniques](#)

Providers may wish to research the titles above related to COPD that Case Managers utilize with Members.

Related WellCare Guidelines

In addition to the information contained in this document, please reference the following CPGs: *Asthma (HS-1001)* and *Smoking Cessation (HS-1035)*. The age-specific *Preventive Health CPGs (Adolescent: HS-1051, Adult: HS-1018, and Older Adult: HS-1063)*, for additional measures related to healthy behaviors (like smoking cessation), and general medication prescribing, reconciliation, and adherence monitoring.

NOTE: Clinical Policies can be accessed by going to www.wellcare.com – select the Provider tab, then “Tools” and “Clinical Guidelines”.

References

1. Qaseem A, Wilt TJ, Weinberger S, Hanania NA, Criner G, van der Molen T, et al. 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. 2011. *Annals of Internal Medicine*;155:179-191.
2. Global strategy for diagnosis, management, and prevention of COPD. Global Initiative for Chronic Obstructive Lung Disease Web site. <http://goldcopd.org/global-strategy-diagnosis-management-prevention-copd-2016/>. Published April 2016. Accessed November 4, 2016.
3. My COPD action plan. American Lung Association Web site. <http://www.lung.org/assets/documents/copd/copd-action-plan.pdf>. Published 2016. Accessed November 9, 2016.
4. WellCare. Internal Care Management Training. 2015.

Disclaimer

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*Easy Choice Health Plan ~ Harmony Health Plan of Illinois ~ Missouri Care ~ Ohana Health Plan, a plan offered by WellCare Health Insurance of Arizona
OneCare (Care1st Health Plan Arizona, Inc.) ~ Staywell of Florida ~ WellCare Prescription Insurance ~ WellCare Texan Plus (Medicare – Dallas and Houston markets)
WellCare (Arizona, Arkansas, Connecticut, Florida, Georgia, Illinois, Kentucky, Louisiana, Mississippi, Nebraska, New Jersey, New York, South Carolina, Tennessee, Texas)*

Medical Policy Committee Approval History

Date	History and Revisions by the Medical Policy Committee
10/10/2017	<ul style="list-style-type: none"> Approved by MPC. No changes.
12/8/2016	<ul style="list-style-type: none"> Approved by MPC. Enhanced Care Management and Measures of Compliance sections. Revised with CM, DM, QI, UM, BH and the Chief Medical Directors.
2/5/2015	<ul style="list-style-type: none"> Approved by MPC. Added items from <i>Care Management</i>.
6/17/2014	<ul style="list-style-type: none"> Approved by MPC. No changes.
4/5/2012	<ul style="list-style-type: none"> Approved by MPC. Added items by Global Initiative for Chronic Obstructive Lung Disease, NCQA re: spirometry.
12/1/2011	<ul style="list-style-type: none"> New template design approved by MPC.
7/2010	<ul style="list-style-type: none"> Approved by MPC. New.

Addendum

Symptoms of COPD⁵

Cough can be expected with COPD. Cough is a natural reaction of the airways to try and remove mucus or it can be a reaction to protect the airways from inhaled irritants.

Dyspnea, or shortness of breath, is a common symptom of COPD. Breathlessness is a feeling occurring when the lung changes from working in the way it was normally designed to work, to working differently. If the lung senses that it takes more work or effort to move air in and out of the lungs, a feeling of breathlessness will be experienced.

It is normal for the airways to produce several ounces of sputum a day. This mucus is needed to keep the breathing passages moist. When the lungs are bothered by irritants, they try to protect themselves by producing additional mucus to trap any inhaled particles from entering the lungs.

Like breathlessness, tiredness is an uncomfortable feeling. It is a common symptom in people with COPD. Tiredness is a feeling of loss of energy or stamina. Generally, breathlessness and tiredness go hand in hand and they are, for some people, difficult to tell apart.

Stages of COPD⁵

- Stage I: Mild.** Individual may not be aware that his or her lung function is abnormal. Mild airflow limitation ($FEV_1/FVC < 70\%$; $FEV_1 \geq 80\%$ predicted) and sometimes, but not always, chronic cough and sputum production.
- Stage II: Moderate.** Individuals typically seek medical attention because of chronic respiratory symptoms or an exacerbation of their disease. Worsening airflow limitation ($FEV_1/FVC < 70\%$; $50\% \leq FEV_1 < 80\%$ predicted) with shortness of breath typically developing on exertion.
- Stage III: Severe.** Airflow limitation, greater shortness of breath, reduced exercise capacity, and repeated exacerbations which have an impact on patient's quality of life. Further worsening of airflow limitation ($FEV_1/FVC < 70\%$; $30\% \leq FEV_1 < 50\%$ predicted), greater shortness of breath, and reduced exercise capacity is expected.
- Stage IV: End Stage.** Quality of life is very appreciably impaired and exacerbations may be life-threatening. Severe airflow limitation ($FEV_1/FVC < 70\%$; $FEV_1 < 30\%$ predicted) or $FEV_1 < 50\%$ predicted plus chronic respiratory failure. Patients may have *Very Severe* (Stage IV) COPD even if the $FEV_1 > 30\%$ predicted, whenever this complication is present.

Spirometry is a Key Diagnostic Test⁵

Spirometry is the gold standard for diagnosing COPD because it is the most standardized and reproducible measurement of airflow limitation. It measures the amount and speed at which a person can exhale after a deep

breath. Symptomatic and asymptomatic patients suspected of having COPD should have spirometry performed to determine airway limitation and disease severity. Only one in three patients newly diagnosed with COPD receives a spirometry-based screening.

Key Indicators for Considering a COPD Diagnosis

Consider COPD and perform spirometry if any of the following indicators are present in an individual over age 40:

- Dyspnea that is progressive, worse with exercise, persistent (present every day) and described by the patient as an “increased effort to breathe, “heaviness”, “gasping”, etc.
- Chronic cough: may be intermittent and may be unproductive
- Chronic sputum production
- History of exposure to risk factors

Spirometry is a test that measures the amount and speed at which a person can exhale after a deep breath. Symptomatic and asymptomatic patients suspected of having COPD should have spirometry performed to determine airway limitation and disease severity. Spirometry is the gold standard for diagnosing COPD because it is the most standardized and reproducible measurement of airflow limitation. Only one in three patients newly diagnosed with COPD receives a spirometry-based screening (NCQA, 2014).

Note: The diagnosis should be confirmed by spirometry. When performing spirometry, measure Forced Vital Capacity (FVC) and Forced Expiratory Volume in one second (FEV₁). Calculate FEV₁/FVC ratio. Spirometric results are expressed as % Predicted using appropriate normal values for the person's sex, age, and height.

Differential Diagnosis of COPD⁵

Asthma: Onset early in life; symptoms vary from day to day; symptoms at night/early morning; allergy, rhinitis and/or eczema also present; family history of asthma; largely reversible airflow limitation.

Bronchiectasis: Large volumes of purulent sputum; commonly associated with bacterial infection; coarse crackles/clubbing on auscultation; chest X-ray/CT shows bronchial dilation, bronchial wall thickening.

Congestive Heart Failure: Fine basilar crackles on auscultation; chest X-ray shows dilated heart, pulmonary edema; pulmonary function tests indicate volume restriction, not airflow limitation.

Diffuse Panbronchiolitis: Most patients are male and nonsmokers; almost all have chronic sinusitis; chest X-ray and HRCT show diffuse small centrilobular nodular opacities and hyperinflation.

Obliterative Bronchiolitis: Onset in younger age; non-smokers; may have history of rheumatoid arthritis or fume exposure; CT on expiration shows hypodense areas.

Tuberculosis: Onset all ages; chest X-ray shows lung infiltration or nodular lesions; microbiological confirmation; high local prevalence of tuberculosis.