

The Evolving Danger of Deadly Lung Disease

Will the rise in youth vaping lead to a
COPD epidemic in the years ahead?

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Chronic obstructive pulmonary disease (COPD) is a leading cause of death for Americans. Characterized by difficulty breathing and restricted airflow into and out of the lungs, COPD encompasses multiple lung conditions, including chronic bronchitis and emphysema. The disease affects more than 16 million people across the United States.

Vaping May Lead to Smoking and, Ultimately, COPD

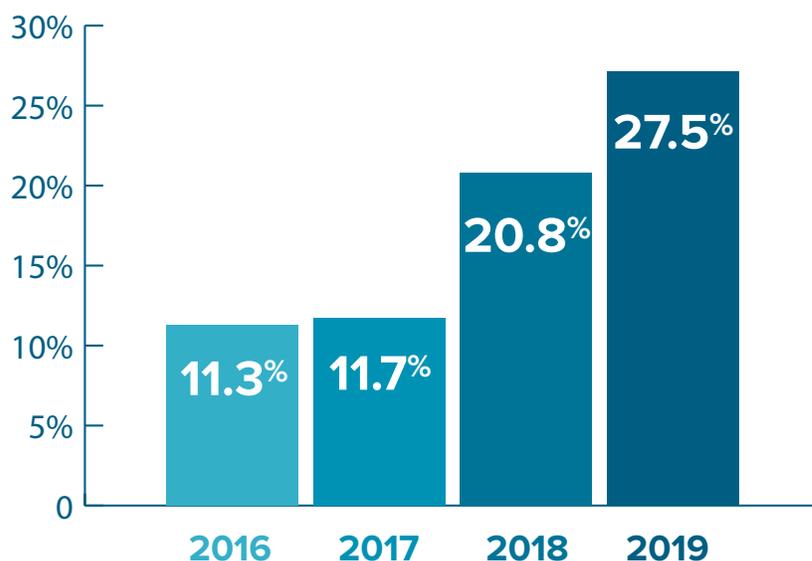
While vaping is still a relatively new phenomenon, some disturbing correlations between vaping and COPD have emerged. States with higher vaping rates among adults also suffer from the highest rates of COPD in the country. Arkansas, Oklahoma, Kentucky and Missouri all fall in the top 10 for both vaping rates and COPD rates.

And while there is still debate about whether the use of e-cigarettes is an effective cessation tool for adult smokers¹, there is no debate about the dangers for young people. While smoking rates among America’s youth have decreased in recent years, the rate of e-cigarette use among young people has exploded. In 2019, 27.5% of high school students admitted to using e-cigarettes, up from just 11.3% in 2016. The rate of vaping in young people is almost 5 times the amount of those who smoke cigarettes.²

As the immediate dangers of e-cigarette and vaping products continue to be closely scrutinized³, recent studies have found that young people who use e-cigarettes may be more likely to smoke cigarettes in the future.⁴ This is troubling given the established relationship between smoking and COPD.

If vaping does indeed lead to higher smoking rates, we need to brace for a startling rise in cases of COPD in the decades ahead.

Youth Vaping Rates Have Increased Drastically Since 2016



Spike in youth e-cigarette use since 2016. 2017–2019

Rural Americans Are More Likely to Suffer and Die From the Disease

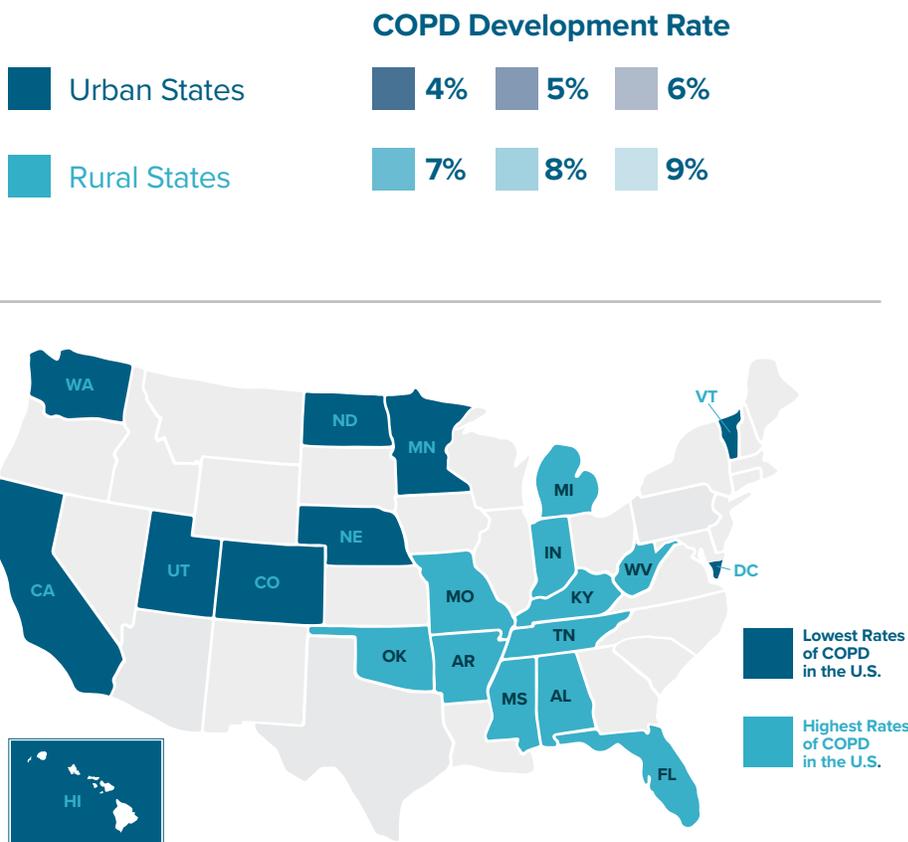
The decline in rural access to health care has been well documented in recent years as family doctors and general practitioners become scarcer in rural communities. These “health care deserts” now make up nearly 80% of rural America.⁵

Data now also shows that rural Americans are facing a significant threat from lung disease in addition to declining access to health care services: COPD rates in rural states are now significantly higher than those in more urban states.⁶

All of the top states with the highest rates of COPD are defined as “rural” by the CDC, meaning they have a high percentage of residents in counties with a population under 50,000 people. Those who develop COPD and live in rural states have the highest risk of dying from the disease. All but 1 of the top 11 states with the highest rates of COPD mortality are defined as rural.

Health Care Deserts in Rural Communities Contribute to the Higher COPD Mortality Rates Found There

State	COPD Development Rate
Alabama	9.6%
Arkansas	7.9%
California	4.6%
Colorado	4.6%
Florida	7.9%
Hawaii	4.4%
Indiana	8.3%
Kentucky	9.8%
Michigan	8.0%
Minnesota	4.1%
Mississippi	8.2%
Missouri	8.0%
Nebraska	4.9%
North Dakota	4.7%
Oklahoma	8.5%
Tennessee	9.2%
Utah	4.0%
Vermont	5.0%
Washington	4.1%
Washington, D.C.	4.6%
West Virginia	8.9%



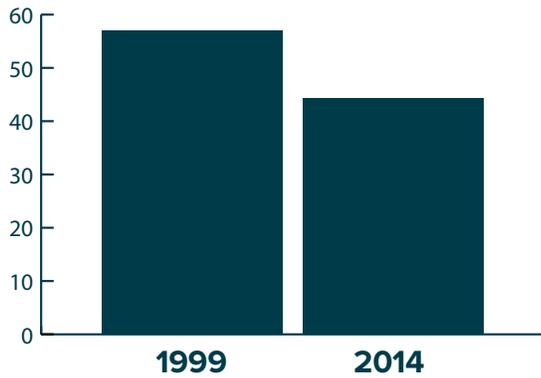
Those who develop COPD and live in rural states have the highest risk of dying from the disease. 02/22/2018

Women Suffer From Higher Rates of COPD

Women are also more likely to suffer from the disease than men.

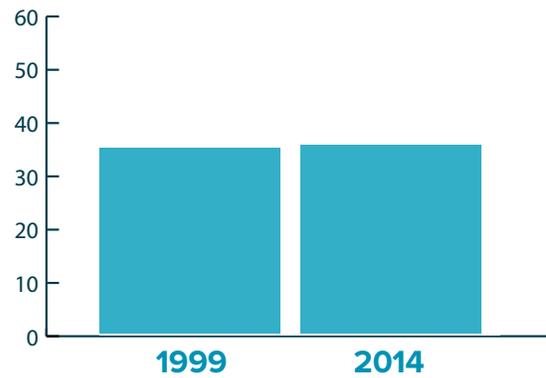
Since 2000, more women than men have died from COPD in the United States, and today, more women than men in the U.S. are also living with COPD.⁷ While the age-adjusted death rates for COPD have dropped among US men, death rates slightly increased for women.⁸

Men's Death Rates Have Declined Since 1999



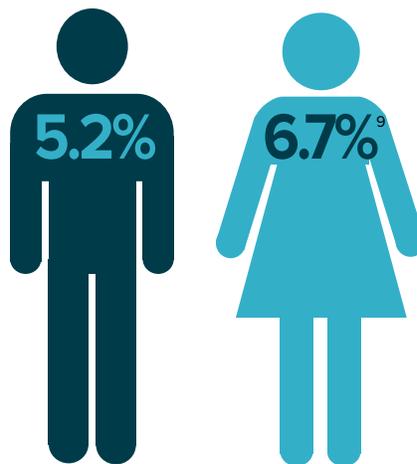
Age-adjusted death rates per 100,00 men with COPD in the U.S. 06/05/2018

Women's Death Rates Have Slightly Increased Since 1999



Age-adjusted death rates per 100,00 women with COPD in the U.S. 06/05/2018

Adults Reporting Being Told by a Physician That They Had COPD Nationwide



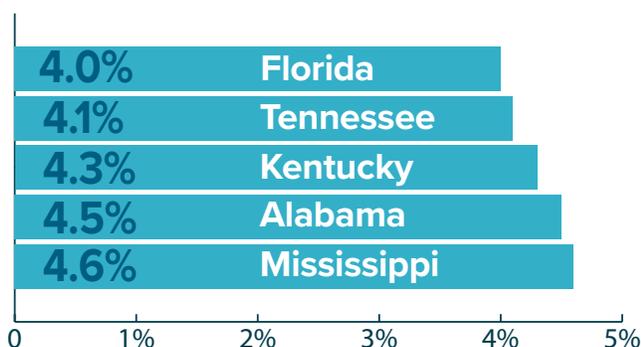
You Can Be at Risk of COPD Even If You've Never Smoked

2.8% of American adults who have never smoked will develop COPD.¹⁰

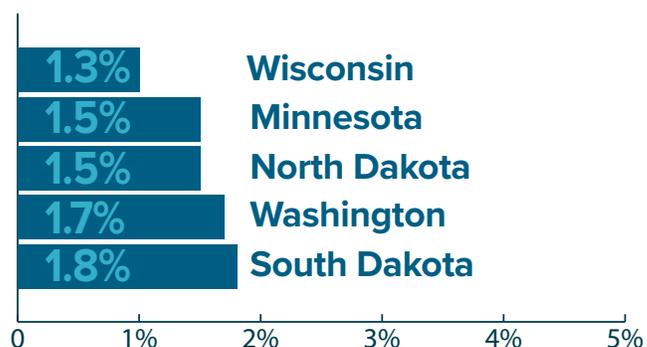
And in some states, the risk of developing COPD without ever smoking is significantly higher than others. Individuals in Mississippi, Alabama, Kentucky, Tennessee and Florida — states with the highest rates of COPD among nonsmokers — are all more than 3 times more likely to develop COPD than nonsmokers who live in Wisconsin.

The rates of developing COPD as a nonsmoker are actually higher in Kentucky, Alabama, Tennessee, Mississippi, than the overall COPD rate found in Hawaii, Washington, Minnesota and Utah.

While the Average Rate of Nonsmokers Who Are Diagnosed With COPD Is 2.8%, the Rates Vary Greatly by State



States with the highest rates of COPD among nonsmokers

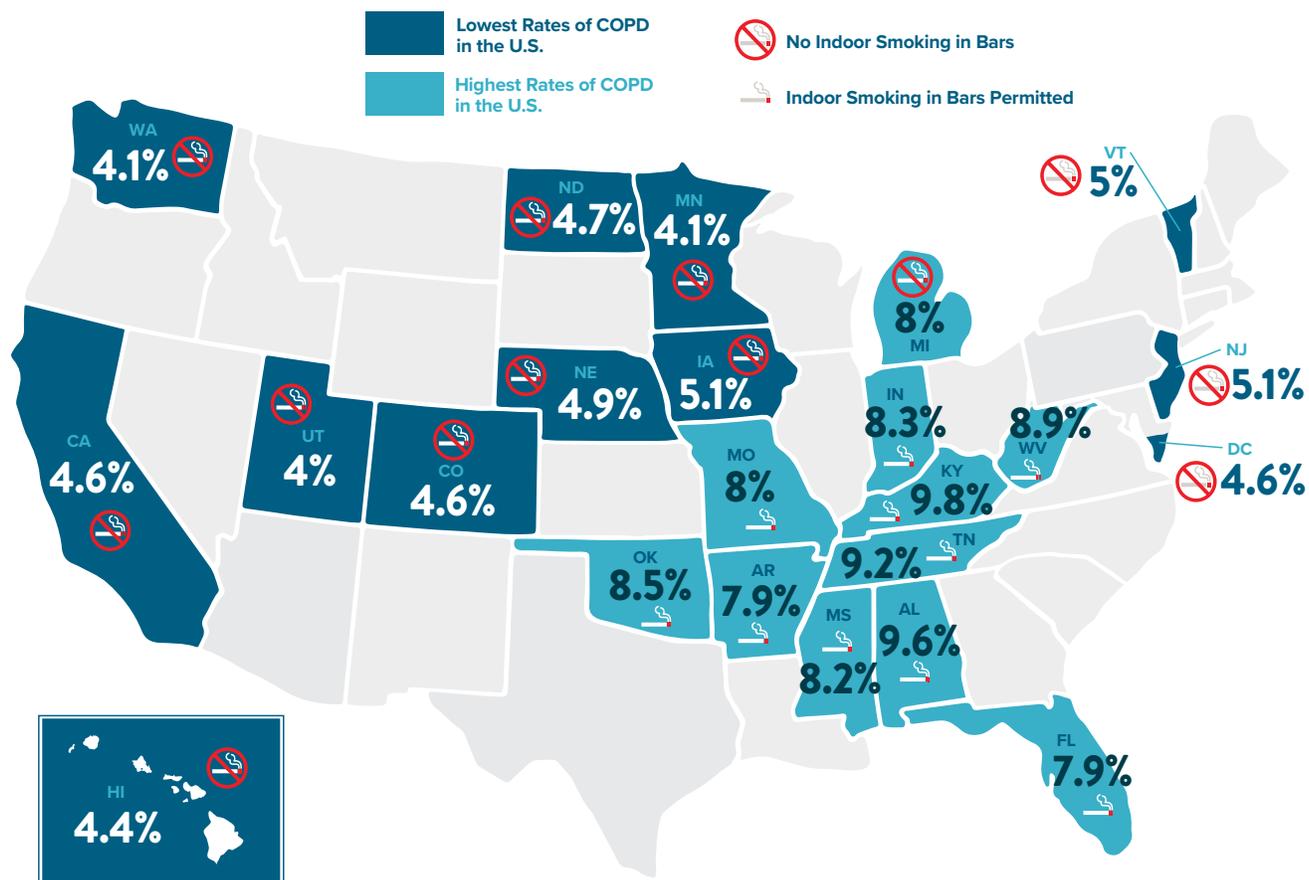


States with the lowest rates of COPD among nonsmokers

High COPD Rates in States That Continue to Allow Indoor Smoking

Among those individuals who don't smoke, indoor air quality has been identified as a major factor in lung health. It is therefore not surprising that 9 of the 10 states with the highest rates of COPD still allow smoking indoors — in bars, restaurants or other private workplaces — in some form.¹¹ Conversely, the 13 states with the lowest rates of COPD in the country all have full bans on smoking indoors in bars, restaurants and private worksites.

States With Fewer Restrictions on Smoking in Bars, Restaurants and Private Worksites Have Higher COPD Rates Among Nonsmokers; The States With the Lowest Rates Have Banned Smoking in These Areas



States with the highest and lowest COPD rates and restrictions they have for indoor smoking in bars. 02/05/2019

The Troubling 10

These states stand out for their high rates of COPD, mortality, smoking, vaping and poor restrictions on indoor air quality. While the rankings vary, each state ranks in more than one area.

- Kentucky
- Alabama
- Tennessee
- West Virginia
- Oklahoma
- Indiana
- Mississippi
- Missouri
- Arkansas
- Florida

Vaping Rates

- ◆ **Kentucky** has the third-highest rate of vaping and the second-highest rate among women
- ◆ **Alabama** is in the top 10 for total vaping rates, as well as rates of vaping among both men and women
- ◆ **Tennessee** ranks sixth in the percentage of adults who vape
- ◆ **West Virginia** ranks sixth in the country by the percentage of women who vape
- ◆ **Oklahoma** ranks third in overall vaping rates, second in men's vaping rates and third in women's vaping rates
- ◆ **Indiana** ranks in the top 10 in overall vaping percentage and has the sixth-highest rate among women
- ◆ **Indiana** allows smoking in bars
- ◆ **Missouri** ranks fifth in the nation in overall vaping rates and fifth in the percentage of women who vape
- ◆ **Arkansas** has the highest percentage of individuals who vape

Smoking Restrictions

- ◆ **Kentucky** has no provisions against smoking indoors in bars, restaurants or private worksites
- ◆ **Alabama** allows smoking indoors in some form in bars, restaurants and private worksites
- ◆ **Tennessee** is one of a handful of states that still allows smoking in some form in both bars and restaurants
- ◆ **West Virginia** has no provision as it relates to smoking in bars, restaurants or private worksites statewide
- ◆ **Oklahoma** allows individuals to smoke in bars, restaurants and private worksites with some restrictions
- ◆ **Mississippi** has no provisions regarding smoking in bars, restaurants or private worksites
- ◆ **Missouri** allows indoor smoking in designated areas in bars, restaurants and private worksites
- ◆ **Arkansas** allows some form of smoking in both bars and restaurants
- ◆ **Florida** allows smoking in bars and has the fifth-highest rate of COPD among nonsmokers

Smoking Rates

- ◆ **Kentucky** has the second-highest smoking rate among both adults and youths
- ◆ **Alabama** is in the top 10 for smoking rate among adults
- ◆ **Tennessee** ranks fourth in the percentage of adults who smoke
- ◆ **West Virginia** has both the highest adult and youth smoking rates in the country

Smoking Rates (continued)

- ◆ **Oklahoma** has the fifth-highest rate of youth smokers in America and ranks fifth in overall COPD rates
- ◆ **Indiana's** smoking rate among adults is the seventh highest
- ◆ **Mississippi** ranks sixth in adult smoking rates
- ◆ **Missouri** has the eleventh-highest rate of smokers
- ◆ **Arkansas** has the third-highest smoking rate among children and the fifth-highest rate of smoking among adults

COPD Rates

- ◆ **Kentucky** has the highest rate of COPD in the country as well as the highest rate of COPD among men and the second-highest rate among women
- ◆ **Alabama** has the third-highest rate of COPD among men and the fourth-highest rate among women
- ◆ **Tennessee** has the fourth-highest rate of COPD among men and the third-highest rate among women
- ◆ **West Virginia** has the highest rate of COPD among women and the second-highest rate of COPD among men
- ◆ **Indiana** has the sixth-highest rate of COPD among nonsmokers
- ◆ **Mississippi** has the highest rates of COPD among nonsmokers in the country

COPD Mortality Rates

- ◆ **Kentucky** has the highest mortality rate as a result of the disease
- ◆ **Alabama** is in the top 10 for COPD mortality rate, ranking eighth in the country
- ◆ **West Virginia** has the second-highest COPD mortality rate in the country
- ◆ **Oklahoma's** COPD mortality rate ranks third among all states in the country
- ◆ **Indiana's** mortality rate from COPD ranks sixth in the nation
- ◆ **Mississippi** falls in the top 10 in COPD mortality rate
- ◆ **Missouri** has thirteenth-highest COPD mortality rate
- ◆ **Arkansas** ranks fourth in COPD mortality rate
- ◆ **Florida** has the highest rate of COPD among all states designated "urban" by the CDC

Key Takeaways

In order to help reduce rates of COPD across the country, government agencies should institute and **enforce these 7 changes immediately:**



Enacting **strict smoke-free policies** in restaurants, bars and private workplaces

21+

Raising the **legal age to buy tobacco to 21** nationwide



Raising tobacco costs to reduce youth access



Banning flavored vape products that appeal to children to reduce youth vaping rates



Providing publicly accessible cessation programs for those trying to quit smoking and vaping



Placing more severe mandatory health warnings on tobacco and e-cigarette packaging



Increasing funding for **anti-smoking and anti-vaping campaigns**

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- ¹¹ *Map of Smokefree Indoor Air - Private Worksites, Restaurants, and Bars*. (2020, February 5) Retrieved from: <https://www.cdc.gov/statesystem/smokefreeindoorair.html>

To learn more about COPD's causes, symptoms and treatments, go to theLungHealthInstitute.com/COPD.



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