

National Indicator Report Chronic Obstructive Pulmonary Disease (COPD)

American Lung Association.

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Introduction

COPD Overview

Every organ in your body – your heart, brain, skin, etc. – is made up of cells. And each cell in your body requires oxygen to function. Your lungs have the important job of taking in oxygen and sending it to your blood, which then carries it throughout your body. Chronic obstructive pulmonary disease (COPD) is a group of lung diseases that cause airflow blockage and breathing related symptoms. COPD is an umbrella term for two chronic lung diseases - emphysema and chronic bronchitis. When a person has COPD, their ability to breathe efficiently is reduced. Gas exchange is not as efficient, resulting in unpleasant symptoms including shortness of breath, chest tightness and coughing.



Figure 1: Representation of healthy airways and airways with chronic bronchitis and emphysema.

COPD is treatable and often preventable, yet it remains a leading cause of death and disability in the United States. Yet there is hope, along with actionable steps to prevent the onset of illness and to provide earlier diagnosis and thorough treatment.



Trends in COPD

National Health Interview Survey (NHIS)

Historically, COPD rates were captured based on the number of people who answered yes in the National Health Interview Survey (NHIS) to having been diagnosed with either chronic bronchitis or emphysema, the two primary components of COPD. In 2014, a question was added asking directly about being diagnosed with COPD. In 2019, the three questions were combined into one question asking about a diagnosis of COPD, chronic bronchitis, or emphysema. The COPD rates from 2014 to 2018 were flat on average from year to year. There was a large decline in both rates and counts from 2018 to 2019, presumed to be due to a change in the question format.

Figure 2: The chart below is a summary of the COPD rates based on these changes in question format, NHIS 2014–2020¹





CDC Behavioral Risk Factor Surveillance System (BRFSS)

BRFSS collects chronic disease related information through a telephone-based nationwide survey. Since 2011, the COPD rate was captured based on the number of people who answered yes in the BRFSS annual survey to the question, " Has a doctor, nurse, or other health professional ever told you that you have COPD, emphysema, or chronic bronchitis?"



Figure 3: Age adjusted prevalence of COPD among US adults aged >/= 18 years (2011-2020)²

When collecting COPD prevalence data through nationwide surveys, wording should be similar to BRFSS and/or NHIS.



State and County Estimates of COPD

COPD rates among adults ranged from 3.0% in Hawaii to 12.3% in West Virginia.³





Data Source: CDC Behavioral Risk Factor Surveillance System (BRFSS), 2022. COPD based on affirmative response to the question:" Has a doctor, nurse, or other health professional ever told you that you have COPD, emphysema, or chronic bronchitis?" Prevalence age-standardized to the 2000 US projected population.

Large disparities exist between different states, and even between counties within states. For example, within the state of West Virginia, Mingo County had a model-based prevalence estimate of 13.3% in 2021, while the estimate for Jefferson County was 7.3% in the same year.⁴



Figure 5: County-level estimates of COPD, BRFSS, 2021⁴

Data sources: The model-based estimates were generated using data from BRFSS 2021 and ACS 2017-2021, and 2021 Census county population estimates.





Data Source: National Vital Statistics System, 2021. Mortality data at <u>http://wonder.cdc.gov.</u> Underlying cause of death ICD-10 codes: J40-J44. Death rates (per 100,000 population) age-standardized to the 2000 US projected population.

Economic Burden of COPD

In addition to being a leading cause of disability and death in the United States and across the globe, COPD is expensive. The total economic cost of COPD in the United States is close to \$50 billion each year⁶, up from 32.1 billion in 2010.⁷



Figure 7: The total economic cost from COPD is \$49.9 billion each year⁶

There are considerable out of pocket costs for people living with moderate to severe COPD due to frequent exacerbations and hospitalizations due to the progressive nature of the disease. In 2019, there were close to 536,000 hospitalizations or 163.3 per 100,000 population.⁸



Figure 8: The COPD hospitalization rate decreased an average of 17 points per year from 2016 to 2019⁸

Society also pays a hefty annual price to care for people living with COPD. In 2010, Medicare paid 51% of those costs, Medicaid paid 25% and 18% was paid by private insurance.⁹

Often thought of as an "older person's disease", there were more people in 2020 diagnosed with COPD under 65 than over 65. And this impacts the workforce directly. An estimated 16.4 million days of work were lost because of COPD in 2010, resulting in a staggering \$3.9 billion dollars in absenteeism costs.¹⁰



Figure 9: COPD Trends by Age¹

Addressing Health Inequities

People with low socioeconomic status (SES) are more likely to have poorer health outcomes and access to fewer resources.¹¹ Low SES factors like income level, educational attainment and environmental exposures all contribute to furthering health inequities related to COPD prevention, diagnosis, and treatment. **Compared to people with a higher SES, people with a lower SES living with COPD are more likely to**¹²:

- Use tobacco products
- Work in industries that put them at risk of exposures to harmful chemicals, fumes and dust
- Have exposure to indoor and outdoor air pollution
- Have childhood exposures that increase the risk of COPD like secondhand smoke exposure or recurrent respiratory infections
- Have challenges with accessing healthcare providers or specialists, lack of health insurance, difficulty affording medications and less access to health management and treatment

There are policies, programs and services that may help lessen health inequities for COPD. Cigarette smoking is the leading cause of COPD. Providing evidence-based tobacco control strategies, programs and policies can prevent smoking initiation and promote quitting. In addition, using wood smoke as a heating or cooking source may increase the risk of developing COPD.¹³ It is important to increase education and policies that address indoor and outdoor air quality as factors contributing to and worsening COPD inequitably.

In the workplace, priority should be made to address, reduce and eliminate exposures to secondhand smoke, dust, fumes, vapors and chemicals. Telehealth services for health education and internet-based programs may help bridge the gap and address especially, in rural areas, the limited access to healthcare providers.¹⁴

Rural Communities

COPD has a greater burden in rural areas compared to urban areas. COPD prevalence is over 8% in the rural population compared to nearly 5% in urban communities.¹⁴

Measures that affect rural communities at a significantly higher rate than in urban areas include¹⁴:

- COPD prevalence
- Medicare hospitalizations
- Death rates

Seven states reported high estimates for all three measures in 2015 and are clustered along the Ohio and lower Mississippi Rivers. They are Arkansas, Kentucky, Mississippi, Indiana, Tennessee, Alabama, and West Virginia.¹⁴



Women

COPD was once thought of as a disease that mostly affects "older males" however since 2000, there has been an increase in women being diagnosed with COPD.¹⁵ While there may be several factors, one reason identified is because tobacco companies directed their marketing tactics at women and cigarette smoking rates in women increased from 1920-1960.¹⁶

Over the last two decades, COPD prevalence rates are increasing in women. In 2020, 5.6% or 7,298,981 women were diagnosed with COPD compared to 4.3% or 5,245,330 men.¹⁷ Women tend to have more shortness of breath, anxiety and depression and their quality of life is more impacted.¹⁸



Figure 10: COPD-Adult Prevalence Rates, 2020¹⁷

Over the past 20 years, more women have died from COPD than men in the United States. In addition, the death rate for men has decreased 32% from 57.4 per 100,000 population in 1999 to 39.2 per 100,000 in 2020.¹⁹ However, for women, the death rate remained relatively flat from 1999 to 2020.¹⁹





Age

COPD has long been thought of as a disease that only affects older adults. And while COPD death rates are highest as people age with nearly 86% of deaths occurring among people 65 years and older¹⁹, most people who develop COPD are at least 40 years old when symptoms first began.²⁰





Income

COPD rates can be linked to household income levels. In 2020, COPD rates were lowest among those with a family income at least two times greater than the poverty threshold compared to those with lower family incomes.¹



Figure 13: Family Income, CDC, NHIS 2020 data. Analysis by the American Lung Association Epidemiology and Statistics Unit¹

Education

Higher smoking rates and lower household income are more common in people with lower levels of education.²¹ People with less than a high school degree are more likely to be diagnosed with COPD than people with a college degree. For example, in Alabama, 17% of people with less than a high school degree were diagnosed with COPD compared to 4.4% of people with a college degree.²²

Smoking Status

Cigarette smoking status is strongly correlated with COPD rates. Compared to people who never smoked, COPD rates are 7 times higher among people who currently smoke and 5 times higher among people who used to smoke.¹

Figure 14: Cigarette Smoking Status, CDC, NHIS 2020 data. Analysis by the American Lung Association Epidemiology and Statistics Unit¹



Among adults 45 years old and older diagnosed with COPD, 37.7% currently smoke.²² The current smoking rate of adults living with COPD varied across the country from 18.6% in Utah to 47.1% in West Virginia.²²

Occupation

Occupational exposures to vapors, chemicals, dust and fumes contributes to 14% of COPD cases. ²³ The top three industries for occupational exposure are agriculture, manufacturing, and mining.²⁴

Occupational COPD continues to be underdiagnosed, mainly due to the challenges of assessing the occupational component of the disease in clinical settings, especially if other risk factors are present.²³



Evidence-Based Strategies to Prevent, Diagnose, Treat, and Manage COPD

Preventing COPD

Smoking is the leading cause of COPD, and the best way to prevent COPD is to never start smoking. The longer the lungs are exposed to irritants such as tobacco smoke, the higher the risk of developing COPD. There are programs and products that can aid people in quitting more successfully than attempting to quit alone.

Long-term exposure to breathing in smoke or pollutants such as secondhand smoke, wood stove smoke or irritants in the workplace may also put people at increased risk for COPD. Ensuring proper ventilation, a N-95 respirator and other safety protocols can lower the risk of breathing in irritants that that can result in disease.

Early Warning Signs of COPD

There is often a misconception about who is most affected by COPD. Often people think COPD is most likely to affect older adults however anyone can develop COPD. While cigarette smoking is the leading risk factor for COPD, one in four people who develop COPD never smoked cigarettes.²⁵

Risk factors for COPD include:

- Adults aged 40 or older
- Those who currently or previously smoked
- Exposure to indoor and outdoor air pollution
- Occupational exposures like dust, chemicals, and fumes
- Changes to lung growth and/or development
- History of childhood respiratory infections
- Alpha 1 antitrypsin deficiency, a genetic form of COPD

Symptoms of COPD

Not everyone experiences the same COPD signs or symptoms. The more commonly recognized signs or symptoms of COPD include shortness of breath, a cough that may bring up sputum (mucus or phlegm), wheezing, tiredness or fatigue, or repeated lung infections like acute bronchitis or pneumonia. These symptoms often progress slowly, and people may change their day-to-day activities to avoid these symptoms, by becoming less active.

COPD is often diagnosed in later stages, once the disease has progressed, and symptoms have become more noticeable. While the United States Preventative Services Task Force (USPSTF) does not recommend screening asymptomatic adults for COPD²⁶, there are COPD screening tools to assess the risk of COPD or symptoms, such as dyspnea, sputum production, and smoking history.



Questionnaires for COPD Screening

- COPD Population Screener²⁷
- CAPTURE²⁸
- Lung Function Questionnaire²⁹
- Veterans Airflow Obstruction Screening Questionnaire³⁰
- GOLD Could it be COPD?³¹



Diagnosis of COPD

Assessment of airway obstruction plays a key role in the diagnosis and assessment of COPD.

Figure 15: Medical tests and procedures to diagnose COPD³²



COPD is diagnosed by a healthcare provider after reviewing the results of the patient's medical and family history including symptoms and exposure to risk factors, a physical examination and the results from the lung function test called spirometry. Spirometry is a test that confirms airflow obstruction and can diagnose COPD.

Other test results a healthcare provider may order include:

- Lung imaging tests like a chest X ray and CT scan
- Arterial blood gas test (ABG)
- Blood test for alpha 1 antitrypsin (AAT) deficiency

A healthcare provider will also review results of other lung function tests and exercise testing to guide treatment.

COPD Staging

Once COPD has been confirmed using spirometry, healthcare providers will guide therapy by staging COPD.

Initial COPD assessment to guide treatment³²:

- Severity of airflow
- Current symptoms through surveys like the Modified Medical Research Council Dyspnea Assessment (mMRC) or COPD Assessment Test (CAT score)
- · History of moderate to severe exacerbations
- Presence and type of co-morbid conditions

Co-Morbid Conditions

COPD is considered a systemic disease because it has clinical features that manifest beyond the lungs. Co-morbid conditions often lead to poorer health outcomes and may increase likelihood of hospitalizations, mortality, and healthcare costs, especially as airflow obstruction worsens.³³ Lung cancer and cardiovascular disease are the most common causes of death in people with COPD.³⁴

Figure 16: COPD as a Systemic Disease³⁵



Anxiety and depression are common comorbidities among people living with COPD. In 2020, 43.5% of people living with COPD reported ever being diagnosed with depression or anxiety, compared to 20.5% among those without COPD.¹





Management and Treatment of COPD

While each person's COPD symptoms and treatment options are different, the overarching goal of treatment is to improve symptoms, prevent disease progression, reduce the risk of COPD exacerbations, treat comorbidities, and enable people to do more of the activities they enjoy.

There are many treatment options available, including:

- Reduce COPD triggers that may worsen a person's COPD. A COPD Action and Management Plan should include opportunities to reduce or eliminate exposure to COPD triggers. Examples include:
 - Tobacco smoke- Smoking causes lung function to worsen at a faster rate. Tobacco cessation is the single most important thing that can be done and should be stressed at every opportunity with resources to assist.
 - **Air quality** exposure to strong odors, chemicals, dust, fumes, smoke from wood burning stoves or fireplaces, and poor outdoor air quality.
 - Weather- Changes in temperature, high humidity, pollen, and wind may affect an person's COPD.



Smoking causes lung function to worsen at a faster rate³⁶



- COPD Medications
 - **Bronchodilators** are used to treat breathlessness by relaxing the muscles around the airways, with severity of symptoms determining if short or long-term therapy is predicted to be most effective.
 - Inhaled corticosteroids or a muscarinic antagonist may be prescribed if the patient experiences frequent exacerbations.
 - **Combination medicines** include two or three types of medications working together to relieve symptoms.
 - Antibiotics may be prescribed during exacerbations, or flare-ups.



• **Pulmonary Rehabilitation**

A pulmonary rehabilitation team often includes doctors, nurses, physical therapists, respiratory therapists, exercise specialists and dietitians. Pulmonary rehab programs vary in format and length however most programs use a small group format and include:

- Education about your condition, symptoms, medications, and oxygen
- Supervised exercise classes and instruction
- Breathing techniques such as pursed lip breathing
- Nutritional counseling •
- Emotional health support

In addition to education, physical activity and socialization, pulmonary rehabilitation has been found to do the following:



Reduces shortness of breath and COPD symptoms



Increases strength and fitness level



Improves activities of daily living



Offers peer and emotional support

Supplemental Oxygen

- Long-term oxygen therapy increases survival in patients with severe, chronic low blood oxygen. It is administered through a nasal cannula or facemask and there are different types of oxygen delivery systems such as a portable oxygen concentrator, home oxygen concentrator, compressed oxygen in a metal tank and liquid oxygen.
- **Noninvasive Positive Pressure Ventilation**
 - Noninvasive positive pressure ventilation (NPPV) is recommended for select patients with higher levels of carbon dioxide in the blood or a history of hospitalizations because of acute respiratory failure. It can be used at home with a face mask and may decrease mortality and prevent re-hospitalizations.
- **Endobronchial Valve (EBV) Therapy**
 - In some people living with advanced COPD and emphysema, endobronchial valve therapy or EBVs may be a non-surgical option. EBVs are removable, one-way valves that reduce lung hyperinflation by allowing the trapped air to escape.
- Surgery
 - In some people with severe COPD or trouble breathing all the time, surgical options may be available. Surgical options include bullectomy, lung volume reduction surgery and lung transplant.



Other Non-Pharmacological Therapies for COPD

Clinical trials

People with COPD may participate in a clinical trial as a COPD treatment option. Clinical trials try to find ways to prevent, screen for, diagnose or treat COPD.

Complementary therapy

Some people may also use techniques such as yoga, massage or acupuncture as a way that may improve symptoms and quality of life. Both clinical trials and complementary therapy should be discussed with a healthcare professional.

Supportive care

Supportive care options such as palliative care and hospice can help address physical and emotional concerns. Palliative care is a type of treatment that can



be started at any stage of COPD and may improve the condition, help manage symptoms and make a patient's treatment goals known. Hospice is support provided at the end stage of COPD that is not intended to improve the condition.

Lifestyle changes

Part of managing COPD includes adapting healthy lifestyle changes. Besides tobacco cessation and reducing COPD triggers, people living with COPD benefit from staying physically active and getting regular exercise. Breathing requires more energy for people living with COPD. Maintaining a well-balanced diet may help with breathing and enable the body to better respond to infections and treatment. The

physical changes that come with living with COPD may affect a person's mood and emotional health. Anxiety and depression are common comorbid conditions and should be discussed with the healthcare team and never be ignored or left untreated.



Preventing COPD Exacerbations

People with COPD are at a higher risk of developing serious complications which may lead to emergency room visits and hospitalizations from infectious respiratory viruses like influenza and pneumonia. Vaccinations are an effective prevention measure that may reduce the risk of respiratory infections and exacerbations.³⁷ People with COPD should receive respiratory vaccinations like influenza, pneumococcal, pertussis, and COVID-19.³²

A COPD exacerbation, or flare-up, is a sudden worsening of symptoms, which may include:

- More coughing
- Changes to the sputum (mucus or phlegm) like color, thickness, or amount
- Difficulty sleeping
- Shorter of breath or having a hard time taking a deep breath
- Wheezing or noisy breathing
- More fatigue or tiredness

Self-management interventions should be tailored to each person with an emphasis on supporting people to adapt their health behaviors and develop skills to manage their disease.³⁸ Below, is an example of a personalized COPD Action and Management Plan.

| American Lung Association. My COF | PD Action Plan | Associatio | on. | | | | | |
|--|--|--|--|---|---|---|---|--|
| | 2 C | General Info | rmation | | | | | |
| Patients and healthcare providers should complete this action plan together. This plan should be discussed at each visit and updated as needed. The green, yellow and red zones show symptoms of COPD. The list of symptoms is not complete. You may experience other symptoms. In the "Actions" column, your healthcare provider will recommend actions for you to | | Namer Deter Ernergency Contact Phone Number Healthcare Provider Namer Phone Number | | | | | | |
| ake. Your healthcare provider may write down other act | ons in addition to those listed here. | Weight Date: | Ibs FEV1 % Predicted Date: | d Ox | ygen Saturation at Ex té: | ercise:% | ested for Alpha-1? | |
| reen Zone: I am doing well today | Actions | General Lun | g Care | | | | | |
| sual activity and exercise level sual amounts of cough and phlegm/mucus leep well at night ppetite is good | Take daly medicines Use oxygen as prescribed Continue regular exercise/det plan Avoid tobacco product use and other inhaled irritants | Plu vaccine Pneumococcal co Pneumococcal po COVID19 vaccine Exercise plan | njugate vaccine (PCV13) [] \ Jysaccharide vaccine (PP5V2 [] Yes [] No [] Yes [] No | Yes No (3) Yes No | Date received Date received Date received Tobacco use, including WalkingOther | e-cigarettes During | lu vaccine due: CVT3 vaccine due: PSV23 vaccine due: Past Current nary rehabilitation | |
| illow Zone: I am having a bad day or a COPD flam | Actions | Diet plan | Ves No | | Goal Weight | - days/wook Date is | ist attended. | |
| More breathless than usual I have less energy for my daily activities Increased or thicker philegm/mucus Using quick region inhaley/nebulicer more often More seveling in ankles More seveling in ankles | Continue daily medication Use quick relief inhaler every | Medications Purpose of Med | for COPD Icine Nat | me of Medicine | How Mu | ch to Take | When to Take | |
| eel like I have a "chest cold" oor sleep and my symptoms woke me up | Use oxygen as prescribed Get plonty of rest | My Quit Plan | | | | | | |
| My appetite is not good My medicine is not helping | Use pursed lip breathing Void secondhand smoke, e-cigarette aerosol, and other inhaled initiants Call provider immediately if symptoms do not improve | Advise: Firmly recommend quitting tobacco use | | | Discuss use of medications, if appropriate: | | | |
| | | Encourage: | Encourage: To pick a guit date | | Lung org/ffs 1-800-LUNG-USA | | | |
| | | Assist: With | a specific cessation plan | that can includ | de materials, resource | es, referrals and aids | i. | |
| d Zone: I need urgent medical care | Actions | Oxygen | | | | | | |
| Severe shortness of breath even at rest Not able to do any activity because of breathing Not able to sleep because of breathing | Call 911 or seek medical care immediately | Resting: | | _ Increased Ad | ctivity: | Sleeping: | | |
| | | Advanced Care and Planning Options | | | | | | |
| ever or snaking chills eeling confused or very drowsy | - 1997 (Personal Control of Contr | Advance Directives (Incl. Healthcare Power of Attorney): | | | | | | |
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| | 1-800-LUNG-USA Lung.org/copd | | | | | 1 900 11810 | | |

A Coordinated Approach to COPD

A leading cause of death and disability, there are several frameworks and objectives set in place to monitor the nation's progress toward better outcomes of COPD. These include:

Meeting Healthy People 2030 Goals

Healthy People 2030³⁹ is a framework for national health objectives designed to identify preventable threats to the health of the nation and to establish goals to reduce these threats. It builds on the initiatives starting from the Surgeon General's 1979 health report and sets public health priorities and goals (targets) that can be used by communities and states to gauge their progress toward these goals. The following targets are specific to COPD, and therefore a desired focal point for coordinated COPD initiatives.

Table 1: Healthy People 2030: Neighborhood and Built Environment- Respiratory Disease³⁹

| Target | Progress | Comments |
|--|-----------------------------------|---|
| Reduce deaths from COPD in adults (RD-05) | Target met or exceeded | With a baseline of 110.0 COPD deaths per 100,000 adults aged 45 years and over occurring in 2018, the target was set at 107.2 deaths per 100,000. Most recent data (2021) showed a death rate of 95.7 COPD deaths per 100,000. |
| Reduce emergency department visits for COPD in adults (RD-06) | Little or no detectable change | With a baseline of 101.6 emergency department visits for COPD per 10,000 adults aged 45 years and over occurring in 2016, the target was set at 64.0 visits per 10,000. Most recent data (2020) showed emergency department visits at 79.6 visits per 10,000. |
| Reduce hospitalizations for COPD (RD-DO4) | Developmental | This is a high-priority public health issue that has evidence-based interventions to address it but does not yet have reliable baseline data. |

Meeting COPD National Action Plan Goals

The COPD National Action Plan describes strategies for raising awareness about COPD and its impact on Americans.⁴⁰ These are the five goals of the COPD National Action Plan:

- 1) **Empower people with COPD**, their families, and caregivers to recognize and reduce the burden of COPD.
- 2) **Improve the prevention, diagnosis, treatment, and management of COPD** by improving the quality of care delivered across the health care continuum.
- 3) **Collect, analyze, report, and disseminate COPD-related public health data** that drive change and track progress.
- 4) **Increase and sustain research to better understand** the prevention, pathogenesis, diagnosis, treatment, and management of COPD.
- 5) **Translate national policy, education, and program recommendations** into research and public health care actions.

Organizations can track and monitor their activities to see and learn from how others are implementing the Action Plan with the COPD Community Action Tool. There are currently a total of 80 activities listed, with the greatest number addressing Goal 1: Empower Patients and the least to Goal 5: Application. Slightly more than half of the activities listed were submitted by advocacy organizations/nonprofits.

Available COPD Resources

The American Lung Association and its partners have developed several tools and resources for patients, caregivers, public health, and healthcare providers.

Health Professional and Public Health Resource Hub

The American Lung Association created the COPD Health Professional and Educator resource hub for professionals supporting patients living with COPD. The resource center includes clinical guidelines, educational opportunities, and resources for patients.

COPD Clinical Practice Guidelines

American Thoracic Society (ATS) develops and updates COPD clinical practice guidelines and provides recommendations for patient care based upon a systematic review. Clinicians can use these guidelines to diagnose and manage patients living with COPD.

COPD Patient-Powered Research Network

The COPD Foundation's COPD Patient-Powered Research Network (COPD PPRN) is the largest network of patients engaging in COPD-related research. The COPD PPRN allows patients living with COPD to join the registry and serve as a clinical research resource for researchers and people who want to participate in COPD-related research.



Learn More, Breathe Better

Quit Now

The CDC's 1-800-QUIT NOW is a nationwide portal to a network of state's quitlines. The quitlines offer evidencebased tobacco cessation services like cessation counseling, referrals to community programs, access to free medication to people who want to quit smoking.

The National Heart, Lung, and Blood Institute's (NHLBI) Learn More, Breathe Better program provides a comprehensive set of educational materials and resources to increase public awareness and provide resources for healthcare and public health professionals. These educational materials include social media resources, the COPD Caregivers Toolkit, animations, and videos.

Surveillance of COPD in the United States

Estimates of COPD in the United States are provided via multiple webtools. For example, CDC's COPD and Chronic Disease Indicators website provide multiple COPD-related estimates, including mortality and prevalence estimates. Public health planners, policy makers, health care systems, and community-based public health practitioners can use these data to track and respond to trends in COPD at the national, state, and local level.

Framework for COPD Prevention

The Public Health Strategic Framework for COPD Prevention report, created by the CDC and partners, serves as an outline for action in the public health community to address COPD as a priority public health concern. The four public health goals focused on surveillance and data collection, research and prevention strategies, programs and policy, and communication.

National COPD Action Plan

The NHLBI's National COPD Action Plan is the nation's blueprint for addressing the burden of COPD. The plan describes 5 goals for raising awareness about COPD and its impact on Americans. The National COPD Action Plan: Community Action Tool tracks and monitors the progress of partner organizations towards reaching the goals and objectives in the National COPD Action Plan.

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⁴Data sources: The model-based estimates were generated using data from BRFSS 2021 and ACS 2017-2021, and 2021 Census county population estimates. Retrieved from County Estimates – Chronic Obstructive Pulmonary Disease (COPD) | CDC ⁵Data Sources: National Vital Statistics System, 2021. Mortality data at http://wonder.cdc.gov.

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