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## Chronic Obstructive Pulmonary Disease (COPD) Guidelines

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### Introduction

Chronic Obstructive Pulmonary Disease (COPD) is a progressive lung disease that encompasses various conditions, primarily chronic bronchitis and emphysema. Here's a brief overview:

#### Signs and Symptoms:

Shortness of Breath: Gradual onset of breathlessness, especially during physical activity.

Chronic Cough: Persistent cough with or without sputum production.

Wheezing: High-pitched whistling sounds while breathing.

Chest Tightness: Feeling of pressure or discomfort in the chest.

Fatigue: Lack of energy and endurance.

#### Causes:

Smoking: The leading cause of COPD. Long-term exposure to irritants like cigarette smoke damages the lungs.

Environmental Exposures: Prolonged exposure to air pollutants, workplace dust, or chemicals.

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# COPD

## Medications examples:

- I. LABA (Long-Acting Beta-Agonists):
  1. Salmeterol (e.g., Serevent)
  2. Formoterol (e.g., Foradil)
  3. Indacaterol (e.g., Arcapta Neohaler)
  4. Olodaterol (e.g., Striverdi Respimat)
- II. LAMA (Long-Acting Muscarinic Antagonists):
  1. Tiotropium (e.g., Spiriva)
  2. Aclidinium (e.g., Tudorza Pressair)
  3. Umeclidinium (e.g., Incruse Ellipta)
  4. Glycopyrrolate (e.g., Lonhala Magnair)
- III. ICS (Inhaled Corticosteroids):
  1. Fluticasone (e.g., Flovent)
  2. Budesonide (e.g., Pulmicort)
  3. Beclomethasone (e.g., Qvar)

## Emphysema:

Considered as the end stage COPD characterized by Shortness of Breath, Chronic Cough, Wheezing, Fatigue up to respiratory failure. Bronchodilators and anti-inflammatory are the drugs of choice as per the guidelines mentioned above.

Note that an attack at this stage almost exclusively leads to hospitalization.

## Laboratory monitoring:

No.	CPT	Description	Frequency	Comments
1	94010	Spirometry, including graphic record, total and timed vital capacity, expiratory flow rate measurement(s), with or without maximal voluntary ventilation	Once every 12 months	Only for patients on LABA as controller
2	94060	Bronchodilation responsiveness, spirometry as in 94010, pre- and post-bronchodilator administration	Once every 12 months	
3	94619	Exercise test for bronchospasm, including pre- and post-spirometry and pulse oximetry; without electrocardiographic recording(s)	Once every 12 months	
4	99241-99245	Consultation with the cardiologist	Once every 3 months	Only for patients on LABA as controller
5	31622	Bronchoscopy, flexible, with or without fluoroscopic guidance, diagnostic.	Once every 12 months	Only for patients on LABA as controller

## Lab tests in case of an attack:

No.	CPT	Description	Frequency	Comments
1	85025	CBC	Every attack	to evaluate the type of inflammation
2	71045	Radiologic examination, chest; single view	If the CBC alerted inflammation post attack	Only one of them to be done
3	71046	Radiologic examination, chest, 2 views, frontal and lateral	If the CBC alerted inflammation post attack	
4	71047	Radiologic examination, chest; 3 views	If the CBC alerted inflammation post attack	

# COPD

## ICD codes

Category	ICD-10 Code	Description
Z82.8	Z82.8	Family history of other specified conditions
Z82.81	Z82.81	Family history of emphysema
Z82.82	Z82.82	Family history of other chronic obstructive pulmonary disease
Z82.83	Z82.83	Family history of asthma and other chronic lower respiratory diseases
J96.11	J96.11	Chronic respiratory failure with hypoxia
J96.12	J96.12	Chronic respiratory failure with hypercapnia
I27.21	I27.21	Secondary pulmonary arterial hypertension
G47.32	G47.32	Obstructive sleep apnea (adult) (pediatric)
F17.21	F17.21	Nicotine dependence with respiratory symptoms
F17.22	F17.22	Nicotine dependence with other nicotine-induced disorders
F17.29	F17.29	Nicotine dependence with unspecified nicotine-induced disorder
Z87.891	Z87.891	Personal history of nicotine dependence
J44.89	J44.89	Other specified chronic obstructive pulmonary disease with comorbidities
J44.9	J44.9	Chronic obstructive pulmonary disease, unspecified
J44.0	J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection
J44.1	J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation
J44.8	J44.8	Other specified chronic obstructive pulmonary disease

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