

# Clinical Practice Guideline (CPG)

## COPD – CHRONIC OBSTRUCTIVE PULMONARY DISEASE



### SCOPE:

Family Care     PACE     Partnership

### AUDIENCE:

Interdisciplinary Team Staff (IDTS),  
Clinicians, Providers

### PURPOSE:

To provide best practice approach to Community Care, Inc. Interdisciplinary Team Staff, Physicians and other providers who care for our members.

Community care Clinical Practice Guidelines (CPG) are recommendations intended to guide an overall approach to care. (Please see references for an in-depth review of the condition/disease.)

Individual member factors, comorbidities, member preferences and member “Goals of Care” should be considered when making recommendations for an individual member.

**Owner:** Medical Director

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### 1) Overview of Chronic Obstructive Pulmonary Disease (COPD)

- COPD is a common, preventable and treatable chronic lung disease characterized by persistent respiratory symptoms and airflow limitation that is due to airway and/or alveolar abnormalities usually caused by significant exposure to noxious particles or gases.

- A number of processes cause the airways to become narrow. There may be destruction of parts of the lung, mucous blocking the airways and inflammation and swelling of the airway lining.
- Symptoms: Shortness of breath, chronic cough, sputum production.
- Risk Factors: The main risk factor is tobacco smoking but other environmental exposures and air pollution also contribute. Host factors that include genetic abnormalities, abnormal lung development, etc. also predispose individuals to develop COPD.
- As the disease progresses, people find it more difficult to carry out their normal daily activities, often due to breathlessness.
- During flare-ups, people with COPD find their symptoms become much worse. They may need to receive extra treatment at home or to be admitted to a hospital for emergency care. Severe flare-ups can be life threatening.
- People with COPD often have other medical conditions such as heart disease, osteoporosis, musculoskeletal disorders, lung cancer, depression and anxiety.

## 2) Best Practice Standards

### ➤ Diagnosis and Initial Assessment

- Consider COPD in a member who presents with shortness of breath, chronic cough, recurrent lower respiratory infections and/or history of cigarette smoking or other risk factors.
- Members with suspected COPD should undergo a targeted history and physical examination.
  - A diagnosis of COPD is based on the presence of symptoms and airflow obstruction (Gold stage 1-4) unless the member is not appropriate to undergo such an evaluation.
- Spirometry (pre and post-bronchodilator) is used to determine airflow obstruction; the presence of a post-bronchodilator FEV1/FVC of  $< 0.7$  confirms the presence of persistent airflow obstruction.
- The level of symptoms (mMRC or CAT)<sup>i</sup> and the risk of exacerbations based on the number of moderate or severe exacerbations in the previous year, are used to determine the patient's GOLD group (A-D).
  - The goals of assessment are to determine the level of airflow limitation, the impact of the disease on the patient's health, the presence of comorbidities and the risk of future events, such as exacerbations, hospital admissions or death.

### ➤ Initial management

- **Non-Pharmacological Management**

- **Smoking Cessation:** All individuals who smoke should be strongly encouraged and supported to quit.
- **Active Life Style and Exercise:** Pulmonary Rehabilitation improves health status and exercise tolerance in stable patients. Pulmonary rehab reduces future hospitalizations in a patient when started within 30 days of a recent exacerbation. It also leads to a reduction in symptoms of anxiety and depression. Maintaining an active life style helps preserve or improve pulmonary function especially after completing pulmonary rehab. Physical and Occupational therapy are also appropriate for COPD and other chronic diseases and provide guided exercise, activity modification/energy conservation techniques, airway clearing/breathing techniques, address functional deficits and assess for DME need.
- **Nutrition/Obesity Management:** Monitor BMI, encourage healthy eating and weight loss.
  - **Self-Management Education:** Risk factors, inhaler technique, breathlessness and energy conservation and stress management strategies, written action plan.
  - **Screening for Lung Cancer:** Patients with COPD aged 50-80 years with a 20 pack year smoking history who currently smoke or who have quit smoking within the past 15 years, should have an annual low-dose computed tomography scan.
  - **Vaccination:** Members should be offered vaccination that includes influenza, pneumonia, Tdap (tetanus, diphtheria, pertussis), zoster and COVID-19 vaccination based on current CDC recommendations.
  - **Palliative Care** should be considered and discussed with the member/legal decision maker in a member with advanced COPD.
  - **Advance Directives** should be discussed and completed for all members.
    - ✓ **Pharmacological Therapy for Stable COPD:** Individualize treatment regimen based on severity of symptoms, airflow limitation and severity of exacerbations.
  - **Bronchodilators:** Inhaled bronchodilators (beta2-agonists or antimuscarinic drugs) used on a regular basis can reduce or prevent symptoms.
    - ✓ Use of short-acting bronchodilators on a regular basis is not recommended.
    - ✓ Long-acting inhaled bronchodilators significantly improve lung function, dyspnea, health status and reduce exacerbation rates.
    - ✓ Combinations of beta-agonists and anticholinergics are superior to either agent alone (short or long acting).
    - ✓ Beta2-Agonists: Relax smooth muscles and relieve symptoms (bronchoconstriction) and improve FEV1. Short-acting beta2-agonists (SABA) have a duration of action of four to six hours. Long-acting beta2-agonists (LABA) show a duration of action of 12 hours or more and do not preclude additional benefit from as-needed SABA.
    - ✓ Antimuscarinic Drugs: Short-acting antimuscarinic agents (SAMA) and long-acting antimuscarinic agents (LAMA) block the bronchoconstrictor effects of acetylcholine on the airway smooth muscle. Studies have shown some small

benefit over beta1-agonists in terms of lung function, health status and requirement for oral steroids.

- ✓ Tiotropium improves effectiveness of pulmonary rehab in increasing exercise performance.
- ✓ Theophylline exerts a small bronchodilator effect in stable COPD, and that is associated with modest symptomatic benefits.
- **Inhaled Corticosteroids:** Consider in combination with one or two long-acting bronchodilators in members with hospitalization(s), one or more exacerbations a year, elevated eosinophils and history of/or concomitant asthma.
- **Oral Corticosteroids:** Long-term use of oral corticosteroids (glucocorticoids) has numerous side effects with no evidence of benefits.
- **Supplemental Oxygen:** Long-term administration of supplemental oxygen increases survival in patients with severe chronic resting arterial hypoxemia.
- **Managing Inhaled Therapies:** Proper use can positively impact the number and severity of exacerbations.
  - ✓ Consider size, portability and steps to prepare inhaler.
  - ✓ Consider member beliefs and satisfaction with current devices.
  - ✓ Consider cognition, dexterity and strength. Consider if the member is able to perform the correct specific inhalation maneuver.

### 3) Preventive Care, Management of Acute Issues

#### ➤ Patient Monitoring and Follow-Up

- Members should be reviewed and reassessed at suitable intervals and pharmacologic and non-pharmacologic therapy adjusted as needed. Assessment should include:
  - Current level of symptoms and frequency of exacerbations;
  - Effect of treatment and possible side effects;
  - Reassessment of comorbidities;
  - Inhaler technique;
  - Adherence to prescribed therapy;
  - Risk factors and continued smoking;
  - Physical activity should be encouraged; and
  - Need and continued need for supplemental oxygen, non-invasive ventilation, palliative care approaches and advance directives.

#### ➤ Management of Exacerbation

- An exacerbation of COPD is an acute worsening of respiratory symptoms that result in additional therapy. It is commonly precipitated by respiratory infections.
- **Exacerbations** are classified as:

- Mild treated with short-acting bronchodilators only;
- Moderate treated with short-acting bronchodilators, antibiotics and/or oral corticosteroids; and
- Severe-patient requires hospitalization or visit to the ER. Severe exacerbation may also be accompanied by acute respiratory failure.
- **Treatment of an Exacerbation:** Goal of treatment is to minimize the negative impact of the exacerbation and to prevent the development of future events. With early reporting of worsening of symptoms and timely treatment, an ER visit and hospitalization may be preventable.
  - Bronchodilators:
    - Short-acting beta2-agonists (SABA) with or without short-acting anticholinergic (antimuscarinic SAMA) are recommended as the initial bronchodilators to treat an acute exacerbation .
    - Maintenance therapy with long-acting bronchodilators should be initiated or added back as soon as possible.
  - Corticosteroids: Systemic steroids improve lung function (FEV1), oxygenation and decrease recovery time. Duration should not be more than five to seven days.
  - Antibiotics: When indicated, shorten recovery time, reduce risk of early relapse and treatment failure.
  - Following an exacerbation, appropriate measures for a future exacerbation prevention should be initiated.
    - **Treatment Setting:** Depending on the severity of the exacerbation and/or the severity of the underlying disease, an exacerbation can be managed in an outpatient or an inpatient setting. More than 80% of the exacerbations are managed on an outpatient basis. Potential indications for hospitalization assessment:
      - ✓ Severe symptoms such as sudden worsening or resting dyspnea, increased respiratory rate, decreased oxygen saturation, confusion and drowsiness;
      - ✓ Acute respiratory failure;
      - ✓ Development of new signs, e.g., cyanosis, peripheral edema;
      - ✓ Failure of an exacerbation to respond to the initial medical management;
      - ✓ Presence of serious comorbidities, e.g., heart failure, newly occurring arrhythmias; and
      - ✓ Insufficient home support.

### ➤ Recommendations for Post-Hospital Follow-Up

- Evaluate member ability to cope in his or her own environment.
- Review and understanding of treatment regimens.
- Reassessment of inhaler technique.

- Reassess need for long-term oxygen or continued need after an exacerbation.
- Document symptoms and the capacity to do physical activity and consider patient eligibility to be enrolled in pulmonary rehabilitation or physical or occupational therapy.
- Determine status of comorbidities.
- There was a major decrease in hospitalization for COPD exacerbation during the COVID-19 pandemic. Shielding measures (masks, avoiding contact, handwashing) may be recommended in the winter months in addition to the established non-pharmacological and pharmacological measures in members at risk for exacerbation.

#### ➤ Palliative Care

- Palliative care approaches should be discussed with the Member/LDM with advanced COPD.

## 4) Process for Interdisciplinary Team Staff (IDTS) – PACE and Partnership Programs

- Ensure access to medication, equipment, medical appointments and medical/social support services.
- Educate members on:
  - Diagnosis, signs and symptoms of exacerbation, triggers and treatment options;
  - Risks of continued smoking; and
  - Correct use of medication, inhaler technique and supplemental oxygen.
- Use motivational interviewing techniques to assess and address barriers to care and to smoking cessation.
- Offer smoking cessation utilizing a shared decision-making process.
  - Collaborate with Primary Care Provider (PCP).
- Incorporate in member care plan if a member goal for the next six months.

## 5) Quality Assurance Monitoring

- Community care monitors quality of care provided to all its members via Internal File Reviews, target audits, risk reports, HEDIS data, Acumen data, electronic health record guideline reports, Clinical Dashboards and feedback from providers.
- Community care recognizes that Clinical Practice Guidelines are intended to assist in decision-making and may not apply to all members or circumstances, and complete compliance is not expected for all guidelines.

## 6) References

- 1) Global Strategy for the Diagnosis, Management, And Prevention of Chronic Obstructive Pulmonary Disease (2024 report)
- 2) mMRC modified Medical Research Council Breathlessness Score CAT COPD Assessment Test