



NYS BRFSS Brief

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual telephone survey of adults developed by the Centers for Disease Control and Prevention conducted in all 50 States, the District of Columbia, and several US Territories. The New York BRFSS is administered by the New York State (NYS) Department of Health (DOH) 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.

Electronic Cigarette Use

New York State Adults, 2021

Introduction

Electronic cigarettes (e-cigarettes) and other vapor products are devices used to heat and aerosolize (turn into particles) highly addictive nicotine or other substances that a person can inhale into their lungs. The use of an e-cigarette is usually called "vaping." E-cigarettes are known by many different names, including e-cigs, vapes, vapor products, vape pens, e-hookahs, tank systems, and electronic nicotine delivery systems (ENDS). E-cigarettes are **not** a Food and Drug Administration (FDA)-approved smoking cessation product – they are classified and regulated as a tobacco product. E-cigarettes have evolved from purely nicotine delivery systems into high-tech, customizable devices that can deliver a range of other non-nicotine substances. With or without nicotine, vaping is not hazard-free and e-cigarette aerosol is not simply water vapor; the aerosol may contain heavy metals, volatile organic compounds, ultrafine particles, and other toxins.¹ In addition, e-cigarette use can undermine social norms about tobacco and increase the risk of youth and young adults using combustible tobacco cigarettes.²

The long-term health risks of e-cigarettes will not be known for decades. Nicotine is a highly addictive chemical. Exposure to nicotine during adolescence can cause addiction and can harm the developing adolescent brain which continues to develop throughout adolescence and into the early to mid-20s.² The dramatic increase in e-cigarette use among youth and the e-cigarette or vaping product use-associated lung injury (EVALI) outbreak in 2019 prompted policy action on e-cigarettes nationally and in NY.³ E-cigarettes are included in New York's Clean Indoor Air Act, which prohibits their use everywhere that smoking tobacco products is prohibited including workplaces, bars, and restaurants.⁴

Health Equity

The NYS Department of Health is committed to reducing the burden of all tobacco product use, including e-cigarettes, and addressing tobacco-related disparities to advance health equity. Addressing the youth vaping epidemic is a priority of NYS and includes comprehensive evidence-based, policy-driven, and cost-effective strategies. The NYS 2019-2024 Prevention Agenda's Prevent Chronic Diseases Action Plan sets an objective to decrease the prevalence of vaping product use among young adults aged 18-24 to 7.0% by 2024.⁵

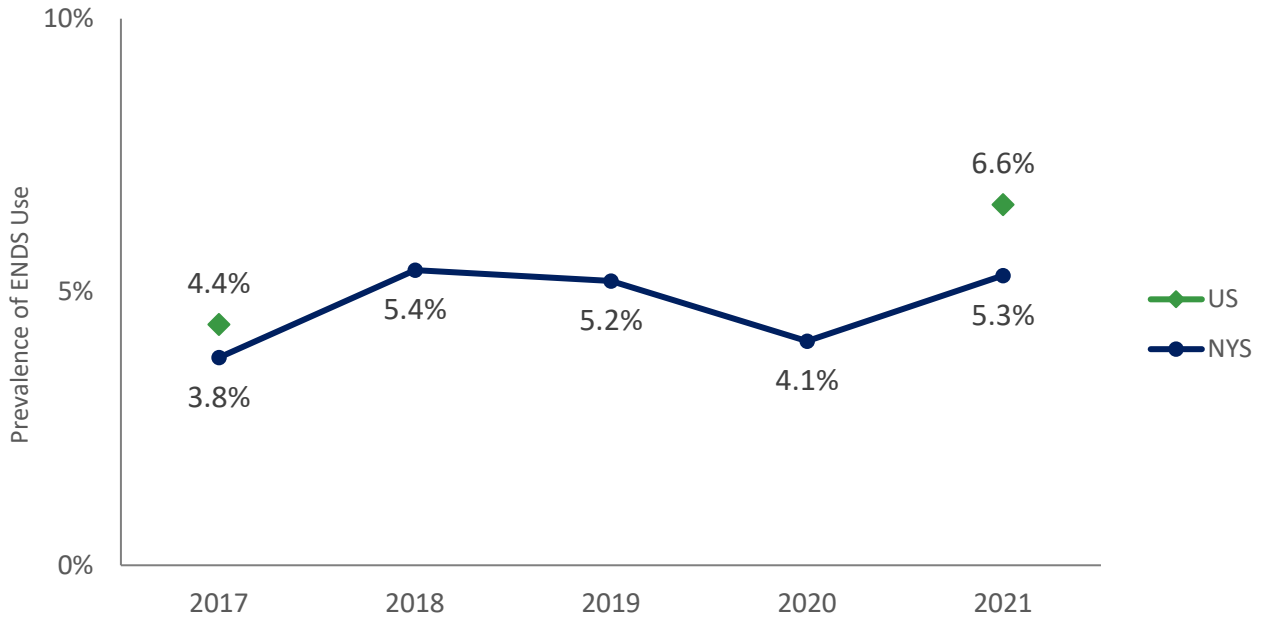


Key Findings

- The prevalence of e-cigarette use among adults in NYS in 2021 was 5.3% (Figure 1).
- E-cigarette use in NYS was lower than the national average of 6.6% in 2021 (Figure 1).
- Statewide, e-cigarette use was highest among adults between the ages of 18-24 (15.1%); current smokers (14.1%); adults with frequent mental distress (11.4%); and adults that identify as LGBTQ (10.4%). (Figure 2, Table 1).
- E-cigarette use was most prevalent among individuals living in the Western and North Country regions of NYS, with Chautauqua (11.2%) and Franklin (10.2%) counties having the highest rates. E-cigarette use was least prevalent in the southern-most tip of NYS, with the lowest rates in Westchester (3.6%) and Queens (3.7%) counties (Figure 3, Table 2).



Figure 1. Prevalence of Current E-cigarette Use among Adults in NYS and US*, BRFSS 2017 – 2021



*Prevalence of e-cigarette use in the US from BRFSS is only available for years 2017 and 2021 on the CDC public site.

Figure 2. Percent of Current E-Cigarette Use among Adults 18 Years of Age and Older by Select Demographic Indicators, NYS BRFSS 2021

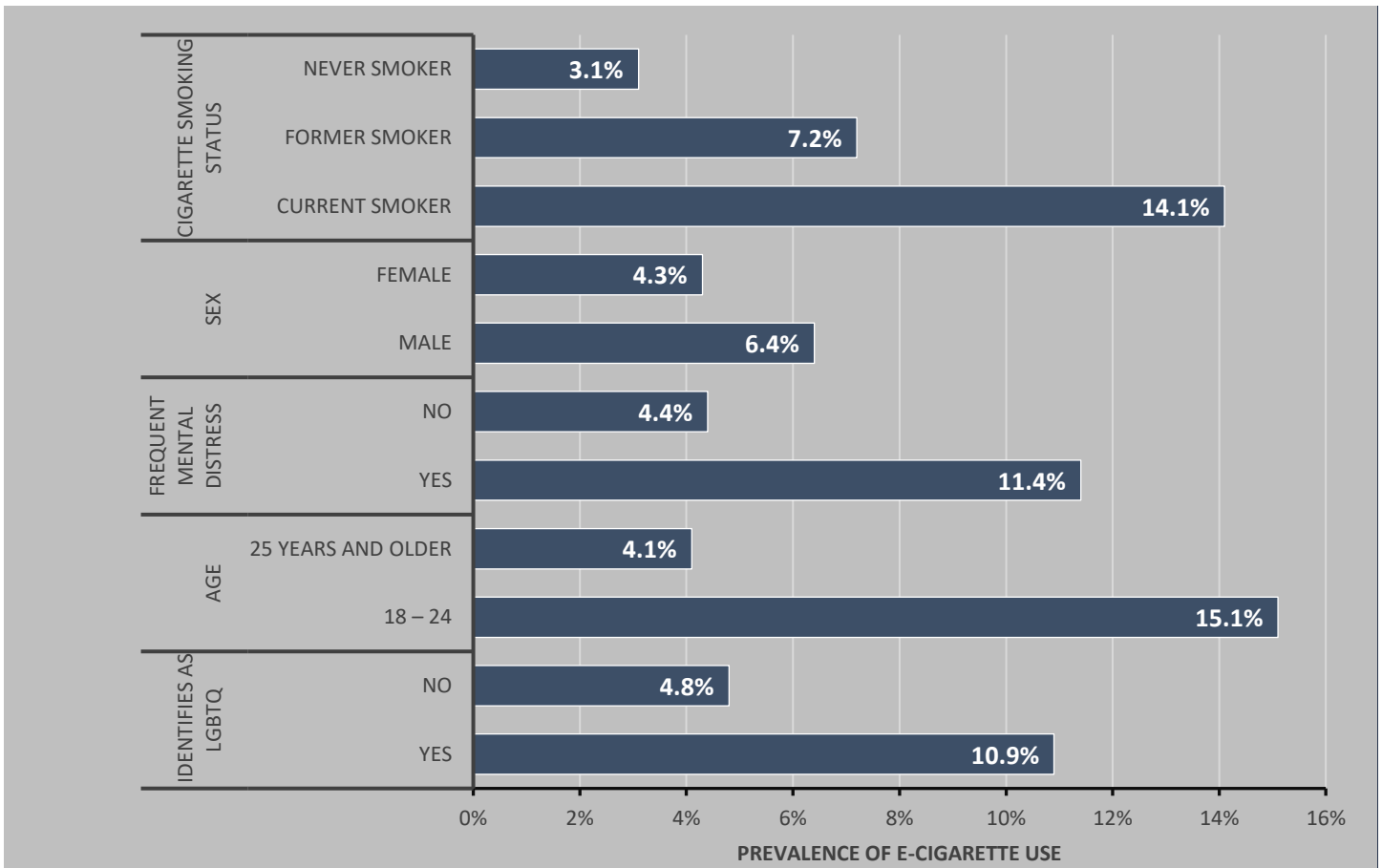


Table I. Prevalence of Current E-Cigarette Use by Demographic Groups in NYS, BRFSS 2021

	Percent ^a	95% CI ^b	Estimated Weighted Number of People
New York State	5.3	[4.9, 5.8]	777,000
Region			
NYS excluding New York City (Rest of State)	6.0	[5.4, 6.5]	505,000
New York City	4.4	[3.8, 5.1]	272,000
Sex			
Male	6.4	[5.7, 7.1]	450,000
Female	4.3	[3.8, 4.8]	327,000
Race/Ethnicity			
White/Non-Hispanic	6.0	[5.4, 6.5]	482,000
Black/Non-Hispanic	3.9	[2.8, 5.0]	75,000
Hispanic	4.8	[3.8, 5.7]	122,000
All other race groups combined ^c	5.5	[4.1, 6.8]	87,000
Age			
18-24 Years Old	15.1	[12.8, 17.4]	246,000
25-34 Years Old	9.0	[7.6, 10.4]	231,000
35-44 Years Old	5.6	[4.7, 6.6]	127,000
45-54 Years Old	3.5	[2.7, 4.2]	72,000
55-64 Years Old	2.3	[1.7, 2.9]	56,000
65+ Years Old	1.1	[0.8, 1.3]	35,000
Educational Attainment			
Less than High School	4.8	[3.5, 6.1]	89,000
High School or GED	7.6	[6.6, 8.6]	284,000
Some College	5.5	[4.7, 6.3]	213,000
College Graduate	3.8	[3.2, 4.3]	190,000
Annual Household Income			
Less than \$25,000	6.0	[4.8, 7.1]	120,000
\$25,000 to \$34,999	6.4	[5.0, 7.7]	90,000
\$35,000 to \$49,999	6.8	[5.3, 8.4]	95,000
\$50,000 to \$74,999	5.3	[4.1, 6.5]	87,000
More than \$75,000	4.7	[4.0, 5.5]	217,000
Current Smoking Status			
Never Smoker	3.1	[13.3, 15.9]	288,000
Former Smoker	7.2	[6.1, 8.2]	239,000
Current Smoker	14.1	[2.7, 3.5]	245,000
Health Insurance Type			
Private	5.1	[4.5, 5.8]	337,000
Medicare	2.9	[2.2, 3.5]	83,000
Medicaid	8.5	[7.1, 9.9]	161,000
No Insurance	6.1	[4.1, 8.2]	49,000
Other	6.1	[4.7, 7.5]	87,000
Frequent Mental Distress ^d			
Yes	11.4	[9.8, 13.1]	546,000
No	4.4	[4.0, 4.8]	219,000
Disability Status ^e			
Yes	7.4	[6.5, 8.3]	284,000
No	4.6	[4.1, 5.0]	483,000
Identifies as LGBTQ ^f			
Yes	10.9	[8.8, 13.1]	129,000
No	4.8	[4.3, 5.2]	553,000

^a Percentages are weighted to population characteristics.

^b Confidence Interval.

^c Includes individuals who identify as American Indian, Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, Multiracial, or other race.

^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.

^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).

^f Identifies as LGBTQ is defined as yes if respondents identified as being lesbian, gay, bisexual, or other sexual orientation OR transgender.

Table 2. Prevalence of E-Cigarette Use Among Adults in New York State by County, NYS BRFSS 2021^a

County	Percent ^b	[95%CI] ^c	County	Percent ^b	[95%CI] ^c
Albany	6.5	[4.0, 8.9]	Niagara	9.9	[5.9, 13.9]
Allegany	6.7 [§]	[2.3, 11.1]	Oneida	7.2	[4.0, 10.4]
Bronx	4.1	[2.6, 5.6]	Onondaga	6.8	[4.5, 9.1]
Broome	5.8	[2.8, 8.9]	Ontario	7.4 [§]	[2.8 - 12.0]
Cattaraugus	7.5	[3.0, 12.1]	Orange	5.2	[2.7, 7.7]
Cayuga	6.1 [§]	[1.9, 10.4]	Orleans	4.2 [§]	[1.6, 6.8]
Chautauqua	11.2	[6.2, 16.2]	Oswego	8.1	[4.4, 11.8]
Chemung	9.6	[4.9, 14.2]	Otsego	2.0 [§]	[0.7, 3.4]
Chenango	7.3 [§]	[2.5, 12.1]	Putnam	7.4 [§]	[2.2, 12.5]
Clinton	4.6 [§]	[0.9, 8.3]	Queens	3.7	[2.5, 4.8]
Columbia	2.4 [§]	[0.8, 4.0]	Rensselaer	5.1 [§]	[1.4, 8.9]
Cortland	4.7 [§]	[1.4, 7.9]	Richmond	6.8	[3.8, 9.8]
Delaware	7.5 [§]	[2.8, 12.1]	Rockland	5.3 [§]	[1.5, 9.1]
Dutchess	6.7 [§]	[2.5, 10.8]	Saratoga	7.2 [§]	[2.4, 12.1]
Erie	7.5	[5.5, 9.4]	Schenectady	2.8 [§]	[0.5, 5.2]
Essex	**		Schoharie	5.9 [§]	[2.1, 9.8]
Franklin	10.2	[5.4, 15.0]	Schuyler	**	
Fulton	7.5	[4.7, 10.3]	Seneca	3.7 [§]	[1.3, 6.2]
Genesee	8.8 [§]	[3.5, 14.1]	St. Lawrence	5.7 [§]	[1.8, 9.5]
Greene	**		Steuben	6.3	[3.3, 9.4]
Hamilton	**		Suffolk	6.0	[4.5, 7.5]
Herkimer	5.7	[2.5, 9.0]	Sullivan	8.3	[3.9, 12.8]
Jefferson	9.0	[7.4, 12.3]	Tioga	**	
Kings	4.5	[3.4, 5.6]	Tompkins	**	
Lewis	4.8 [§]	[1.7, 7.8]	Ulster	4.9	[2.3, 7.4]
Livingston	8.0 [§]	[0.5, 15.6]	Warren	6.0	[3.0, 8.9]
Madison	9.0 [§]	[3.6, 14.4]	Washington	8.7	[4.2, 13.2]
Monroe	6.2	[4.4, 7.9]	Wayne	6.7	[4.1, 9.3]
Montgomery	3.7 [§]	[0.8, 6.6]	Westchester	3.6	[2.2, 5.0]
Nassau	5.5	[3.9, 7.1]	Wyoming	4.0	[0.9, 7.1]
New York	5.4	[3.9, 6.8]	Yates	**	

^a Only crude rates are presented in Table 1. Age-adjusted rates can be accessed here: <https://health.data.ny.gov/Health/Behavioral-Risk-Factor-Surveillance-System-BRFSS-H/jsy7-eb4n>.

^b Percentages are weighted to population characteristics.

^c The 95% confidence interval (95% CI) provides the statistical range containing the true population rate with a 95% probability.

[§] Unreliable rate due to large standard error.

**Rate suppressed due to small sample size.



References

1. Centers for Disease Control and Prevention. About Electronic Cigarettes (E-Cigarettes). 2023. Accessed August 8, 2023.
https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html
2. Centers for Disease Control and Prevention. Quick Facts on the Risks of E-Cigarettes for Kids, Teens, and Young Adults. 2022. Accessed August 8, 2023.
https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html
3. New York State Department of Health (NYSDOH), Division of Chronic Disease Prevention, Bureau of Chronic Disease Evaluation and Research. *BRFSS Brief: Electronic Cigarette Use, New York State Adults, 2020*. Albany, NY: NYSDOH; 2022. Report No. 23. Accessed August 8, 2023.
https://www.health.ny.gov/statistics/brfss/reports/docs/2022-23_brfss_electronic_cigarette.pdf
4. New York State Department of Health. Clean Indoor Air Act. New York State Public Health Law Article 13-E - Regulation of Smoking and Vaping in Certain Public Areas. Updated 2022. Accessed August 8, 2023.
https://www.health.ny.gov/prevention/tobacco_control/clean_indoor_air_act/
5. New York State Department of Health. Prevention Agenda 2019-2024: Prevent Chronic Diseases Action Plan. Accessed August 8, 2023.
https://health.ny.gov/prevention/prevention_agenda/2019-2024/chr.htm#FA3



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BRFSS questions

Current E-Cigarette User

- Do you now use e-cigarettes or other electronic vaping products every day, some days, or not at all?

BRFSS defines “current e-cigarette user” as an adult aged 18 years or older that currently uses e-cigarettes or other electronic vaping products every day or some days.



Program Contributions

New York State Department of Health

Bureau of Chronic Disease Evaluation and Research

Bureau of Tobacco Control



Contact Information

Contact us by

phone (518) 473-0673

email BRFSS@health.ny.gov

Visit us at www.health.ny.gov



Department of Health