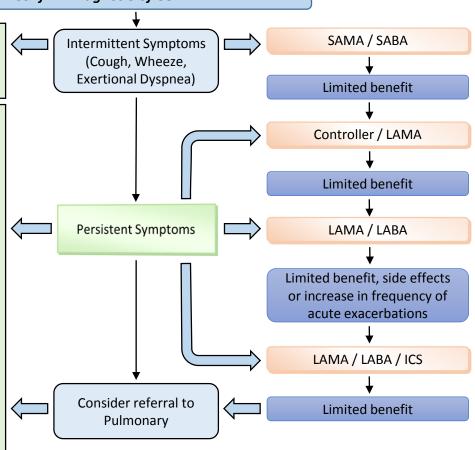
# **Confirm Diagnosis of COPD**

# **Pulmonary Rehabilitation**

Should be offered to all COPD patients who get short of breath when walking at own pace on level ground.

## Benefits of Pulmonary Rehabilitation in COPD

- · Improves exercise capacity.
- Reduces the perceived intensity of breathlessness.
- Improves health-related quality of life.
- Reduces the number of hospitalizations and days in the hospital.
- Reduces anxiety and depression associated with COPD.
- Strength and endurance training of the upper limbs improves arm function.
- Benefits extend well beyond the immediate period of training.
- · Improves survival.
- Respiratory muscle training can be beneficial, especially when combined with general exercise training.
- Improves recovery after hospitalization for an exacerbation.
- Enhances the effect of long-acting bronchodilators.



1. National Guideline C. British Society guideline on pulmonary rehabilitation in adults. Accessed 1/23/2015. http://www.guideline.gov/content.aspx?id+47037. 2. American Thoracic Society European Respiratory Society Task Force. Standards for the Diagnosis and Management of Patients with COPD 2004 (updated 2005 September 8).

Advair

Breo Ellipta

Inhaler / Nebulizer	Inhaler Strength (mcg)	Nebulizer Solution (mg)	Price Range* (per month)		
Beta 2 Agonist – Short Acting (SABA)					
Albuterol	90 (HFA-MDI)	0.63 / 3 ml, 1.25 / 3 ml, 2.5 / 3 ml	\$10 - \$13		
Xopenex (levalbuterol)	45 (HFA-MDI)	0.63 / 3 ml, 1.25 / 3 ml	\$245 - \$264		
Anticholinergics – Short Acting (SAMA)					
Ipratropium Bromide		0.5 / 2 ml	\$49 - \$150		
Short Acting Anticholinergic plus B2-Agonist (SAMA/SABA)					
DuoNeb		0.5 / 2.5 / 3 ml	\$250 - \$269		
Combivent Respimat	20/100		\$392 - \$420		
Beta 2 Agonist – Long Acting (LABA)					
Serevent	50 (DPI)		\$425 - \$470		
Brovana		15 mcg / 2 ml	\$1028 - \$1197		
Perforomist		20 mcg / 2 ml	\$991 - \$1221		
Arcapta Maleate	75 (DPI)		\$228 - \$235		
Straverdi Respimat			N/A		

Inhaler Strength (mcg)	Nebulizer Solution (mg)	Price Range* (per month)			
Anticholinergics – Long Acting (LAMA)					
18 (DPI)		\$402 - \$450			
400 mcg (DPI)		\$387 - \$408			
		\$369			
Long Acting Anticholinergic plus B2-Agonist (LAMA/LABA)					
		\$391			
		\$387			
		\$408			
		\$414			
Inhaled Corticosteroids (ICS) plus B2-Agonist (ICS/LABA)					
160/4.5 (HFA)		\$244 - \$384			
	Strength (mcg)  Acting (LAMA)  18 (DPI)  400 mcg (DPI)  ergic plus B2-Agonis	Inhaler Strength (mcg)  Acting (LAMA)  18 (DPI)  400 mcg (DPI)  Pergic plus B2-Agonist (LAMA/LABA)  (ICS) plus B2-Agonist (ICS/LABA)			

\*Pricing information is subject to change. The table above reflects a range from three national pharmacies, and was correct as of June 1, 2017. Pricing information will be updated periodically, and will be published on the Breathe NH website at www.BreatheNH.org.

\$394 - \$430

\$359 - \$370

250/50

100/25 (DPI)

# **Assessment Pathway**

#### **Host Factors**

- Genetic Factors
- Sex
- Airway hyper reactivity
- Immunoglobulin E
- Asthma

#### **Diagnosis**

Symptoms of cough Sputum production or

Dyspnea or history of exposure to risk factors for the disease

#### Spirometry

Post bronchodilator FEV1/forced vital capacity < 0.7 that is not fully reversible

American Thoracic Society / European Respiratory Society Task Force. Standards for the Diagnosis and Management of Patients with COPD. 2004 (updated 2005 September 8).

#### **Exposures**

- Smoking/Occupation
- Socioeconomic status
- Environmental pollution
- Perinatal events
- Childhood illness
- Recurrent broncho-pulmonary infections

## Consider Checking for Alpha 1 Antitrypsin Deficiency

- Early-onset pulmonary emphysema (regardless of smoking history)
- Family members of known alpha-1 antitrypsin-deficient patients
- · Dyspnea and cough occurring in multiple family members in same or different generations
- · Liver disease of unknown cause
- Adults with bronchiectasis without evident etiology should be considered for testing

http://journal.copd foundation.org/jcopdf/id/1115/The-Diagnosis-and-Management-of-Alpha-1-Antitryps in-Deficiency-in-the-Adult for the contract of the contr

Spirometry Grades						
SG 0 – At Risk	SG 1 – Mild Risk	SG 2 – Moderate Risk	SG 3 – Severe Risk			
Normal spirometry does not rule out emphysema, chronic bronchitis, asthma, or risk of developing either exacerbations or COPD	Post bronchodilator FEV1/FVC ratio <0.7, FEV1 >60% predicted	Post bronchodilator FEV1/FVC ratio <0.7, 30% <fev1 <60%="" predicted<="" td=""><td>Post bronchodilator FEV1/FVC ratio &lt;0.7, FEV1 &lt;30% predicted</td></fev1>	Post bronchodilator FEV1/FVC ratio <0.7, FEV1 <30% predicted			

# **Tobacco Cessation Counseling**

Price Range (per month)	Drugs for Tobacco Cessation	Price Range (per month)
\$376 - \$404	Nicotine gum/lozenges	\$40/100 pcs
\$72 - \$100	Nicotine Inhaler*	\$360 - \$400
\$30 - \$40	Nicotine nasal spray* 1 - 2 doses/hr	\$360 - \$400
	(per month) \$376 - \$404 \$72 - \$100	(per month)  \$376 - \$404  \$172 - \$100  \$100 - \$100  \$100

<sup>\*</sup> Require prescription

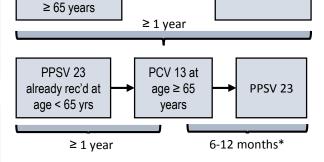
## **Strategies:**

- **1. ASK:** EVERY patient at EVERY clinic visit, tobacco use is queried and documented.
- **2. ADVISE:** In a clear, strong, and personalized manner, urge every tobacco user to quit.
- **3. REFER to Tobacco Cessation:** Patients are connected with tobacco cessation counselor (TTS preferred) or 1-800-QUIT-NOW.

National Guideline C. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease.

### **Vaccinations**

# PCV 13 at age ≥ 65 years PPSV 23 6-12 months\*



**PCV 13** 

≥ 5 years

#### Abbreviations:

PPSV 23 already received at age

PCV 13 = 13 Valent pneumococcal conjugate vaccine
PPSV 23 = 23 Valent pneumococcal polysaccharide vaccine
\*Minimum interval between sequential administration of PCV
13 and PPSV 23 is 8 weeks; PPSV 23 can be given later than 6-12
months after PCV 13 if this window is missed.