

## Ambulatory Management of COPD

Chronic Obstructive Lung Disease (COPD), a common preventable and treatable disease, is characterized by persistent airflow limitation that is usually progressive and associated with an enhanced chronic inflammatory response in the airways and the lung to noxious particles or gases (2015 Global Initiative for Chronic Obstructive Lung Disease).

### IMPORTANCE OF FOCUS

COPD is a leading cause of morbidity and mortality worldwide. The burden of COPD is projected to increase in coming decades due to continued exposure to COPD risk factors and the aging of the world's population. COPD is associated with significant economic burden (2015 Global Initiative for Chronic Obstructive Lung Disease). However; improved management of symptoms can reduce exacerbations to reduce the financial burden of COPD and improve the quality of life for COPD patients.

COPD is nationally and internationally under diagnosed and often is undetected until severely advanced. Some estimate that approximately half of the individuals with COPD remain under diagnosed or misdiagnosed (CMAJ, 2010). Although required by GOLD standards for COPD diagnosis, Spirometry remains underutilized.

The most cost effective and patient-focused way to impact COPD is to prevent it. Of the many causes of COPD, tobacco use is the most common. Tobacco-related COPD is frequently viewed as a self-imposed condition and therefore may not get the same attention as other chronic diseases. Additionally, patients may deny symptoms as they develop because they do not want to admit that their actions have been injurious and/or that they do not want to change their lifestyle. Raising awareness and early detection are important strategies to identify patients prior to the development of symptoms or disability (2016 SC COPD Strategic Plan).

### GOALS

- *Increase the number of persons at high risk for COPD or with a current diagnosis of COPD who have proper Spirometry and clinical evaluation performed*
- *Increase the percentage of health care providers who ask, advise and refer their COPD patients to evidence-based tobacco cessation treatment for current smokers.*
- *Increase vaccination rates in the COPD population for influenza, pneumococcal and pertussis based on published guidelines, including the GOLD COPD guidelines and the CDC*
- *Increase percentage of patients with COPD who are referred to pulmonary rehabilitation*

### KEY RECOMMENDATIONS

- (1) Identify Early Using Spirometry and Classify Severity  
**\*\*\*Spirometry performed by a trained individual REQUIRED for COPD Diagnosis\*\*\***
- (2) Promote Smoking Cessation
- (3) Increase Immunizations
- (4) Treat with Medications
- (5) Refer to Pulmonary Rehabilitation
- (6) Refer to Pulmonologist
- (7) Follow-up Treatment

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### CARE PATHWAY COMPONENTS

**(1) Identify Early using Spirometry and Classify Severity**  
**Spirometry performed by a trained individual is REQUIRED for COPD Diagnosis**

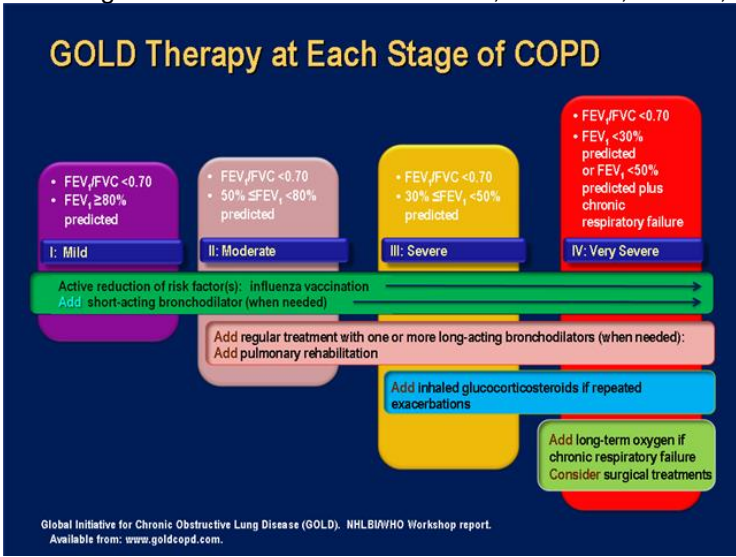
*Spirometry performed by an untrained individual using equipment not calibrated appropriately can lead to incorrect diagnoses*

To schedule training in the Baptist or Parkridge Pulmonary labs, contact Ruthie Dasher or Rhonda Hicks at 803 296-5027. To schedule training in the Richland Pulmonary lab, contact Robin Belz at 803 434-2686

- Assess symptoms / risk of exacerbations
- Test degree of airflow limitation using screening spirometry performed by a Respiratory Therapist (RT) / Respiratory Care Practitioner (RCP) or an individual trained and deemed competent to perform screening spirometry by an RT/RCP. See contact information in care pathway to schedule training.
- Abnormal results for screening spirometry include actual FEV1/FVC ratio <70% or FEV1 <80%
- If abnormal, complete PFTs. To order complete PFTs, call Palmetto Health Baptist Pulmonary
- Evaluate co morbidities

**Classify Severity**

- Classify Severity based on FEV1 and symptoms
- Four stages of classifications include Mild, Moderate, Severe, Very Severe



**Complete PFTs if needed**

To order complete PFTs, call Palmetto Health Baptist Pulmonary Lab at 803 296-5027 or Palmetto Health Richland Pulmonary Lab at 803 434-7201



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### **(2) Promote Smoking Cessation (see Smoking Cessation Workflow)**

- Decrease the prevalence and impact of smoking tobacco products and other environmental exposures that lead to the development and/or worsening of COPD
- Ask about tobacco use
- Advise to quit
- Assess willingness/readiness to quit
- Assist attempt (provide medication)
- Arrange support (education, websites, smart phone apps, follow up with case management)

### **(3) Increase Immunizations**

- Influenza vaccination annually
- Pneumococcal vaccinations and boosters
- Pertussis vaccination and booster.

### **(4) Treat with Medications**

- Stage 1 and above:  
Consider inhaled short-acting beta2-agonists (SABA)
- Stage 2 and above:  
Consider adding Anticholinergics  
Consider Long-acting beta2-agonists (LABA)  
Consider adding corticosteroid to LABA  
Consider LABA/LAMA combination  
Consider Phosphodiesterase 4 (PDE4) inhibitor

**See PHFormulary.net for easy resource for Inpatient and Outpatient Pharmacy Information  
Access from web at [www.PHFormulary.net](http://www.PHFormulary.net) or  
My Pal > Care > Patient Care Resources > Palmetto Health Formulary  
Then choose Ambulatory Care/Outpatient Pharmacy > PAP > inhalers**

### **(5) Refer All Patients to Pulmonary Rehabilitation**

- Studies indicate Pulmonary Rehabilitation increases positive outcomes for all COPD patients including those with mild COPD
- CMS benefits include Pulmonary Rehabilitation for moderate to severe stages of COPD
- Reasonable cash option for patients not covered by insurance (<\$50/month)  
At least six to twelve week duration for best results (Chron Respir Dis, 2011)

### **(6) Refer to Pulmonologist**

- Consider referral to pulmonologist for:
  - Need for oxygen therapy
  - Hypercapnia
  - FEV1<40%
  - Repeat hospital admissions / ED visits (>2 a year)
  - Repeated exacerbations (>3-4 per year)



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### (7) Follow up Treatment

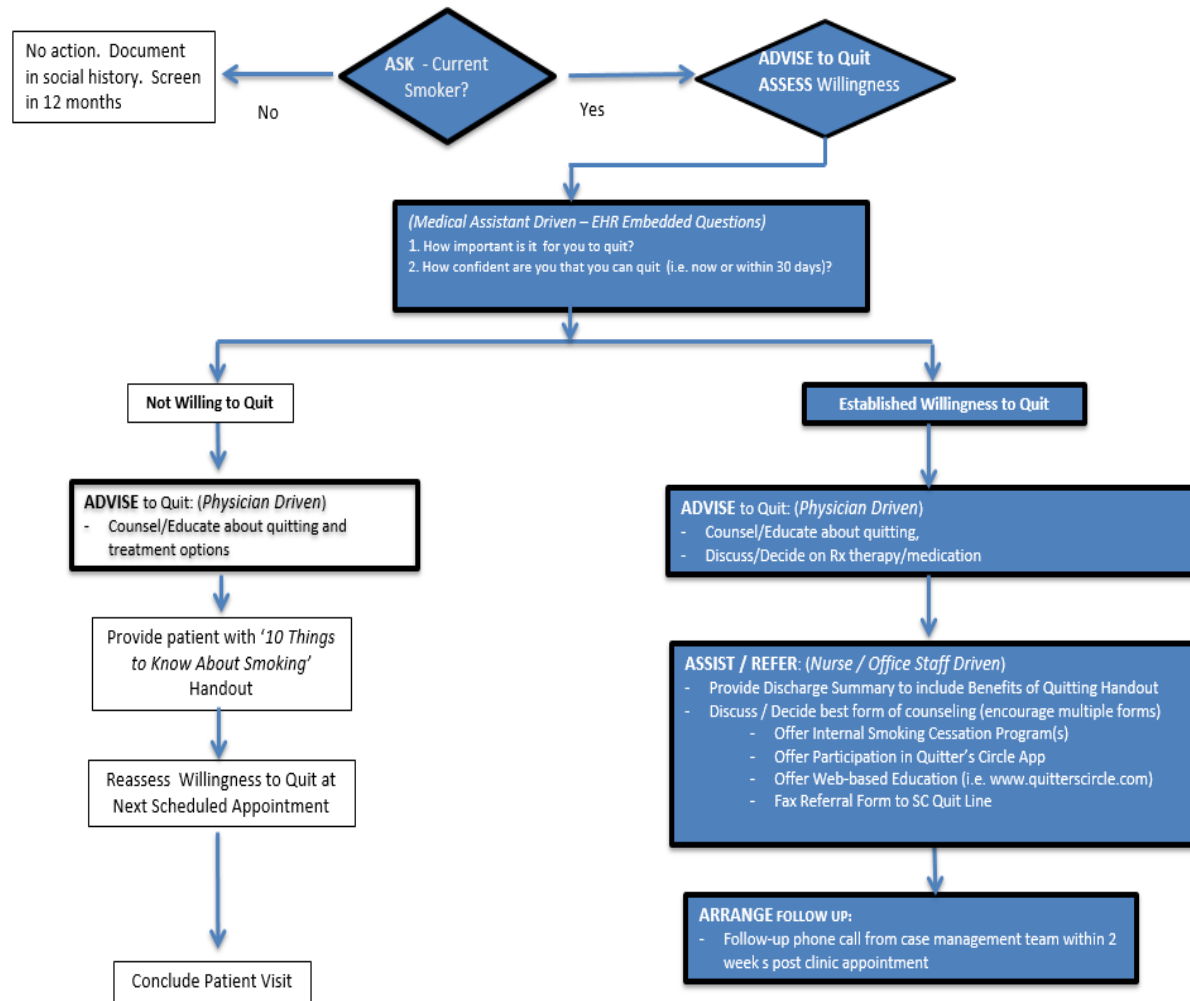
- Peak Flow monitoring is not considered reliable and is not indicated for ongoing monitoring
- Consider COPD Assessment Test (CAT) to monitor progress (<http://catestonline.org>)
- No specific follow-up Spirometry schedule is recommended but Spirometry should be performed with significant change in symptoms or disease activity
- Consider Palliative Care referral for patients with very severe or end-stage COPD



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PHQC COPD Smoking Cessation Workflow





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### Patient Education for Smoking Cessation (available on PH Formulary):

#### Smoking Cessation

*There are benefits to quitting smoking.*



Quitting smoking can be one of the most important decisions you will make. The benefits of quitting smoking may include improving your health, saving money, and having more time to do what makes you happy.

Taking the first step means knowing when to get help. It can be hard to quit, but you *can* do it.

#### Know what to expect when you quit smoking.

Quitting means coping with potential withdrawal symptoms. These symptoms are your body's reaction to no longer having nicotine. They can occur when you stop smoking all at once or cut back slowly. Withdrawal symptoms reach their peak 2 to 3 days after your last cigarette, and they may last several weeks for people trying to quit.<sup>1</sup>

#### Potential Withdrawal Symptoms<sup>2</sup>:

- Feeling depressed
- Feeling irritable, restless, and anxious
- Difficulty sleeping
- Difficulty concentrating
- Changes in appetite and weight gain

#### Consider your health

*Smoking is linked to certain life-threatening illnesses, including heart disease, lung cancer, and stroke.<sup>7</sup>*

*Smoking may also cause health-related issues that can affect your well-being, including emphysema, chronic coughing, and shortness of breath.<sup>7</sup>*

#### You may experience the following smoking-related symptoms:

- Short of breath<sup>3</sup>
- Chronic cough<sup>3</sup>
- More likely to get sick<sup>3</sup>
- Hoarseness<sup>4</sup>
- Triggers allergies<sup>5</sup>
- Increase in belly fat<sup>6</sup>

#### If you're a smoker, you are at increased risk for the following conditions:

- Cancer<sup>8</sup>
- Asthma trigger<sup>8</sup>
- COPD (chronic bronchitis/emphysema)<sup>8</sup>
- Heart disease<sup>8</sup>
- Stroke<sup>8</sup>
- Peripheral vascular disease (hardening of arteries)<sup>9</sup>
- Osteoporosis (decrease in bone density)<sup>10</sup>

The health information contained herein is provided for educational purposes only and is not intended to replace discussions with a healthcare provider. All decisions regarding patient care must be made with a healthcare provider, considering the unique characteristics of the patient.



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### Quitting smoking may save you time and money.<sup>11</sup>



#### Consider the time



*If smoking a cigarette takes 6 minutes, then for a pack-a-day smoker that means approximately 2 hours per day spent smoking. At that rate, you spend about 30 days per year smoking.*

#### How much time you could save.

Number of cigarettes you smoke per day?

6 minutes spent per cigarette break.

Total time you spend smoking each day?

*What will you do with the time you save if you quit smoking?*

#### Consider the cost



*The cost of a pack of cigarettes in South Carolina is about \$4.97.<sup>11</sup> For a pack-a-day smoker, that's \$1,814.05 per year. Over 10 years, that's \$18,140.50.*

#### How much money you could save.

Price you typically pay for a pack of cigarettes.

Average number of packs you smoke per week.

Total amount you spend on smoking every week.

Weekly cost of \_\_\_\_\_ X 52 weeks per year = \_\_\_\_\_  
or the amount you spend on smoking in a year.

*What will you do with the money you save if you quit smoking?*

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**You can start to quit smoking today.**  
Willing to quit? Help is available.



There are many tools and resources available to help you quit smoking.

Other Resources			
Program	Type	Description	How to Access
Choose to Say No Quit Connect	Group or Individual Counseling	Smoking cessation program	1-803-296-CARE (1-803-296-2273) <a href="http://www.quitconnect.com">www.quitconnect.com</a>
Quit Line <sup>†</sup>	Phone 	This quit line offers one-on-one counseling for smokers who are willing to quit	1-800-QUITNOW (1-800-784-8669)
Quitter's Circle <sup>®**</sup>	Website 	This website provides resources to help support a quit attempt	<a href="http://www.quitterscircle.com">www.quitterscircle.com</a>
Quitter's Circle <sup>®**</sup>	Mobile Application 	This application provides support to smokers during their quit journey	1. Download Quitter's Circle from <b>App Store/Google Play</b> 2. Enter a personal Email and create a password 3. Follow and respond to prompts 4. Enter code provided by organization PHQC

<sup>†</sup>A Pfizer sponsored program.

<sup>\*\*</sup>An American Lung Association-sponsored program.

<sup>®</sup>Pfizer does not own or operate the quitline(s) and is not responsible for the information provided.

<sup>®</sup>Quitter's Circle and Quitter's Circle logo are trademarks of Pfizer Inc. The American Lung Association does not endorse products, devices, or services.

Pharmacologic Aids**		
Type	Regimen	How to Access
Non-nicotine pill	As prescribed by your healthcare provider	By prescription
Nicotine replacement therapy (NRT)—Nicotine gum, lozenge, patch, or inhalant	Talk with your doctor and/or healthcare team about how best to use	Available over the counter and by prescription

\*\*Medications have risks and benefits and patients should speak to their healthcare provider about which medication may be right for them.

### Let's talk again

Please return on \_\_\_\_\_  
to discuss how your quit journey is progressing.

If you need additional support in the meantime, visit [www.quitterscircle.com](http://www.quitterscircle.com) or call the state quit line in South Carolina: 800-784-8669.



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### Smoking Cessation Education Flyer References:

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### RESOURCES

2017 Global Initiative for Chronic Obstructive Lung Disease:

[The Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Pulmonary Disease Updated 2015](#)

<http://www.goldcopd.org/>

2016 SC COPD Strategic Plan:

[http://dc.statelibrary.sc.gov/bitstream/handle/10827/21131/DHEC\\_SC\\_COPD\\_Strategic\\_Plan\\_2016-04.pdf?sequence=1&isAllowed=y](http://dc.statelibrary.sc.gov/bitstream/handle/10827/21131/DHEC_SC_COPD_Strategic_Plan_2016-04.pdf?sequence=1&isAllowed=y)

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### For Additional Information

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