

Chronic Obstructive Pulmonary Disease (COPD) US Media Backgrounder

"I feel like I am not going to get that breath... (It feels like) I am in a plastic bag." - Actual quote from COPD patient¹

About COPD

Chronic obstructive pulmonary disease (COPD) is a progressive, life-threatening disease that makes it difficult to breathe. "Progressive" means the disease gets worse over time². Smoking is the primary cause of COPD². COPD ranks as the third leading cause of death in the United States^{*34} and a major cause of serious long-term disability⁵. Over time, it causes patients to become less and less active⁵. In the United States, the term COPD includes two main conditions – emphysema and chronic bronchitis⁶. Many people who have COPD suffer from both conditions.

- *Emphysema* – occurs when the walls between the tiny air sacs (alveoli) in the lungs are damaged, causing them to lose their shape and become floppy⁶. This makes each breath difficult because old air is trapped and there is limited space for new air.
- *Chronic bronchitis* – occurs when the lining of the airways is consistently irritated and inflamed, causing the lining to thicken. Thick mucus forms in the airways, making it hard to breathe⁶.

What is the prevalence and impact of COPD?

More than 12 million people are diagnosed with COPD in the United States, while another 12 million people likely have the disease but are undiagnosed⁷. COPD leads to more than 120,000 American deaths each year – that is one death every 4 minutes⁷. According to the World Health Organization, total deaths from COPD are projected to increase by more than 30% over the next 10 years unless urgent action is taken to reduce the risk factors⁸.

A diagnosis of COPD should be considered if individuals over 40 years of age present with symptoms, such as dyspnea, chronic cough, chronic sputum production or have a history of exposure to risk factors²; however, it is no longer seen as a disease of the elderly. COPD is generally diagnosed in adults in their 40s or later⁹. Fifty-two percent of adults aged 25 years or older who have moderate COPD are between the ages of 25 and 64 years¹⁰ – and hence likely to be members of the workforce.

What causes COPD?

According to the US Department of Health and Human Services, men and women smokers are nearly 12 and 13 times, respectively, as likely to die from COPD as men and women who have never smoked¹¹. In nonsmokers, exposure to secondhand smoke or other indoor or outdoor pollutants can increase a person's chance of developing COPD². In rare cases, COPD also can be caused by a genetic condition called Alpha-1 antitrypsin deficiency².

What are the symptoms of COPD?

The most common symptoms of COPD are breathlessness, abnormal sputum (a mix of saliva and mucus in the airway) and chronic cough. The symptoms of COPD make activities of daily living, such as walking up a short flight of stairs or carrying things, difficult as the condition gradually worsens⁷.

According to the evidence-based international treatment guidelines issued by the Global Initiative for Chronic Obstructive Lung Disease (GOLD), COPD is classified into four stages²,

- *Mild* – mild airflow limitation and sometimes, but not always, chronic cough and sputum production. At this stage, the individual may not be aware that his or her lung function is abnormal.

* Preliminary 2008 US mortality rates for chronic lower respiratory diseases (CLRD) such as chronic bronchitis, emphysema, and bronchiectasis (Centers for Disease Control and Prevention).

- *Moderate* – worsening airflow limitation, with shortness of breath typically developing on exertion. This is the stage at which patients typically seek medical attention because of chronic respiratory symptoms or an exacerbation of their disease.
- *Severe* – further worsening of airflow limitation, greater shortness of breath, reduced exercise capacity, and repeated exacerbations which have an impact on patients' quality of life.
- *Very Severe* – severe airflow limitation plus chronic respiratory failure. At this stage, quality of life is very appreciably impaired and exacerbations may be life-threatening²,

Why is COPD under-recognized? What does this mean for patients?

COPD is often misdiagnosed by physicians as asthma or under-diagnosed because patients are not properly tested to detect the disease¹². Since most early symptoms may be minimal or attributed to aging, many patients do not seek help and remain undiagnosed until they have lost enough lung function to make them short of breath when they perform activities of daily living. This under-recognition and misdiagnosis contribute to the fact that at diagnosis, up to 50% of lung function may have been lost¹³.

It is important to make the distinction between asthma and COPD, even in older patients, because optimal disease management for each is based on distinctively different approaches¹⁴.

How is COPD treated?

As there is no cure for COPD, treatment requires a long-term and systematic approach that focuses on slowing disease progression, controlling the symptoms and reducing complications. COPD is a complex disease, and the treatment approach is typically individualized to address symptoms and improve quality of life. Physicians usually use spirometry, a test that measures the amount of air a person can breathe out, and the amount of time taken to do so, to help diagnose the disease and assess its severity².

COPD prevention and treatment options include:

- Risk factor reduction including smoking cessation²
- Medications, including bronchodilators, which include short-acting agents given as needed or long-acting agents given as maintenance therapy² to help to open the airways in the lungs by relaxing smooth muscle around the airways, increase their opening and improving air flow², and corticosteroids, which help to reduce and prevent inflammation inside the airways²
- Pulmonary rehabilitation, including exercise training programs, improvements in exercise tolerance and symptoms of dyspnea and fatigue²
- Supplemental oxygen, when oxygen levels in the body are low²
- Surgery, including bullectomy and lung transplantation may be considered in carefully selected patients with Stage IV: Very Severe COPD²

What is the economic and workplace burden of COPD in the United States?

In 2010, the cost to the US for COPD was projected to be \$49.9 billion, including \$29.5 billion in direct health care expenditures, \$8.0 billion in indirect morbidity costs and \$12.4 billion in indirect mortality costs⁷. COPD has a significant negative impact that manifests as absenteeism, presenteeism, lost productivity, and activity impairment. The estimated average annual cost of an employee with COPD is \$20,000, compared with \$8,000 for an employee without COPD¹⁵. In 2005, the average per beneficiary Medicare payment for COPD was the second highest among 6 chronic conditions¹⁶.

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Media Contact:

Christine Cascio
Novartis Pharmaceuticals Corporation
Direct: +1 862-778-8026
Cell: +1 862-926-7992
christine.cascio@novartis.com

¹ COPD Patients Emotional Insights Topline USA. Patient focus group conducted February 16, 2009 in New York, New York and February 19, 2009 in Ft. Lauderdale, Florida.

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