



## CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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### ISSUE

This report answers a series of questions on Chronic Obstructive Pulmonary Disease (COPD) that address (1) screening and diagnostic methods, (2) its prevalence and associated health care costs in Connecticut, and (3) local and national advocacy organizations.

#### **1. What is COPD?**

According to the federal Centers for Disease Control and Prevention (CDC), COPD generally refers to a group of diseases, including emphysema and chronic bronchitis, that cause airflow limitation and breathing-related issues. The disease is progressive, and impairs a person's breathing ability over time. Symptoms, such as coughing, shortness of breath, and chest tightness, often cause a decrease in a person's productivity and quality of life.

COPD is caused by several factors, including cigarette smoking, genetics, exposure to air pollutants, and respiratory infections. It is treated with (1) lifestyle and behavior modifications (e.g., smoking cessation, breathing strategies, and avoidance of air pollutants), (2) medications, and (3) pulmonary rehabilitation programs.

According to the CDC's National Health and Nutrition Examination Survey data, 15 million Americans reported a COPD diagnosis in 2011. However, the agency notes that the disease is likely under reported as more than half of adults with low pulmonary function are unaware that they have COPD.

#### **2. How is COPD diagnosed?**

Physicians generally diagnose COPD after considering several factors, including a patient's (1) medical or family history, (2) symptoms, and (3) performance on lung function tests. Several medical specialty organizations, including the American Thoracic Society, American College of Chest Physicians, American College of Physicians, and European Respiratory Society issued joint clinical guidelines for

diagnosing and treating COPD. The guidelines, which were last updated in [2011](#), recommend the following diagnostic testing:

1. spirometry, which assesses a patient's lung function by measuring his or her breathing rate and blood oxygen levels;
2. bronchodilator reversibility, which excludes the presence of asthma and assesses the patient's lung function;
3. chest radiography, which excludes the presence of other diseases such as pneumonia or cancer;
4. alpha-1 antitrypsin deficiency, which identifies whether a person has a protein deficiency genetically linked to COPD; and
5. computed tomography (CT) scanning.

### ***3. Is there a COPD "Patient Population Screener"?***

In 2008, Optum (formerly QualityMetric Incorporated) released a self-administered, five-question survey (called the "COPD Patient Population Screener") to identify people likely to have COPD in the general population. The survey was created by a clinical working group of five pulmonary specialists, four primary care physicians and one respiratory therapy professor. The working group developed the survey content, designed a clinical study to develop and validate the survey, and evaluated the study results (Martinez et al. 2008).

The survey assesses several contributing factors to COPD onset, including (1) symptoms, such as shortness of breath and coughing; (2) functional impact (e.g., effect on daily activities); and (3) other patient characteristics, including smoking history and age.

It is available online through various healthcare agencies, organizations, and providers. For example, the COPD Foundation provides an interactive version on its [website](#) that provides respondents with a numerical score between 1 and 10 based on their answers. The higher the score, the more likely the person may have COPD. Respondents that receive a score of five or greater are encouraged to bring the results to a health care provider for testing. According to the foundation, it collects aggregate survey results for internal purposes, but does not publish the information online.

#### **4. Does Connecticut collect data on COPD prevalence, hospital readmission rates, or related health care costs?**

The Department of Public Health (DPH) collects certain data on COPD-related hospitalizations and associated health care costs, but does not collect prevalence rates. However, the CDC's Behavioral Risk Factor Surveillance System (BRFSS) survey found that in 2013, 5.9% of Connecticut residents ages 18 and older have been diagnosed with COPD, emphysema, or chronic bronchitis. (This telephone survey collects state data on residents' health-related risk behaviors, chronic health conditions, and use of preventive services.)

According to DPH, COPD hospitalization rates increased between 1998 and 2009, but started to decrease over the last few years. In 2012, Connecticut's COPD hospitalization rate was 270.8 per 100,000 residents, down from 303.5 per 100,000 residents in 2009 (see Table 1). Additionally, COPD accounted for 14.5% of all preventable hospitalizations in 2012 (i.e., hospitalizations for health conditions typically treated through primary care). DPH's 2014 *Databook on Preventable Hospitalizations in Connecticut* reported that these preventable hospitalizations resulted in \$183,941,712 in charges, which were disproportionately covered by Medicare (67%); Medicaid and private insurers paid 18% and 14%, respectively.

**Table 1: COPD Hospitalization Rates**

<b>Year</b>	<b>Hospitalization Rate (per 100,000 residents)</b>
1998	243.3
1999	270.2
2000	257.2
2001	250.1
2002	260.8
2003	261.9
2004	245.1
2005	262.5
2006	266.8
2007	266.0
2008	293.0
2009	303.5
2010	273.3

Table 1 (continued)

Year	Hospitalization Rate (per 100,000 residents)
2011	274.9
2012	270.8

Source: DPH Hospitalization Reports, Table H-1

**5. Does DPH provide educational materials on COPD for the public?**

According to DPH, it does not currently provide COPD educational materials or initiatives to increase disease awareness to the public.

**6. Are there any local or national COPD advocacy organizations?**

There are several organizations with programs that advocate for COPD education, awareness, and research. For example, the COPD Foundation maintains an online advocacy center that provides the public with information on (1) state and federal COPD-related legislation; (2) contact information for local, state, and national elected officials; (3) pre-written advocacy letters to send to these officials; and (4) local and state advocacy initiatives and resources. It also allows individuals to become “Certified COPD Advocates” after completing a 30 minute training video and five-question quiz. Among other things, the training provides tips for successfully interacting with elected officials and an overview of the foundation’s advocacy goals and activities.

Additionally, the foundation maintains an interactive, online community (COPD 360° Social) that provides the public with information on local advocacy events and opportunities to participate in them. It also offers a public education and awareness initiative, DRIVE4COPD, to educate, inform, and screen people at risk for developing COPD.

As another example, the American Lung Association advocates for COPD patients at the federal, state, and local levels. Its federal initiatives include advocating for increased (1) COPD research funding for federal programs, such as the National Institutes of Health and the Department of Veterans Affairs; (2) coverage and access to pulmonary rehabilitation services for COPD patients; and (3) federal taxation on cigarettes and regulation of tobacco products. The association participates in the federal COPD Coalition, which works with the Congressional COPD Caucus to increase COPD public awareness, prevention, and early detection.

At the state and local level, the American Lung Association advocates for policies to help prevent the disease, such as comprehensive smoke-free indoor air laws and fully funded tobacco prevention and cessation programs. It also advocates for the inclusion of COPD-related questions on each state’s BRFSS.

## RESOURCES

American Lung Association website: <http://www.lung.org/lung-disease/copd/advocacy/>

Centers for Disease Control and Prevention website: <http://www.cdc.gov/copd/index.html>

Centers for Disease Control and Prevention, "Connecticut COPD Fact Sheet:" [http://www.cdc.gov/copd/maps/docs/pdf/CT\\_COPDFactSheet.pdf](http://www.cdc.gov/copd/maps/docs/pdf/CT_COPDFactSheet.pdf)

Centers for Disease Control and Prevention, "Public Health Strategic Framework for COPD Prevention:" [http://www.cdc.gov/copd/pdfs/Framework\\_for\\_COPD\\_Prevention.pdf](http://www.cdc.gov/copd/pdfs/Framework_for_COPD_Prevention.pdf)

COPD Foundation website: <http://www.copdfoundation.org/>

Department of Public Health, "Databook - Preventable Hospitalizations in Connecticut: A Reassessment of Access to Community Health Services 2008-2012." September 2014: [http://www.ct.gov/dph/lib/dph/ohca/publications/2014/preventable\\_hospital\\_report\\_final.pdf](http://www.ct.gov/dph/lib/dph/ohca/publications/2014/preventable_hospital_report_final.pdf)

Martinez et. al, "Development and Initial Validation of a Self-Scored COPD Population Screener Questionnaire." *COPD*. 2008; 5(2): 85-95: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2430173/>

National Institutes of Health website: <http://www.nlm.nih.gov/health/health-topics/topics/copd/diagnosis>

Optum, "COPD Population Screener:" <https://www.optum.com/optum-outcomes/what-we-do/disease-specific-health-surveys/copd-population-screener.html>

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