

# WHO'S QUITTING IN NEW YORK?



NEW YORK STATE  
DEPARTMENT OF HEALTH

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# Who's Quitting in New York?

**July 2018**

Prepared for

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# Background

Tobacco use remains the leading preventable cause of death in the United States.<sup>1</sup> From 2009 to 2016, adult smoking prevalence declined by 33% in New York from 20.6% to 14.2%.<sup>2</sup> Cessation is a complex process that often requires multiple attempts.<sup>3</sup> Promisingly, more smokers than ever—approximately two thirds in 2013—are trying to quit smoking;<sup>4</sup> however, certain groups smoke at higher rates than others, including males, American Indian/Alaska Natives, individuals with a GED, individuals living below the poverty line, those who have Medicaid insurance, and those who experience serious psychological distress.<sup>5</sup>

Policy, environmental changes, and mass antitobacco advertising are well-documented evidence-based interventions for promoting cessation. Implementing smoke-free air laws, increasing taxes on tobacco products, implementing point of sale policies to minimize tobacco advertising and promotions, and national antitobacco media campaigns, such as the Centers for Disease Control and Prevention's (CDC) TIPS from Former Smokers campaign, have been shown to promote quitting.<sup>6-9</sup> In addition, receiving assistance with quitting from a health care provider doubles the chances that a smoker will quit.<sup>10</sup> The *CDC's Best Practices for Comprehensive Tobacco Control Programs—2014* and the *Public Health Service Guideline for Treating Tobacco Use and Dependence: 2008 Update* recommend encouraging the provision of health care provider assistance by institutionalizing tobacco dependence screening and treatment in health care settings through systems changes to workflows and expanding insurance coverage for all U.S. Food and Drug Administration (FDA)-approved tobacco dependence treatments.<sup>6,10</sup>

New York State has been a leader in the field of tobacco control, with the first clean indoor air act enacted in 1989, which now includes e-cigarettes,<sup>11</sup> the highest state-level tobacco excise tax in the country at \$4.35,<sup>12</sup> and comprehensive Medicaid coverage for tobacco dependence treatments with no barriers to access, which includes individual and group counseling and all seven FDA-approved cessation medications.<sup>2</sup> In recent years, the New York Tobacco Control Program (NY TCP) has made a strategic shift in

focus and resources to target smokers who are disproportionately affected by tobacco use, particularly individuals with serious mental illness and/or low income.

The goal of this report is to explore disparities in smoking prevalence and quit attempts in New York State. This report also identifies differences in influences on smoking cessation (i.e., provider assistance with a quit attempt, use of evidence-based tobacco dependence treatments, and awareness of antitobacco television advertising) by demographic groups, including age, gender, race and ethnicity, education, income, insurance status, mental health status, and geography (New York City vs. rest of state). We aim to identify differences in influences on cessation as potential explanations for disparities in smoking prevalence and quit attempts.

## Data and Methods

We used data from the New York Behavioral Risk Factor Surveillance System (NY-BRFSS) survey and the New York Adult Tobacco Survey (NY ATS) to analyze smoking prevalence and cessation-related outcomes among adults in New York State overall and by demographic groups. To achieve adequate sample size for demographic groups of interest, we pooled survey data from 2014 through 2016.

We focused on the following outcomes:

- Smoking prevalence
- Past year quit attempts
- Assistance by a health care provider
- Use of evidence-based quit methods
- Awareness of antitobacco advertising

We estimated outcomes overall, and by these demographic variables:

- Age
- Race/ethnicity
- Sex
- Education level
- Annual household income
- Insurance status/type
- Mental health status
- Location (New York City vs. rest of state)

## Findings

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*Smoking prevalence in New York State is highest among individuals with poor mental health, lower education and income levels, and no health insurance.*

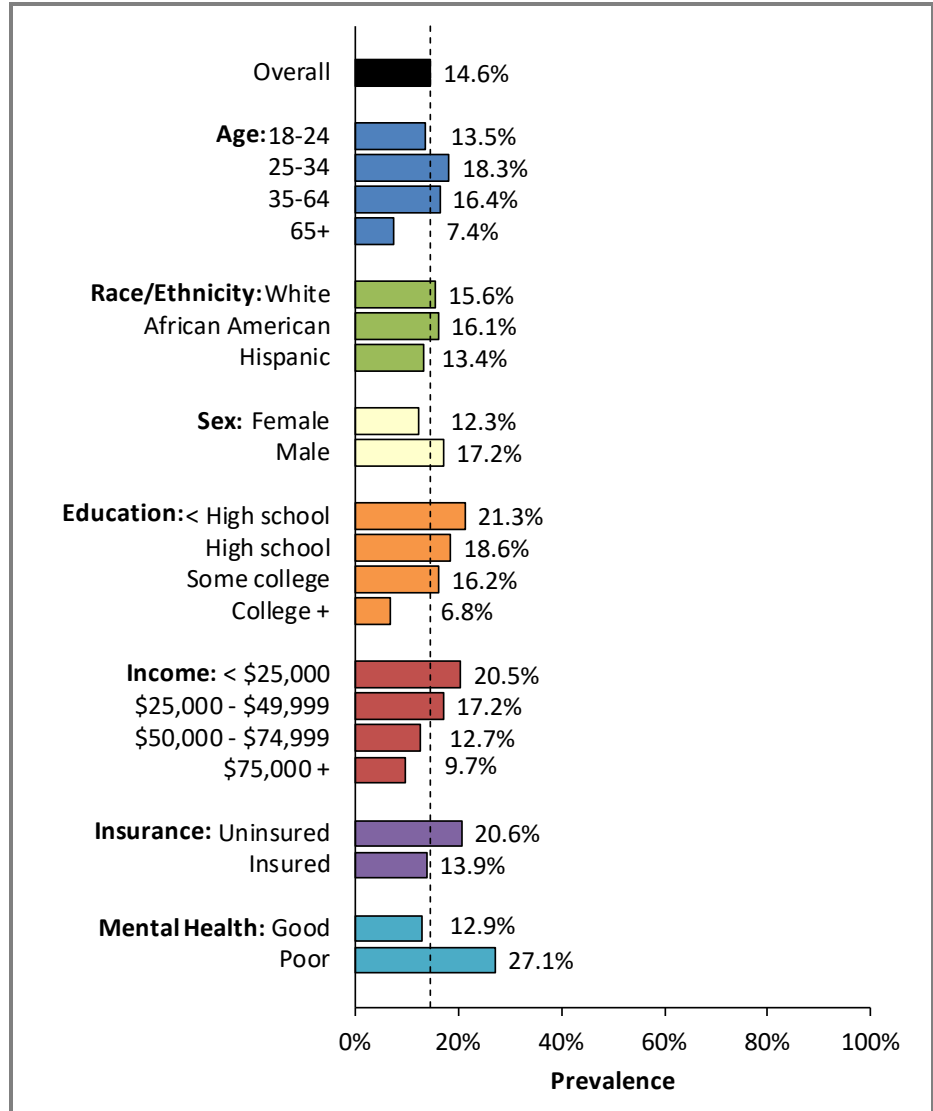
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### Smoking Prevalence

Overall, 14.6% of New Yorkers are current smokers (Figure 1). In New York, several groups smoke at higher rates than others. Smoking prevalence is higher for African Americans and white New Yorkers (compared with Hispanics), males, individuals who are uninsured, individuals who report poor mental health, and individuals with lower education levels and lower incomes. In addition, older adults, with the exception of adults 65 or older, smoke at higher rates than younger adults aged 18–24.

**Figure 1. Smoking Prevalence, NY-BRFSS 2014–2016**



Legend: The dotted line denotes the New York overall prevalence.

Note: There are statistically significant differences by age (25–34 > 35–64 > 18–24 > 65+), race/ethnicity (African American, White > Hispanic), sex (Male > Female), education (Less than high school > High school > Some college > College degree or more), income (Less than \$25,000 > \$25,000–\$49,999 > \$50,000–\$74,999 > \$75,000 or more), insurance status (Uninsured > Insured), and mental health status (Poor > Good).

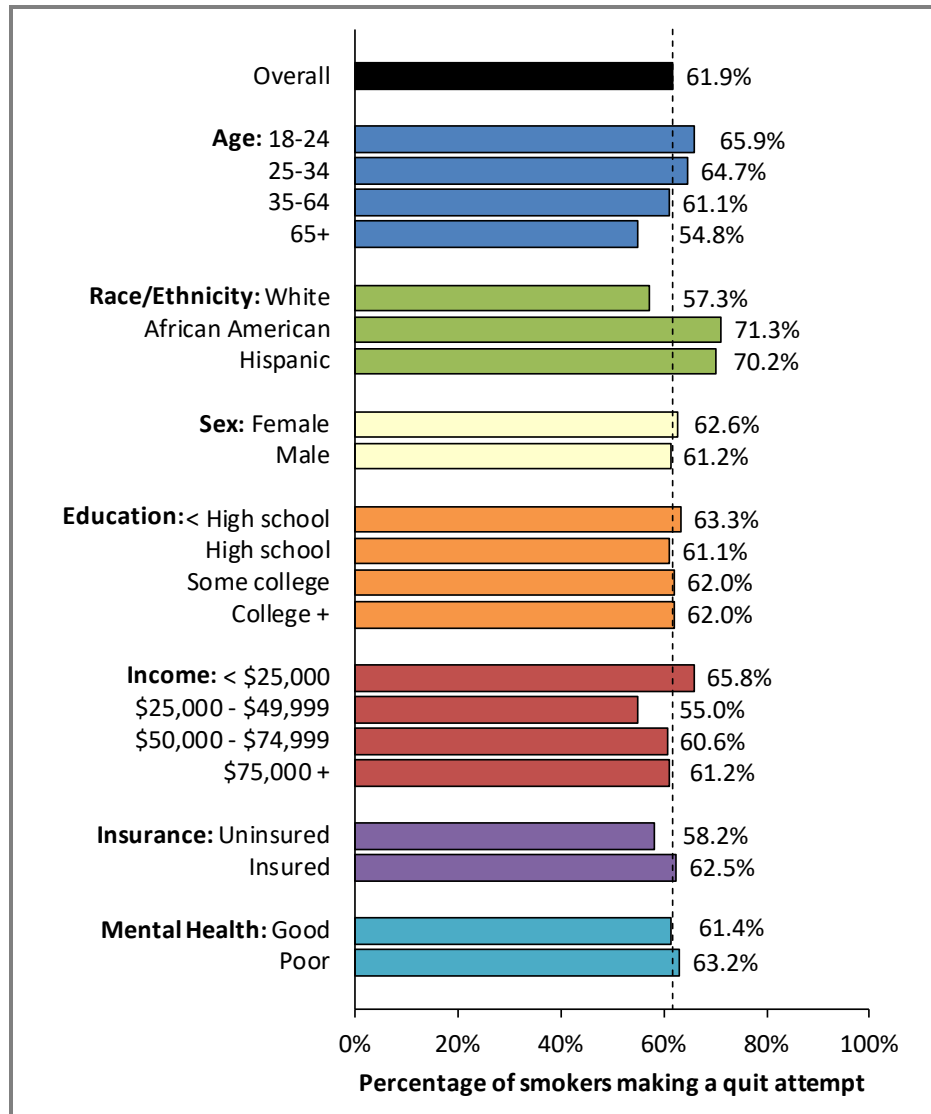


## Quit Attempts

Rates of quit attempts were highest for African Americans and Hispanics, smokers making less than \$25,000, and smokers aged 18–24 and 25–34.

Overall, 61.9% of current smokers in New York made a quit attempt in the past year (Figure 2), with similar rates across groups we examined. Rates of quit attempts were highest for African Americans and Hispanics, smokers making less than \$25,000 annually, smokers aged 18–24 and 25–34, and were lowest for smokers 65 years or older.

**Figure 2. Prevalence of Making a Past Year Quit Attempt, NY-BRFSS 2014–2016**



Legend: The dotted line denotes the New York overall prevalence.

Note: There are statistically significant differences by age (18–24, 25–34, 35–64 > 65+), race/ethnicity (African American, Hispanic > White), and income (Less than \$25,000 > \$25,000–\$49,999).

## **Strategies and Influences on Smoking**

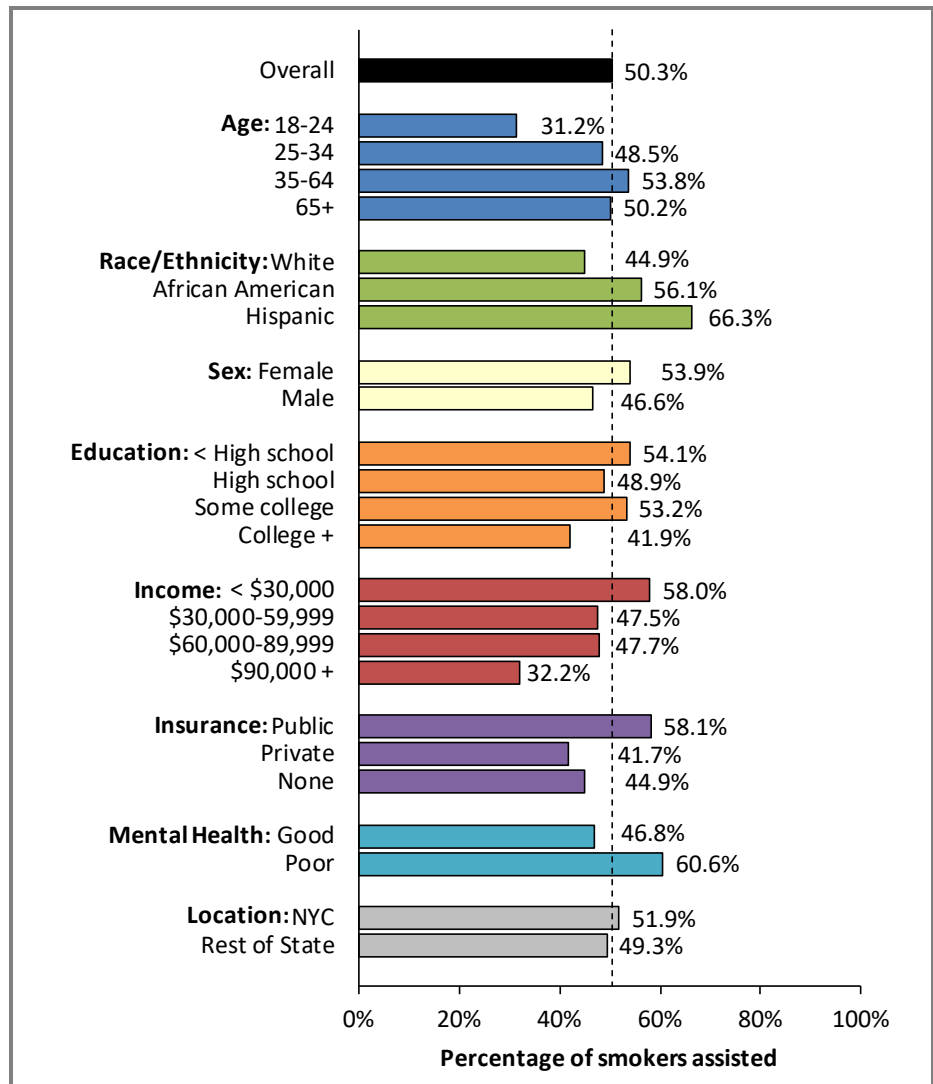
In this section, we present data on New York smokers' reports of whether their health care provider assisted them with quitting, whether they used evidence-based quit strategies, and their awareness of antitobacco media campaigns. We reviewed these influences on smoking cessation by smokers' age, race/ethnicity, gender, education, income, insurance status, mental health, and location (New York City vs. rest of state).

The groups reporting the highest rates of provider assistance were smokers with low income, public insurance, poor mental health, and those who are Hispanic.

### Health Care Provider Assistance with a Quit Attempt

Advice to quit and brief clinical cessation intervention from a health care provider doubles the chances that a smoker will quit.<sup>10</sup> Approximately half of current smokers in New York (50.3%) who have seen a health care provider in the past year reported receiving assistance with quitting (Figure 3). Provider assistance was highest for smokers reporting poor mental health, public insurance, those making less than \$30,000 annually, and Hispanics. Provider assistance was lowest for young adults aged 18–24.

**Figure 3. Percentage of Smokers Who Were Assisted with a Quit Attempt by their Health Care Provider, NY ATS 2014–2016**



Legend: The dotted line denotes the New York overall prevalence.

Note: There are statistically significant differences by age (35–64, 65+, 25–34 > 18–24), race/ethnicity (Hispanic, African American > White), income (Less than \$30,000 > \$30,000–\$59,999 > \$90,000 and more), insurance type (Public > None, Private), and mental health status (Poor > Okay).

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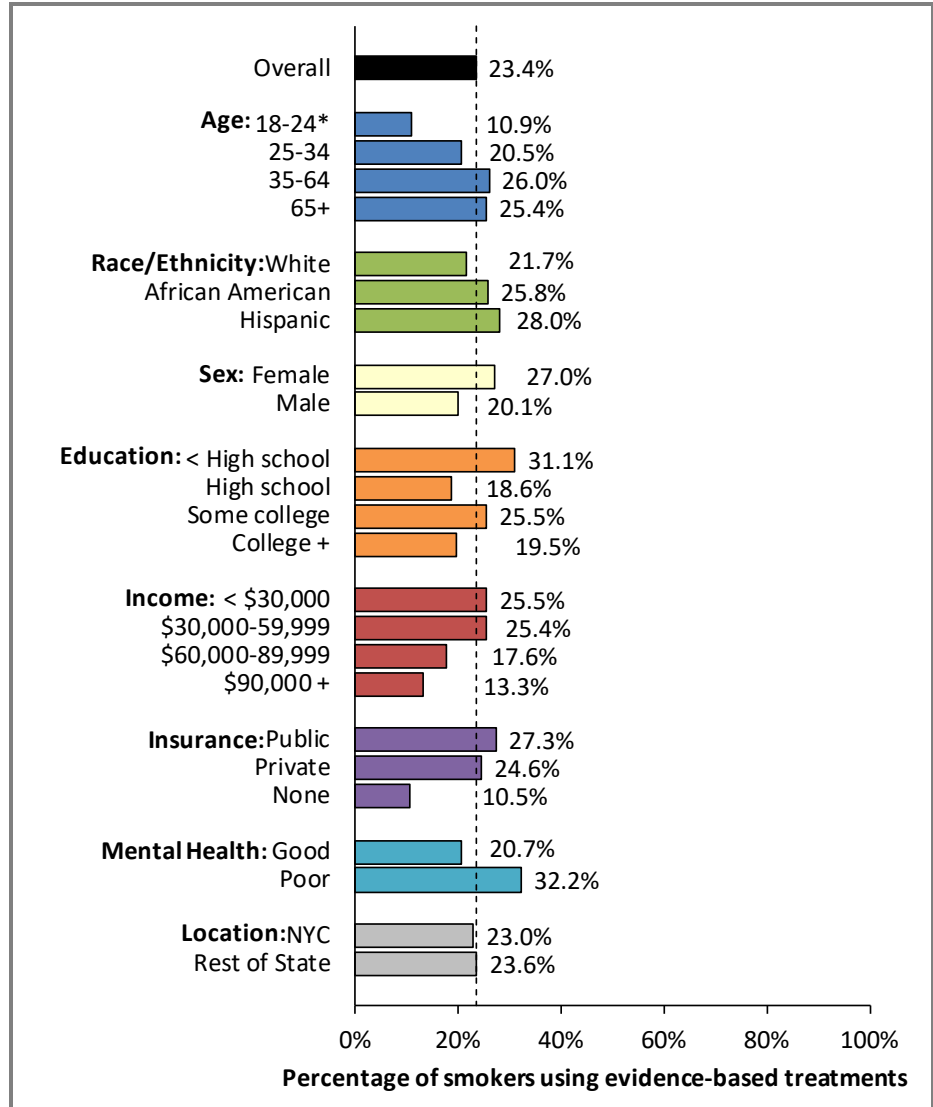
*Rates of using evidence-based methods to quit were lowest among smokers without health insurance, and those with higher income. Individuals who experience poor mental health and those with less than a high school education reported the highest rates of using evidence-based methods.*

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### **Use of Evidence-Based Quit Methods**

Several evidence-based quit methods are available to help smokers quit, including counseling from a health care provider, Quitline or cessation program/class, or stop-smoking medications (e.g., Zyban or Chantix) and nicotine replacement therapy (e.g., nicotine patch or gum). Overall, 23.4% of current smokers in New York used an evidence-based quit method at their last quit attempt (Figure 4). Use of evidence-based quit methods was highest for individuals reporting poor mental health, less than a high school education, and females. We estimated the lowest rates of using evidence-based quit methods among individuals without insurance and individuals making more than \$60,000 annually.

**Figure 4. Percentage of Smokers Who Used an Evidence-Based Quit Method at Last Quit Attempt, NY ATS 2014–2016**



Legend: The dotted line denotes the New York overall prevalence.

\*This estimate is unreliable (RSE=40.8) and thus caution is suggested when interpreting.

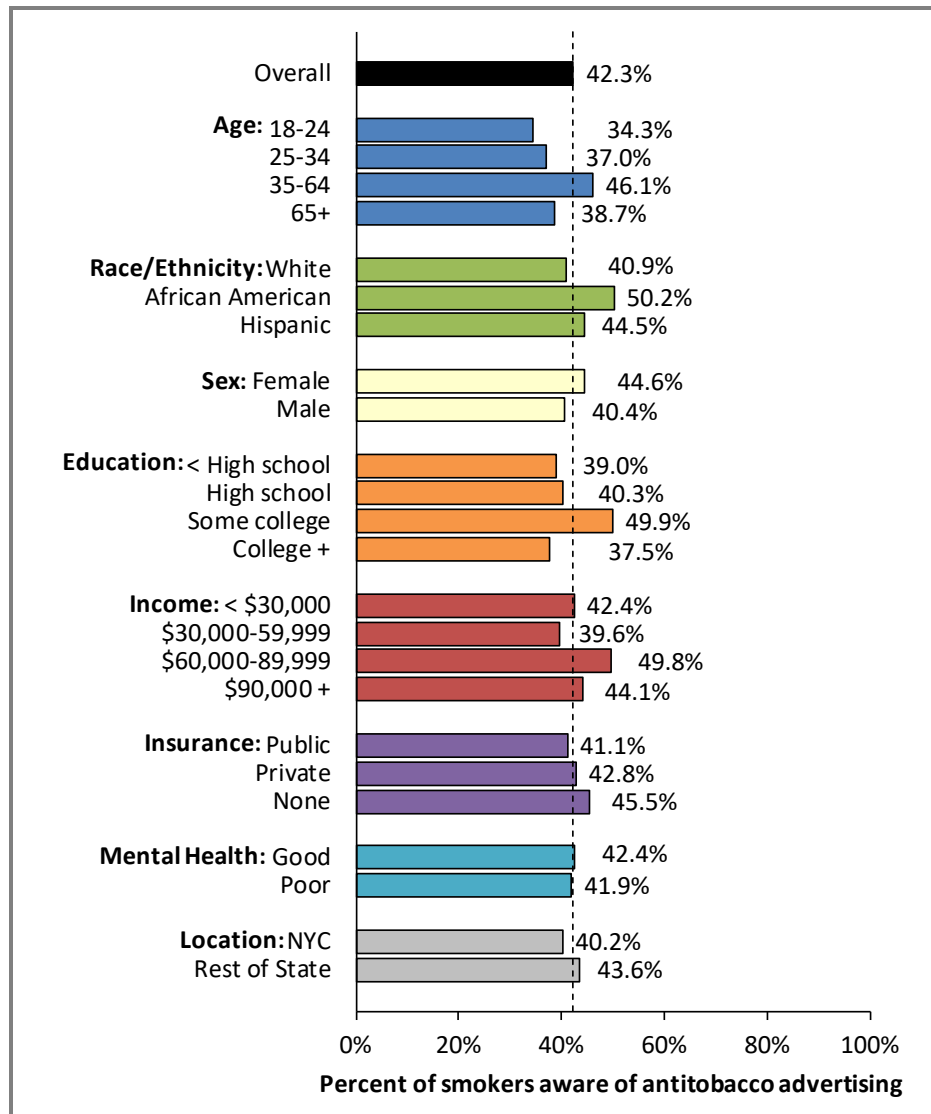
Note: There are statistically significant differences by age (35–64, 65+ > 18–24), sex (Female > Male), income (Less than \$30,000, \$30,000–59,999 > \$90,000 and more), insurance type (Public, Private > None), and mental health status (Poor > Good).

**Awareness of Antitobacco Television Advertisements**

*Smokers aged 35–64, African Americans, and individuals with some college experience reported the highest awareness of NY TCP's antitobacco advertising.*

The New York Tobacco Control Program (NY TCP) airs antitobacco television advertisements aimed at promoting smoking cessation. Overall, 42.3% of current smokers were aware of NY TCP's antitobacco television advertisements, which indicates they had “recently seen” at least one NY TCP-sponsored television advertisement (Figure 5). Smokers aged 35–64, African Americans, and individuals with some college experience reported the highest awareness. Young adults aged 18-24 reported the lowest awareness.

**Figure 5. Percentage of Smokers Aware of Cessation Media, NY ATS 2014–2016**



Legend: The dotted line denotes the New York overall prevalence.

Note: There are statistically significant differences by age (35–64 > 25–34, 18–24), race/ethnicity (African American > White), and education (Some college > High school, Less than high school, College degree or more).

## Discussion

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*Smoking rates in New York are highest for individuals who experience poor mental health, those with lower education and lower income, and those without insurance. Smoking rates varied by all groups we assessed, except for location.*

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*Groups with the highest smoking prevalence—individuals with poor mental health, public insurance, and lower education and income—were generally those receiving provider assistance and using evidence-based treatments more often than the general population.*

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In New York State, adult smoking prevalence has declined over time, and remains below the national average.<sup>2</sup> This report provides a snapshot of how smoking prevalence, quit attempts, assistance with quitting from a health care provider, use of evidence-based quit methods, and awareness of antitobacco advertising in New York State vary by demographic characteristics. Although smoking rates in New York State have declined over time, some groups still smoke at disproportionately higher rates than others. Smoking rates in New York are highest for individuals who experience poor mental health, those with lower education and lower income, and those without insurance. Smoking rates varied by all groups we assessed, except for location (New York City vs. rest of state).

Cessation is a complex, dynamic process and successful quitting often requires multiple attempts.<sup>4</sup> Adult smokers in New York State are trying to quit, with approximately 6 in 10 adults having tried to quit in the past year, with few differences observed by group. In this report, we examined cessation-related influences and behaviors, such as receiving assistance from a health care provider, using evidence-based tobacco dependence treatments (i.e., nicotine replacement therapy, stop-smoking medications, the Quitline), and awareness of antitobacco television advertising to explore potential associations with smoking prevalence and quit attempts. We found that health care providers assisted about half of New York smokers with quitting. Groups with the highest prevalence—individuals with poor mental health, public insurance, and lower education and income—were generally those receiving provider assistance and using evidence-based treatments at higher rates than the general population. These findings suggest that NY TCP's approach to targeting those disproportionately affected by tobacco may be working.

Smokers aged 35–64, African Americans, and smokers with some college reported the highest awareness of NY TCP's antitobacco

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*Overall, we did not observe striking differences in awareness, indicating that, overall, NY TCP's media approach is reaching New York smokers.*

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media. Younger adults and adults with lower education reported the lowest rates of awareness, which may relate to how they use media. However, overall, we did not observe striking differences in awareness, indicating that, overall, NY TCP's media approach is reaching New York smokers.

Although individuals with poor mental health, public insurance, and lower education used evidence-based treatments at higher rates than those who report good mental health, no insurance, or higher education, respectively, we did not find evidence of higher rates of quit attempts in those groups. The relationship between prevalence, quit attempts, and cessation influences is complex. It is unclear why individuals in these groups report higher rates of provider assistance and use of evidence-based methods, but prevalence remains high. Healthy People 2020 emphasizes the importance of considering social determinants that influence, and often limit, the ability of groups to achieve health equity.<sup>14</sup> Employing innovative and creative partnerships with other sectors that are working to influence social determinants, such as poverty, education, and other aspects of the social and cultural environments within which individuals live, may be an important future direction for promoting cessation.

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*Disparities in smoking rates persist. Efforts to target groups disproportionately affected by tobacco use should remain an important priority for NY TCP and other programs across the United States.*

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Disparities in smoking rates and cessation persist, and tobacco control efforts are still needed to address the disparate rates of tobacco use among certain groups. NY TCP's Prevention Agenda includes specific objectives for lowering prevalence among individuals with serious mental illness and low income, and uses a multi-pronged approach to target these groups, including health systems change and antitobacco cessation media messaging. Higher rates of provider assistance and use of evidence-based treatments among those with poor mental health, public insurance, and lower education may be a result of NY TCP's efforts. Continued efforts to target groups disproportionately affected by tobacco use should remain an important priority for NY TCP and other programs across the United States.



# References

1. 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. Printed with corrections, January 2014.
2. RTI International. (In preparation, 2018). *2017 Independent evaluation report of the New York Tobacco Control Program*. Prepared for New York State Department of Health. research Triangle Park, NC: RTI International.
3. Chaiton, M., Diemert, L., Cohen, J. E., Bondy, S. J., Selby, P., Philipneri, A., & Schwartz, R. (2016). Estimating the number of quit attempts it takes to quit smoking successfully in a longitudinal cohort of smokers. *BMJ Open*, *6*(6), 1–9. doi: 10.1136/bmjopen-2016-011045
4. Lavinghouze, S. R., Malarcher, A., Jama, A., Neff, L., Debrot, K., & Whalen, L. (2015). Trends in quit attempts among adult cigarette smokers—United States, 2001–2013. *MMWR. Morbidity and Mortality Weekly Report*, *64*(40), 1129–1135. doi: 10.15585/mmwr.mm6440a1
5. Jamal, A., Homa, D. M., O’Connor, E., Babb, S. D., Caraballo, R. S., Singh, T., ...King, B. A. (2015). Current cigarette smoking among adults—United States, 2005–2014. *Morbidity & Mortality Weekly Report*, *64*(44), 1233–1240. doi: 10.15585/mmwr.mm6444a2
6. Centers for Disease Control and Prevention (CDC). (2014). *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.
7. Botello-Harbaum, M. T., Haynie, D. L., Iannotti, R. J., Wang, J., Gase, L., & Simons-Morton, B. (2009). Tobacco control policy and adolescent cigarette smoking status in the United States. *Nicotine & Tobacco Research*, *11*(7), 875–885. doi: 10.1093/ntr/ntp081
8. Chaloupka, F. J., Straif, K., Leon, M. E., & International Agency for Research on Cancer Working Group. (2011). Effectiveness of tax and price policies in tobacco control. *Tobacco Control*, *20*(3), 235–238. doi: 10.1136/tc.2010.039982
9. Farrelly, M. C., Niederdeppe, J., & Yarsevich, J. (2003). Youth tobacco prevention mass media campaigns: Past, present, and future directions. *Tobacco Control*, *12*(Suppl 1), i35–i47.
10. Fiore, M. C., Jaén, C. R., Baker, T. B., et al. (2008, May). *Treating tobacco use and dependence: 2008 update*. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service.
11. Dobbs, P. D., Hammig, B., & Sudduth, A. (2016). 2015 Legislative update of e-cigarette youth access and exposure laws. *Preventive Medicine*, *88*, 90–94. doi: 10.1016/j.ypmed.2016.03.010
12. Campaign for Tobacco-Free Kids. *State cigarette excise tax rates & rankings*. Accessed March 13, 2018, from <https://www.global.tobaccofreekids.org/assets/factsheets/0097.pdf>. Updated January 9, 2018.
13. Centers for Disease Control and Prevention (CDC). (2016). *Behavioral Risk Factor Surveillance System: Monitoring health risks and behaviors among adults: At a glance 2016*. Retrieved from <http://www.cdc.gov/chronicdisease/resources/publications/aag/brfss.htm>.
14. Koh, H. K., Piotrowski, J. J., Kumanyika, S., Fielding, J. E. (2011) Healthy people: a 2020 vision for the social determinants approach. *Health Educ Behav*, *38*, 551–557

# Appendix A: Summary of Findings

**Table A-1. Summary of Categorical Differences by Demographics, NY-BRFSS and NY ATS, 2014–2016**

	NY-BRFSS		NY ATS		
	Current Smoker	Quit Attempt	Assisted by Health Care Professional	Used Evidence-Based	Confirmed Awareness
Age	35–64 > 25–34 > 18–24 > 65+	18–24, 25–34, 35–64 > 65+	35–64, 65+, 25–34 > 18–24	35–64, 65+ > 18–24	35–64 > 25–34, 18–24
Race/Ethnicity	African American, White > Hispanic	African American, Hispanic > White	African American, Hispanic > White	—	African American > White
Gender	Male > Female	—	—	Female > Male	—
Education	Less than HS > HS or GED > Some college > College+	—	—	—	Some college > Less than HS, HS or GED, College+
Income	Less than \$25,000 > \$25,000–\$49,999 > \$50,000–\$74,999 > \$75,000 or more	Less than \$25,000 > \$25,000–\$49,999	Less than \$30,000 > \$30,000–\$59,999 > \$90,000 and more	\$30,000–59,999, Less than \$30,000 > \$90,000 and more	—
Insurance	Uninsured > Insured	—	Public > None, Private	Public, Private > None	—
Mental Health	Poor > Good	—	Poor > Good	Poor > Good	—
NYC vs ROS	NA	NA	—	—	—

Legend: — = no statistically significant differences. College+ = college degree or more; HS = high school; NYC = New York City; ROS = rest of state.

# Appendix B: Data Sources, Measures, and Analyses

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## Description of Data Sources

This report presents findings from 2014–2016 data from two cross-sectional surveys of adults: the New York Behavioral Risk Factor Surveillance System (NY-BRFSS) and the New York Adult Tobacco Survey (NY ATS). Pooling allows for adequate sample sizes for smaller population subgroups and increases the strength of significance testing.

### *New York Behavioral Risk Factor Surveillance System*

The Centers for Disease Control and Prevention's (CDC's) Behavioral Risk Factor Surveillance System (BRFSS) is a state representative survey of topics related to health and health care. All 50 states, the District of Columbia, and 3 territories participate in the survey, and BRFSS is the largest continuously conducted telephone health survey in the world.<sup>13</sup> New York has conducted BRFSS surveys since 1985; however, a sample design and weight change implemented in 2009 prevent comparisons of results with earlier surveys. These changes in sample design and weighting were extended to all states in 2011. Estimates of smoking prevalence in New York come from a core set of BRFSS tobacco-related questions. The New York State Department of Health collaborates with CDC to conduct New York's BRFSS. CDC provides support for instrument development, sampling, and data weighting. The data are generalizable to the adult population in New York State.

### *New York Adult Tobacco Survey*

The New York Adult Tobacco Survey (ATS) is a cross-sectional survey, developed through cooperation between RTI International and the NY Tobacco Control Program, which has been administered quarterly by phone to a stratified, random sample of noninstitutionalized adults in New York State since June 2003 (except in 2013). The ATS is designed to inform the efforts of the NY Tobacco Control program by assessing tobacco use, as well as

tobacco-related attitudes, beliefs, and behaviors. After creating annual weights that account for nonresponse and sampling methods, and adjustments by geography, age, gender, race/ethnicity, and educational attainment, the sample is generalizable to adults in New York State as a whole, in New York City, and in the rest of the state.

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## Measures

**Age:** Continuous age measures were grouped into four categories: 18- to 24-year-olds, 25- to 34-year-olds, 35- to 64-year-olds, and those aged 65 and older.

**Sex:** Sex is self-reported as either male or female.

**Race racial/ethnic groups:** Respondents are categorized as white, non-Hispanic; African American, non-Hispanic; or Hispanic. For non-Hispanic respondents, NY-BRFSS race-ethnicity is defined among those indicating a single race, white-only or African American-only. NY ATS, however, considers “primary” race selections among respondent selecting more than one race.

**Education level:** Respondents are categorized into four groups based on education level: those with less than a high school education, those who graduated from high school or obtained a GED, those with some college experience (less than four years), and those with a college degree or higher.

**Income:** Due to differences in available response options between NY-BRFSS and NY ATS, income categories are defined differently for respondents of each survey. Each NY-BRFSS respondent is categorized as having an annual household income of less than \$25,000, \$25,000–\$49,999, \$50,000–\$74,999, or \$75,000 or more. NY ATS income categories are: less than \$30,000, \$30,000–\$59,999, \$60,000–\$89,999, and \$90,000 and more.

**Insurance status/type:** While 2014, 2015, and 2016 NY-BRFSS include a question about health insurance status, 2015 NY-BRFSS does not ask respondents to specify health insurance type. Respondents are thus categorized as either uninsured or insured. NY ATS respondents are categorized as privately insured, publicly insured, or uninsured.

**Mental health status:** In both surveys, respondents are asked the question: “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” For this study, a respondent is considered in “poor” mental health if they report more than 13 days of “poor” mental health.

**Location:** For NY ATS, respondents are categorized as living in New York City (NYC) or somewhere else in the state (“rest of state”).

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## Methods

We conducted adjusted-Wald tests to determine significant relationships between smoking and cessation-related outcomes by each demographic measure. In cases where a significant relationship was confirmed ( $p < 0.05$ ), we conducted pairwise testing to determine significant differences in outcome prevalence across demographic groups (e.g., males vs. females), also using adjusted-Wald tests. Only statistically significant pairwise differences ( $p < 0.05$ ) are reported in the text. All analyses were conducted using Stata 14 software.

Although data was pooled, sample size for some estimates was relatively small. We indicate estimates as less reliable if the Relative Standard Error (RSE) is greater than 30. RSE is calculated as follows:

$$\text{RSE} = 100 (\text{standard error of estimate} / \text{estimate})$$



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