

What Is Chronic Obstructive Pulmonary Disease (COPD)?

COPD is the name for a group of diseases that restrict air flow and cause trouble breathing. COPD includes emphysema and chronic bronchitis. Chronic lower respiratory disease, including COPD, is the third leading cause of death in the United States.¹ Fifteen million Americans have been diagnosed with COPD.² Two decades ago, more than 50% of adults with poor pulmonary function were not aware that they had COPD, therefore millions more may have it.³

Symptoms

- Chronic cough (also known as smoker’s cough).
- Chronic phlegm production.
- Shortness of breath while doing things you used to be able to do.
- Not being able to take a deep breath.
- Wheezing.

Causes

Tobacco use is the primary cause of COPD in the United States, but air pollutants at home (such as secondhand smoke and some heating fuels) and at work (such as dusts, gases, and fumes), and genetic predisposition also can cause COPD.

Prevention and Treatment

For current smokers, smoking cessation is essential for preventing COPD. Eliminating exposure to tobacco smoke and other environmental pollutants is also important. While there is no cure for COPD, treatment is available to manage the symptoms that are caused by COPD and improve quality of life. Treatment options include medication (such as inhalers), pulmonary rehabilitation, physical activity training, and oxygen treatment.

1. Kochanek KD, Xu J, Murphy SL, Miniño AM, Kung HC. Deaths: final data for 2009. *Nat Vital Stat Rep.* 2012; 60(3): 1-117.
 2. CDC. Chronic obstructive pulmonary disease among adults—United States, 2011. *MMWR.* 2012; 61(46):938-943.
 3. Mannino DM, Gagnon RC, Petty TL, Lydick E. Obstructive lung disease and low lung function in adults in the United States: data from the National health care and Nutrition Examination Survey 1988-1994. *Arch Intern Med.* 2000;160:1683-1689.

COPD Risk Factors

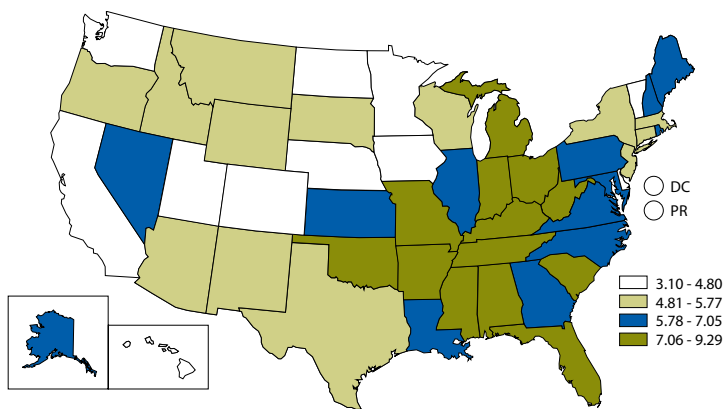
You may be at an increased risk if you are older than 40 years and

- Have symptoms of COPD.
- Have a history of smoking.
- Have been exposed to environmental or occupational pollutants.

Please talk with your health care provider about being tested for COPD using spirometry (a breathing test).

8.0% (age-adjusted = 7.4%) of Michigan residents surveyed in 2011 reported having been told by a health care professional that they have COPD. The map below depicts quartiles of the national prevalence of COPD by state for comparison.

Age-Adjusted[†] Percentage of U.S. Adults with COPD by State or Territory, 2011*



[†]Age-adjusted to the 2000 U.S. standard population.
 *Behavioral Risk Factor Surveillance Survey (BRFSS) for 2011.

COPD Learn More Breathe Better[®]

Find more information about COPD and its treatment is available at www.cdc.gov/. Type *COPD* in the search box or visit the COPD Learn More Breathe Better[®] Campaign, at www.nhlbi.nih.gov/health/health-topics/topics/copd/

Other resources:

- www.copdfoundation.org/
- www.thoracic.org/clinical/copd-guidelines/index.php
- www.goldcopd.org/



The table to the right breaks down the prevalence of COPD among Michigan adults by age, race/ethnicity, sex, employment status, education level, income, marital status, smoking status, and asthma history.

Respondents were more likely to report COPD ($p < 0.05$) if they

- Were female.
- Were unable to work.
- Were divorced, widowed, or separated.
- Were a current smoker.
- Had a history of asthma.

Respondents were less likely to report COPD ($p < 0.05$) if they

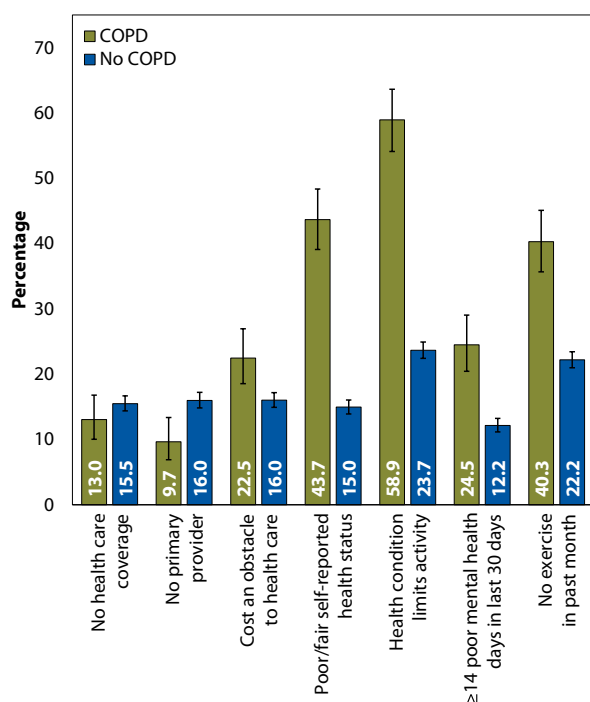
- Were age 44 years or younger.
- Were male.
- Had at least some college education.
- Were never married.
- Had never smoked.
- Had no history of asthma.

The figure below compares health and health care characteristics by COPD status.

Compared with adults without COPD, adults with COPD were more likely ($p < 0.05$) to report

- They had a primary health care provider.
- Cost was an obstacle to health care.
- Poor/fair health status.
- A health condition limited activity.
- Fourteen or more poor mental health days in the past 30 days.
- No exercise in the past month.

Health and Healthcare Characteristics by COPD Status: Michigan



Percentage of Michigan Adults with COPD, 2011 BRFSS*, n=10,943

Characteristic	%	95% CI
Age Group (Years)		
18–44	3.8	(2.9–4.8)
45–54	9.0	(7.3–11.0)
55–64	11.2	(9.5–13.2)
65–74	14.8	(12.6–17.3)
≥75	14.0	(11.6–16.8)
Race/Ethnicity		
White	7.9	(7.1–8.7)
Black	9.9	(7.7–12.8)
Hispanic	**	—
Other	7.1	(5.0–10.1)
Sex		
Men	6.8	(5.8–7.9)
Women	9.0	(8.1–10.1)
Employment Status		
Employed	4.1	(3.3–4.9)
Unemployed	10.0	(7.2–13.6)
Homemaker/Student	4.4	(3.1–6.3)
Retired	13.6	(12.0–15.4)
Unable to work	24.1	(20.0–28.7)
Education Level		
Less than High School Diploma	13.5	(10.5–17.2)
High School Diploma or GED	9.4	(8.2–10.8)
At least Some College	5.9	(5.2–6.8)
Income		
<\$25,000	11.7	(10.2–13.4)
\$25,000–\$49,999	8.9	(7.6–10.4)
\$50,000–\$74,999	6.1	(4.4–8.2)
>\$75,000+	3.2	(2.2–4.6)
Marital Status		
Married	7.7	(6.8–8.9)
Divorced/Widowed/Separated	13.5	(11.8–15.3)
Never Married	4.8	(3.7–6.2)
Member of Unmarried Couple	**	—
Smoking Status		
Current	14.7	(12.6–17.0)
Former	10.9	(9.5–12.4)
Never	3.4	(2.8–4.1)
Ever Had Asthma		
Yes	21.6	(18.8–24.7)
No	5.6	(5.0–6.3)

*BRFSS for 2011. Respondents were asked, "Have you ever been told by a doctor or health professional that you have COPD, emphysema, or chronic bronchitis?"

**Relative standard error ≥ 0.3 . Learn more about BRFSS methodology at www.cdc.gov/BRFSS.

In 2011, 21 states, the District of Columbia, and Puerto Rico administered an optional module as part of the annual BRFSS survey. The questions in the optional module asked about COPD-related health care behaviors and health-related quality of life and were asked of respondents who reported having COPD.

The results for all these states may be found in "Chronic Obstructive Pulmonary Disease Among Adults—United States, 2011." *MMWR*. 2012;61:938-943. <http://www.cdc.gov/mmwr/PDF/wk/mm6146.pdf>.

Diagnosis

Spirometry is the current standard of COPD diagnosis. Spirometry is a simple breathing test administered by a health care professional that measures how much air you breathe out and how fast you can blow air out. Spirometry can also determine how severe COPD is and help guide doctors to decide on the appropriate treatment.

Among 995 Michigan Adults with COPD

60.1%

reported being diagnosed
using spirometry

Management

Although there is no cure for COPD, treatment exists that can prevent worsening of the disease. Daily COPD **medications** can be used to manage symptoms.

44.5%

reported using at least one
daily COPD medication

Doctor Visits and Hospitalization

COPD poses a significant economic burden. In 2008, the cost to the nation for COPD and asthma was estimated to be approximately \$68.0 billion in healthcare expenditures and lost productivity.¹

39.2%

reported seeing a doctor about COPD
symptoms in the previous 12 months

19.2%

reported a hospital or emergency
department visit for COPD symptoms
in the previous 12 months

Quality of Life

COPD causes shortness of breath, which makes it difficult to do the things you used to be able to do, at work and at home. These symptoms can cause decreased quality of life and loss of productivity.

54.8%

reported that shortness of breath
affected their quality of life

1. National Institutes of Health, National Heart, Lung, and Blood Institute. Morbidity & Mortality: 2012 Chart Book on Cardiovascular, Lung, and Blood Diseases. February 2012. <http://www.nhlbi.nih.gov/resources/docs/cht-book.htm>.