

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual statewide telephone survey of adults developed by the Centers for Disease Control and Prevention (CDC) and administered by the New York State Department of Health. The BRFSS is designed to provide information on behaviors, risk factors, and utilization of preventive services related to the leading causes of chronic and infectious diseases, disability, injury, and death among the noninstitutionalized, civilian population aged 18 years and older.

## Cigarette Smoking

### New York State Adults, 2016

#### Introduction and Key Findings

Tobacco is the leading cause of preventable disease, disability, and death in both the United States and in New York State (NYS). In New York, tobacco use is responsible for more than 28,000 deaths annually, more than alcohol consumption, microbial agents, toxic agents, motor vehicle crashes, firearms, and unsafe sexual behaviors combined.<sup>1</sup> Smoking can cause cancer almost anywhere in the body. To date, the U.S. Surgeon General has identified sixteen different types of cancers caused by smoking including cancer of the lungs, larynx, bladder, kidney, pancreas, uterine cervix, colon and rectum, and liver.<sup>2</sup> Smoking is the most common cause of lung cancer, and an estimated 30 percent of all cancer deaths are related to cigarette smoking.<sup>2</sup> Smoking also increases the risk of developing chronic diseases, including chronic obstructive pulmonary disease (COPD), tuberculosis, asthma, pneumonia, coronary heart disease, stroke, diabetes, cardiovascular disease, blindness, cataracts, age-related macular degeneration, periodontitis, rheumatoid arthritis, reduced fertility, erectile dysfunction, and impaired immune function.<sup>2</sup> Women who smoke during pregnancy are at risk for ectopic pregnancy and smoking places the child at risk for low birth weight and defects such as orofacial clefts. In addition, there is sufficient evidence of a causal relationship between exposure to secondhand smoke and lung cancer, stroke and heart disease, and, in children, respiratory symptoms such as impaired lung functioning and lower respiratory illness, middle ear disease and sudden infant death syndrome (SIDS).<sup>2</sup>

#### Key Findings

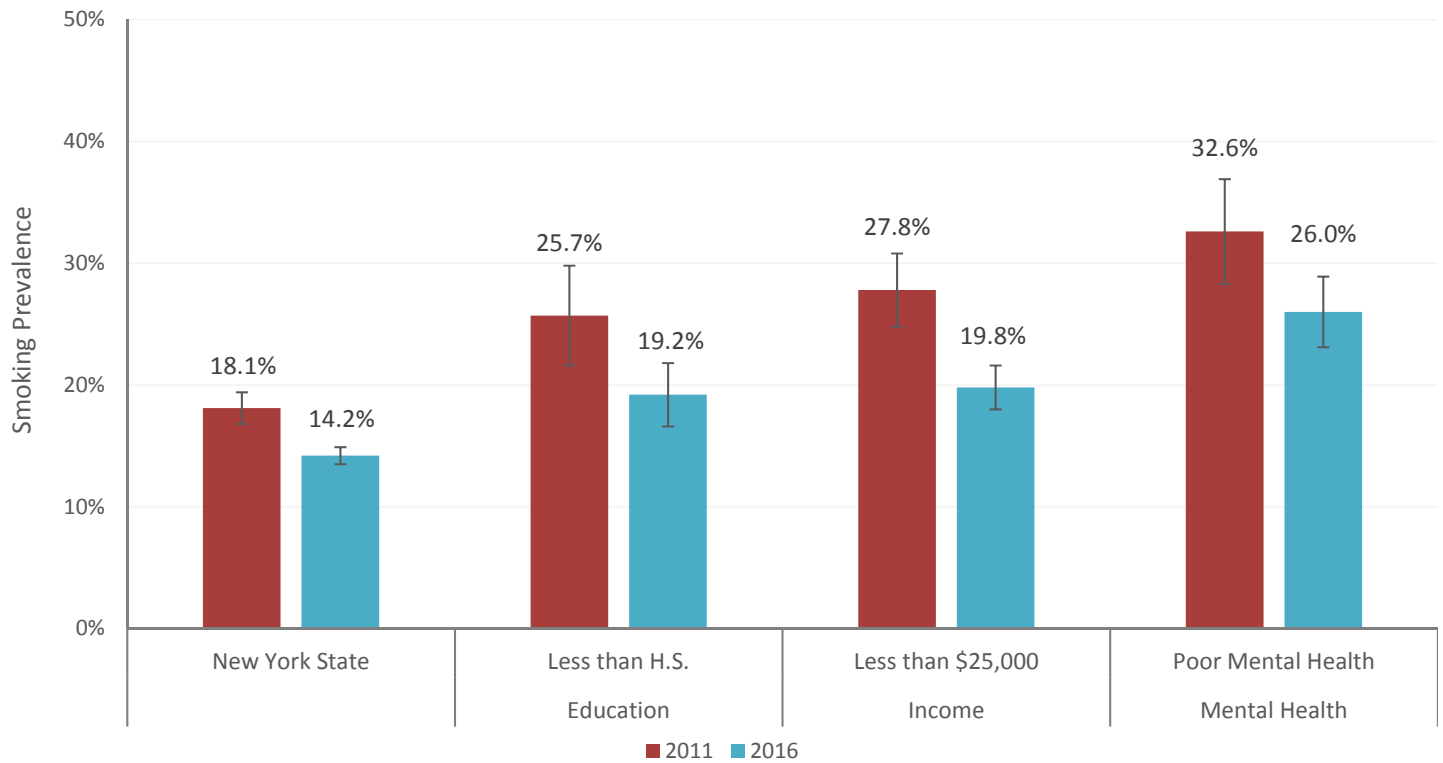
In New York State, adult cigarette smoking prevalence is currently 14.2% (Table 1). Between 2011 and 2016 the statewide smoking rate decreased by 22% from 18.1% in 2011 to 14.2% in 2016; this includes a 46% decrease in the smoking rate among young adults age 18-24 years from 21.6% in 2011 to 11.7% in 2016. Other notable reductions were observed among adults with: (1) less than a high school education where the smoking rate decreased 25%, from 25.7% in 2011 to 19.2% in 2016; (2) annual household incomes below \$25,000 where the smoking rate decreased 29%, from 27.8% in 2011 to 19.8% in 2016; and (3) poor mental health, defined as reported problems with stress, depression, or emotions on at least 14 of the previous 30 days, where the smoking rate decreased 20%, from 32.6% in 2011 to 26.0% in 2016 (Figure 1). Adult smoking prevalence by health care coverage type is presented in Figure 2. Adults enrolled in Medicaid smoke at a significantly higher rate than adults enrolled in Medicare, those with private health insurance, and those who are not insured. Adult cigarette smoking prevalence by Delivery System Reform Incentive Payment (DSRIP) program region is presented in Table 2. DSRIP is a key component of the NYS Medicaid waiver to restructure and improve quality in the health care system.<sup>3</sup> Smoking rates among adults are lower in downstate geographic regions compared to central, western and upstate regions of NYS.

#### BRFSS Questions

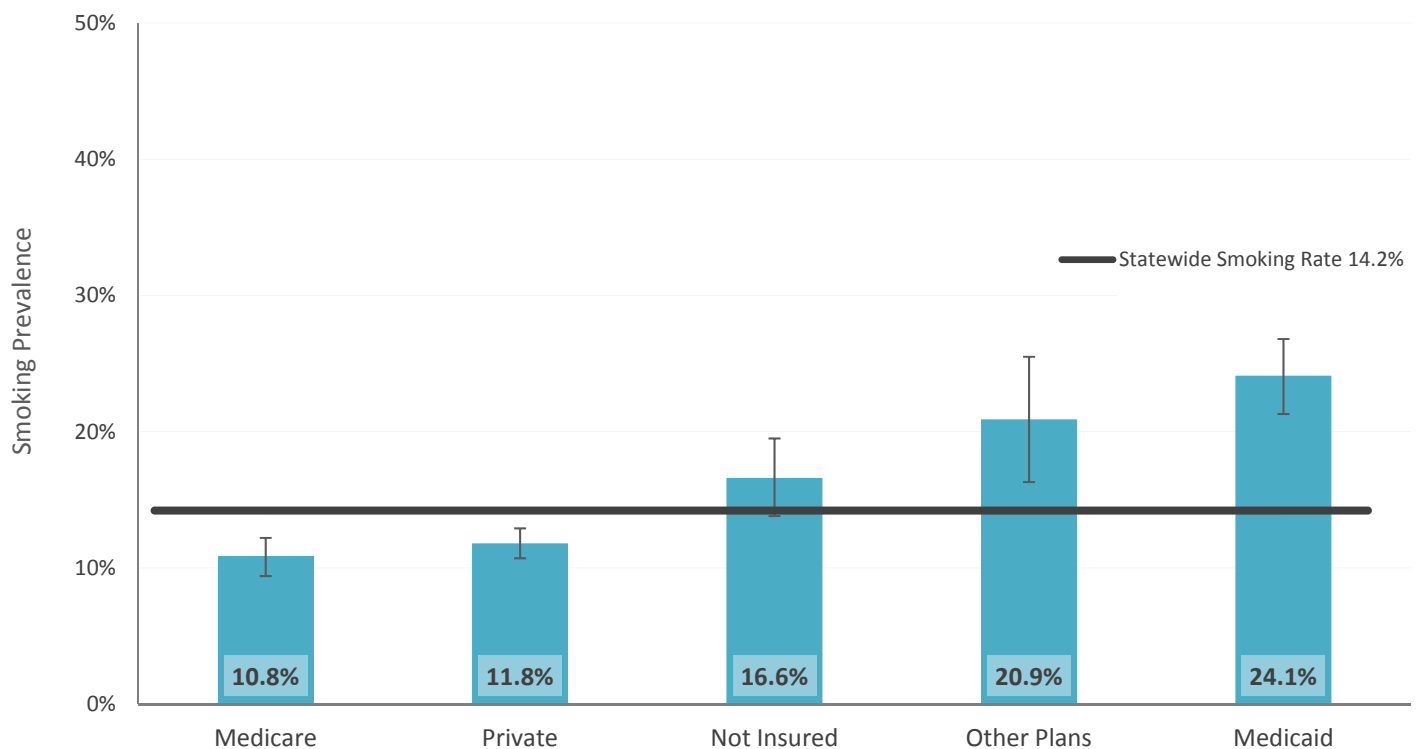
- Have you smoked at least 100 cigarettes in your entire life?
- Do you now smoke cigarettes every day, some days, or not at all?

Note: BRFSS defines “current smoker” as an adult over the age of 18 who has smoked at least 100 cigarettes in their lifetime and currently smokes on at least some days.

**Figure 1. Prevalence of Current Smoking by Socioeconomic Status Indicators and Mental Health Status in NYS, BRFSS 2011 and 2016**



**Figure 2. Prevalence of Current Smoking by Health Care Coverage Type in NYS, BRFSS 2016**



**Table 1. Prevalence of Current Cigarette Smoking by Demographic Groups in NYS with Percent Change, BRFSS 2016 and 2011**

	2011			2016			2011-2016	
	Percent	95% CI	Estimated Weighted N	Percent	95% CI	Estimated Weighted N	Percent Change	p Value
<b>Total New York State</b>	<b>18.1</b>	<b>(16.9, 19.4)</b>	<b>2,701,000</b>	<b>14.2</b>	<b>(13.4,14.9)</b>	<b>2,047,000</b>	<b>-22</b>	<b>&lt;.001</b>
<b>Region</b>								
Rest of State (NYS excluding NYC)	19.6	(17.8, 21.4)	1,663,000	16.2	(15.2,17.1)	1,339,000	-17	<.001
New York City	16.2	(14.4, 17.7)	1,037,000	11.5	(10.3,12.7)	708,000	-29	<.001
<b>Sex</b>								
Male	19.5	(17.5, 21.5)	1,393,000	16.7	(15.4,17.9)	1,149,000	-14	<.05
Female	16.8	(15.3, 18.4)	1,307,000	11.9	(11.0,12.8)	898,000	-29	<.001
<b>Race/Ethnicity</b>								
White/Non-Hispanic	17.9	(16.4, 19.5)	1,592,000	15.7	(14.7,16.7)	1,276,000	-12	<.05
Black/Non-Hispanic	21.3	(17.5, 25.0)	427,000	16.3	(13.8,18.8)	321,000	-23	<.05
Other Race or Multiracial/Non-Hispanic	17.2	(12.8, 21.6)	246,000	7.9	(5.6,10.1)	119,000	-54	<.001
Hispanic	17.4	(14.0, 20.7)	398,000	11.9	(10.1,13.7)	289,000	-32	<.01
<b>Age</b>								
18-24 Years Old	21.6	(16.4, 26.7)	400,000	11.7	(9.1,14.3)	204,000	-46	<.001
25+ Years Old	17.6	(16.4,18.9)	2,301,000	14.6	(13.8,15.4)	1,819,000	-18	<.001
<b>Educational Attainment</b>								
Less than H.S.	25.7	(21.6, 29.8)	592,000	19.2	(16.6,21.8)	394,000	-25	<.01
H.S. or GED	24.0	(21.2, 26.8)	1,001,000	18.5	(16.9,20.1)	701,000	-23	<.001
Some Post H.S.	17.7	(15.3, 20.1)	692,000	16.6	(14.9,18.2)	647,000	-6	ns
College Graduate	9.2	(8.0, 10.4)	407,000	6.5	(5.6,7.3)	297,000	-29	<.001
<b>Annual Household Income</b>								
Less than \$25,000	27.8	(24.9,30.8)	1,150,000	19.8	(18.1,21.6)	705,000	-29	<.001
\$25,000 - 34,999	17.7	(13.9, 21.5)	221,000	16.8	(13.9,19.8)	204,000	-5	ns
\$35,000 - 49,999	19.0	(15.4, 22.6)	310,000	15.8	(13.3,18.2)	228,000	-17	ns
\$50,000 - 74,999	14.1	(11.2, 16.9)	248,000	14.2	(12.0,16.4)	242,000	<-1	ns
More than \$75,000	10.1	(8.4, 11.7)	391,000	9.7	(8.4,11.0)	434,000	-4	ns
<b>Employment Status</b>								
Employed/Self-Employed	16.6	(15.0, 18.2)	1,311,000	14.2	(13.2,15.3)	1,146,000	-14	<.05
Unemployed	27.7	(22.5, 33.0)	403,000	25.5	(21.1,29.9)	210,000	-8	ns
Not in Labor Force	17.8	(15.7, 20.0)	970,000	12.6	(11.5,13.7)	673,000	-29	<.001
<b>Poor Mental Health<sup>a</sup></b>								
Yes	32.6	(28.2, 36.9)	525,000	26.0	(23.1,28.9)	391,000	-20	<.05
No	16.1	(14.8, 17.5)	2,068,000	12.6	(11.8,13.4)	1,588,000	-22	<.001
<b>Limitation Status<sup>b</sup></b>								
Yes	24.1	(21.3, 26.9)	800,000	19.8	(18.0,21.6)	570,000	-18	<.01
No	15.7	(14.3, 17.1)	1,621,000	12.8	(11.9,13.7)	1,374,000	-18	<.001
<b>Disability Status<sup>c</sup></b>								
Yes	<i>data not available</i>			20.1	(18.4,21.9)	657,000	<i>data not available</i>	
No	<i>data not available</i>			12.4	(11.6,13.3)	1,378,000	<i>data not available</i>	
<b>Health Care Coverage</b>								
Yes	16.8	(15.5, 18.0)	2,114,000	13.9	(13.1,14.7)	1,809,000	-17	<.001
No	26.5	(22.2, 30.8)	577,000	17.4	(14.4,20.4)	230,000	-34	<.001
<b>Health Care Coverage - Type</b>								
Medicaid	<i>data not available</i>			24.1	(21.3,26.8)	416,000	<i>data not available</i>	
Medicare	<i>data not available</i>			10.8	(9.4,12.2)	249,000	<i>data not available</i>	
Private Insurance	<i>data not available</i>			11.8	(10.7,12.9)	768,000	<i>data not available</i>	
Other Insurance	<i>data not available</i>			20.9	(16.3,25.5)	118,000	<i>data not available</i>	
No Insurance	<i>data not available</i>			16.6	(13.8,19.5)	239,000	<i>data not available</i>	

a Poor mental health is defined as reported problems with stress, depression, or emotions on at least 14 of the previous 30 days.

b Limitation status is defined as reported activity limitations due to physical, mental or emotional problems OR have health problems that require the use of special equipment. Prior to 2015 this was referred to as disability status. We now track disability status using a revised set of questions (see below). We will continue to track smoking by limitation status until further notice.

c Disability status is defined as reported having at least one type of disability (cognitive, independent living, self-care, mobility, vision or hearing).

ns= not significant

**Table 2. Prevalence of Current Smoking by Delivery System Reform Incentive Payment (DSRIP) Region, NYS BRFSS 2016**

	Percent	95% CI	Estimated Weighted N
North Country <ul style="list-style-type: none"> <li>Clinton, Essex, Franklin, Hamilton, Warren, Washington</li> </ul>	22.9	(20.4,25.3)	53,000
Mohawk Valley <ul style="list-style-type: none"> <li>Fulton, Herkimer, Montgomery, Otsego, Schoharie</li> </ul>	22.0	(19.0,25.0)	43,000
Southern Tier <ul style="list-style-type: none"> <li>Broome, Chenango, Delaware, Tioga, Tompkins</li> </ul>	21.4	(18.4,24.4)	73,000
Tug Hill Seaway <ul style="list-style-type: none"> <li>Jefferson, Lewis, St. Lawrence</li> </ul>	21.3	(15.9,26.7)	39,000
Western NY <ul style="list-style-type: none"> <li>Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming</li> </ul>	20.7	(17.8,23.5)	234,000
Finger Lakes <ul style="list-style-type: none"> <li>Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne, Yates</li> </ul>	18.4	(15.7,21.1)	176,000
Central NY <ul style="list-style-type: none"> <li>Cayuga, Cortland, Madison, Oneida, Onondaga, Oswego</li> </ul>	18.4	(16.3,20.6)	139,000
Capital Region <ul style="list-style-type: none"> <li>Albany, Columbia, Greene, Rensselaer, Saratoga, Schenectady</li> </ul>	16.4	(14.5,18.3)	119,000
Long Island <ul style="list-style-type: none"> <li>Nassau, Suffolk</li> </ul>	13.4	(10.7,16.1)	277,000
New York City <ul style="list-style-type: none"> <li>Bronx, Kings, New York, Queens, Richmond</li> </ul>	11.5	(10.3,12.7)	708,000
Mid-Hudson <ul style="list-style-type: none"> <li>Dutchess, Putnam, Orange, Rockland, Sullivan, Ulster, Westchester</li> </ul>	11.0	(9.3,12.7)	187,000

## References

1. Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Control Programs — 2014. Atlanta: 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, 2014. [http://www.cdc.gov/tobacco/stateandcommunity/best\\_practices/pdfs/2014/comprehensive.pdf](http://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2014/comprehensive.pdf)
2. U.S. Department of Health and Human Services. (2014). The health consequences of smoking – 50 years of progress: 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, 2014. Printed with corrections, January 2014. [http://www.cdc.gov/tobacco/data\\_statistics/sgr/50th-anniversary/index.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/50th-anniversary/index.htm)
3. New York State Department of Health, Delivery System Reform Incentive Payment (DSRIP) Program, 2016. [http://www.health.ny.gov/health\\_care/medicaid/redesign/dsrip/](http://www.health.ny.gov/health_care/medicaid/redesign/dsrip/)
4. Centers for Disease Control and Prevention. (2016). Nationwide- 2016 Tobacco Use. Behavioral Risk Factor Surveillance System (BRFSS). <http://www.cdc.gov/brfss>

## 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](mailto:BRFSS@health.ny.gov)

or

[www.health.ny.gov](http://www.health.ny.gov)