# **BRFSS Brief**

# Number 2022-22

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual telephone survey of adults developed by the Centers for Disease Control and Prevention and conducted in all 50 states, the District of Columbia, and several US Territories. The New York BRFSS is administered by the New York State Department of Health to provide statewide and regional information on behaviors, risk factors, and use of preventive health services related to the leading causes of chronic and infectious diseases, disability, injury, and death.

# **Chronic Obstructive Pulmonary Disease**

New York State Adults, 2020

# **Introduction and Key Findings**

Chronic obstructive pulmonary disease (COPD) is a group of diseases that cause airflow blockage, breathing-related problems, and serious long-term disability. In the United States, COPD includes two main conditions: emphysema and chronic bronchitis. Chronic lower respiratory diseases, a group that includes COPD, was the sixth leading cause of death in the US in 2020.¹ More than 15.9 million Americans report ever being diagnosed with COPD.² More than half of all adults with low pulmonary function may not be aware they have COPD, therefore the actual number of adults living with COPD may be higher.³ Tobacco smoke is the primary cause of the development and progression of COPD⁴; exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections are also causes. In addition, the global outbreak of the novel coronavirus disease (COVID-19) adds concern. Though evidence is still gathering, available data suggest relatively worse outcomes from COVID-19 in individuals living with COPD compared to those without COPD.⁵

Higher prevalence of COPD has also been reported in women compared to men. In the US, COPD-related hospitalizations and deaths in women now surpass those in men. Several factors are associated with these differences including women being diagnosed later than men, when treatment is less effective, and women having increased vulnerability to the effects of tobacco and other air pollution. The primary means of preventing COPD is to never smoke or to quit smoking tobacco. There is no cure for COPD, but the condition can be managed through quitting smoking, avoiding tobacco and other air pollutants, receiving personalized treatment programs for pulmonary rehabilitation, adhering to medication, and preventing lung infections by getting vaccinated for vaccine-preventable diseases, such as the flu, pneumonia, and COVID-19.

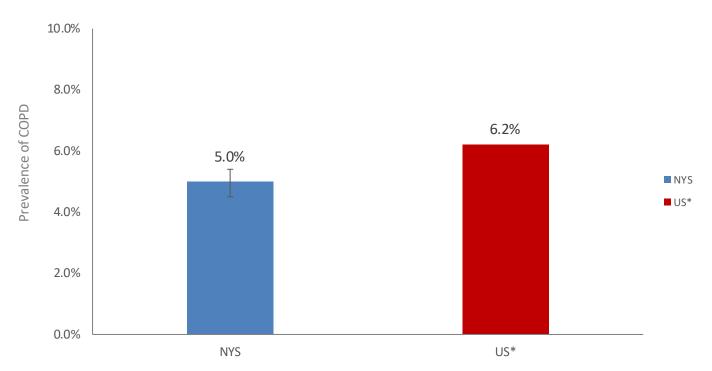
### **Key Findings**

In 2020, an estimated 5.0% of adults in New York State (estimated 762,000 adults) report being told by a health professional they have COPD (Figure 1). Rates of COPD are highest among adults who report living with disability (13.4%), current cigarette smokers (13.1%), individuals covered by Medicare (11.5%), adults aged 65 and older (11.3%), adults who are not in the labor force (9.6%), former smokers (9.5%), and those with frequent mental distress (8.9%) (Table 1). Overall, annual statewide prevalence rates of COPD were similar between 2016 and 2020 (Figure 2).

## **BRFSS Questions 2020**

• Has a doctor, nurse, or other health professional ever told you that you have chronic obstructive pulmonary disease (COPD), emphysema or chronic bronchitis?

Figure 1. Prevalence of Chronic Obstructive Pulmonary Disease (COPD) among Adults in NYS and in the US, BRFSS 2020



<sup>\*</sup>U.S. data point is the median value for all states, D.C, and territories. Confidence interval is not used with the median value.

Figure 2. Prevalence of Chronic Obstructive Pulmonary Disease (COPD) among Adults in NYS, BRFSS 2016 – 2020

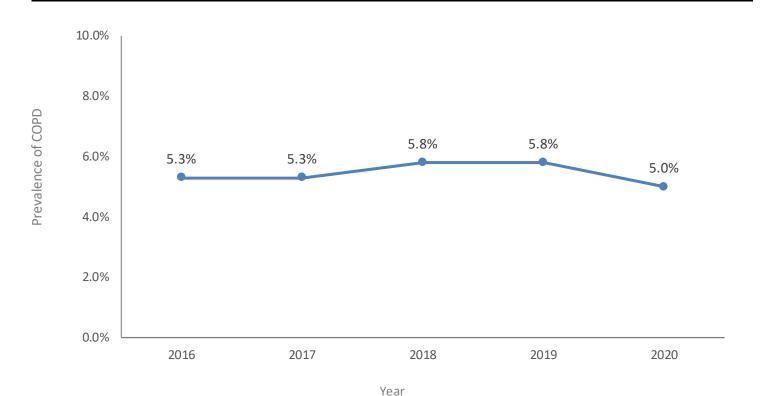


Table 1. Prevalence of COPD by Demographic Groups in NYS, BRFSS 2020

	Percent <sup>a</sup>	95% CI <sup>b</sup>	Estimated Population Size c
Total New York State	5.0	[4.5-5.4]	762,000
Region			·
New York City (NYC)	4.3	[3.5, 5.1]	281,000
Rest of State (NYS excluding NYC)	5.5	[5.0, 6.0]	481,000
Sex		. , .	·
Male	4.5	[3.8,5.2]	330,000
Female	5.4	[4.8,6.0]	432,000
Race and Ethnicity		. , .	,
White, Non-Hispanic	6.0	[5.4,6.5]	494,000
Black, Non-Hispanic	4.7	[3.3,6.0]	97,000
Other Race or Multiracial, Non-Hispanic	3.0	[1.3,4.7]	50,000
Hispanic	3.5	[2.4,4.5]	97,000
Age		. , -1	,,,,,
18 – 24	*	*	*
25 - 34	0.9	[0.5,1.3]	51,000
35 – 44	2.2	[1.4,3.1]	86,000
45 – 54	3.8	[2.8,4.8]	208,000
55 - 64	8.5	[7.2,9.8]	375,000
65+	11.3	[9.8,12.7]	51,000
Education	22.0	[5:0,12:7]	32,633
Less than High School (H.S.)	7.4	[5.6,9.2]	147,000
H.S. or GED	5.9	[5.0,6.7]	233,000
Some College or Technical School	5.6	[4.7,6.4]	225,000
College Graduate	2.7	[2.3,3.2]	140,000
Annual Household Income		[=:=,=:=]	2 10,202
Less than \$25,000	8.7	[7.4,10.0]	251,000
\$25,000 - 34,999	6.0	[4.2,7.7]	60,000
\$35,000 - 49,999	5.7	[4.2,7.1]	72,000
\$50,000 - 74,999	4.8	[3.5,6.0]	73,000
More than \$75,000	2.6	[2.1,3.2]	124,000
Employment Status	2.0	[2.1,5.2]	12 1,000
Employed/Self-Employed	2.3	[2.0,2.7]	188,000
Not in Labor Force	9.6	[8.5,10.7]	505,000
Unemployed	2.9	[1.8,4.0]	45,000
Frequent Mental Distress d	2.9	[1.0,4.0]	43,000
Yes	8.9	[7.2,10.6]	167,000
No	4.3	[3.9,4.8]	566,000
Disability Status <sup>e</sup>	4.3	[3.3,4.0]	300,000
Yes	13.4	[11.8,15.0]	435,000
No	2.6	[2.2,2.9]	283,000
Health Care Coverage – Type	2.0	[2.2,2.3]	283,000
Medicaid	7.3	[5.5,9.2]	146,000
Medicare	11.5	[10.0,13.0]	293,000
	3.4		
No Insurance	2.9	[2.2,4.6]	56,000
Private Insurance		[2.4,3.3]	206,000
Other Smaking Status	5.9	[3.9,8.0]	43,000
Smoking Status	12.4	[14.2.45.0]	330,000
Current Smoker	13.1	[11.2,15.0]	220,000
Former Smoker	9.5	[8.2,10.9]	308,000
Never Smoker	2.0	[1.7,2.4]	188,000

a Percentages are weighted to population characteristics. b Confidence Interval. c An estimated population size based on weighted frequencies from BRFSS. d Frequent mental distress is defined as yes if respondents report problems with stress, depression, or emotions on at least 14 of the previous 30 days (formerly referred to as poor mental health). e Disability status is defined as yes if respondents report having at least one type of disability (cognitive, independent living, self-care, mobility, vision, or hearing). \* Data unavailable/estimates unstable.

#### References

- 1. Murphy SL, Kochanek KD, Xu JQ, Arias E. Mortality in the United States, 2020. NCHS Data Brief, no 427. Hyattsville, MD: National Center for Health Statistics. 2021. Retrieved from <a href="https://www.cdc.gov/nchs/data/databriefs/db427.pdf">https://www.cdc.gov/nchs/data/databriefs/db427.pdf</a> [Accessed 2022 July 1]
- Sullivan J, Pravosud V, Mannino DM, Siegel K, Choate R, Sullivan T. National and State Estimates of COPD Morbidity and Mortality United States, 2014-2015. Chronic Obstr Pulm Dis. 2018 Oct 12;5(4):324-333. Retrieved from <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6361472/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6361472/</a> [Accessed 2022 July 1]
- 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 and Nutrition Examination Survey, 1988-1994. Arch Intern Med. 2000 Jun 12;160(11):1683-9. Retrieved from <a href="https://pubmed.ncbi.nlm.nih.gov/10847262/">https://pubmed.ncbi.nlm.nih.gov/10847262/</a> [Accessed 2022 July 1]
- 4. U.S. Department of Health and Human Services. Smoking Cessation. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2020. Retrieved from <a href="https://www.hhs.gov/surgeongeneral/reports-and-publications/tobacco/index.html">https://www.hhs.gov/surgeongeneral/reports-and-publications/tobacco/index.html</a> [Accessed 2022 July 1]
- 5. Singh D, Mathioudakis AG, Higham A. Chronic obstructive pulmonary disease and COVID-19: interrelationships. Curr Opin Pulm Med. 2022;28(2):76-83. Retrieved from <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8815646/pdf/copme-28-76.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8815646/pdf/copme-28-76.pdf</a> [Accessed 2022 Aug 15].
- Han MK, Arteaga-Solis E, Blenis J, et al. Female Sex and Gender in Lung/Sleep Health and Disease. Increased Understanding of Basic Biological, Pathophysiological, and Behavioral Mechanisms Leading to Better Health for Female Patients with Lung Disease. Am J Respir Crit Care Med. 2018;198(7):850-858. Retrieved from <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6173069/pdf/rccm.201801-0168WS.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6173069/pdf/rccm.201801-0168WS.pdf</a> [Accessed 2022 Aug 15].
- 7. Aryal S, Diaz-Guzman E, Mannino DM. Influence of sex on chronic obstructive pulmonary disease risk and treatment outcomes. Int J Chron Obstruct Pulmon Dis. 2014;9:1145-1154. Published 2014 Oct 14. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4206206/pdf/copd-9-1145.pdf [Accessed 2022 Aug 15].
- 8. Croft JB, Wheaton AG, Liu Y, et al. Urban-Rural County and State Differences in Chronic Obstructive Pulmonary Disease United States, 2015. MMWR Morb Mortal Wkly Rep 2018;67:205–211. Retrieved from https://www.cdc.gov/mmwr/volumes/67/wr/mm6707a1.htm?s cid=mm6707a1 w [Accessed 2022 Aug 15].
- 9. Matthews KA, Croft JB, Liu Y, et al. Health-Related Behaviors by Urban-Rural County Classification United States, 2013. MMWR Surveill Summ 2017;66(No. SS-5):1–8. Retrieved from https://www.cdc.gov/mmwr/volumes/66/ss/ss6605a1.htm?s\_cid=ss6605a1\_w [Accessed 2022 Aug 15].
- 10. American Lung Association. Cutting tobacco's rural roots: Tobacco use in rural communities. ALA, Washington, DC; 2012. Retrieved from https://healthforward.org/wp-content/uploads/2015/07/cutting-tobaccos-rural-roots.pdf [Accessed 2022 Aug 15].

## **Program Contributors**

New York State Department of Health Bureau of Chronic Disease Evaluation and Research Bureau of Tobacco Control

## **Order Information**

#### Copies may be obtained by contacting:

BRFSS Coordinator
New York State Department of Health
Bureau of Chronic Disease Evaluation and Research
Empire State Plaza, Rm. 1070
Corning Tower
Albany, NY 12237-0679

#### Or by phone or electronic mail:

(518) 473-0673 or BRFSS@health.ny.gov or www.health.ny.gov