

About COPD

Chronic Obstructive Pulmonary Disease (COPD) is characterized by a persistent airflow limitation that is chronic (ongoing) and progressive (gets worse over time). COPD interferes with normal breathing, so its most common symptom is persistent breathlessness (dyspnea). COPD is incurable, but treatable. It is one of the leading, yet under-recognized causes of morbidity and mortality worldwide. In the U.S. and Europe, the main cause of COPD is smoking, yet environmental factors such as air pollution, secondhand smoke, fumes and chemicals (occupational exposure) can also cause COPD. More than 300 million people are estimated to have COPD¹ worldwide, with more than 19 million adults in the U.S. The prevalence of COPD increases with age, from 3.2% among those aged 18 – 44 years to 11.6% among those aged ≥65 years¹. The U.S. annual healthcare burden of COPD is estimated at \$50 billion per year².

COPD is an umbrella term used to describe different pathologies that contribute to patient symptoms of breathlessness, coughing, sputum production, chest tightness and wheezing. Small airway disease refers to obstruction in the smaller airways deep in the lung. Chronic bronchitis may be diagnosed when patients experience significant periods of excess sputum production. Emphysema is the loss of alveolar tissue and lung elasticity, resulting in excess air trapping in the lungs. Some forms of asthma in adults co-exist in patients with COPD. Patients may interpret their shortness of breath from COPD as “normal aging” and reduce their activity levels in lieu of seeking medical help, which contributes to significant under-diagnosis. And many COPD patients have overlap of these pathologies, which is why global and national guidelines emphasize personalized treatment strategies to best address an individual patient’s symptoms.

Current Treatments

COPD treatment consists of inhaled drug therapies to alleviate the patient’s symptoms, stabilize lung function, and reduce the patient’s risk of COPD exacerbation (increased symptoms that require urgent and additional medical treatments).

The mainstay of COPD treatment is a class of drugs called “bronchodilators”. They relax the muscles around the airways and prevent them from tightening to make breathing easier, help with mucus clearance and decrease airway inflammation. These drugs are typically delivered through inhalers, which can sometimes be difficult for patients with breathing difficulties to use properly. The drugs must be also be taken regularly to be effective, and many have copays which can be a financial burden on patients.

Unmet Needs

A key unmet need is novel approaches to reduce and prevent exacerbations of COPD. Treatments have not substantially changed over the past several decades¹. This is important because of the poor prognosis associated with exacerbations in patients with COPD. In a landmark global epidemiologic study, patients with a history of COPD exacerbation and high symptom burden had an 8-year survival rate of less than 60%, vs. 90% for patients with minimal symptoms and fewer exacerbations.²

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¹ Criner, G, Current Controversies in COPD, Report from the GOLD Committee, AJRCCM 2018

² Criner, R, Mortality and Exacerbations by GOLD ABCD in the COPDGene cohort_J.COPD.F, 2018