Chronic Obstructive Lung Disease (COPD)

This CPM presents a model of care based on scientific evidence available at the time of publication. It is not a prescription for every physician or every patient, nor does it replace clinical judgment. All statements, protocols, and recommendations herein are viewed as transitory and iterative.

Although physicians are encouraged to follow the CPM to help focus on and measure quality, deviations are a means for discovering improvements in patient care and expanding the knowledge base.

If you have questions or concerns regarding this information, contact:

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This CPM is part of Presbyterian’s Clinical Care Mode, a broad, enterprise-wide body of documentation covering PHS’ functions, programs, and care pathways, intended to build organizational acumen, facilitate cross-system collaboration, and accelerate our implementation of clinical initiatives.

Find all of PHS’ Care Model at www.PHSCareModel.org.

This Clinical Practice Model (CPM) is designed for patients:
- Over the age of 18
- With suspected or diagnosed COPD
- In a PMG clinic/outpatient setting

A multidisciplinary COPD Guidelines Committee, as part of an evidence-based care design project (EBCD), developed these guidelines for the effective, consistent management of COPD across Presbyterian. This CPM is based on the Global Initiative for Chronic Obstructive Lung Disease (GOLD) Guidelines, and focuses on COPD management in the outpatient setting.

Why Focus on COPD?

According to the CDC, Chronic lower respiratory disease, primarily COPD, was the third leading cause of death in the United States in 2011. Fifteen million Americans report that they have been diagnosed with COPD, however, it remains an under-diagnosed disease. More than 50% of adults with low pulmonary function are not aware they have COPD.

Care Pathway Roles and Responsibilities

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Clinician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial diagnosis and treatment for early stages of COPD (GOLD mild, moderate), severity stratification</td>
<td>Physician or APC, Primary Care</td>
</tr>
<tr>
<td>Patient education, outreach, health coaching; message management; Healthy Planet care management; support for early stages of COPD (GOLD mild, moderate)</td>
<td>Care Manager, Primary Care</td>
</tr>
<tr>
<td>Message management, nurse visits, team support, spirometry, vaccination administration</td>
<td>Team Nurse, Primary Care</td>
</tr>
<tr>
<td>Patient education, outreach, health coaching, follow up, scheduling, and support for advanced COPD (GOLD severe, very severe)</td>
<td>Care Manager, Pulmonology</td>
</tr>
<tr>
<td>Management of advanced stage COPD (GOLD severe, very severe), severity stratification</td>
<td>Pulmonologist</td>
</tr>
<tr>
<td>Perform spirometry testing for initial diagnosis and annual follow up spirometry</td>
<td>Spirometry Certified RN</td>
</tr>
<tr>
<td>Medication management therapy, medication adjustment, medication adherence support</td>
<td>Pharmacist Clinician, Primary Care</td>
</tr>
<tr>
<td>Support for lifestyle modification, stress management, depression</td>
<td>Behavioral Health Clinician</td>
</tr>
<tr>
<td>Community support for transportation, medication assistance, home safety assessment</td>
<td>Care Coordinator</td>
</tr>
</tbody>
</table>
Assessment of COPD

1. Screen patients with COPD risk factors or chronic respiratory symptoms
2. Suspect COPD
3. Perform spirometry and administer CAT Questionnaire
4. COPD diagnostic criteria met?
   - Yes: Evaluate comorbidities
   - No: Evaluate for other causes of symptoms and refer patient as needed
5. Classify severity based on spirometry and CAT

- **GOLD A: Mild**
  - FEV1 >80%
  - FEV1/FVC <70%
  - Low level of symptoms
  - CAT score <10
  - Cough and sputum may be present

- **GOLD B: Moderate**
  - FEV1 50% to <80%
  - FEV1/FVC <70%
  - 0-1 exacerbations in the past 12 months
  - Symptomatic with CAT score ≥10

- **GOLD C: Severe**
  - FEV1 30% to <50%
  - FEV1/FEV <70% predicted
  - CAT score <10
  - High risk: 2 or more exacerbations in the past year, none resulting in hospitalization

- **GOLD D: Very Severe**
  - FEV1 <30%
  - FEV1/FEV <70%
  - CAT Score ≥10
  - High risk: 2 or more exacerbations in the past year, 1 requiring hospitalization

Treat

**Evidence/Resources**

- [American Lung Association](#)
- [American Thoracic Society](#)
- [Centers for Disease Control and Prevention](#)
- [GOLD: Global Initiative for Chronic Obstructive Pulmonary Disease](#)
- [GOLD: Outpatient Reference](#)
Diagnostic Criteria

COPD Risk Factors and Symptoms

**Symptoms:**
- Dyspnea that is progressive, persistent, worsens with exercise or during respiratory infections
- Chronic cough: present, intermittent, or daily
- Chronic sputum production
- Mild COPD may present airflow limitation without any of the above key indicators

**Risk Factors:**
- History of tobacco smoking (most significant risk factor)
- History of other inhalation exposures, such as occupational chemicals and dusts
- Family history of COPD

**Other Diseases that Present with Symptoms of COPD:**
- Asthma
- Heart Failure
- Tuberculosis (or other chronic lung infections)
- Chronic cough from GERD or post nasal drip
- Sleep apnea
- Thyroid disease (and other metabolic disorders)

**Spirometry**

Spirometry is required to establish a diagnosis of COPD:
- Spirometry assesses lung capacity using Forced Vital Capacity (FVC) / Forced Expiratory Volume in 1 second (FEV₁).
- FVC = the total amount of air a patient can exhale forcefully after a full inspiration.
- FEV₁ = the amount of air a patient can exhale forcefully in the first second of exhalation.
- FEV₁/FVC provides the ratio required to diagnose COPD. The presence of a post-bronchodilator FEV₁/FVC < 0.70 (less than 70%) along with evaluation of symptoms confirms the presence of airflow limitation and COPD.
- After a diagnosis of COPD is established, spirometry should be performed annually to assess disease progression.
COPD Assessment Test (CAT)
The COPD Assessment Test is a patient-completed questionnaire for assessing and monitoring COPD. It consists of 8 questions that are rated on a scale from 0-5 (0=normal/none; 5=markedly abnormal), which informs the overall score. A higher score is indicative of a higher severity. The COPD Assessment Test can be accessed through a flowsheet in Epic by searching “COPD” or “CAT.”

![COPD Assessment Test (CAT) Chart]

**Assessment of Severity**
In the context of COPD, severity refers to the severity of airway obstruction. COPD assessment for severity helps determine the risk of future events (exacerbations, hospital admissions, death) in order to guide therapy, and informs the initial treatment.

**Key assessment criteria:**
- The COPD Assessment Test (CAT), shown on this page (above), is recommended for a comprehensive assessment of symptoms.
- **Airflow limitation** based on spirometry
- **Risk of exacerbation**
Comorbidities

Comorbidities to be treated in conjunction with COPD:

- Heart failure
- Ischemic heart disease
- Depression
- Lung cancer
- Osteoporosis
- Obstructive sleep apnea
- Diabetes mellitus
- Metabolic disease

Prevention

Patients are classified “at risk for COPD” if they demonstrate the following criteria:

- Chronic symptoms (cough, sputum production, dyspnea)
- Exposure to risk factors (smoking, pollutants)
- Normal spirometry (≥80%)

Preventive measures:

- Smoking Cessation
  - Assess readiness to quit
  - Refer patient to the Quit Line (1-800-QUIT NOW)
  - Provide patient with Smoking Cessation Packet
- Encourage physical activity
- Administer flu vaccine and pneumococcal vaccine, if indicated
- Perform annual spirometry testing
- Administer COPD Action Plan
Medication Therapy

Once COPD has been diagnosed, effective management should be based on individualized assessment of symptoms and future risks. The role of pharmacological therapy is to prevent and control symptoms, reduce the frequency of exacerbations, and improve exercise tolerance and overall health. Medication therapy should be determined by disease class, symptom severity, and clinical status of the patient. Bronchodilators and inhaled corticosteroids are the primary categories of medications used. Currently, no treatment is shown to modify the rate of decline in lung function.

Bronchodilators (SABA, LABA, SAMA, LAMA)

- Short-acting beta2 agonists (SABAs) are used for monotherapy in mild COPD (GOLD A), and in combination for all stages.
- Long-acting bronchodilators- long-acting muscarinic antagonist (LAMA), long-acting beta2-agonist (LABA), anticholinergic, or combination therapy- are used for moderate to very severe COPD (GOLD B,C,D).
- Combined use of short-or-long-acting beta2-agonists and anticholinergics may be considered if symptoms are not improved with dosing agents.
- Inhaled bronchodilators are preferred to oral bronchodilators.
- Treatment with theophylline is not recommended unless other bronchodilators are not available for long-term treatment.

Inhaled Corticosteroids (ICS)

- Long-term treatment with inhaled long-acting beta2-agonist (LABA) and inhaled corticosteroids (ICS) is appropriate for severe and very severe COPD (GOLD C,D), and for patients with frequent exacerbations that are not adequately controlled by long-acting bronchodilators.
- Long-term monotherapy with oral corticosteroids is not recommended in COPD.

Phosphodiesterase-4 (PDE-4) Inhibitors

- PDE-4 inhibitor roflumilast may be used to reduce exacerbations in patients with chronic bronchitis, severe and very severe airflow limitation, and frequent exacerbations that are not controlled by long-acting bronchodilators.
- PDE-4 does not cause bronchodilation and should not be used to treat acute bronchospasm.

Individualized Treatment

Treatment recommendations for stable COPD and an acute exacerbation are based on the GOLD guidelines. It is important to note that COPD treatment is individualized, as patients will respond differently to medications. Often times, providers will need to try more than one combination to find optimal treatment and symptom management. The following table outlines high-level recommendations for treating stable COPD.
Pharmacological Therapy for Stable COPD

<table>
<thead>
<tr>
<th>Treatment</th>
<th>GOLD A</th>
<th>GOLD B</th>
<th>GOLD C</th>
<th>GOLD D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended First Choice</strong></td>
<td>1. Short-acting beta₂-agonist (SABA)</td>
<td>1. Long-acting muscarinic antagonist (LAMA)</td>
<td>1. Inhaled corticosteroid (ICS) - AND- LAMA or LABA agent</td>
<td>1. Inhaled corticosteroid (ICS) - AND- LAMA or LABA agent</td>
</tr>
<tr>
<td></td>
<td>2. Short-acting muscarinic antagonist (SAMA)</td>
<td>2. Long-acting beta₂-agonist (LABA) - OR-</td>
<td>2. Combination therapy (LAMA/LABA agents)</td>
<td>2. Combination therapy (LAMA/LABA agents)</td>
</tr>
<tr>
<td></td>
<td>3. Combination therapy- Combivent respimat inhaler</td>
<td>3. Combination therapy</td>
<td></td>
<td></td>
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<tr>
<td><strong>Alternative</strong></td>
<td>None identified</td>
<td>1. Short-acting beta₂-agonist (SABA)</td>
<td>ICS/LABA combination agents</td>
<td>ICS/LABA combination agents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Short-acting muscarinic antagonist (SAMA)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>3. Combination therapy- Combivent respimat inhaler</td>
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</tr>
<tr>
<td><strong>Rescue Medications</strong></td>
<td></td>
<td>1. SAMA</td>
<td>1. SAMA</td>
<td>1. SAMA</td>
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<tr>
<td></td>
<td></td>
<td>2. SABA</td>
<td>2. SABA</td>
<td>2. SABA</td>
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<tr>
<td></td>
<td></td>
<td>3. Combination therapy (SAMA/SABA)</td>
<td>3. Combination therapy (SAMA/SABA)</td>
<td>3. Combination therapy (SAMA/SABA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. PDE-4 inhibitor</td>
<td>4. PDE-4 inhibitor, theophylline</td>
<td></td>
</tr>
<tr>
<td><strong>Procedures</strong></td>
<td>Spirometry</td>
<td>Spirometry</td>
<td>Spirometry</td>
<td>Spirometry</td>
</tr>
<tr>
<td><strong>Vaccinations</strong></td>
<td>• Flu Vaccine</td>
<td>• Flu Vaccine</td>
<td>• Flu Vaccine</td>
<td>• Flu Vaccine</td>
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<tr>
<td></td>
<td>• Pneumococcal</td>
<td>• Pneumococcal</td>
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<tr>
<td></td>
<td>• Vaccine</td>
<td>• Vaccine</td>
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<tr>
<td></td>
<td>• Tdap (adult)</td>
<td>• Tdap (adult)</td>
<td>• Tdap (adult)</td>
<td>• Tdap (adult)</td>
</tr>
<tr>
<td><strong>Referral</strong></td>
<td>• Pulmonary Rehab</td>
<td>• Pulmonary Rehab</td>
<td>• Pulmonary Rehab</td>
<td>• Pulmonary Rehab</td>
</tr>
<tr>
<td></td>
<td>• Pulmonary Medicine</td>
<td>• Pulmonary Medicine</td>
<td>• Palliative Care</td>
<td>• Palliative Care</td>
</tr>
</tbody>
</table>

Oxygen Therapy

Long-term oxygen therapy (LTOT) is used for COPD when a patient has hypoxia (low levels of oxygen in the blood). Oxygen therapy improves survival, quality of life, exercise, sleep, and cognitive performance. Physiological indicators for oxygen include an arterial oxygen tension (PaO₂ < 7.3 kPa (55 mmHg)). The therapeutic goal is to maintain SP,O₂ > 90% during rest, sleep, and exertion (American Thoracic Society).

An oxygen prescription should include:

- Qualifying diagnosis
- Results from pulse oximetry or Arterial Blood Gas testing
  - Arterial Blood Gas (ABG) is the preferred measure; arterial oxygen saturation measured by pulse oximetry is adequate for trending.
- Recommended flow rate, duration of need, and delivery system
  - Oxygen delivery methods include nasal continuous flow, pulse demand, cannulas, and tracheal catheter.
  - Modalities should be matched to an individual patient’s need for oxygen at rest, during exercise, and at night.
  - Patient education strongly improves compliance.
  - Active patients require portable oxygen.

Arterial Blood Gas (ABG)

ABG measures gas exchange and acid base status. It is recommended for initiation of oxygen therapy as well as to determine arterial carbon dioxide tension (Pa,CO₂).
Oximetry Testing
Pulse oximetry is a real-time, non-invasive method used to measure the oxygen level in the blood and heart rate. It is able to rapidly detect changes in blood oxygen level when a patient is resting, and before and after exercise/physical exertion.

Treatment of Exacerbations
Exacerbation is an acute change in a patient’s clinical status, characterized by worsening dyspnea and cough, and increased sputum volume and/or purulence. Most exacerbations are associated with environmental changes or infection. Antibiotics and oral corticosteroids are recommended for mild to severe exacerbations, depending on symptoms. For a detailed workflow, see Additional Resource: COPD Acute Exacerbation Care Pathway on page 13.

Antibiotics
Recommended antibiotics for the treatment of COPD exacerbations include:

- Doxycycline (vibramycin)
- Sulfamethoxazole-trimethoprim (batrim DS)
- Ampicillin-clavulante (augmentin)
- Azithromycin (Zithromax; ZPAK)
- Levofoxacin (Levaquin)
- Cefuroxime (ceftin)
- Moxifloxacin

Labs
- Nasal smear
- Sputum culture

Steroids
- Prednisone (deltasone)
- Methylprednisolone

Pulmonary Rehabilitation
Pulmonary rehabilitation is a multidisciplinary program for patients with COPD who have dyspnea or other respiratory symptoms, reduced exercise tolerance, a restriction in activity, or impaired health status. It is designed to control and alleviate symptoms, optimize functional capacity, and enhance quality of life for patients living with COPD. Each patient’s unique needs are assessed and a program of care is designed at an individual level. At PHS, pulmonary rehab is offered at the Presbyterian Healthplex. A physician referral and diagnosis of pulmonary disease are requisite. Generally, an individualized program involves 36 visits of exercise and education classes.

Demonstrated benefits include:

- Improved quality of life
- Reduced hospitalizations and use of medical resources
- Enhanced ability to perform daily activities
- Increased knowledge of pulmonary disease

Program Components:
- Pre and post-program individual fitness assessment
- Education and Training: breathing technique, bronchial hygiene, proper use of metered dose inhalers, medications, exercise techniques, energy conservation, coping skills, nutrition, oxygen therapy, traveling with oxygen
- Individualized exercise prescription
- Psychosocial support
- Team care: medical director, respiratory therapists, exercise specialists, registered nurses, and registered dieticians

For more information, call the Cardiopulmonary Rehab Department at (505) 823-8420.
Disease Progression/ End of Life

COPD is progressive, chronic disease. At PHS, COPD is managed and treated across multiple care settings. When the disease progresses to Severe, patients are treated by a pulmonologist and care team. The Pulmonology care team partners closely with Presbyterian’s Palliative Care program to support Severe and Very Severe COPD patients.

Patient Education and Support

In the Pulmonary clinic, the nurse care manager provides education to the patients about their disease progress.

PMG care teams provide education and work with patients to self-manage goals.

COPD Self-Management Goals

- Smoking cessation
- Avoid exposure to triggers
  - Pollutants, smoke, dust, strong fumes
- Increased physical activity
  - Increased endurance
  - Improved muscle tone and strength
  - Improved circulation
- Medication management
- Reduce risk of exacerbation
  - Annual flu vaccine
  - Pneumococcal vaccine
  - Annual spirometry

PMG Patient Education Materials:

- “Breathing Better with COPD Diagnosis” (Brochure), American Heart Lung and Blood Institute
- EMR Patient Instructions:
  - Smoking Cessation, by ExtCare
  - Chronic Obstructive Pulmonary Disease Exacerbation, by ExtCare
- Patient Videos
  - Chronic Obstructive Pulmonary Disease (COPD)
  - Spirometry
  - Smoking and COPD

COPD Action Plan

The COPD Action Plan is a tool that provides additional information and education to the patient. It is designed to help providers have a conversation with the patient about the status of their disease. The COPD Action Plan can be accessed in the Letters Activity or Communication Management. The Action Plan is available as a searchable flowsheet in Epic. An example of the Action Plan can be found on page 11, Additional Resource: COPD Action Plan.

Epic Documentation and Tracking Tools

A summary of the Epic tools that were developed as part of the EBCD initiative for COPD, including order sets, questionnaires, documentation flowsheets, progress notes, medication reconciliation, and alerts, can be found here.

COPD: Health Maintenance (HM) and Best Practice Advisories (BPA)

- A one-time BPA will fire when COPD is added to a Problem List or Diagnosis to include/exclude CAT, COPD Action Plan, and COPD Spirometry
Clinical Definitions

**CAT**  
COPD Assessment Test

**Chronic Obstructive Pulmonary Disease (COPD)**  
COPD is a common, preventable, and treatable disease that is 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. The chronic airflow limitation that characterizes COPD is caused by a mixture of small airways disease (e.g., obstructive bronchiolitis) and parenchymal destruction (emphysema), the relative contributions of which vary from person to person. Chronic inflammation causes structural changes, small airways narrowing, and destruction of lung parenchyma. A loss of small airways may contribute to airflow limitation and mucociliary dysfunction, a characteristic feature of the disease. Subtypes of COPD are emphysema, chronic bronchitis, and chronic obstructive asthma.

**ICS**  
Inhaled corticosteroids

**LAMA**  
Long-acting muscarinic antagonist

**LABA**  
Long-acting beta2-agonist

**SABA**  
Short-acting beta2 agonist

**SAMA**  
Short-acting muscarinic antagonist

**PDE-4 inhibitor**  
Phosphodiesterase inhibitor

Additional References

**Related Care Model Topics**
- Palliative Care
- Pulmonary Rehabilitation

**Training** [PHS login required]
- COPD Epic Tools  Training for Providers
- COPD Epic Tools  Training for Pulmonary Clinical Staff
- COPD Epic Tools  Training for Pulmonary Providers
- PMG COPD Management

**Additional Resources**
- COPD Action Plan
- COPD Care Pathway (Ambulatory)
- COPD Acute Exacerbation Care Pathway
Additional Resource: COPD Action Plan

**Nowletter for the encounter of 08/26/2015**

- **From:** BOBADILLA, ARNEL
- **Template:** PHS COPD ACTION PLAN

**Name:** Khal Drogo  **Date of Birth:** 9/16/1960  **Provider:** ***

### MY COPD ACTION PLAN

It is recommended that patients, caregivers, and healthcare providers complete this action plan together. This plan should be discussed at each physician visit and updated as needed.

The green, yellow, and red zones show symptoms of COPD. The list of symptoms is not comprehensive, and you may experience other symptoms. In the "Actions" column, your healthcare provider will recommend actions for you to take based on your symptoms by checking the appropriate boxes. Your healthcare provider may write down other actions in addition to those listed here.

#### Green Zone: I am doing well today

<table>
<thead>
<tr>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usual activity and exercise level</td>
</tr>
<tr>
<td>Usual amounts of cough and phlegm/mucus</td>
</tr>
<tr>
<td>Sleep well at night</td>
</tr>
<tr>
<td>Appetite is good</td>
</tr>
</tbody>
</table>

#### Yellow Zone: I am having a bad day or a COPD flare

<table>
<thead>
<tr>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>More breathless than usual</td>
</tr>
<tr>
<td>I have less energy for my daily activities</td>
</tr>
<tr>
<td>Increased or thicker phlegm/mucus</td>
</tr>
<tr>
<td>Using quick reliefinhaled bronchodilator more often</td>
</tr>
<tr>
<td>Swelling of ankles more than usual</td>
</tr>
<tr>
<td>More coughing than usual</td>
</tr>
<tr>
<td>I feel like I have a &quot;chest cold&quot;</td>
</tr>
<tr>
<td>Poor sleep and my symptoms woke me up</td>
</tr>
<tr>
<td>My appetite is not good</td>
</tr>
<tr>
<td>My medicine is not working</td>
</tr>
</tbody>
</table>

#### Red Zone: I need urgent medical care

<table>
<thead>
<tr>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe shortness of breath even at rest</td>
</tr>
<tr>
<td>Not able to do any activity because of breathing</td>
</tr>
<tr>
<td>Not able to sleep because of breathing</td>
</tr>
<tr>
<td>Fever or shaking chills</td>
</tr>
<tr>
<td>Feeling confused or very drowsy</td>
</tr>
<tr>
<td>Chest pain</td>
</tr>
<tr>
<td>Coughing up blood</td>
</tr>
<tr>
<td>Call 911 or seek medical care immediately*</td>
</tr>
<tr>
<td>While getting help, immediately do the following: ***</td>
</tr>
</tbody>
</table>

*The American Lung Association recommends that the providers select this action for all patients.

The information contained in this document is for educational use only. It should not be used as a substitute for professional medical advice, diagnosis or treatment. The American Lung
Additional Resource: COPD Care Pathway (Ambulatory)

### PHS: COPD Care Pathway, Adults (Ambulatory Setting)

**Goal Statement:** To improve the health of patients with COPD, as measured by increased use of the COPD Assessment Test (CAT), increase the use of spirometry testing in the assessment and diagnosis of COPD, and decrease the number of COPD-related Hospitalizations and ED/Urgent Care visits.

<table>
<thead>
<tr>
<th>Patient has De of COPD, returning for follow-up appt.</th>
<th>Patient Arrives for appt; is roomed</th>
<th>Document chief complaint, vital signs, medication reconciliation</th>
<th>Perform Pulse Oximetry, if O2 Sat &lt; 90% notify provider</th>
<th>Document smoking status and if smoker, readiness to quit</th>
<th>Administer COPD Assessment Test (CAT)</th>
<th>Document results of CAT in Progress Notes using CAT Smartphrase COPD flowsheet</th>
<th>Review COPD Assessment Test (CAT) results and Synopsis</th>
<th>Document patient’s GOLD category in problem overview</th>
<th>Determine appropriate interventions(s) based on severity (open COPD Smartset)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New feature In ink: COPD Synopses see vitals, CAT spirometry results across multiple visits</td>
<td>New feature In ink: COPD Smart sets 1. GOLD A 2. COPD, Acute Exacerbation Smart sets</td>
<td>New feature In ink: Health Maintenance Annual Spirometry for all COPD patients</td>
<td>New feature In ink: Health Maintenance Annual COPD Action Plan</td>
<td>Preventive Measures</td>
<td>Therapy Intervention</td>
<td>Therapy Intervention</td>
<td>Therapy Intervention</td>
<td>Therapy Intervention</td>
<td>Therapy Intervention</td>
</tr>
</tbody>
</table>

#### At Risk for COPD
- Chronic Symptoms (cough, sputum production, dyspnea)
- Exposure to risk factors (smoking, pollutants)
- Normal Spirometry (≥80%)

#### Mild COPD (GOLD Patient Category A)
- With or without Chronic symptoms
- FEV1 > 80% predicted
- FEV1/FVC < 70%

#### Moderate COPD (GOLD Patient Category B)
- Rare exacerbations
- Mobility normal

#### Severe COPD (GOLD Patient Category C)
- Occasional exacerbations (2 exacerbations/yr)
- Mobility limited

#### Very Severe (GOLD Patient Category D)
- Frequent exacerbations (≥2 exacerbations/yr)
- Mobility severely limited

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