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# **2012 Independent Evaluation Report of the New York Tobacco Control Program**

Prepared for

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## Executive Summary

**N**ew York State continues to be a recognized leader in tobacco control with a program built on evidence-based interventions, supported by strong tobacco control policies, and complemented by forward-looking next-generation initiatives. In 2005, the New York State Department of Health established an ambitious goal of reducing the number of smokers by 1 million by 2010. Although the state did not reach this goal, the number of adult and youth smokers has been reduced by more than 700,000. In addition, the declines in smoking prevalence among adults and youth in New York have outpaced declines nationally.

As a result of the declines in smoking, smoking-attributable personal health care expenditures in New York in 2011 were estimated to be \$2.9 billion less than they would have been had smoking rates remained at 2001 levels. If smoking rates continue to decline and meet a 2017 goal of 15%, the estimated annual smoking-attributable health care costs would be expected to decline by an additional \$2.2 billion. A 1% decline in the current smoking prevalence to 17.1% would reduce health care costs by \$554 million.

From fiscal year (FY) 2008–2009 to FY 2011–2012, the New York Tobacco Control Program’s (NY TCP’s) budget was reduced more than 50%, from \$84 million to \$41.4 million, and the 2012–2013 budget remains at this reduced level. Although smoking prevalence has continued to decline relative to the rest of the United States, this decline has slowed. Previously, it was shown that several key outcomes remained unchanged from 2009 to 2010. The current report indicates that this lack of improvement persists through 2011. In previous years, cigarette consumption among New York adults was lower than cigarette consumption among adults nationally, but this was not the case in 2011.

Continued underfunding of the Program threatens continued progress toward reducing tobacco use and risks, perpetuating tobacco-related disparities among the state’s most vulnerable populations. The state’s comprehensive smoke-free indoor air law and its high cigarette excise taxes have effectively reduced tobacco use, but further reductions in tobacco use are put at risk by budget reductions that curtail the Program’s ability to

reach a significant proportion of New Yorkers. The decline in the Program's reach is illustrated by the decreased awareness of media campaigns among adult smokers, a measure associated with an increased prevalence of quit attempts and decreased cigarette consumption. Awareness among smokers decreased from a peak of 53% in 2007 to 38% in 2011. It is also manifest in the Program's inability to support its community public education activities with the paid media required to build public support for new policy interventions that can reinvigorate the decrease in tobacco use. Budget limitations also constrain the Program's ability to address stubbornly high smoking rates among historically disadvantaged populations: African American smokers and smokers with low educational attainment, low incomes, and poor mental health. These smokers pay a disproportionate amount of their income on tobacco products and tobacco taxes. For example, those with annual household incomes less than \$30,000 pay 20% of their income on cigarette purchases, compared to 4% for smokers with annual household incomes greater than or equal to \$30,000. Decreases in tobacco control program funding reduce the reach of the Program and its ability to assist those who would benefit most from it, such as low-income smokers.

Findings from the California Tobacco Control Program (California Department of Public Health, California Tobacco Control Program, 2010) suggest that it is possible to reduce smoking among some of these historically disadvantaged populations.

Insufficient funding reduces the overall reach of the Program and its reach into populations most at risk for tobacco use. Evidence from a recent study based on NY TCP antismoking television advertising and previous Independent Evaluation Reports highlights the success of hard-hitting messages in prompting smokers, including smokers who are poor and less well educated, to quit (Farrelly et al., 2012). These evidence-based campaigns do not merely educate smokers about the health risks of smoking—they rely on emotional and graphic messages to prompt action. Thus, such campaigns should be viewed not as a luxury but as a core, effective public health strategy. The current report illustrates the benefits of providing sufficient funds to reach 60% of smokers with NY TCP media consistently. Compared with having no media campaign, 60%

ad awareness would result in 431,000 additional smokers making a quit attempt.

In light of the persistently high rates of tobacco use among historically disadvantaged populations, New York State should rededicate itself to a healthy and sufficient tobacco control infrastructure and ambitious goals to reduce tobacco use. The tobacco-related disparities among these populations are not unique to New York, and it will be impossible to reach the state's tobacco use prevalence goals without addressing these disparities. As a leader in tobacco control, New York has an opportunity to collaborate with the research and practice community to develop and implement population-based interventions that will reach and effectively reduce tobacco use among historically disadvantaged populations. Dedicating just 13% (\$254 million) of the \$1.9 billion in annual tobacco tax revenue and Master Settlement Agreement payments to tobacco control would permit New York State to match the Centers for Disease Control and Prevention's (CDC's) recommended funding level for tobacco control (up from the current 2% of tobacco taxes and Master Settlement Agreement payments). It would also provide sufficient opportunities for NY TCP to target interventions to the economically disadvantaged that pay a disproportionate share of all tobacco taxes.

### *Key Evaluation Findings*

- From 2003–2004 to 2011, the prevalence of adult smoking in New York declined by 13%; however, there were marked differences across race/ethnicity, education, and income groups.
- From 2003–2004 to 2011, the prevalence of adult smoking among African Americans and Hispanics, those with less than a high school education, those with incomes lower than \$25,000, and those with poor mental health did not decline at all.
- From 2000 to 2010, the prevalence of smoking declined by 69% among middle school students; from 2000 to 2011, it declined by 53% among high school students. These declines outpaced national declines.
- From 2009 to 2011, the percentage of New Yorkers covered by policies that ban outdoor smoking increased from less than 2% to 54%.

- From 2005 to 2011, the percentage of New York adults supporting a ban on smoking in outdoor public places increased by 11%.
- Cigarette consumption declined by 28% among New York adult smokers from 2003 to 2011 and was similar to the national average in 2011.
- Cigarette consumption was 50% lower in 2011 than it would have been had cigarette taxes and NY TCP funding remained at 2000 levels and had the Clean Indoor Air Act not been amended in 2003.
- Increasing awareness of NY TCP antismoking television advertising to 60% would result in 431,000 additional smokers making quit attempts compared with no advertising.
- Approximately 100,000 fewer New Yorkers called the New York State Smokers' Quitline in 2011 compared with peak call volume in 2008—nearly a 40% decline as a result of decreased health communication efforts.
- Higher cigarette prices that result from increased taxes are borne disproportionately by low-income smokers. In 2010, smokers with incomes less than \$30,000 spent 20% of their income on cigarette purchases.

RTI's key programmatic recommendations are as follows:

### *Overall Recommendations*

- Increase NY TCP funding to a minimum of one-half of CDC's recommend funding level for New York (\$254 million) to \$127.5 million for FY 2013–2014 and subsequent years.
- Develop and implement interventions to address disparities in smoking rates, particularly for African Americans; Hispanics; and those with low income, limited education, and mental illness. This may be accomplished by collaborating with federal partners, such as research initiatives funded by the National Cancer Institute, or other state tobacco control programs that have focused on disparities.

### *Health Communication Recommendations*

- Invest \$40 million per year in antismoking television advertising to reach 60% awareness of antismoking messages among smokers.

- Invest additional funds in campaigns to support policy change efforts implemented by community contractors.

### *Health Systems Change Recommendations*

- Continue to direct Cessation Center contractors to focus their efforts on organizations serving high proportions of tobacco users, such as community health centers and mental health programs.
- Reinstate health care provider media campaigns to increase awareness of statewide cessation resources and prompt a greater percentage of providers to encourage smokers to quit.

### *Statewide and Community Action Recommendations*

- Consider funding a statewide media campaign to educate the public about youth smoking and the need to address it.
- Work with the Policy Center to develop additional model policies for local communities that can withstand legal challenges by the tobacco industry.
- Expand and formalize relationships with voluntary agencies at the state level to leverage their statewide and local media and policy networks.
- Reinforce community mobilization requirements to ensure that contractors actively engage allied organizations in planning, leading, and implementing tobacco control activities.
- Increase engagement of youth members of Reality Check and other youth-focused organizations in community education, government policy-maker education, and decision-maker advocacy activities focused on point-of-sale and tobacco-free outdoors policy change.
- Work with contractors to identify and build collaborations with organizations and individuals representing groups disproportionately affected by tobacco use in their communities.



## Introduction

Consistent with the large evidence base for tobacco control (CDC, 2007; NCI, 2008; USDHHS, 2000, 2012; Zaza, Briss, and Harris, 2005), the New York Tobacco Control Program (NY TCP) employs three key evidence-based strategies to change social norms and reduce tobacco use: health communication; cessation interventions; and statewide and community action aimed at policy, systems, and environmental changes.

As noted in the 2011 Independent Evaluation Report, New York has made significant progress in reducing cigarette smoking. From 2000 to 2010, smoking prevalence declined by 70% among middle school students and 54% among high school students—rates of decline that outpaced the nation as a whole. Among adults, smoking prevalence declined 28% from 2003 to 2010, almost three times the decline in the United States (10%) over this same period.

As of 2010, other key indicators in New York compared favorably with the rest of the United States. Average daily cigarette consumption and smokeless tobacco use were both lower in New York than in the rest of the United States. In 2010, intentions to quit in the future and the prevalence of making a quit attempt were both higher in New York than in the rest of the United States. These better than average outcomes were understandable given that New York State has the highest state excise tax in the country, a comprehensive smoke-free air law since 2003, and better than average funding for tobacco control. However, we also cautioned that recent, successive budget reductions were likely slowing progress on a range of key outcome indicators.

In addition, we noted that smoking prevalence had not declined from 2003–2004 to 2009–2010 among those with less than a high school degree, those earning less than \$30,000, and those reporting that their mental health is not good. Smoking prevalence in all three groups is significantly higher than the statewide average. However, recent changes in the sampling and weighting methodology for the Behavioral Risk Factor Surveillance System (BRFSS)—the key survey for tracking adult smoking prevalence—have changed smoking prevalence

estimates. Consequently, it may be a few years until we better understand the trends in smoking prevalence.

In this report, we summarize the contextual influences that can affect the Program's progress, describe the Program's approach to tobacco control, examine trends in key outcome indicators, and address the following critical evaluation questions for the Program:

- How has NY TCP influenced trends in tobacco use over time?
- How have statewide and community action efforts influenced key outcome indicators?
- How effective have public health communications been in influencing key outcome indicators?
- How have other key outcome indicators changed over time?
- How do these indicators compare between New York and the United States?

Addressing these central evaluation questions will illustrate the Program's impact on key outcome indicators and highlight gaps that need to be addressed moving forward.

## **The New York Tobacco Control Program – Context and Programmatic Approach**

**I**n this section, we begin by describing the tobacco control context in which the Program operates. We then describe the Program's current approach to tobacco control.

### *Program Context*

To put NY TCP's efforts and progress in context, we summarize information about the health and economic burden of tobacco; tobacco industry advertising and promotions; state revenue from cigarette taxes and Master Settlement Agreement (MSA) payments; and indicators of the tobacco control environment, such as funding for tobacco control and level of cigarette excise taxes in New York compared with the U.S. average.

### **Economic Burden of Smoking**

Smoking is associated with a significant health and economic burden. Personal health care expenditures attributable to



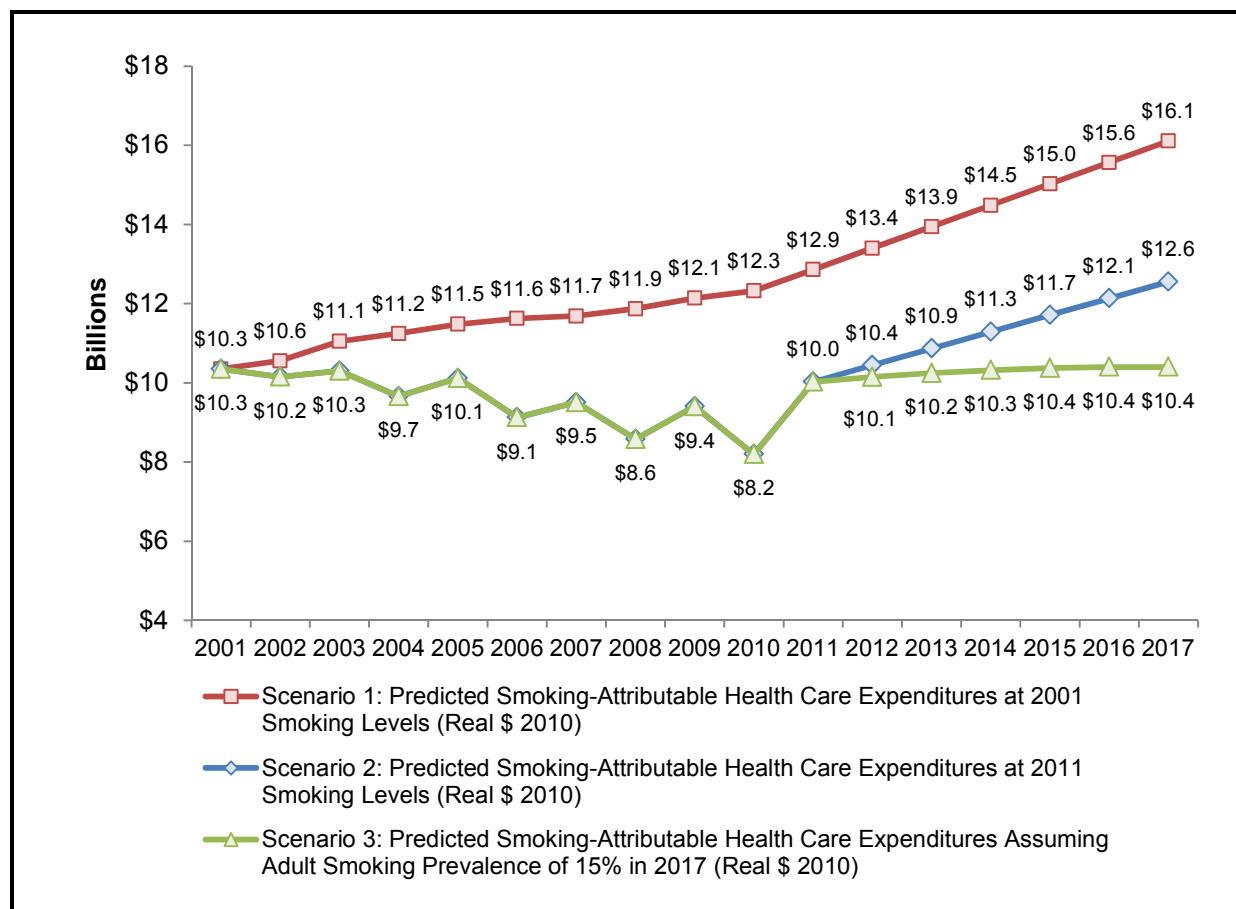
smoking in New York totaled an estimated \$10.0 billion in 2011. However, given recent declines in smoking, smoking-attributable health care costs in New York have dropped since 2001. To illustrate the effect of declining smoking rates on smoking-related health care costs, we examine three scenarios: (1) what costs would have been if the adult smoking rate had remained at the 2001 level (23.2%), (2) what costs will be in the future if the adult smoking rate remains at the 2011 level (18.1%), and (3) what costs will be in the future if the adult smoking rate declines to 15% by 2017—a goal set by NY TCP.

Figure 1 shows the estimated smoking-attributable health care costs for New York corresponding to each of the three scenarios explored. Because of reductions in adult smoking over the past decade, smoking-attributable health care costs were estimated to be \$2.9 billion less in 2011 than they would have been had smoking remained unchanged over this period. From 2001 to 2011, this represents a cumulative estimated reduction of \$21.8 billion in smoking-related health care costs. If smoking rates continue to decline to 15% by 2017, New York can reduce smoking-related health care costs by an estimated additional \$2.2 billion per year. A decrease from the current smoking prevalence of 18.1% to 17.1% would reduce health care costs by \$554 million. As discussed later in this report, tobacco control programming and policies have been shown to be effective in reducing smoking rates. The substantial savings in smoking-related health care costs associated with reductions in smoking rates highlight the value of tobacco control for New York State. Note that these figures have been revised since the 2011 Independent Evaluation Report to reflect the recent increase in smoking prevalence estimates due to methodological changes to the BRFSS survey.

### **Revenues and Expenditures Related to Tobacco Control and Promotion**

Each year, New York State receives significant revenue from cigarette taxes and MSA payments. These two sources total approximately \$1.96 billion for FY 2011–2012 (Table 1). Allocating just 13% of the annual revenues from cigarette taxes and MSA payments to tobacco control programming would meet the Centers for Disease Control and Prevention’s (CDC’s) recommended funding level for NY TCP of \$254 million. The

**Figure 1. Smoking-Attributable Health Care Costs in New York, 2001–2017**



**Table 1. Annual New York State Tobacco Tax Revenue, Master Settlement Agreement Payments, and Spending on Tobacco Control and Tobacco Promotions**

Revenue/Expenditure Category	Annual Revenue/Expenditure
Revenue from state cigarette excise tax (FY 2011–2012)	\$1,233,647,820
Revenue from MSA payments (CY 2011)	\$723,500,000
Estimated cigarette advertising and promotions in New York State (CY 2010) by five major cigarette manufacturers	\$278,405,904
Tobacco control program budget (FY 2012–2013)	\$41,415,000

Note: CY = calendar year; FY = fiscal year; MSA = Master Settlement Agreement (National Association of Attorneys General, 2013).

current NY TCP budget of \$41.4 million is only 16% of the CDC recommendation and represents less than 2% of annual cigarette tax and MSA payments.

In addition to falling well below CDC’s recommended funding levels, NY TCP is outspent by tobacco company advertising and promotional efforts. Based on the latest available data from the Federal Trade Commission (2011), tobacco companies spent \$9.4 billion nationally on advertising and promotions. If these expenditures are spent in proportion to cigarette sales, then this translates to \$278 million spent on advertising and promotions overall in New York State in 2010. Of this, an estimated \$232 million is for price reductions and the value of bonus cigarettes (e.g., buy two packs, get one free).

### Tobacco Control Policy Environment

New York has been a national leader with respect to tobacco control policies. New York’s cigarette excise tax is now the highest in the country and nearly \$3 more than the national average tax; all New Yorkers are covered by a comprehensive smoke-free air law (workplaces, restaurants, and bars), compared with 48% of the population nationally; and average per capita funding for tobacco control over the past three fiscal years is higher in New York (\$3.45) than in the average state (\$2.14) (Table 2).

**Table 2. Pro- and Antitobacco Environmental Influences in New York and the United States**

Indicator	New York	U.S. Average
State cigarette excise tax (January 1, 2012)	\$4.35	\$1.46
Percentage of the state population covered by comprehensive <sup>a</sup> smoke-free air laws (April 1, 2012)	100%	48.2%
Average annual per capita funding for tobacco control (2008–2010)	\$3.45	\$2.14
Percentage of grocery store cigarette sales sold under a price promotion (January 1–September 3, 2011)	2.6%	2.2%

<sup>a</sup> “Comprehensive” refers to laws that create smoke-free workplaces, restaurants, and bars.

Tobacco company advertising and promotional activities are a countervailing force that also influences tobacco use in New York. In addition to spending \$278 million on promoting tobacco in New York, cigarette companies offer cigarette price

promotions somewhat more frequently in New York compared with the country as a whole (2.6% versus 2.2%).

### *Program Approach*

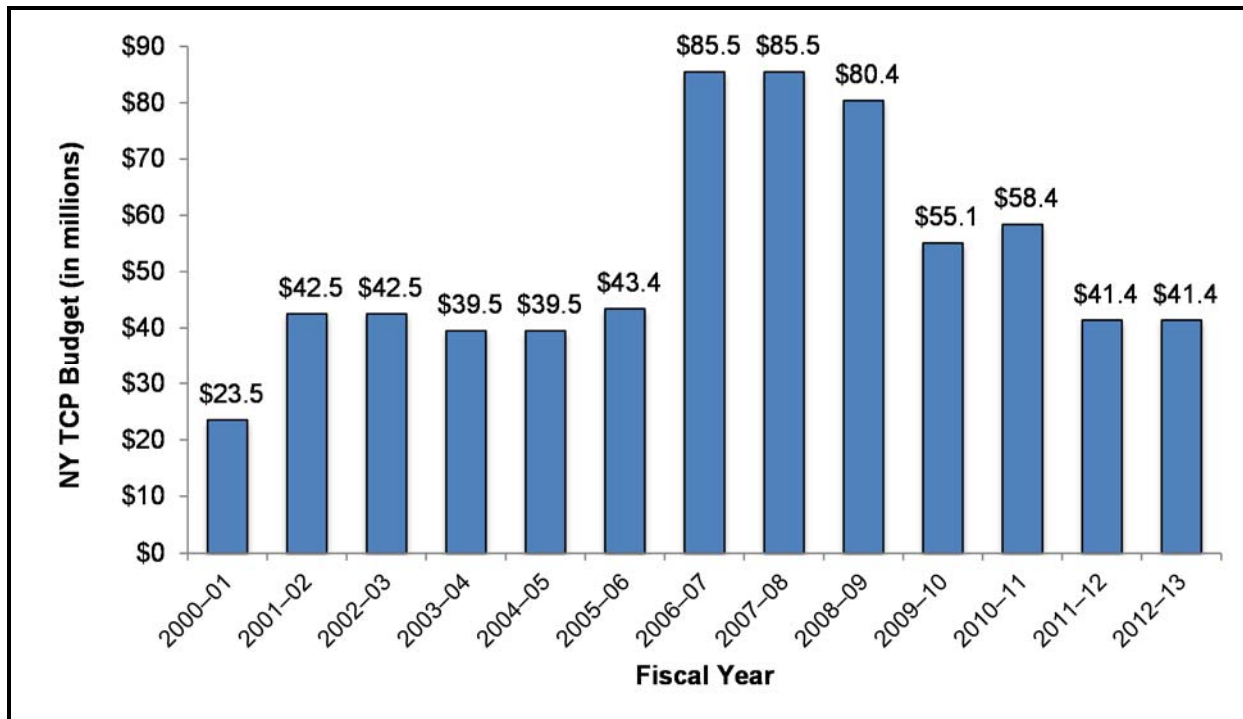
NY TCP is built on the social norm change model, which posits that reductions in tobacco use are achieved by creating a social environment and legal climate in which tobacco becomes less desirable, less acceptable, and less accessible (CDC, 2007; Frieden, 2010; NCI, 1991; USDHHS, 2000). The Program's current primary goal is to reduce the prevalence of smoking to 15% among adults and the rate of any tobacco use (i.e., cigarettes, cigars, smokeless tobacco) to 15% among high school students by 2017. California was one of the first state tobacco control programs to take a social norms approach and achieved a substantial decline in smoking among adults and youth alike (CDHS, 1998). New York's strong tobacco control environment will likely maintain current antitobacco norms and tobacco use prevalence rates. However, the Program recognizes that continued reductions in tobacco use require strengthening traditional tobacco control interventions and implementing new interventions that increase cessation and decrease youth initiation (Bonnie, Stratton, and Wallace, 2007).

The Program's community action goals focus on promoting evidence-based policies at the local level to decrease exposure to secondhand smoke and reduce the social acceptability of tobacco. Program efforts prioritize policy changes that affect the largest proportion of the population. Local policy goals include increasing the number of tobacco-free multi-unit dwellings in the state and the number of tobacco-free outdoor public spaces such as beaches, parks, and building entryways. One of the innovative areas the Program has focused on in recent years is reducing youth exposure to tobacco product marketing by changing the tobacco retail environment. In support of these efforts, the Program has developed and promoted consistent messaging, technical assistance, and support to contractors. Local contractors educate the public and local policy makers about the effects of tobacco marketing at the point of sale on youth initiation and the need for local policies to reduce that exposure. We describe the Program's major programmatic efforts below.

## Program Budget

The approved budget for FY 2012–2013 is similar to the previous FY budget of \$41.4 million. The longer-term pattern of NY TCP funding is shown in Figure 2 and provides context for interpreting the longer-term trends in key outcome indicators presented below. Funding for FY 2011–2012 and FY 2012–2013 is similar to the funding levels prior to FY 2006–2007, when funding increased to \$85.5 million.

**Figure 2. NY TCP Funding FY 2000–2001 to FY 2012–2013**



Note: NY TCP = New York Tobacco Control Program

Table 3 shows the budget for FY 2011–2012 and FY 2012–2013 by program component. Although the overall budget is similar across these two years, fewer resources are spent on statewide programs and funding is increased somewhat for the New York State Smokers’ Quitline and media placement. Figure 3 illustrates how the distribution of the FY 2012–2013 NY TCP budget compares to CDC Best Practices recommendations by program component (CDC, 2007). This figure shows that the distribution of funds is reasonably similar to CDC’s recommendations. The allocation for cessation programs matches the recommended percentage (26%), and the

**Table 3. NY TCP Budget for FY 2011–2012 and FY 2012–2013**

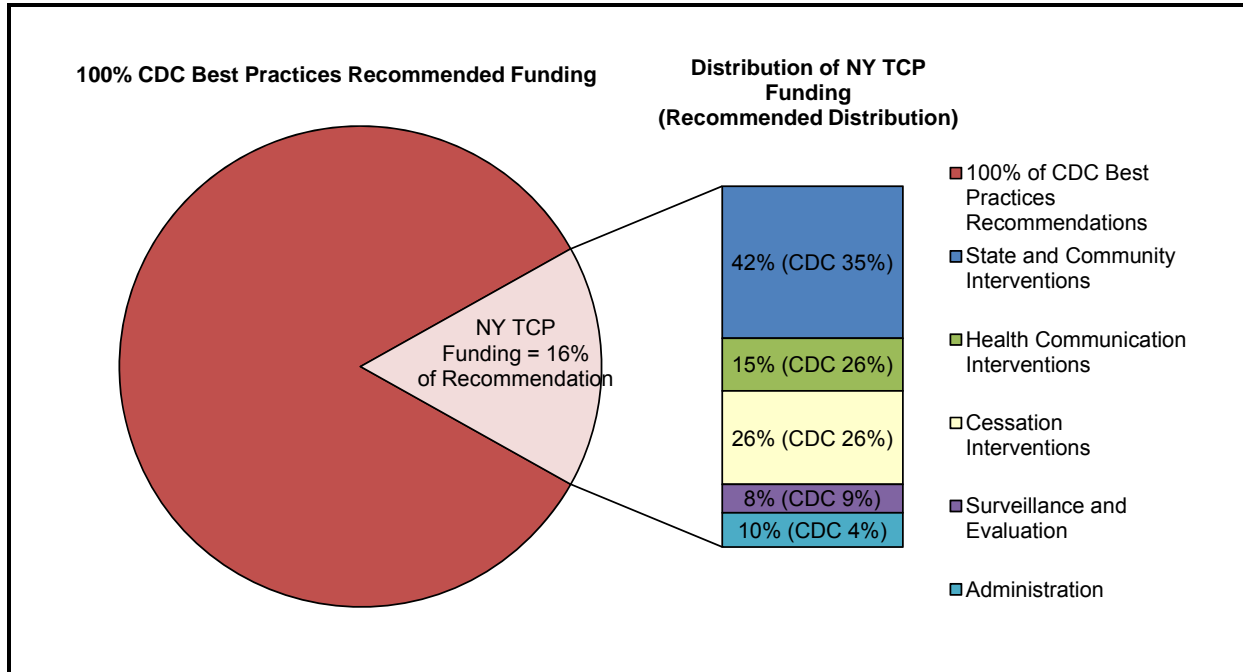
<b>Program Component</b>	<b>2011–2012 Expenditure Plan</b>	<b>2012–2013 Expenditure Plan</b>
<b>State and Community Interventions</b>	<b>\$12,604,752</b>	<b>\$11,512,922</b>
Community Partnerships	\$8,466,645	\$8,145,810
Reality Check	\$2,395,243	\$2,360,024
Colleges for Change <sup>a</sup>	\$62,955	\$0
Healthy Schools New York <sup>a</sup>	\$221,500	\$0
Asthma coalitions	\$258,500	\$0
Center for Public Health and Tobacco Policy	\$465,750	\$480,500
Training	\$505,553	\$526,588
<b>Enforcement</b>		
Clean Indoor Air Act and Adolescent Tobacco Use Prevention Act Enforcement	<b>\$4,795,350</b>	<b>\$4,795,346</b>
<b>Cessation Interventions</b>	<b>\$10,747,664</b>	<b>\$11,624,378</b>
Cessation Centers	\$5,714,540	\$5,502,890
State University of New York Professional Development Program	\$75,000	\$0
Quitline	\$3,958,124	\$4,721,488
Nicotine replacement therapy	\$1,228,606	\$1,400,000
<b>Health Communication Interventions</b>	<b>\$6,022,234</b>	<b>\$6,898,340</b>
Media placement	\$6,000,000	\$6,115,072
Miscellaneous media development and placement	\$22,234	\$0
<b>Surveillance and Evaluation</b>		
Independent evaluation	<b>\$3,250,000</b>	<b>\$3,372,282</b>
<b>Administration</b>		
Tobacco control and cancer services <sup>b</sup>	<b>\$3,937,000</b>	<b>\$3,211,732</b>
<b>Total</b>	<b>\$41,357,000</b>	<b>\$41,415,000</b>

<sup>a</sup> NY TCP support for these initiatives ended on May 31, 2011.

<sup>b</sup> This line item includes \$1,010,005 for the cancer surveillance improvement project.

allocation for surveillance and evaluation (8%) is slightly less than the recommended percentage (9%). The three components that differ considerably from CDC recommendations are state and community, health communication, and administration. Only 15% of NY TCP's budget is dedicated to health communication, compared with the recommended 26%. As noted in the 2010 and 2011 IER, funding for media placement was reduced disproportionately to preserve capacity for community programs. As a result, statewide programs constitute 42% of the budget, compared with the CDC recommended 35%. The allocation for administration is higher (10%) than CDC recommendations

**Figure 3. NY TCP 2012–2013 Budget Versus CDC Recommendations**



(4%), but that is largely explained by the inclusion of support for cancer surveillance in NY TCP’s administration budget. Without this, only 5% of the budget would be dedicated to administration.

### Program Administration and Support

NY TCP’s programmatic efforts are supported by administration, training and technical assistance, and surveillance and evaluation. NY TCP administration focuses on driving overall programmatic strategy, building and maintaining an effective tobacco control infrastructure, providing technical assistance and guidance, and managing the effective and efficient investment of state tobacco control funding. To ensure that policy goals are met, the Program has implemented an integrated approach and implemented strong accountability procedures. State and community-level activities, as well as Program initiatives, are supported by development and dissemination of key messages. The messages are communicated by community contractors and via earned and paid media.

In early 2012, the NY TCP Director and Assistant Director took other positions. The former Director took a position outside of the New York State Department of Health (NYSDOH), while the former Assistant Director was promoted to be the Assistant Director of the Division of Chronic Disease Prevention, which includes the NY TCP. This loss of tobacco control expertise and the temporary vacancies may impede progress in the short-run.

### Health Communication

NY TCP uses health communication strategies to motivate tobacco users to stop using tobacco, promote smoke-free homes, deglamorize tobacco use, and educate community members and decision makers about tobacco control. In recent years, the Program has focused paid media efforts on promoting smoking cessation with an emphasis on television advertisements that graphically depict the health consequences of smoking and/or elicit strong negative emotions. Recently published research based on NY TCP advertising finds that these graphic and/or emotional advertisements are effective in promoting smoking cessation, while a comparison set of advertisements were not effective (Farrelly et al., 2012).

While NY TCP's focus on emotional and graphic messages is intended to remind smokers of "why to quit," the Program has also complemented these messages in the past with "how to quit" ads intended to increase smokers' self-efficacy to quit. Nearly all messages include the New York State Smokers' Quitline telephone number and Web site address. Although our recent research suggests that "how to quit" messages were not associated with quit attempts, we do not believe there is sufficient evidence yet to abandon this strategy. However, we believe that the Program should concentrate its paid television efforts on graphic and/or emotional messages aimed at promoting cessation and use "how to quit" messages in other media (e.g., radio, print, Internet).

In 2011, the Program's media implementation remained consistent with these recommendations and past strategies. The Program aired the cessation-focused "Reverse the Damage" campaign during spring 2011 that consisted of two primary television ads: "Reverse Heart Attack" and "Reverse Lung Cancer." These ads are visually graphic but, unlike most prior graphic ads, they highlight the immediate and long-term



benefits of quitting on cardiovascular and lung health. Both of these campaign ads were also supported with corresponding Internet and radio ads that were placed and aired during the same time. The Program also aired the secondhand smoke-focused ads "Kids" and "Preemie" throughout the spring of 2011. These ads show the harmful effects of secondhand smoke on children and babies. During the summer and early fall of 2011, the Program continued airing cessation-focused ads, including the graphic "Tumor" ad and the emotional ads "Suffering Emphysema" and "What's Worse." In addition, the Program aired two ads from the emotional "Ronaldo" campaign during early fall 2011. These ads feature a man, Ronaldo, with a stoma in his neck from throat cancer caused by smoking.

In 2011, an average of 7,907 television gross rating points (GRPs) per market were delivered statewide. This is 31% of the recommended amount of annual GRPs to reach the recommended 60% awareness of media messages.

Approximately 75% of the GRPs in 2011 were for graphic (45%) or emotional (30%) cessation ads, and 25% were for secondhand smoke-focused ads. None of the ads were "how to quit" cessation advertisements.

During the first half of 2012, the Program continued these strategies with cessation- and secondhand smoke-focused campaigns. The Program's cessation-focused advertising consisted of the ads "What's Worse" and "Scared," two emotional ads that focus on the emotional consequences of children learning their parents will die of smoking. "Carotid" is one of the most graphic ads the campaign has aired to date, showing the dissection of a carotid artery and removal of fatty deposits from the artery. During the spring of 2012, the Program also aired the secondhand smoke-focused ads "Inhaler" and "Father Smoking," which portray the negative health consequences for children when they are exposed to secondhand smoke. All of these ads were also supported with complementary radio and Internet ads that were aired during the same time.

## Cessation Interventions

NY TCP promotes cessation from tobacco use via a multistrategy, evidence-based approach that includes health systems change, telephone-based smoking cessation

counseling, and health communication. Health systems change approaches include promoting the Medicaid benefits for smoking cessation, encouraging private health plans to expand tobacco cessation coverage, and updating health care provider charting systems to ensure that patients are asked about tobacco use and provided assistance. The New York State Smokers' Quitline provides tobacco cessation counseling and access to nicotine replacement therapy and serves as an information clearinghouse for cessation. Below, we describe NY TCP cessation interventions in more detail, addressing Cessation Centers, the New York State Smokers' Quitline, and reduced patient costs for treatment.

### *Cessation Centers*

The Program funds 19 Cessation Centers to increase the number of health care provider organizations that have systems to screen all patients for tobacco use, provide brief advice to quit at all visits, and provide assistance to help patients quit successfully. Evidence demonstrates that brief advice to quit smoking by a health care provider significantly increases the odds that a smoker will quit. Cessation Centers partner with health care organizations across New York State to help with changes to improve tobacco cessation intervention, offer provider training, provide guidance on system improvement, and provide technical assistance. To extend the reach of their message, the Cessation Centers have used a media campaign ("Don't Be Silent About Smoking") aimed at health care providers.

Cessation Centers have primarily targeted medical practices, where the majority of smokers report getting regular care, thus providing opportunities for intervention on a routine basis. Consistent with RTI recommendations, NY TCP has instructed Cessation Centers to work with organizations that serve higher proportions of tobacco users. Specifically, NY TCP redirected the focus of Cessation Center initiatives from medical practices to community health centers and programs that serve individuals with severe mental illness. Cessation Centers' new objectives specific to community health centers and programs serving individuals with severe mental illness who live in the community (Personalized Recovery-Oriented Services programs) went into effect in August 2012. Cessation Centers provide these organizations with guidance, training, and

assistance on systems-level changes that support the assessment and treatment of tobacco dependence.

Community health centers served more than 1.4 million New Yorkers in 2011, with 86.4% of patients at or below 200% of the poverty level (USDHHS, 2011). Because populations with low socioeconomic status use tobacco at higher rates than the general population, working with community health centers provides a significant opportunity for Cessation Centers to target their efforts. Similarly, people with mental health disorders have disproportionately high rates of tobacco use. Personalized Recovery-Oriented Services programs serve individuals with mental health disorders in an outpatient setting and focus on helping clients set, prepare for, and achieve their life goals. Cessation Centers' relationships with these programs may also help with efforts to promote a policy requiring tobacco-free services across Office of Mental Health facilities, similar to the regulatory changes that the Office of Alcoholism and Substance Abuse Services passed in 2007.

#### *New York State Smokers' Quitline*

The New York State Smokers' Quitline was established in 2000 and provides individualized telephone counseling to adult smokers who want to quit. In addition, the Quitline offers free 2-week nicotine replacement therapy starter kits by phone or Internet to eligible clients, prerecorded telephone messages covering a range of stop-smoking topics, and a Quitsite Web site with interactive features. For health care providers, the Quitline offers a Refer-to-Quit program for tobacco using patients and free cessation continuing medical education programs for providers. Quitlines and Web-based quitsites serve a number of purposes in a tobacco control program, including (1) providing an effective, evidence-based service for helping smokers quit smoking; (2) serving as a clearinghouse of information on smoking cessation for smokers, health care providers, and the general public; (3) providing a call to action in mass media messages designed to promote cessation; and (4) enhancing the ability of health care providers to refer their patients to a helpful resource.

#### *Reduced Patient Costs for Treatment*

NY TCP has worked with the Medicaid program to expand coverage for smoking cessation counseling and

pharmacotherapy and has reached out to New York–based health plans to encourage them to provide greater support for smoking cessation. Fee-for-service Medicaid covers all first-line, FDA-approved medications except nicotine lozenges and most Medicaid Managed Care plans cover at least the nicotine patch and gum, bupropion (Zyban®), and varenicline (Chantix®); some cover even more. Two three-month courses are covered per year, including combination therapy (e.g., patch and gum). Medicaid also reimburses for up to six counseling sessions annually for all Medicaid beneficiaries, expanded from previously covering counseling for adolescents and pregnant and postpartum smokers. NY TCP and the Cessation Centers continue to encourage health plans to expand coverage and promotion of cessation services to their members.

### *Statewide and Community Action*

New York’s statewide tobacco control interventions include a comprehensive statewide clean indoor air law and a cigarette excise tax that is the highest statewide tax in the nation. With these strong, evidence-based policies in place at the state level, NY TCP’s community action efforts focus on policies at the local level with the potential to affect smoking initiation and cessation. The policy goals and the activities to support them are recommended by CDC (2007) and considered essential to the continued reduction of tobacco use (Institute of Medicine, 2007). The community program prioritizes policy change that affects a significant proportion of the state’s population, such as municipalities (i.e., villages, towns, cities, and counties) and large businesses (e.g., large housing complexes, real estate management companies).

Community activities are conducted by 33 Community Partnerships and 16 Reality Check Youth Partners. The Program includes an important role for Reality Check youth, who can uniquely communicate their perspective on tobacco marketing and tobacco use to the public and to policy makers. As a result, Community Partnerships are strongly encouraged to work closely with the Reality Check in their catchment area and to actively and publicly involve youth in their activities.

Community contractors conduct four types of strategies: community education (including paid media), community mobilization, government policy-maker education, and

advocacy with organizational decision makers. Community education strategies include events, earned media, and other types of information dissemination. Community mobilization activities include educating and working with other community organizations and influential individuals to incorporate tobacco control program initiative messages and objectives into their own education and advocacy activities. Government policy-maker education activities include one-on-one meetings with policy makers and testimony at public hearings. Organizational decision-maker advocacy activities may include one-on-one meetings with key stakeholders, such as major employers or real estate managers. As part of decision-maker advocacy, contractors may also provide technical assistance in support of policy development and implementation. Each year, Community Partnership contractors allocate 10% of their budget to paid media, which funds a coordinated media campaign in communities across the state. During 2011–2012, community mobilization was added as a strategy. This requires that contractors recruit influential community organizations and community members in activities to support their policy goals and conduct their own public and policy-maker educational activities.

During FY 2011–2012, Community Partnerships focused their efforts on three initiatives: Point-of-Sale (POS), Tobacco-free Outdoors (TFO), and Smoke-free Multi-Unit Housing (MUH). Reality Checks focused their efforts on the POS initiative and the Smoke-Free Media initiative.

*POS initiative:* The goal of the POS initiative is to reduce the social acceptability of tobacco use by reducing the impact of retail tobacco product marketing on youth. The density of tobacco retailers in high school neighborhoods has been associated with experimental smoking (Leatherdale and Strath, 2007; McCarthy et al., 2009), and exposure to tobacco product marketing at the POS has been consistently associated with increased youth smoking initiation and susceptibility to smoking (Henriksen et al., 2010; Paynter and Edwards, 2009; Slater et al., 2007). Citing the Paynter and Edwards study, the 2012 Surgeon General’s Report concluded that “the addictiveness of tobacco, the severity of the health hazards posed by smoking, the evidence that tobacco marketing and promotion encourages children to start smoking, and the consistency of the evidence

that it influences children's smoking justify banning advertising and displays of tobacco products at the point of sale" (p. 544).

The POS policy goals are intended to reduce the level of tobacco product marketing and include policies that prohibit the display of tobacco products in establishments open to youth, limit the number of retailers that can sell tobacco products in a community, prohibit the sale of tobacco products in stores that are near schools, and/or prohibit the sale of tobacco products in pharmacies. During 2011–2012, additional support for the POS initiative came from an American Recovery and Reinvestment Act-funded Communities Putting Prevention to Work grant from CDC, which ended in May 2012. This funding was used to support a contract with the Center for a Tobacco-Free New York to leverage the media advocacy resources and policy change expertise at the American Cancer Society.

The POS initiative continues to break new ground in community tobacco control and serve as a model for other state programs. This initiative has been characterized by effective communication and a high level of coordination between the Program, the Center for Public Health and Tobacco Policy, Center for Tobacco-Free New York, RTI, and the community contractors. Program and evaluation staff have been invited to present information and findings about the initiative to science and practice stakeholders.

*TFO initiative:* The goal of the TFO initiative is to reduce the social acceptability of tobacco use by decreasing the number of public places where it is allowed. The policy goals for this initiative are restrictions on smoking in public places, such as beaches and parks and in building entryways. Well-enforced local policies that prohibit tobacco use in outdoor public places such as beaches, parks, and playgrounds, and in building entryways communicate that tobacco use is not acceptable to children and adolescents (Institute of Medicine, 2007).

*MUH initiative:* The goal of the MUH initiative is to eliminate exposure to secondhand smoke by increasing the number of smoke-free homes. The policy goal for this initiative is to increase the number of housing units where smoking is prohibited. Contractors in more densely populated areas of the state advocate with building owners and managers for smoke-free policies in large housing complexes and are directed to prioritize those with a minimum of 50 units. Smoke-free homes

not only protect nonsmokers and children from secondhand smoke, they also have the potential to increase quit attempts among smokers (Pizacani et al., 2004).

## Key Evaluation Questions

This section addresses NY TCP progress from 2003 to 2011 in achieving its statutorily mandated outcomes of reducing tobacco use and reinforcing antitobacco attitudes. Where available, data are presented for the remaining United States to allow comparisons with New York. We accomplish this by addressing specific evaluation questions that speak to core strategies used by NY TCP to reduce tobacco use:

- How has the Program influenced trends in tobacco use from 2003 to 2011?
- How have statewide and community action efforts influenced key outcome indicators?
- How effective have public health communications been in influencing key outcome indicators?
- What is the impact of NY TCP funding and tobacco control policies?
- How have other key outcome indicators changed over time?

## *Cigarette Use and Smoking Cessation Indicators*

The key outcome indicators for this section include the

- percentage of adults who currently smoke in New York and the United States,
- number of cigarettes smoked per day by current adult smokers in New York and the rest of the United States,
- percentage of adults who currently use smokeless tobacco and smoke cigars,
- percentage of adult smokers who intend to make a quit attempt in the next 30 days,
- percentage of adult smokers who made a quit attempt in the past 12 months, and
- youth smoking prevalence as measured by the New York and National Youth Tobacco and Youth Risk Behavior Surveillance System Surveys.

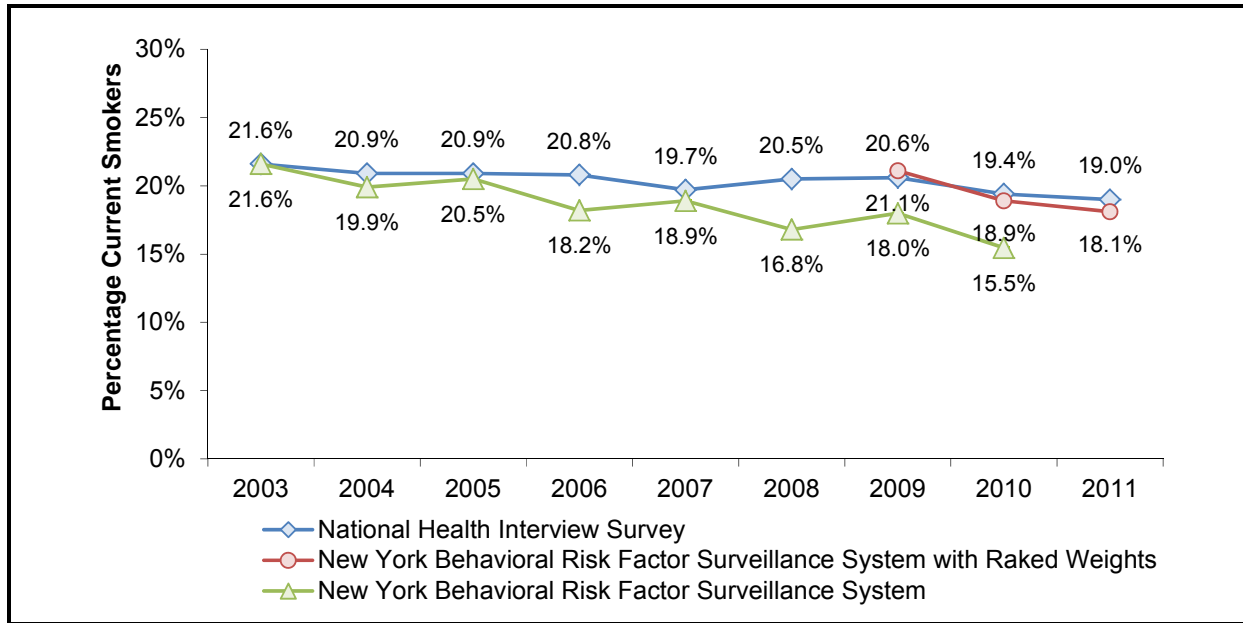
## Adult Tobacco Use Measures

In 2011, the methodology for conducting and weighting the BRFSS changed, which complicates the interpretation of trends in smoking prevalence. In 2011, the BRFSS weighting methods changed to account for additional demographic characteristics (using a raking methodology). While this new method likely produces more accurate estimates of smoking prevalence, the new estimates are higher than those from previous years. In addition, BRFSS estimates now include respondents surveyed by cell phones. Previous studies indicate that cell phone only households are more likely to smoke (Blumberg and Luke, 2011; Delnevo, Gundersen, and Hagman, 2009). Below, we compare smoking prevalence in the 2003–2004 and 2011 BRFSS. We believe these comparisons are reasonable because the prevalence of wireless only households in 2003–2004 was 3% to 5% compared with 32% in 2011 (Blumberg and Luke, 2012). It is possible that some of the differences between these two periods could result from a difference in weighting methodology. The prevalence of smoking in 2011 from the BRFSS is 18.1%, which is statistically similar to the prevalence of smoking nationally of 19.0% (Figure 4). However, the prevalence of smoking in New York is lower in 2011 than in 2003, and there was a statistically significant downward trend over that time period. The percentage decline over this time period was larger in New York (16%) than nationally (12%).

Table 4 presents the change in smoking prevalence from 2003–2004 to 2011 from the BRFSS overall and by specific sociodemographic groups. Years 2003 and 2004 were combined to increase the sample sizes for subgroups. Overall, the prevalence of smoking declined by 13% during this period, with marked differences across race/ethnicity, education, and income groups. The prevalence of smoking declined by 16% among Caucasians, with no significant change among African Americans or Hispanics. Smoking prevalence declined the most among those with a college degree or more (–27%), followed by those with some college education (–21%) and those with a high school degree or equivalent (–12%). Adults with less than a high school degree had no statistically significant change in their prevalence, which was 26.6% in 2011—higher than the overall rate (18.1%). A similar pattern exists by income groups,



**Figure 4. Percentage of Adults Who Currently Smoke in New York (Behavioral Risk Factor Surveillance System [BRFSS]) and Nationally (National Health Interview Survey), 2003–2011**



Note: Statistically significant decrease in New York and national adult smoking prevalence between 2003 and 2011. Statistically significant downward trend from 2003 to 2011 in New York and nationally, with a steeper decline in New York than nationally.

**Table 4. Percentage of Adults Who Currently Smoke in New York by Demographic Groups, Behavioral Risk Factor Surveillance System 2003–2004 and 2011**

Group	2003–2004	2011	Relative % Change
Overall	<b>20.8%</b>	<b>18.1%</b>	<b>-13%</b>
Race/Ethnicity			
<b>Caucasian</b>	<b>21.5%</b>	<b>17.9%</b>	<b>-16%</b>
African American	23.3%	21.6%	-8%
Hispanic	18.3%	17.4%	-5%
Education			
< High school	27.5%	26.6%	-3%
<b>High school or GED</b>	<b>27.0%</b>	<b>23.8%</b>	<b>-12%</b>
<b>Some college</b>	<b>21.9%</b>	<b>17.3%</b>	<b>-21%</b>
<b>College graduate or higher degree</b>	<b>12.5%</b>	<b>9.2%</b>	<b>-27%</b>
Income			
Less than \$25,000	26.9%	28.2%	5%
<b>\$25,000–\$49,999</b>	<b>23.2%</b>	<b>18.4%</b>	<b>-21%</b>
<b>\$50,000–\$74,999</b>	<b>20.1%</b>	<b>13.8%</b>	<b>-31%</b>
<b>\$75,000 and more</b>	<b>14.3%</b>	<b>10.2%</b>	<b>-28%</b>
Mental Health in Past Month			
<b>Good</b>	<b>19.2%</b>	<b>16.1%</b>	<b>-16%</b>
Not good	35.6%	31.8%	-11%

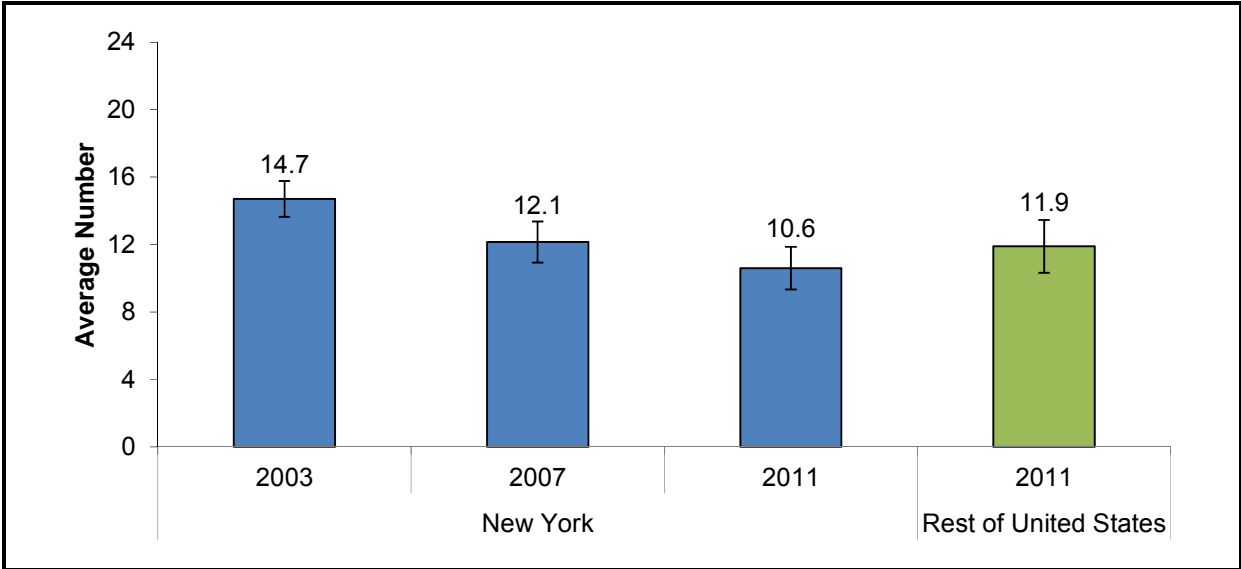
Note: Statistically significant changes between 2003–2004 and 2011 are presented in bold text.

with larger declines in smoking prevalence among those with the highest income levels. The prevalence of smoking declined by 28%, 31%, and 21% for those with incomes of \$75,000 or more, between \$50,000 and \$74,999, and between \$25,000 and \$49,999, respectively.

Those with incomes less than \$25,000 had no statistically significant change in smoking prevalence. This group also had the highest smoking prevalence among the four income groups in 2011 at 28.2% and higher than the statewide average (18.1%). Finally, the prevalence of smoking declined by 16% for adults with good mental health, while there was no statistically significant change for adults with poor mental health. The latter group has a prevalence of smoking nearly twice that of those with good mental health (31.8% vs. 16.1%).

From 2003 to 2011, daily cigarette consumption among current smokers declined by 27.9% (from 14.7 to 10.6 cigarettes per day) (Figure 5). Although there is also a statistically significant downward trend from 2007 to 2011, the decline over this 4-year period (12.7% relative decline) was less than the previous 4-year period (17.4% relative decline). Average cigarette consumption is statistically similar between New York and the rest of the United States in 2011.

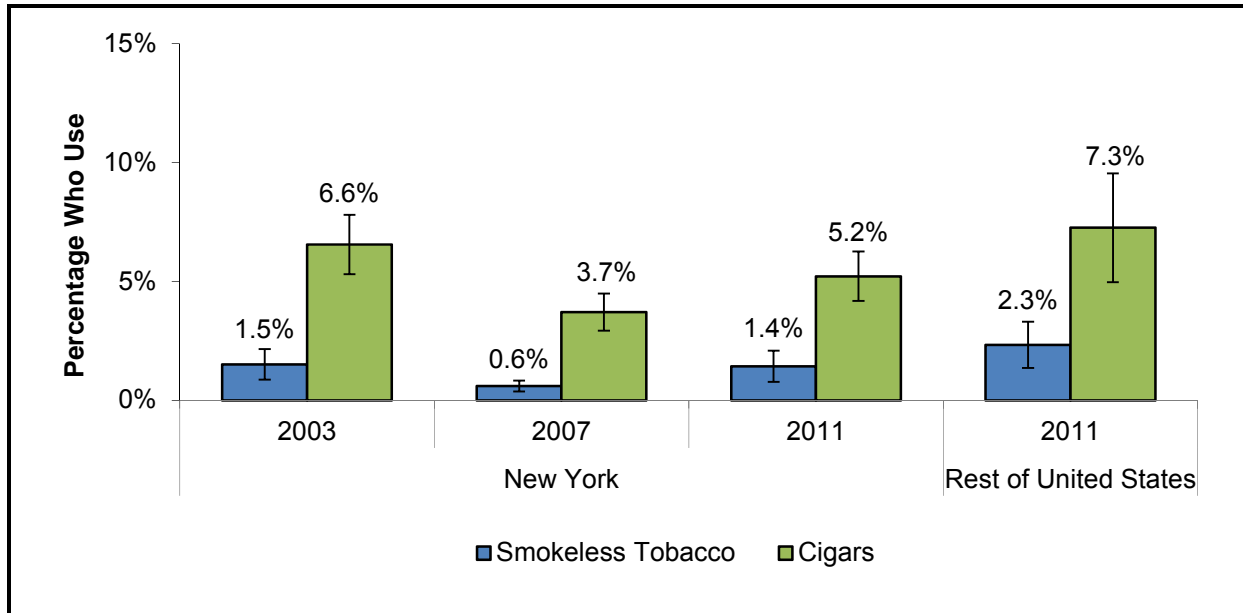
**Figure 5. Average Daily Cigarette Consumption by Current Smokers, Adult Tobacco Survey 2003–2011 and National Adult Tobacco Survey 2011**



Note: Statistically significant difference between 2003 and 2007 and between 2003 and 2011 among New York adult smokers.

A very different pattern exists for smokeless tobacco and cigar use in New York from 2003 to 2011 (Figure 6). Although the prevalence of smokeless tobacco and cigar use is unchanged over this period, there was a statistically significant decrease for both measures from 2003 to 2007 and then a statistically significant increase from 2007 to 2011. However, in 2011, only 1.4% of adults were current users of smokeless tobacco—comparable to 1.5% in 2003. In 2011, 5.2% of New Yorkers were current cigar smokers, statistically similar to the 6.6% prevalence in 2003. In 2011, rates of smokeless tobacco and cigar use were statistically similar between New York and the rest of the United States.

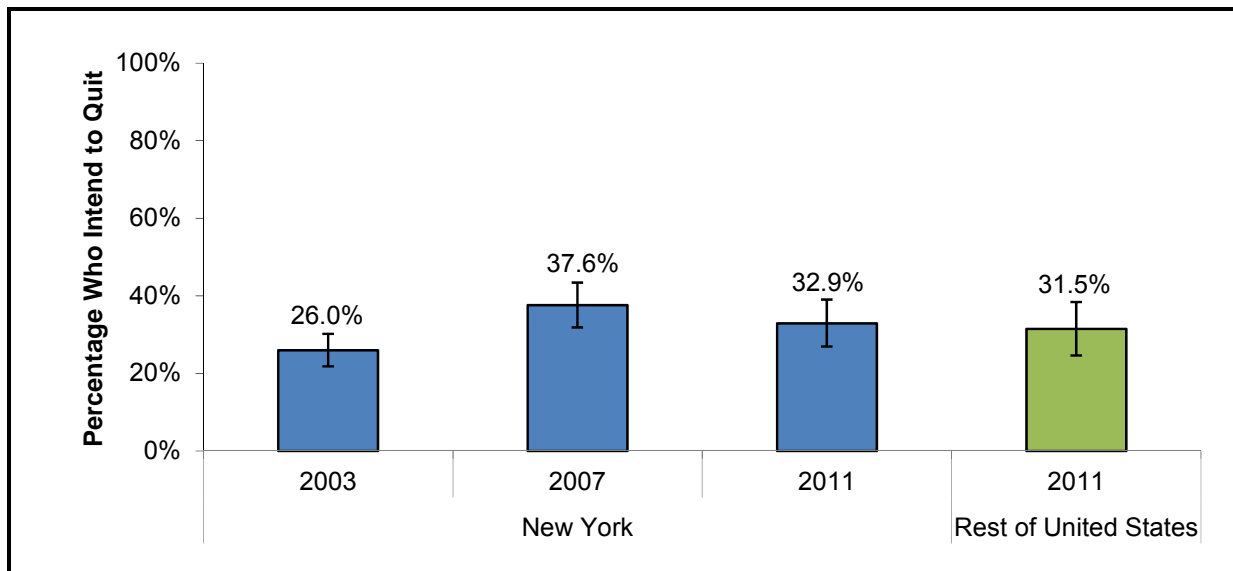
**Figure 6. Percentage of Adults Who Currently Use Smokeless Tobacco and Smoke Cigars, Adult Tobacco Survey 2003–2011 and National Adult Tobacco Survey 2011**



Note: “Rarely” was added as an option for how often the respondent uses smokeless tobacco or cigars in Q4 2011. Current smokeless tobacco and cigar use is defined as those who use smokeless tobacco or cigars every day, some days, or rarely. Statistically significant decrease between 2003 and 2007 and a statistically significant increase between 2007 and 2011 in the prevalence of smokeless tobacco and cigar use among New York adults overall.

Turning to indicators of smoking cessation, there was a 45% relative increase in intentions to quit smoking from 2003 to 2007 and no change over the next 4 years (Figure 7). In 2001, intentions to quit were similar between New York and the rest of the United States. Similarly, there was a 29% relative increase in the percentage of smokers who made a quit attempt in the past 12 months from 2003 to 2007 and then no change

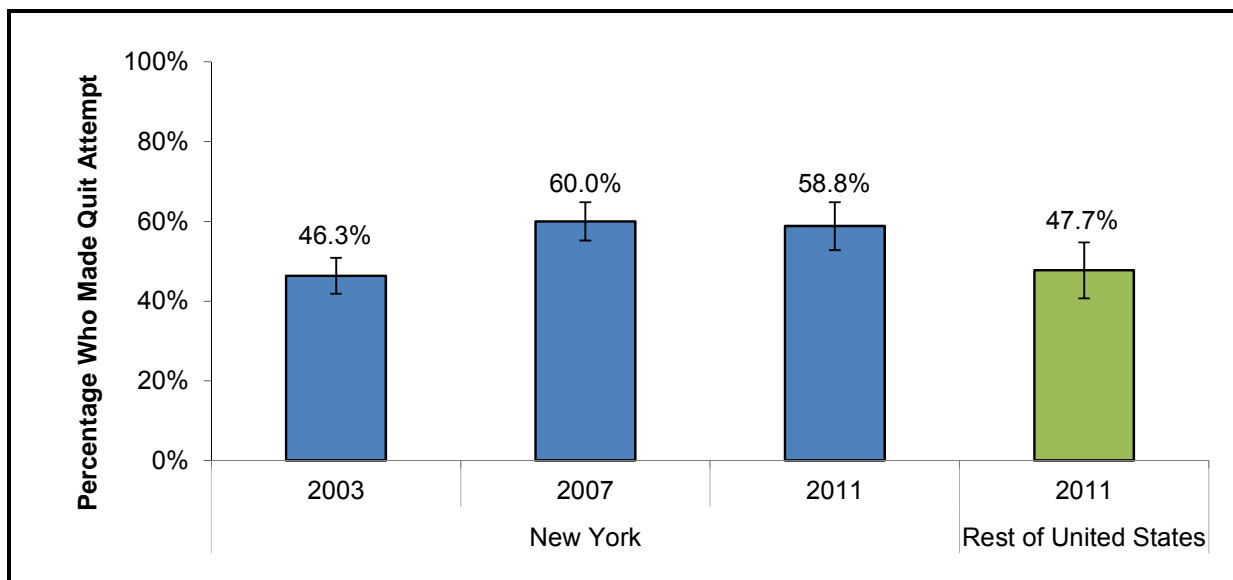
**Figure 7. Percentage of Adult Smokers Who Intend to Make a Quit Attempt in the Next 30 Days, Adult Tobacco Survey 2003–2011 and National Adult Tobacco Survey 2011**



Note: Statistically significant increase between 2003 and 2007 among New York adult smokers.

thereafter (Figure 8). In 2011, the prevalence of making a quit attempt in the past 12 months was higher in New York (58.8%) than in the rest of the United States (47.7%).

**Figure 8. Percentage of Adult Smokers Who Made a Quit Attempt in the Past 12 Months, Adult Tobacco Survey 2003–2011 and National Adult Tobacco Survey 2011**

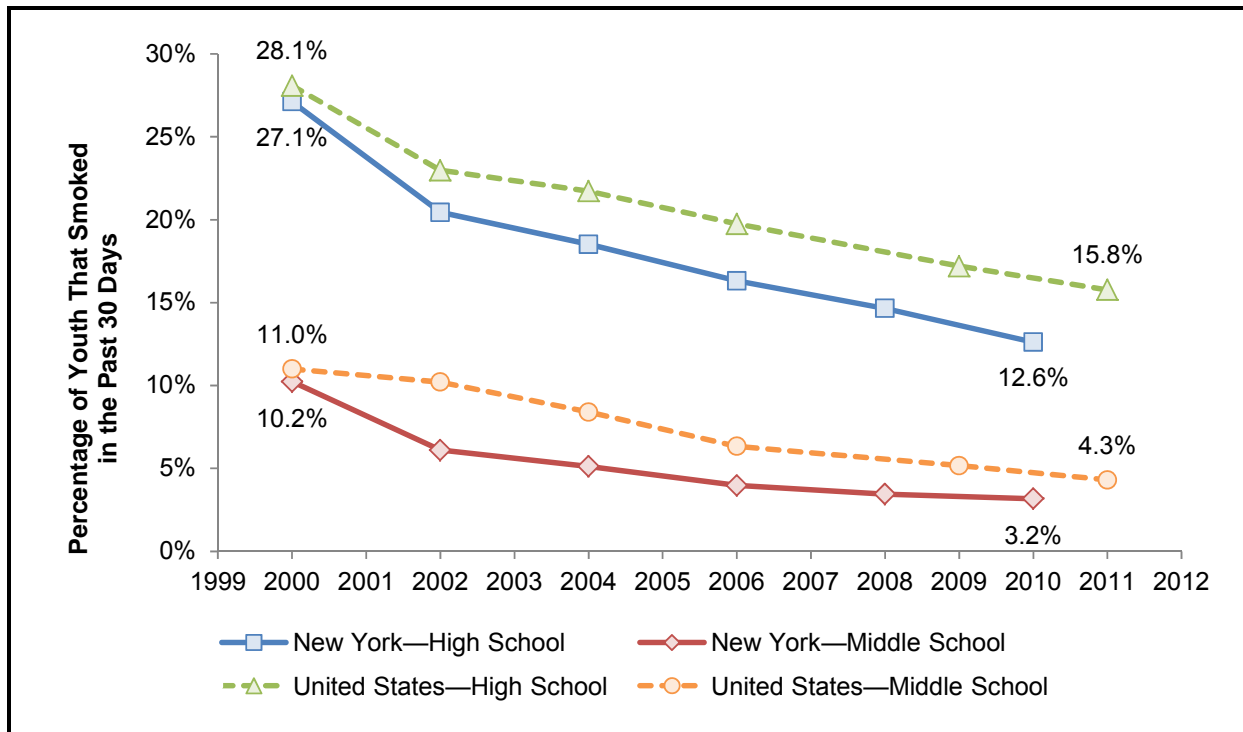


Note: Statistically significant increase between 2003 and 2007 and between 2003 and 2011 among New York adult smokers. Statistically significant difference between New York and the remaining United States in 2011.

## Youth Tobacco Use Measures

Since 2000, the prevalence of smoking among high school students declined by 53.5% in New York State and by 43.9% nationally (Figure 9). While the prevalence of smoking among high school students has declined over time, the downward trend in smoking prevalence among New York high school students is steeper than the national trend. However, the prevalence of smoking among high school students is not statistically different between New York (12.6% in 2010) and the U.S. (15.8% in 2011) according to the New York and National Youth Tobacco Surveys. From 2000 to 2010, the prevalence of smoking among middle school students declined by 68.9% in New York (Figure 9). From 2000 to 2011, the prevalence of smoking declined by 60.9% among middle school students nationally.

**Figure 9. Percentage of Middle and High School Students Who Currently Smoke in New York and Nationally, New York Youth Tobacco Survey 2000–2010 and National Youth Tobacco Survey 2000–2011**



Note: Statistically significant decrease among middle school and high school students in New York between 2000 and 2010 and among middle school and high school students in the United States between 2000 and 2011. Statistically significant downward trend among middle and high school students from 2000 to 2010 in New York and from 2000 to 2011 nationally, with a steeper decline among high school students in New York than nationally.

## *Effect of Statewide and Community Action on Key Outcome Indicators*

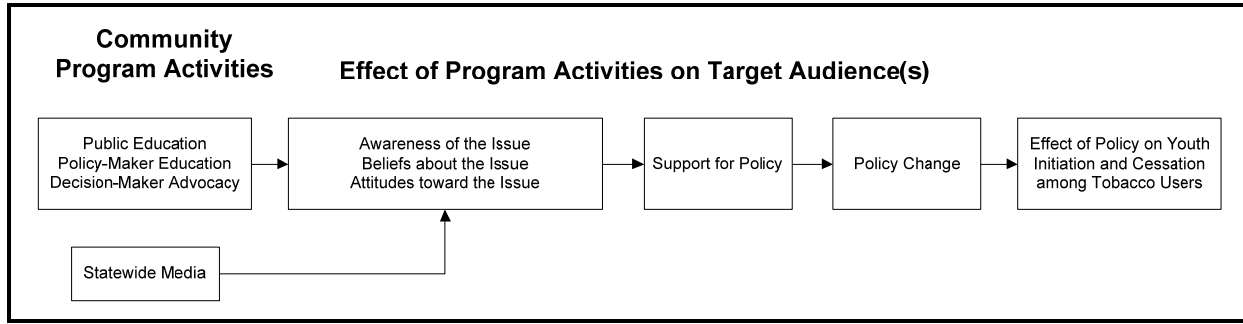
The adoption and implementation of local and statewide policies that permanently change society's acceptance of tobacco use is the primary indicator of the effectiveness of community programs (Gerlach et al., 2005). However, while there are significant challenges to demonstrating the effectiveness of community-level interventions (Granner and Sharpe, 2004; Roussos and Fawcett, 2000), NY TCP's community program is characterized by two factors that are considered hallmarks of effective community interventions (defined as those that achieve their defined goals): a clear theory of how program activities are expected to result in policy change and the capacity to conduct those activities (Leviton and Cassidy, 2006).

The Program's theory of how its activities are expected to lead to policy change provided the framework for a revision of the statewide and community action evaluation plan in 2009. Program education activities target both the general public and the policy makers or decision makers who can influence policy change. Statewide media, while rarely used, and complementary local media campaigns can also amplify program education activities. Program messages convey information about the issue to change beliefs and attitudes. For example, POS initiative activities raise awareness of the high level of tobacco marketing in the retail environment and how that marketing increases youth tobacco use. These beliefs, in turn, are expected to increase negative attitudes toward tobacco marketing at the POS and create support for the POS policy solutions.

Figure 10 illustrates the underlying theory of change that currently guides the evaluation of statewide and community action. This conceptual model was used to identify gaps in the evaluation surveillance system and as the basis for additional survey questions measuring initiative-relevant awareness, beliefs, attitudes, and policy support. These items were added to the New York and National Adult Tobacco Surveys.

The model also identified the need for new surveillance systems, including the Local Opinion Leaders Survey (LOLS), a telephone survey of New York county-level leaders that was

**Figure 10. Relationship between Contractor Activities and Policy Outcomes**



conducted in 2011. This survey was the first time that the Program had information to assess the effects of its activities on a key audience: policy makers. We completed interviews with 679 (59%) of the 1,148 county-level opinion leaders. The survey included items about local opinion leader awareness of, beliefs about, attitudes toward, and policy support for the POS and TFO initiative issues. Many of the items were the same as those included in the ATS and NATS, so that public and opinion leader responses could be compared. More in-depth questions were included in this survey, along with a number of open-text responses that provided context for the quantitative findings.

In this section, we examine the effects of community-level activities on key outcome indicators for each of the three initiatives: the POS initiative, the TFO initiative, and the MUH initiative. Specifically, we address the following questions:

- To what extent have Program efforts resulted in local policy change, and what is the reach of those policies?
- To what extent have Program efforts affected support for local policy changes among the target audience?
- To what extent have Program efforts raised awareness of the initiative and affected beliefs and attitudes toward the initiative’s focus area?
- To what extent can we link Program activities with key outcomes?

For each of the three initiatives, we first present data on policy change reported in the Community Activity Tracking (CAT) system. Where feasible, we use information reported in CAT or combine CAT data with U.S. Census data to report the potential reach of a policy change, an important indicator of potential effectiveness (Frieden, 2010). We subsequently describe the

extent to which the public and policy makers support the policy goals of the three initiatives, and their beliefs and attitudes relevant to the initiative issues. Where available, we also describe the extent to which the public and policy makers are aware of the issue.

Public awareness, beliefs, attitudes, and policy support relevant to each community initiative are examined using ATS data, and where relevant we compare New York findings to a nationally representative sample in NATS. Policy-maker awareness, attitudes, beliefs, and support for policy change are examined using data from LOLS.

### **Effectiveness of Statewide and Community Action on Local Policy Change**

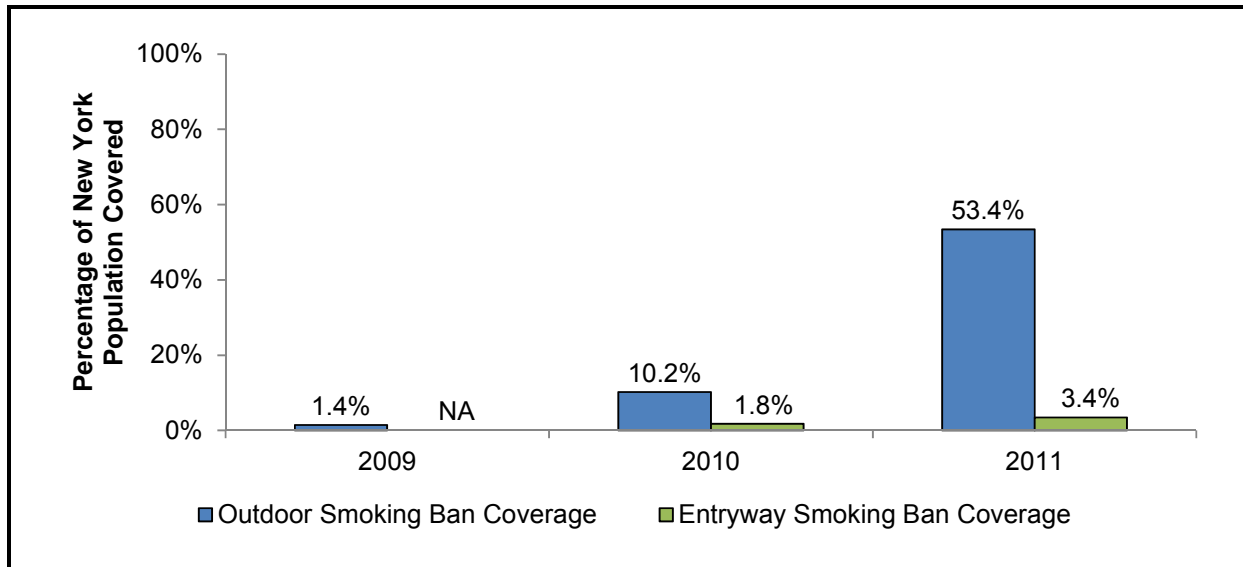
As of May 2012, one New York municipality (Haverstraw Village) adopted a POS initiative policy that bans the display of tobacco products. This policy was rescinded after the New York Association of Convenience Stores and several tobacco companies filed a civil lawsuit against the village. While this may appear to be a modest accomplishment, it is the first display ban policy adopted in the United States. However, there is evidence that the Program is building the public and policy-maker support that will result in future policy change. In addition, the evaluation has collected qualitative data from the public and policy makers to better understand the challenges to building support for POS policies. These data highlight information gaps about the effects of tobacco industry marketing at the POS on youth that the Program can address as part of its educational activities. Furthermore, these data also describe why the public and policy makers may oppose POS policies. Counterarguments to this opposition, such as fears about a negative effect on businesses or beliefs that such policies would not be effective, can be developed using the research literature. For example, recent reports from Ireland and New Zealand, where tobacco product displays are banned, provide evidence that these policies have not had a negative impact on businesses (Hoek et al., 2011; Quinn et al., 2011) and that they can denormalize tobacco use (McNeill et al., 2011). Policy-maker concerns about how the POS model policies would be implemented and enforced can be allayed



with fact sheets prepared by the Center for Public Health and Tobacco Policy.

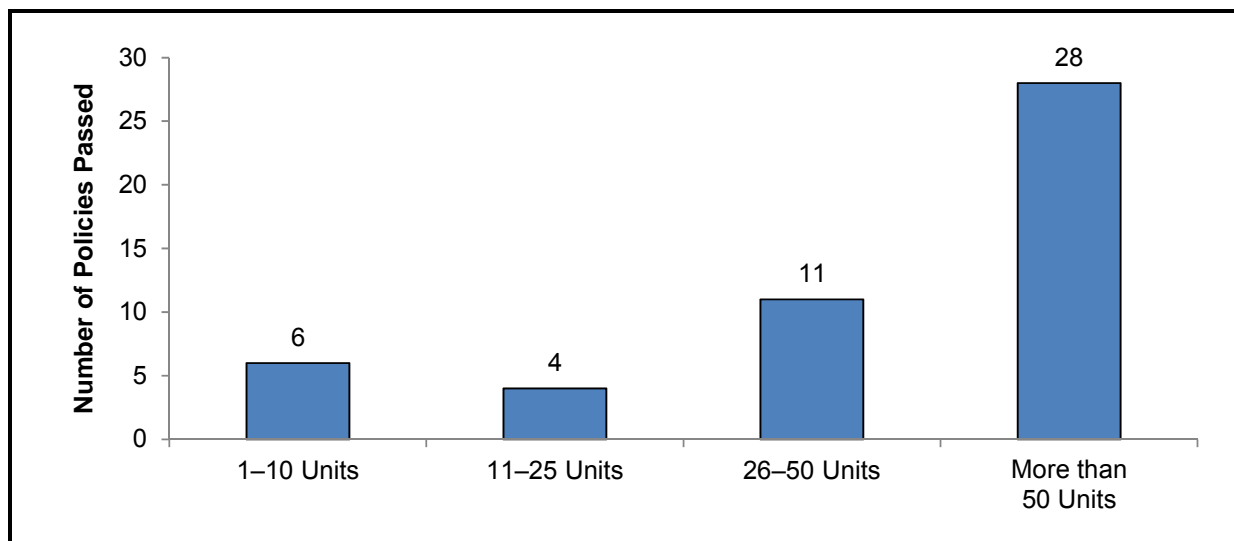
As a result of the TFO initiative activities, 21 municipalities adopted policies to prohibit tobacco use in outdoor public places such as beaches, parks and playgrounds, and 12 municipalities adopted policies prohibiting tobacco use in building entryways. As Figure 11 shows, these policies affect more than 50% of the state population.

**Figure 11. Percentage of New York Population Covered by Tobacco-Free Outdoor Policies Adopted by Municipalities from 2009–2011, CAT System**



Nearly 50 tobacco-free MUH policies were adopted as a result of the contractor activities. Figure 12 shows the number of policies passed and the number of housing units covered by the policy.

**Figure 12. Number of Tobacco-free Multi-Unit Housing Policies Adopted by the Number of Housing Units Covered by Each Policy, CAT System July 2011–June 2012**

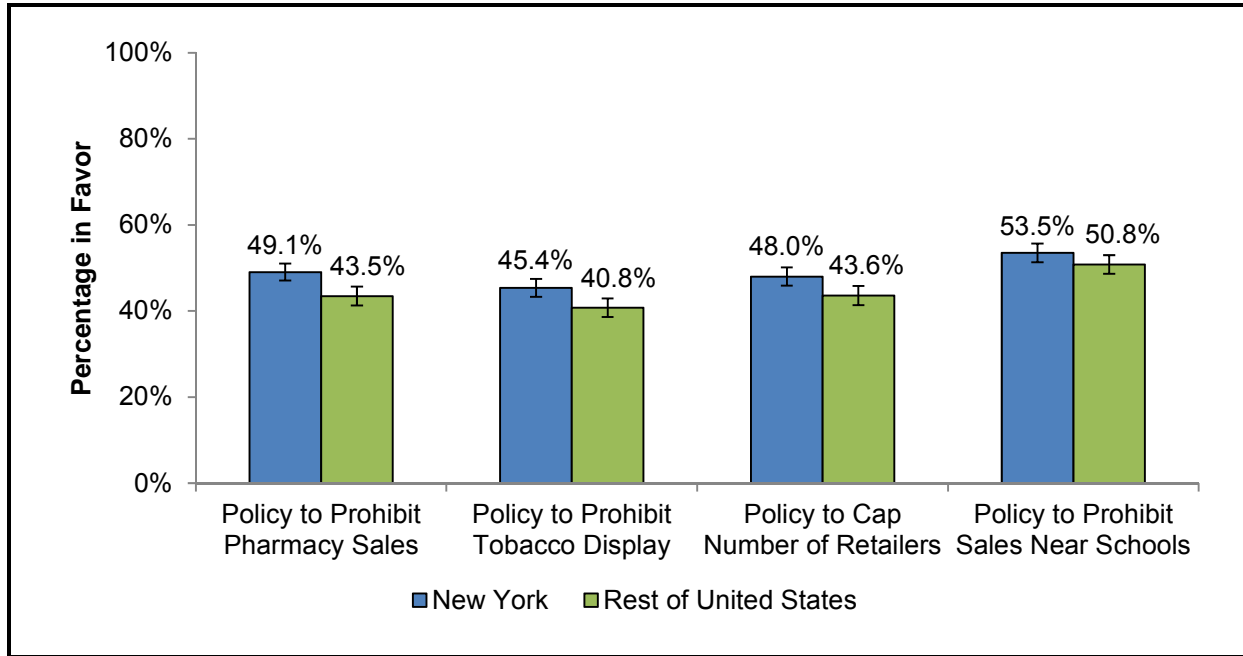


### Effectiveness of Statewide and Community Action on Support for Local Policy Change

While acknowledging that the number of policies adopted and the reach of those policies are the gold standard of community tobacco control programs, local context such as competing health or economic priorities, may pose significant barriers to policy change even when there is significant support for that change. As a result, the extent to which the public and policy makers support policy change is an early indicator of program effectiveness. Figures 13 and 14 present public and policy-maker support for the four POS initiative policies.

As Figure 13 shows, a larger percentage of New York adults supported each of the four POS initiative policies than did adults in the rest of the United States. Support differed by policy, with the most New Yorkers supporting a policy to prohibit tobacco sales near schools and the fewest supporting a policy to prohibit the display of tobacco products.

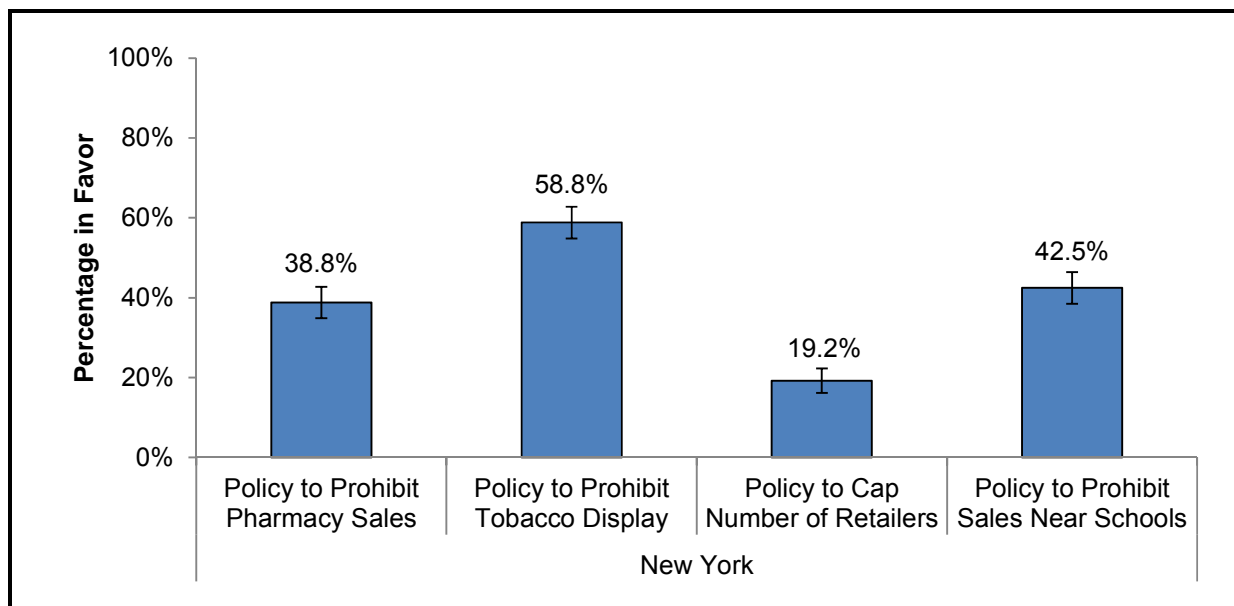
**Figure 13. Percentage of Adults Who Support POS Policies, Adult Tobacco Survey and National Adult Tobacco Survey 2010–2011**



Note: Statistically significant difference between New York and the remaining United States for pharmacy sales ban, tobacco display ban, and retailer cap.

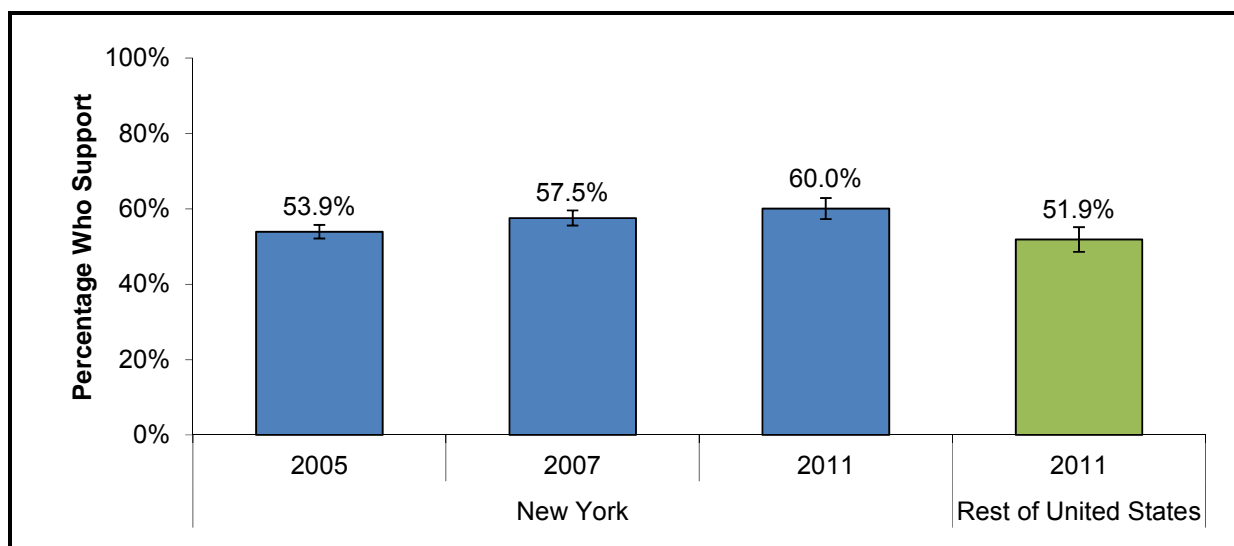
With one exception, a lower percentage of policy makers than the general public supported the POS policies (Figure 14). The largest percentage of policy makers supported a policy that would prohibit the display of tobacco products and the lowest percentage supported a policy to cap the number of retailers in their community. Nearly 30% more policy makers supported the display ban than did the general public, whereas public support for the other three POS policies exceeded policy-maker support by a range of approximately 10% to 30%. LOLS asked policy makers who said they would not support a specific policy to briefly tell the interviewer why. These responses provide insight into why policy makers supported the display ban in preference to policies that would restrict some retailers’ ability to sell tobacco products (a policy to cap the number of retailers; a policy to ban tobacco sales near stores); some of the resistance focused on policy-maker perceptions that such policies would put some businesses at a disadvantage relative to other businesses in the community and would be difficult to implement fairly.

**Figure 14. Percentage of Local Opinion Leaders Who Support POS Initiative Policies, Local Opinion Leaders Survey 2011**



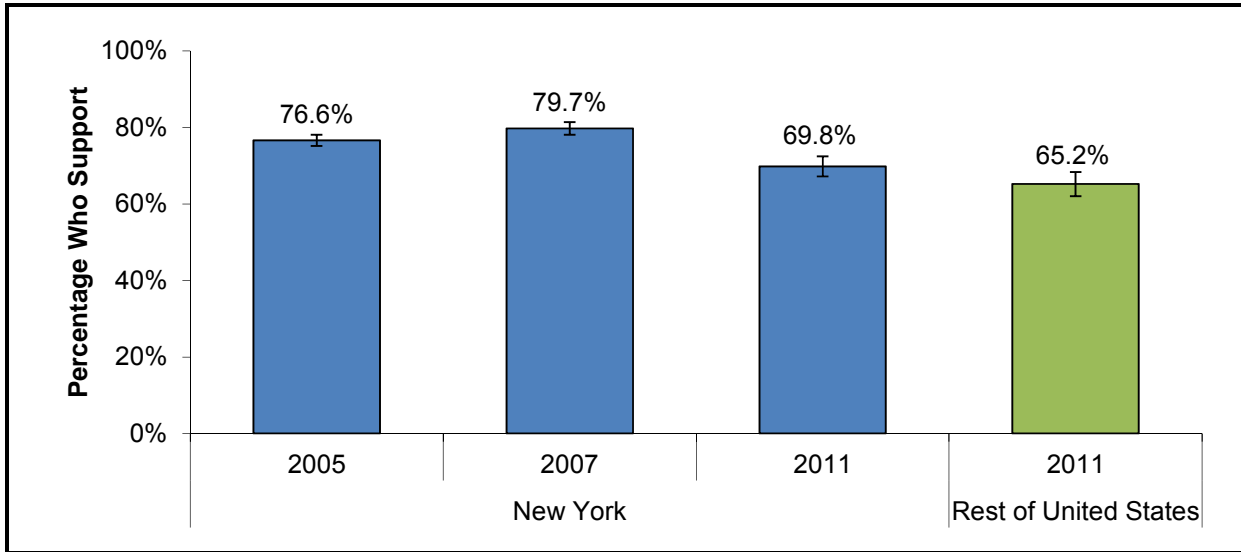
Figures 15 and 16 present changes in public support for the two TFO initiative policies between 2005 and 2011 and compare New York support for these policies to support in the rest of the United States during 2011. Figure 17 presents policy-maker support for the two POS policies during 2011.

**Figure 15. Percentage of Adults Who Support a Ban on Smoking in Outdoor Public Places, Adult Tobacco Survey 2005–2011 and National Adult Tobacco Survey 2011**



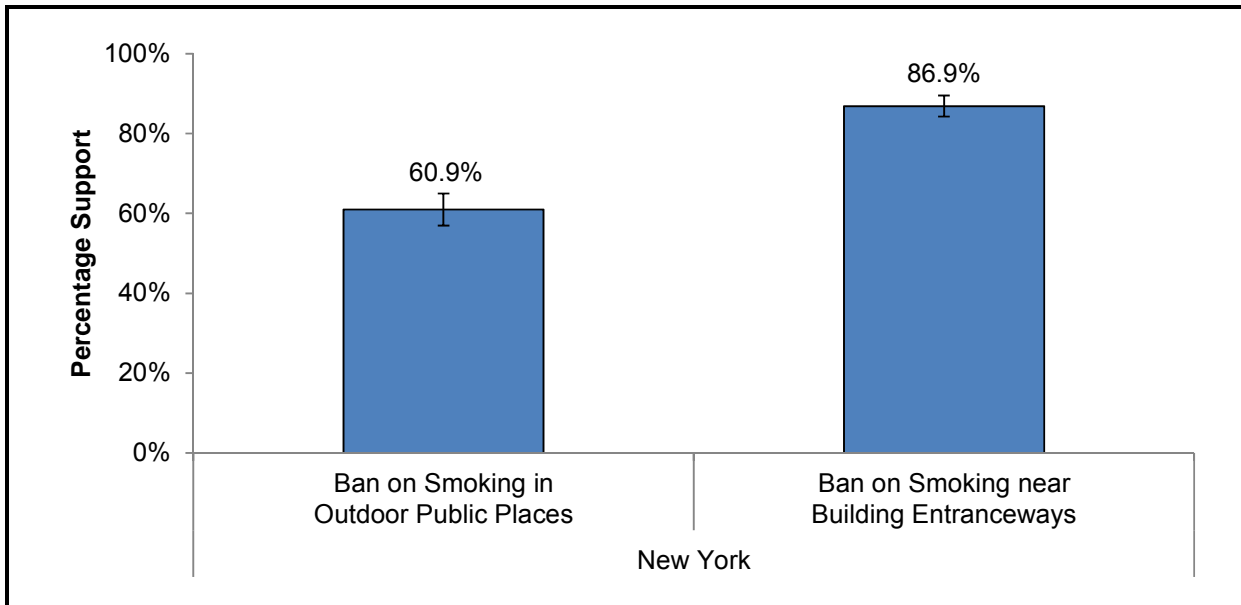
Note: Statistically significant increase between 2005 and 2011 among New York adults overall. Statistically significant difference between New York and the remaining United States in 2011.

**Figure 16. Percentage of Adults Who Support a Ban on Smoking in Building Entraceways, Adult Tobacco Survey 2005–2011 and National Adult Tobacco Survey 2011**



Note: Statistically significant increase between 2005 and 2007, statistically significant decrease between 2007 and 2011, and statistically significant decrease between 2005 and 2011 among New York adults. Statistically significant difference between New York and the remaining United States in 2011.

**Figure 17. Percentage of Local Opinion Leaders Who Support a Ban on Smoking in Outdoor Public Places and a Ban on Smoking in Building Entraceways, Local Opinion Leaders Survey 2011**



Note: Statistically significant difference between outdoor public places and building entrances.

Support for smoking bans in outdoor public places increased among New Yorkers between 2005 and 2011, and in 2011 support for this policy was higher in New York than in the rest

of the United States (see Figure 15). In contrast, support for smoking bans in building entryways decreased among New Yorkers between 2005 and 2011, although support for this policy in 2011 was significantly higher in New York than in the rest of the United States (see Figure 16).

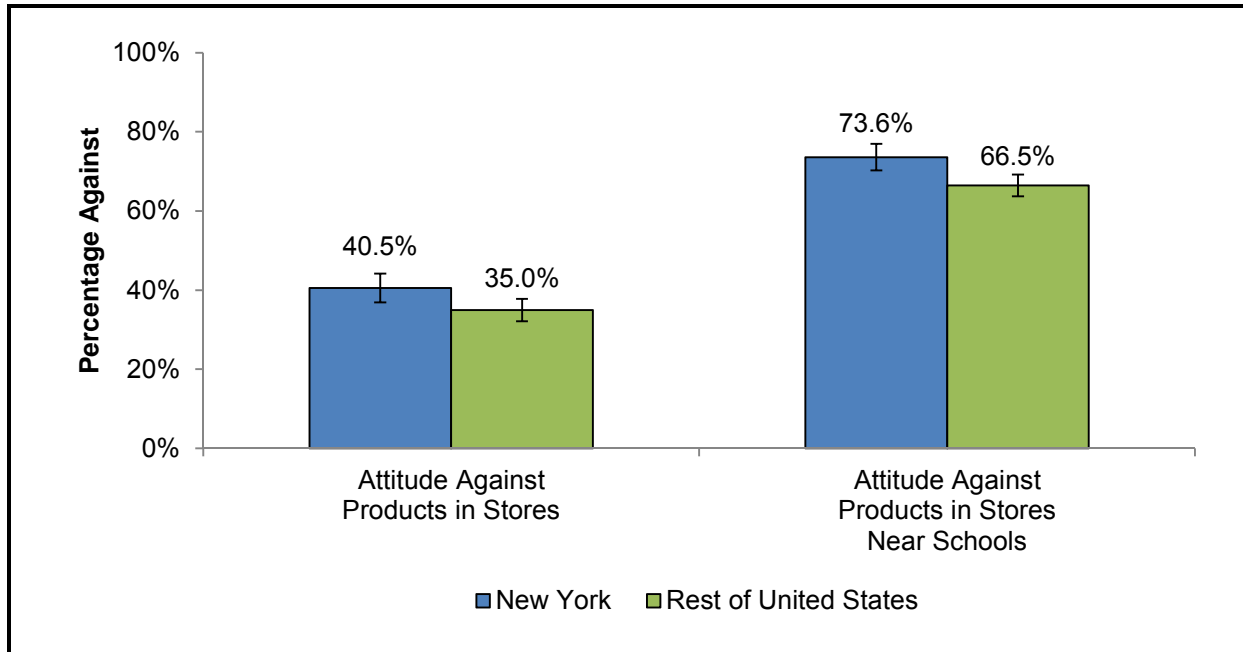
Policy-maker support for smoking bans in outdoor public places was similar to public support for this policy; however, as Figure 17 shows, local opinion leaders were significantly more supportive of a ban on smoking near building entryways. The level of support for this policy among policy makers far exceeded support among the general public.

### **Effectiveness of Statewide and Community Action on Attitudes, Beliefs, and Awareness**

Long-established tobacco control policies such as smoke-free indoor air laws, are supported by a majority of the public. However, this support was built over time through the efforts of state and local tobacco control programs. For example, public support for smoke-free workplaces rose from 55% to 75% between 1992 and 2007, and public support for smoke-free restaurants rose from 42% to 64% during this period (Pacheco, 2011). Community contractors working toward the POS and TFO initiative policies today face a similar challenge as they work to increase support for policy change. They must first raise awareness and change attitudes and beliefs about POS tobacco marketing and smoking in outdoor spaces before the public will recognize the need for a policy solution. As a result, attitudes toward, beliefs about, and awareness of the relevant initiative issue (e.g., tobacco industry marketing at the POS and smoking in outdoor public places) are early indicators of community program effectiveness.

Figure 18 presents public attitudes that parallel two of the three POS initiative policy goals: attitudes toward tobacco product marketing at the POS and toward the sale of tobacco products near schools. It is expected that the more negative public attitudes toward these issues become, the more likely it is that the public will support the associated policy solution.

**Figure 18. Percentage of Adults Who Hold Negative Attitudes toward the Display of Tobacco Products at the Point of Sale and toward the Sale of Tobacco Products in Stores Near Schools, Adult Tobacco Survey and National Adult Tobacco Survey 2010**

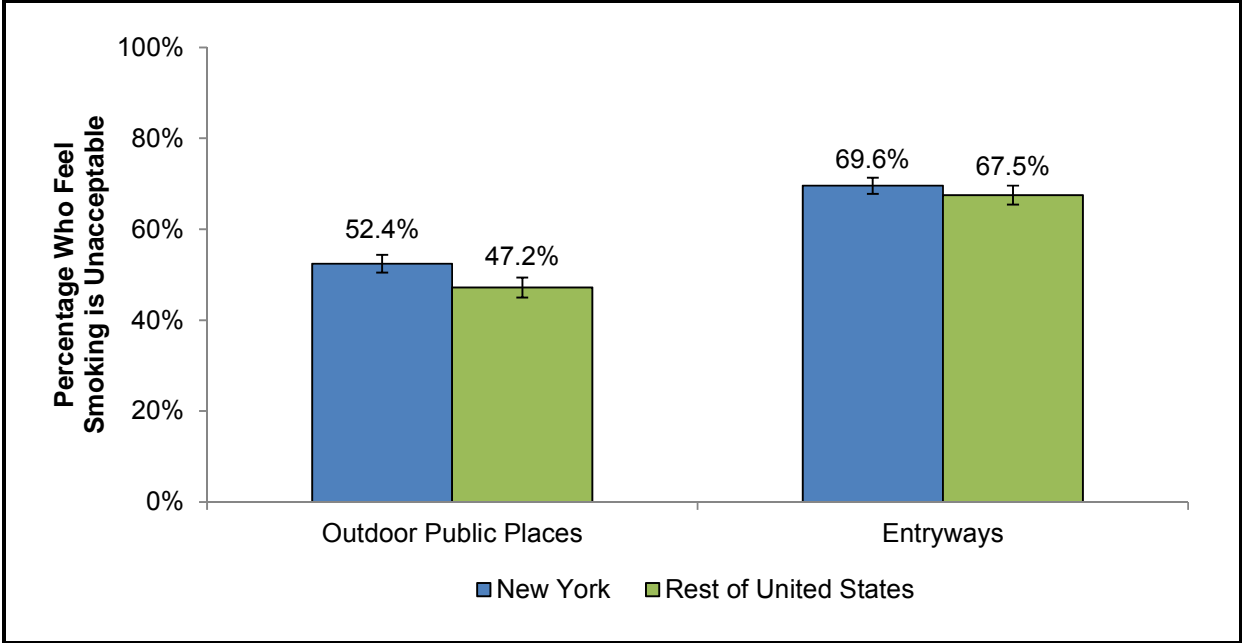


Note: Statistically significant difference between attitudes toward display of tobacco products at the point of sale and toward tobacco product sales in stores near schools. Statistically significant difference between New York and the remaining United States for both attitudes.

New Yorkers were almost twice as likely to hold negative attitudes toward tobacco products being sold in stores near schools than they did toward tobacco products being displayed in stores. New Yorkers also held more negative attitudes toward both POS target issues than did participants in the rest of the United States. New Yorkers were also more likely to believe that exposure to tobacco marketing at the POS increases youth smoking: 69.8% responded that they endorsed this belief, compared with 63.2% of respondents in the rest of the United States. Local opinion leaders also hold similar beliefs—80.7% said that they believe seeing tobacco product displays makes youth at least somewhat more likely to become smokers.

Attitudes toward TFO issues—smoking in outdoor public places and in building entryways—are presented in Figure 19. Attitudes in New York did not differ from attitudes in the rest of the country.

**Figure 19. Percentage of Adults Who Feel Smoking in Outdoor Public Places and in Building Entryways is Unacceptable, Adult Tobacco Survey and National Adult Tobacco Survey 2010–2011**

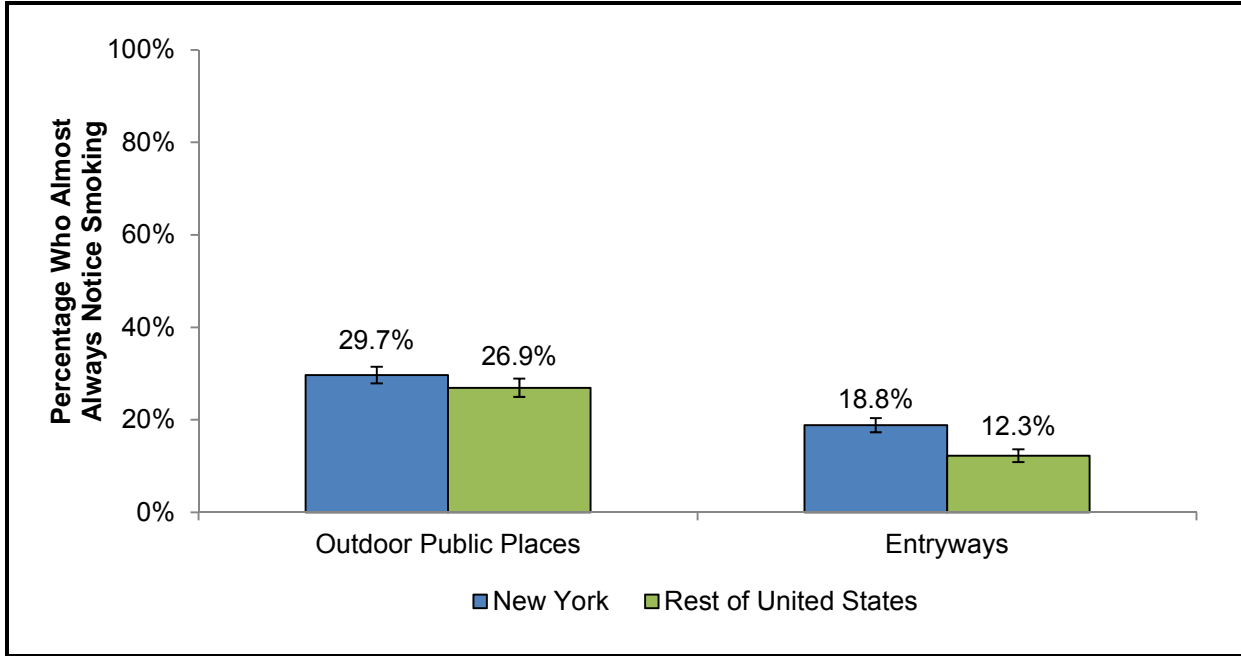


Note: Statistically significant difference between New York and the remaining United States for feeling smoking is unacceptable for outdoor public places.

New Yorkers were more aware of outdoor public smoking than those in the rest of the country. As shown in Figure 20, more New Yorkers said they saw public smoking in both outdoor public areas and in building entryways.



**Figure 20. Percentage of Adults Who Report Almost Always Noticing Smoking in Outdoor Public Places and in Building Entryways, Adult Tobacco Survey and National Adult Tobacco Survey 2010–2011**

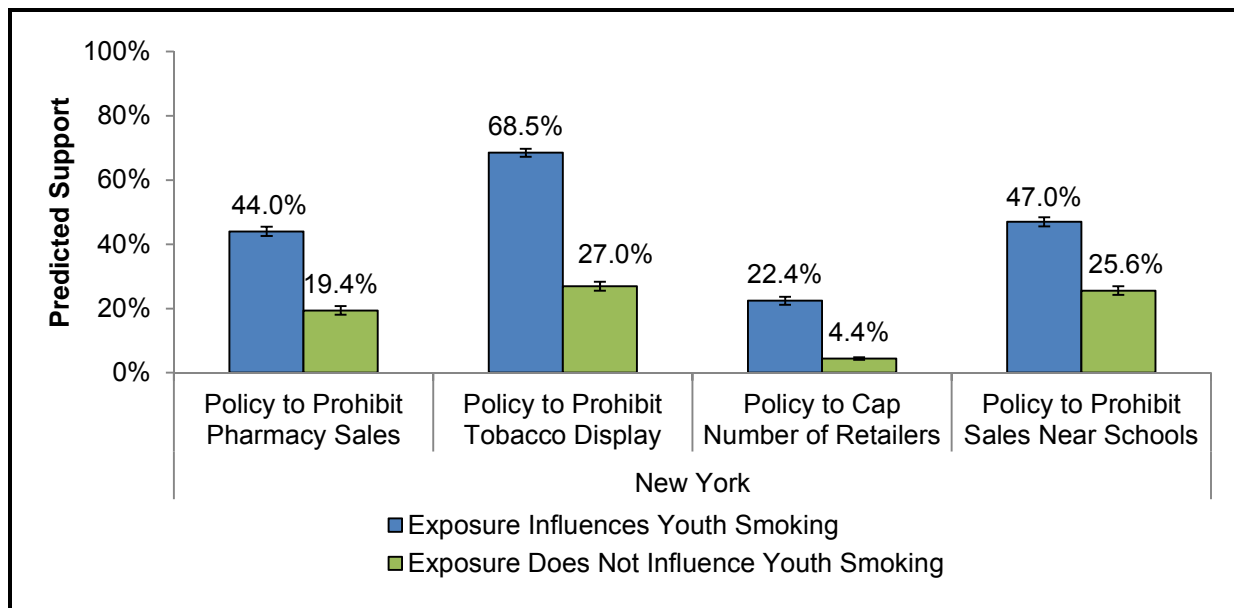


Note: Statistically significant difference between New York and the remaining United States for almost always noticing smoking in outdoor public places and entryways to buildings.

### Preliminary Links between Statewide and Community Action and Key Outcomes

Figure 21 presents the findings from an analysis comparing predicted support for each POS policy if all local opinion leaders believed that exposure to tobacco product displays affects youth smoking to predicted support for the same policy if no local opinion leaders believed that exposure to tobacco product displays affects youth smoking. We estimated predicted support through a logistic model of individual local opinion leader support for each policy controlling for demographic characteristics and individual beliefs for whether exposure to tobacco displays influences youth smoking. We then used this model to predict support if all local opinion leaders believed or did not believe that exposure to tobacco displays influences youth smoking. For example, if all local opinion leaders believed that exposure to tobacco product displays affects youth smoking, then 68.5% of them would support a policy to prohibit tobacco displays at the POS (Figure 21). In contrast, if no local opinion leaders believed that exposure to tobacco product displays affects youth smoking, then only 27% of them would

**Figure 21. Percentage of Local Opinion Leaders Who Support Point-of-Sale Policies by Belief that Exposure to Tobacco Product Displays Influences Youth Smoking, Local Opinion Leaders Survey 2011**



be likely to support the same policy. Community contractors are first directed to educate local leaders about the effect of tobacco marketing at the POS on youth smoking. This is a new issue for many of them, and the Program has assumed that without understanding the problem, they would be unlikely to support a policy solution. Our analyses demonstrate that this is an effective approach.

We conducted several additional analyses that also provide preliminary evidence of a link between community contractor activities and key outcomes. Using data from LOLS, we found that the more information that local opinion leaders had heard about the POS issue, the more likely they were to support the POS policies. In another analysis, we found that policy makers in counties where contractors reported higher levels of policy-maker education were more supportive of POS policies than those in counties with less contractor activity. If these data are collected from local opinion leaders in the future, we can more confidently attribute policy-maker support to contractor activities.

## *Effectiveness of Public Health Communication*

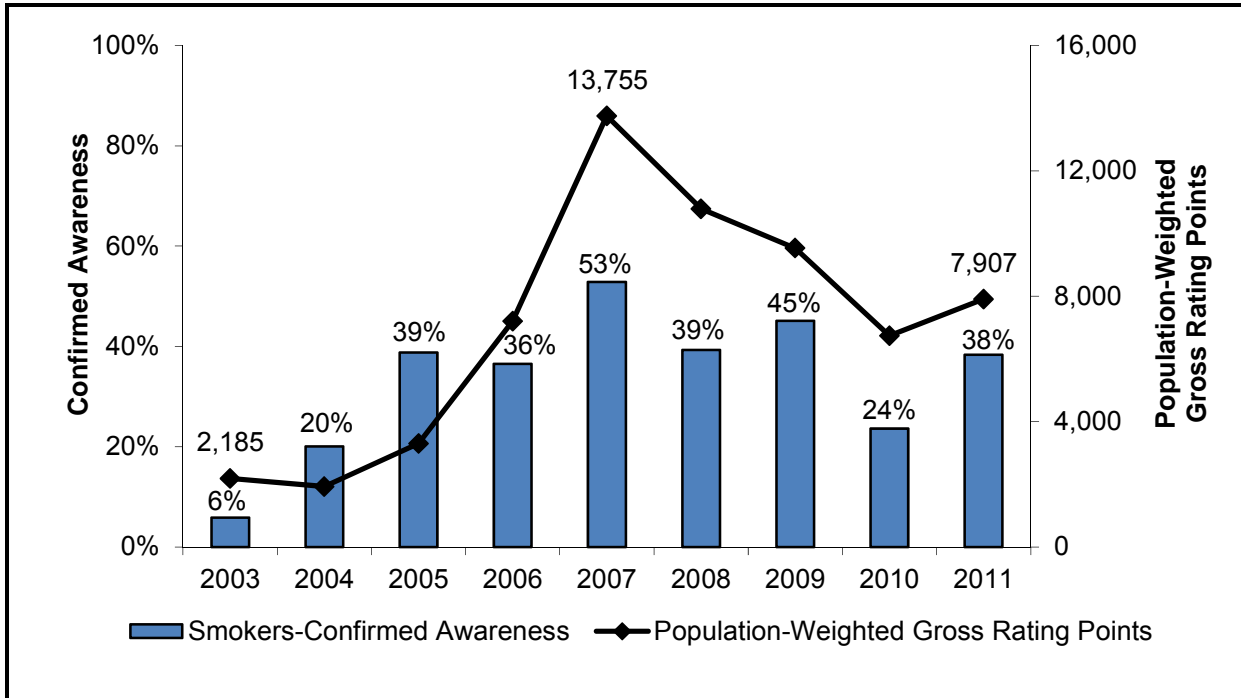
There is growing evidence that antismoking campaigns are effective in reducing cigarette smoking among youth (USDHHS, 2012) and adults (Farrelly et al., in press; NCI, 2008; Wakefield et al., 2011; Wakefield, Loken, and Hornik, 2010). Based on data from the NY ATS, we demonstrate that greater exposure to graphic and emotional television advertisements was linked to a greater likelihood of making a quit attempt (Farrelly et al., in press). In this section, we examine the relationship between measures of awareness of/exposure to NY TCP television advertisements and key outcome indicators. Specifically, how does (1) smokers' awareness of antismoking advertisements, (2) quitline call volume, and (3) quit attempts in the past 12 months respond to changes in the level of the NY TCP media buy as measured by GRPs?

As shown in Figures 22 and 23, as the size of the television advertising buy has decreased (represented by GRPs), both the level of confirmed awareness among smokers and Quitline call volume have dropped. ATS respondents are provided a short description of each NY TCP advertisement that aired within 6 weeks of the current ATS quarter. Respondents who say they have seen the advertisement are asked to provide more detail on what happened in the advertisement. We then code these responses to confirm whether they saw the advertisement. Those who can confirm seeing at least one advertisement are considered to have confirmed awareness. Confirmed awareness among smokers has dropped from its peak of 53% in 2007 to 38% in 2011, a relative percentage drop of 27% (Figure 22). Over that period, statewide average GRPs dropped by 43%.

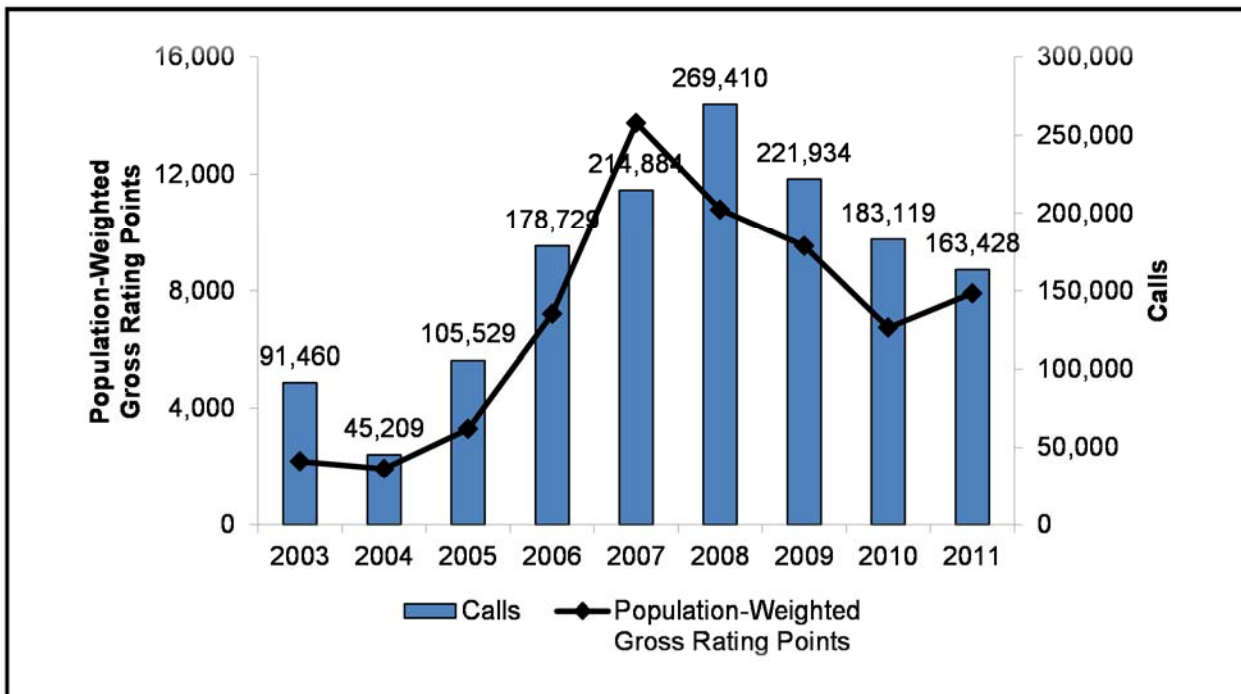
Similarly, Quitline call volume has dropped by 39% from its peak in 2008 to 2011, while GRPs dropped 27% during that 3-year period (Figure 23). This drop represents approximately 106,000 fewer callers to the Quitline each year.

To further establish the relationship between NY TCP television advertising and key outcome indicators, we analyze the relationship between making a quit attempt and the level of campaign awareness. Specifically, we report the prevalence of smokers indicating that they made a quit attempt in the past 12 months during ATS quarters when average confirmed awareness among smokers was relatively low (<20%)

**Figure 22. Confirmed Awareness of Paid Advertisements among Smokers and Population-Weighted Statewide Average Gross Rating Points, Adult Tobacco Survey 2003–2011**

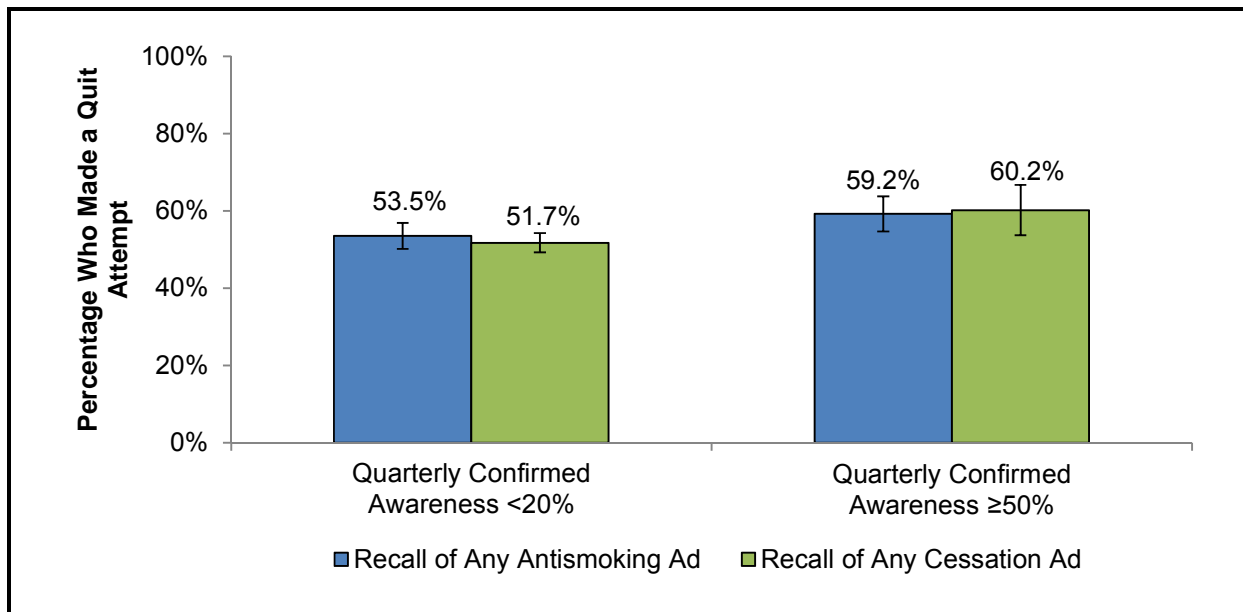


**Figure 23. Annual New York State Smokers' Quitline Call Volume and Population-Weighted Statewide Average Gross Rating Points, 2003–2011**



compared with quarters when average awareness was relatively high ( $\geq 50\%$ ) (Figure 24). This analysis shows that the prevalence of quit attempts is 11% (59.3% versus 53.4%) higher during quarters when confirmed awareness is greater than or equal to 50% compared to when confirmed awareness is low. Applying this difference to the number of smokers in 2011, this suggests that approximately 164,000 more smokers would quit if awareness was maintained at 50% or higher instead of below 20%.

**Figure 24. Percentage of Adult Smokers Who Made a Quit Attempt in the Past 12 Months by Quarterly Level of Awareness of NY TCP Television Advertisements, Adult Tobacco Survey 2003–2011**



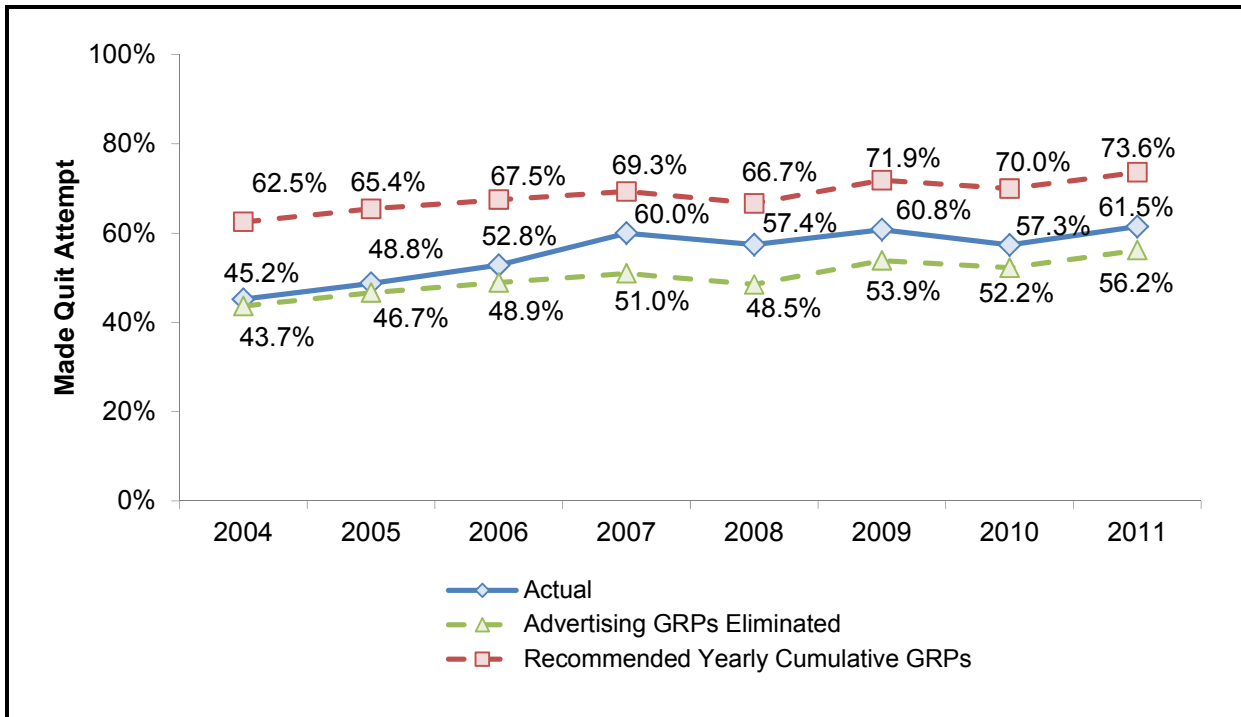
Note: Significantly greater percentage of quit attempts in quarters with  $\geq 50\%$  confirmed awareness compared to quarters with <20% confirmed awareness. NY TCP = New York Tobacco Control Program

Repeating this analysis for cessation-related advertisements, the prevalence of quit attempts is 17% higher in quarters with relatively higher awareness of cessation advertisements. Again, this implies that if awareness were maintained at 50% or higher, there would be approximately 239,000 additional smokers who make a quit attempt.

Using more sophisticated analytic techniques, we perform a logistic regression of the relationship between making a quit attempt and GRPs, controlling for a range of sociodemographic factors (age, gender, race/ethnicity, income, education, residence in New York City). For this analysis, we plot the

actual trend in the prevalence of quit attempts, the prevalence of quit attempts with no GRPs, and the prevalence of quit attempts with sufficient GRPs to reach 60% confirmed awareness (Figure 25).

**Figure 25. Trends in Actual Quit Attempts and Predicted Quit Attempts if Advertising Gross Rating Points are Eliminated or Maintained at Recommended Levels, Adult Tobacco Survey 2004–2010**



Note: GRP = gross rating point

This analysis suggests that in 2011, the quit attempt rate among smokers would have been 56.2% in the absence of any media compared with 73.6% had the Program placed sufficient advertising GRPs to maintain awareness at recommended levels. Based on census population estimates of New York, the elimination of paid advertising would have resulted in approximately 186,534 fewer smokers making quit attempts in 2011 compared with existing levels. Conversely, increasing paid advertising to recommended levels sufficient for 60% awareness of ads would have resulted in a net increase of approximately 428,707 more smokers attempting to quit compared with existing quit attempts in 2011. In total, we estimate that 615,241 more smokers would attempt to quit when advertising is maintained at recommended levels compared to when advertising is eliminated completely. Of the

431,172 who make a quit attempt, approximately 36,650 would quit for 6 months or longer (Fiore et al., 2008).

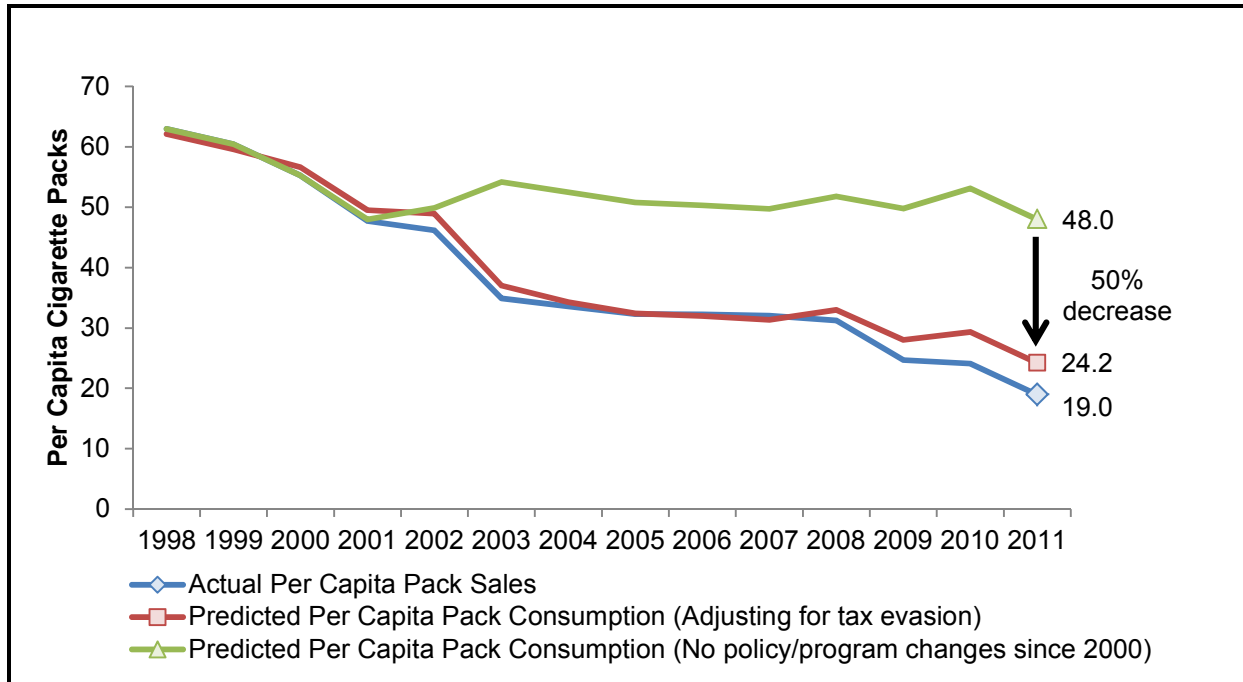
### *Impact of New York Tobacco Control Program and Policies*

Between 2000 and 2011, NY TCP invested \$646 million in programs to reduce tobacco use, including Community Partnerships, media campaigns, Cessation Centers, and support of the New York State Smokers' Quitline. During this same period, the tax on a pack of cigarettes increased from 56¢ to \$4.35, and the 2003 amendment to the New York Clean Indoor Air Act eliminated smoking in virtually all workplaces, including bars and restaurants.

State tobacco control programs are known to be effective in reducing per capita cigarette sales, and numerous studies have shown that raising the cigarette excise tax can substantially reduce tobacco use (Farrelly, Pechacek, and Chaloupka, 2003; IOM, 2007; USDHHS, 2000, 2012). Cigarette excise tax increases, however, are not completely effective, because smokers can avoid paying them by traveling to nearby states with lower taxes, purchasing cigarettes on the Internet, or buying cigarettes from Indian reservations where state taxes are not collected. From the 2011 Independent Evaluation Report, cigarette tax evasion cost New York State between \$465 million and \$610 million per year in lost tax revenue.

To use tax-paid sales as a key outcome indicator, we must adjust for tax evasion. In this section, when we refer to cigarette consumption, we mean tax-paid sales adjusted for tax evasion. To illustrate the impact of tobacco control funding, cigarette excise taxes, and smoke-free air laws, we analyzed national tax-paid cigarette sales from 1980 through 2010. We then applied these results to New York State to get an estimate of the combined effects of NY TCP funding, cigarette excise taxes, and the Clean Indoor Air Act on cigarette consumption in New York. Specifically, we examined what would have happened to cigarette consumption in New York in 2011 had NY TCP funding and cigarette excise taxes remained constant at 2000 levels and the Clean Indoor Air Act had not been amended in 2003 (Figure 26).

**Figure 26. Actual Per Capita Cigarette Sales, Predicted Cigarette Consumption, and Predicted Consumption Holding Tobacco Control Funding, Taxes, and Smoke-free Air Law Coverage Constant from 2000 through 2011, in New York, 1998–2011**

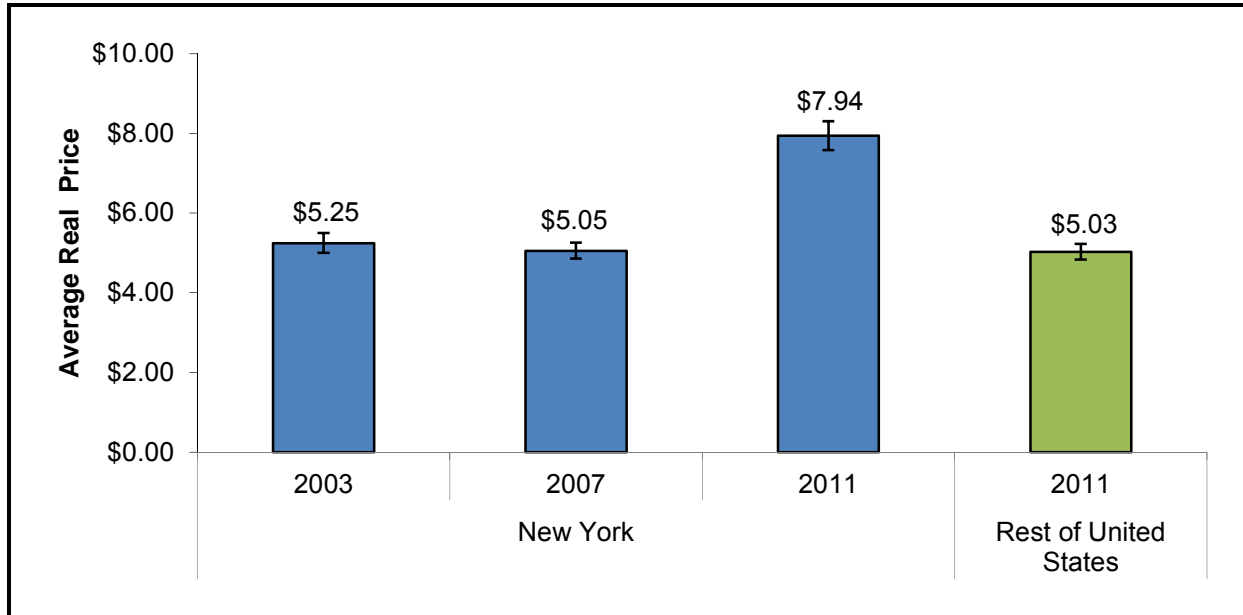


By 2011, cigarette consumption is 50% lower than the levels estimated by our model had these policies remained at their 2000 levels. The difference of 23.8 packs of per capita consumption translates to approximately 462 million fewer packs consumed in 2011 or 3.5 trillion fewer packs consumed from 2000 to 2011 than if these policies remained at 2000 levels.

In Figure 27, we display inflation-adjusted self-reported cigarette prices per pack for a smoker’s most recent purchase. We find that cigarette prices increased by 51% from 2003 to 2011 in New York, and prices in New York are 58% higher than the remaining United States as of 2011. These differences are largely explained by the increases in cigarette excise taxes in New York over time and the sizeable difference in average tax per pack between New York and the United States. In 2011, the tax was \$4.35 in New York State and \$5.85 in New York City. In the United States as a whole, the average tax per pack was \$1.46 in 2011.



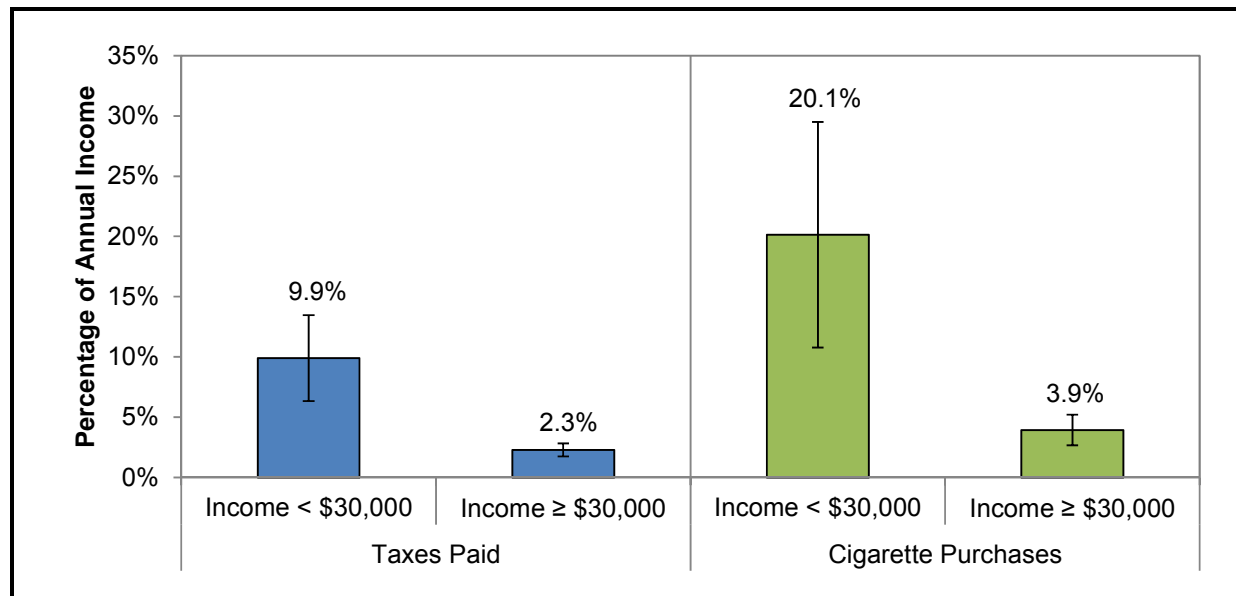
**Figure 27. Self-reported Cigarette Price per Pack, Adult Tobacco Survey 2003–2011 and National Adult Tobacco Survey 2011**



Note: Statistically significant increase between 2003 and 2011 and between 2007 and 2011 among New York adult smokers. Statistically significant difference between New York and the remaining United States in 2011.

A drawback of these large cigarette excise taxes in New York is that they place a disproportionately large burden on low-income smokers (Figure 28). The calculations in Figure 28 are based on the quantity of cigarettes smoked, adjusted for underreporting, and the self-reported price paid for cigarette purchases (Farrelly, Nonnemaker, & Watson, 2012). This figure shows that smokers earning less than \$30,000 per year spend 20% of their annual income on cigarette purchases and nearly 10% in the form of cigarette excise taxes. The financial burden is significantly less on smokers earning \$30,000 or more.

**Figure 28. Share of Smokers' Annual Income Going to Cigarette Taxes and Purchases (inclusive of excise taxes), Adult Tobacco Survey 2011**



### *Trends in Other Key Outcome Indicators*

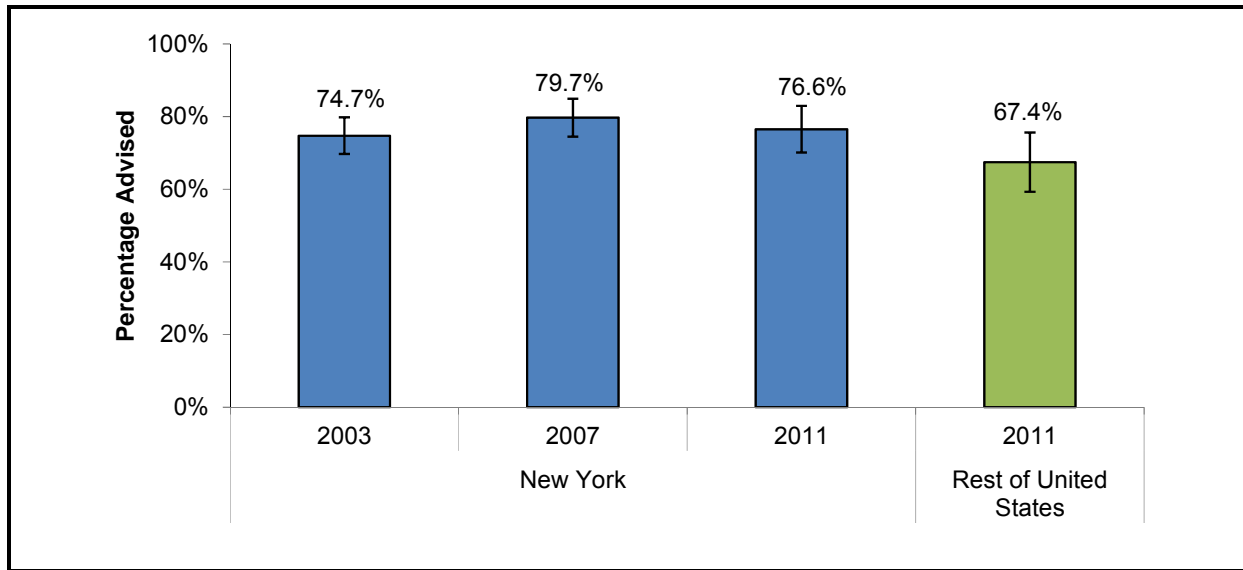
In the sections below, we present a few other key outcome indicators of interest that reflect NY TCP's progress. The first set measures NY TCP's progress in encouraging health care provider support of smoking cessation. The next measure reflects support for tobacco control in New York, and the last measures reflect progress in reducing exposure to secondhand smoke in private places.

### **Health Care Provider Support for Smoking Cessation**

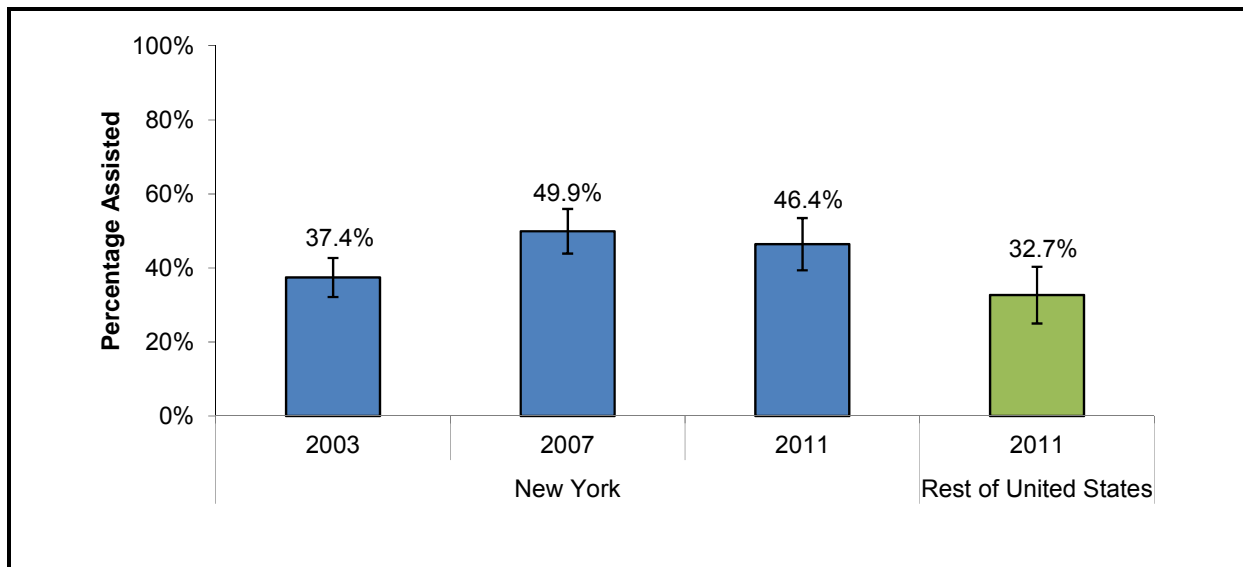
The indicators of health care provider support for smoking cessation present a mixed picture of progress. There has been no statistically significant change in the percentage of adult smokers who were advised to quit in the past 12 months when they visited a health care provider. In 2011, 76.6% of smokers indicated that their health care provider advised them to quit—a percentage that is statistically similar to 2003 (74.7%) and the percentage in the rest of the United States (67.4%) (Figure 29). The percentage of smokers who reported that their health care provider assisted them with smoking cessation increased from 37.4% in 2003 to 49.9% in 2007 and then leveled off between 2007 and 2011 (Figure 30). In 2011, a

greater percentage of New York smokers (46.4%) reported receiving assistance from their health care provider with smoking cessation compared to smokers in the rest of the United States (32.7%).

**Figure 29. Percentage of Adult Smokers Who Were Advised by Their Health Care Provider to Quit Smoking in the Past 12 Months, Adult Tobacco Survey 2003–2011 and National Adult Tobacco Survey 2011**



**Figure 30. Percentage of Adult Smokers Who Report That Their Health Care Provider Assisted Them with Smoking Cessation in the Past 12 Months, Adult Tobacco Survey 2003–2011 and National Adult Tobacco Survey 2011**

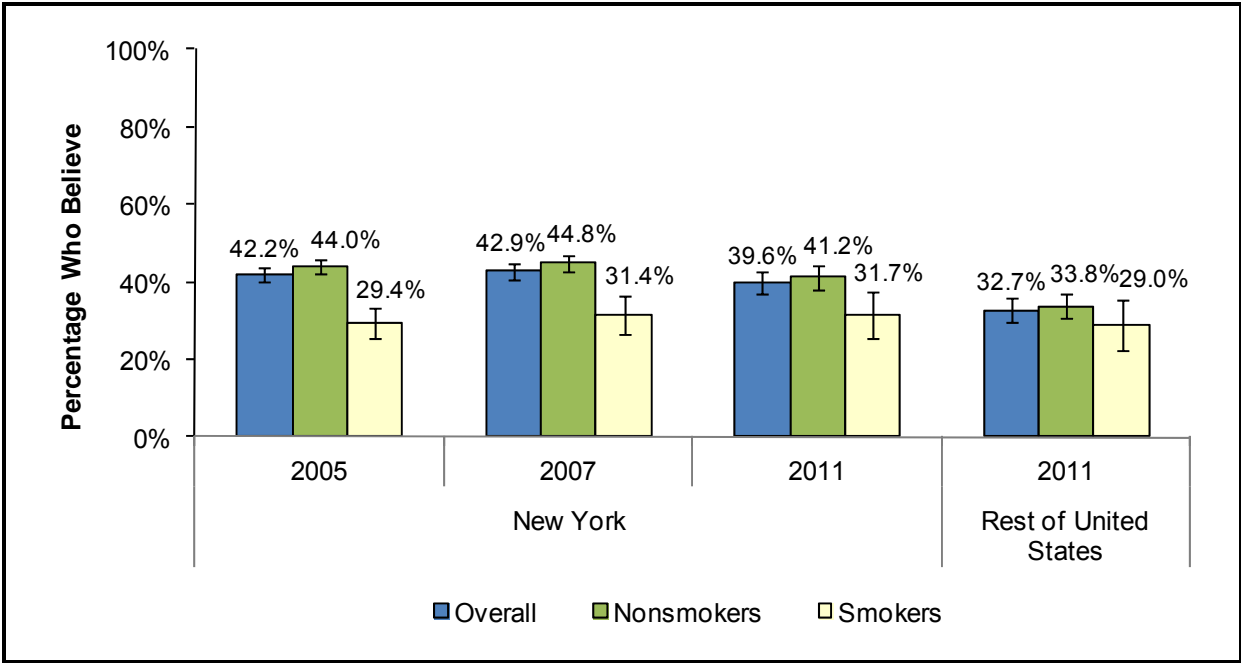


Note: Statistically significant increase between 2003 and 2007 among New York adult smokers. Statistically significant difference between New York and the remaining United States in 2011.

### Support for Tobacco Control

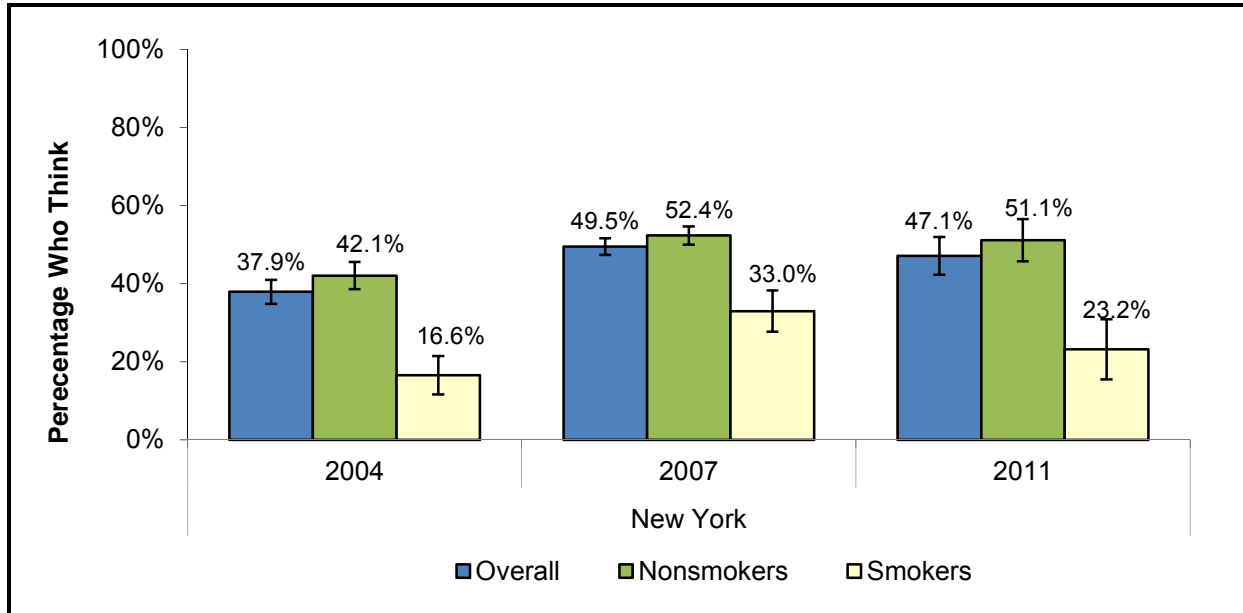
Figure 31 illustrates adults’ perceptions of the importance of addressing tobacco use as an important health problem in their community. This figure shows that the percentage of adults overall, nonsmokers, and smokers who believe that tobacco use is among the most important health problems in their community was stable over time, but greater in New York than in the rest of the United States in 2011 among adults overall and nonsmokers. Turning to the topic of tobacco advertising in stores, we find differing trends over time for smokers and nonsmokers. Specifically, the percentage of adults overall and nonsmokers who think that tobacco advertising should not be allowed in stores increased from 2004 to 2007 and then remained stable through 2011 (Figure 32). In contrast, the percentage of smokers who think that tobacco advertising should not be allowed in stores increased from 2004 to 2007 and then decreased from 2007 to 2011.

**Figure 31. Percentage of Adults Who Believe That Tobacco Use Is among the Most Important Health Problems in Their Community, Adult Tobacco Survey 2005–2011 and National Adult Tobacco Survey 2011**



Note: Statistically significant difference between New York and the remaining United States among nonsmokers and adults overall in 2011.

**Figure 32. Percentage of Adults Who Think Tobacco Advertising in Stores Should Not Be Allowed, Adult Tobacco Survey 2004–2011**



Note: Statistically significant increase between 2004 and 2007 among New York smokers, nonsmokers, and adults overall. Statistically significant increase between 2004 and 2011 among New York nonsmokers and adults overall. Statistically significant decrease between 2007 and 2011 among New York smokers.

## Discussion

### *Progress in Changing Tobacco Use and Other Key Outcome Indicators*

A number of key outcome indicators illustrate that New York has reduced tobacco use over time and that several of these indicators in New York compare favorably to the rest of the United States. However, it also appears that trends in the key outcome indicators between 2007 and 2011 have slowed compared to the period from 2003 to 2007.

From 2003 to 2011, the prevalence of adult smoking declined at a faster rate in New York (16%) than nationally (10%). Changes in the methodology for the BRFSS increased the reported prevalence of smoking in 2011 and make it challenging to understand recent trends in smoking. However, the new BRFSS methodology has two key benefits. First, the inclusion of households with cell phones includes New Yorkers who would not be interviewed otherwise. Second, the enhanced weighting methodology likely increases the accuracy of

estimates by including more sociodemographic characteristics in the weighting procedures.

A closer examination of the trends in smoking reveals that the decline in smoking from 2003–2004 to 2011 was not uniform across sociodemographic groups. We observed declines in smoking among those with a high school degree or higher, incomes above \$25,000, good mental health, and among Caucasians. Unfortunately, those with the highest smoking prevalence in 2011, such as African Americans (22%), those with less than a high school degree (27%), those earning less than \$25,000 (28%), or those with poor mental health (32%), had no change in smoking prevalence from 2003/2004 to 2011. The lack of progress among racial/ethnic minorities and those with relatively low socioeconomic status may be driven by two factors. It is possible that the tobacco control strategies that have been implemented over the past decade are effective, but have not reached these populations with sufficient intensity to reduce smoking. Alternatively, it is possible that these strategies are not as effective with racial/ethnic minorities and low socioeconomic status populations as they are with other populations.

Much of our research in New York indicates that there is no obvious gap in how various tobacco control interventions are reaching populations with high smoking rates. New analyses conducted in 2011 show that all racial/ethnic and socioeconomic groups make quit attempts at similar rates but that the disparity in prevalence rates is because these groups stay quit at much lower rates (Farrelly, Watson, and Lawson, 2011). This suggests that NY TCP media campaigns are effective for all groups and that the causes of the disparities in smoking prevalence lie elsewhere. Increases in cigarette prices have also been shown to be very effective in reducing the prevalence of smoking and cigarette consumption (Chaloupka and Warner, 2000) and may have relatively larger effects on smoking prevalence and consumption among racial/ethnic minorities and low socioeconomic populations. However, the lack of progress in these populations at a time when cigarette taxes have increased markedly suggests that tax avoidance may be eroding the public health benefits of higher cigarette taxes. The high smoking rates among these disparate populations are similar to those documented in the rest of the United States (USDHHS, 2010) and pose a significant challenge

to further reducing smoking rates in New York. However, the path forward for NY TCP is not yet clear.

With respect to youth, the prevalence of smoking among high school students declined by 53% in New York State from 2000 to 2010. While the prevalence of smoking among high school students in New York was similar to the rate in the United States in 2000, the rate of decline has been greater in New York than nationally. Among middle school students, the prevalence of smoking declined by 69% from 2000 to 2010 in New York. From 2000 to 2011, the prevalence of smoking declined by 61% nationally. As of 2010, only 3% of middle school students smoked in the past month, similar to the national rate of 4% in 2011. The declines in youth smoking in New York have been impressive, and the prevalence of smoking is so low among middle school students that there is little room for improvement.

Other indicators of tobacco use in addition to the prevalence of smoking help us paint a fuller picture of the progress that NY TCP has made over this time period. Daily cigarette consumption by smokers declined by 28% from 2003 to 2011, but the pace of the decline slowed after 2007. Intentions to quit and smokers' quit attempts increased from 2003 to 2011, and the prevalence of making a quit attempt was higher in New York than the rest of the United States in 2011. Quit intentions and the prevalence of quit attempts leveled off after 2007.

With respect to other tobacco use, the prevalence of cigar use nearly dropped by half from 2003 to 2007, but then increased between 2007 and 2011. Smokeless tobacco use also declined from 2003 to 2007 and then increased by 2011. However, in 2011, the rates of cigar and smokeless tobacco use remained relatively low at 5.2% and 1.3%, respectively.

It now seems apparent that progress in reducing tobacco use has slowed in recent years, concomitant with a period of declining resources for NY TCP programming. In addition, significant disparities in smoking prevalence have persisted for nearly a decade. With reduced funding for tobacco control, it will be challenging for NY TCP to continue to reduce tobacco use and address the high rates of smoking among African Americans, adults with relatively little education and/or financial resources, and those with mental illness.

## *Economic Costs and Benefits of Tobacco Control*

Currently, New Yorkers spend an estimated \$10 billion annually in smoking-attributable personal health care expenditures. Although this is a substantial sum, there has been a reduction in these costs as a result of declines in smoking over the past decade. Had the prevalence of smoking remained at its 2001 level, these costs would be 29% higher in 2010 or \$12.9 billion annually. The accumulated savings from 2001 to 2010 as a result of this decline in smoking is estimated to be \$21.8 billion. Furthermore, if smoking prevalence declines to 15% by 2017, smoking-attributable personal health care costs would be reduced by an estimated additional \$2.2 billion per year. However, such a goal is quite ambitious with current NY TCP funding levels. Nevertheless, each percentage point drop in the prevalence of smoking brings with it substantial reductions in personal health care costs—one of the many rationales for investing in tobacco control in New York State.

## *Health Communication*

There is strong and convincing evidence in this and previous IERs, as well as peer-reviewed publications, that NY TCP's public health communication efforts have had a positive influence on call volume for the New York State Smokers' Quitline, cigarette consumption, and quit attempts among smokers. As the amount of funds dedicated to public health communication increased from 2006 to early 2008, Quitline call volume increased markedly and the prevalence of smokers making a quit attempt increased. More in-depth analyses tie exposure to NY TCP media campaigns to call volume and quit attempts. NY TCP's selection of television advertisements has also evolved over time in favor of advertisements that feature strong emotional and/or graphic messages that have been shown to be more effective than other strategies. This strong evidence base illustrates that a strong investment in health communication is an essential component of a strong tobacco control program.

## *Cessation Interventions*

NY TCP uses multiple strategies to promote smoking cessation—health communications to prompt more smokers to



quit; the New York State Smokers' Quitline to provide direct support to those interested in quitting; social norm changes, such as smoke-free indoor and outdoor places and higher cigarette prices to create environments where smokers are more likely to quit; and systems-level changes in health care organizations to provide cessation support to those who need it. This last strategy is the focus of the Cessation Centers. Promoting system-level changes is a gradual, time-intensive process, but one that can yield long-lasting benefits. Consistent with RTI's past recommendations, NY TCP has instructed Cessation Centers to work with organizations that serve higher proportions of tobacco users. Specifically, NY TCP redirected the focus of Cessation Center initiatives from medical practices to community health centers and programs that serve individuals with severe mental illness. Cessation Centers' new objectives specific to community health centers and programs serving individuals with severe mental illness who live in the community (Personalized Recovery-Oriented Services programs) went into effect in August 2012. Cessation Centers provide these organizations with guidance, training, and assistance on systems-level changes that support the assessment and treatment of tobacco dependence. This type of system-level change is required to reach a greater proportion of smokers statewide. However, this strategy could benefit from increased resources devoted to media campaigns (e.g., Talk to Your Patients) aimed at health care providers to prompt them to do more to support smoking cessation.

### *Statewide and Community Action*

New York has implemented strong traditional tobacco control policies at the state level and engages in CDC-recommended approaches to cessation. As expected, state tobacco use prevalence rates are below the national average. However, continued progress toward a tobacco-free New York requires investment in the policies areas represented by the POS, TFO, and MUH initiatives. Consistent with past successes in tobacco control policy change, where statewide support must be built community-by community, the Program spends a high proportion of its funding (42%) on interventions that are delivered primarily at the community level. It is at this level where New York's community contractors are raising awareness

of and building support for this next generation of tobacco control policies.

The Program's community efforts have resulted in high levels of support for TFO policies, and more than half of New Yorkers are protected by these policies. Given the high levels of policy-maker support, the number of TFO policies is expected to continue increasing in the coming years. In contrast, the POS issue is new to most policy makers and the public. The investment the Program has made in educating the public and policy makers must continue before we can expect to see increased support for and adoption of these policies.

The evaluation findings suggest that there is a base of public support for POS policies and that the Program's approach to POS policy change—educating policy makers and the public about how tobacco industry marketing at the POS increases youth tobacco use—is effective. Support for the POS policies is significantly higher among New York adults than among adults in the rest of the United States. Because these are cross-sectional data, we cannot conclude that the support is a result of the Program's activities. We can, however, view this support (and any changes in support for these policies among the public and local opinion leaders) as a sentinel indicator of future policy change.

On the negative side, ATS data show that public support for POS policies did not change between 2010 and 2011, despite the Program's focused efforts on this initiative. To assess public awareness of the POS initiative and to better understand why public support for POS policies has not changed over the past years, the evaluation conducted a series of focus groups in the Albany area. Virtually all focus group participants were aware of and expressed positive attitudes toward voluntary tobacco product display bans in several area grocery stores. However, they were unaware of any efforts conducted by the community contractors to promote these bans. While a majority of participants—particularly those with children younger than age 18 living at home—believed that tobacco product marketing at the POS could be an influence on youth smoking, we found that one of the primary barriers to public engagement in this issue was the general belief that youth smoking was not an important issue in their community. Some participants considered the tobacco use problem “solved,” while others cited more urgent

problems, such as obesity and unemployment. These findings suggest that contractors must provide compelling information about the extent and effects of youth smoking to the public and policy makers as part of their efforts to educate them about the effects of tobacco product marketing at the POS on youth.

In conclusion, progress toward policy change at the local level has been uneven, with more than two dozen TFO policies passed and only one POS policy passed (and subsequently rescinded). Likewise, public and policy-maker support is higher for TFO policies than for POS policies. Support for TFO policies may be widespread because these policies reinforce current nonsmoking norms. POS policy change, on the other hand, counters current norms in the retail environment: tobacco product marketing that is disproportionate to tobacco use prevalence and excessive compared to other product marketing. Tobacco product marketing at the POS remains the most influential factor in youth tobacco use initiation without a widely implemented tobacco control intervention to counter it. The Federal Family Smoking Prevention and Tobacco Control Act of 2009 gives states and communities the authority to change the time, place, and manner of cigarette advertising at the POS. While policies to reduce exposure to tobacco product marketing at the POS have always been included in tobacco control goals, the majority of the public and policy makers are unfamiliar with the research literature and the policy solutions. The Program's sustained messaging and efforts in this area will be important to ensure the continued decline of tobacco use in the state. However, without investment in a media campaign to better educate the public about youth tobacco use and tobacco industry marketing at the POS, the current efforts may lack sufficient reach to build the required public support for POS policies.

## **Programmatic Recommendations**

### *Overall Recommendations*

- Increase NY TCP funding to a minimum of one-half of CDC's recommended funding level for New York (\$254 million) to \$127.5 million per year for FY 2013–2014 and subsequent years. This represents less than 7% of New York's total tobacco tax and MSA revenue annually.

- Develop and implement interventions to address disparities in smoking rates, particularly for African Americans; Hispanics; and those with low income, limited education, and mental illness. This may be accomplished by collaborating with federal partners, such as research initiatives funded by the National Cancer Institute, or other state tobacco control programs that have focused on disparities.

### *Health Communication Recommendations*

- Invest \$40 million per year in antismoking television advertising to reach 60% awareness of antismoking messages among smokers.
- Invest additional funds in media campaigns to support policy change efforts implemented by community contractors.

### *Health Systems Change Recommendations*

- Continue to direct Cessation Center contractors to focus their efforts on organizations serving high proportions of tobacco users, such as community health centers and mental health programs.
- Reinstate health care provider media campaigns to increase awareness of statewide cessation resources and prompt a greater percentage of providers to encourage smokers to quit.

### *Statewide and Community Action Recommendations*

- Consider developing and implementing a statewide media campaign to educate the public about youth smoking and the need to address it. Such a campaign could also include messaging support for the POS initiative, such as information about how tobacco product marketing at the POS increases youth smoking.
- Continue to work with the Center for Public Health and Tobacco Policy at New England Law|Boston to develop additional model policies for local communities that can withstand legal challenges by the tobacco industry.
- The Program's formal relationship with the American Cancer Society was supported through an American Recovery and Reinvestment Act-funded grant, which recently ended. To ensure that similar successful relationships are sustained, the Program should develop

and implement formal relationships with multiple voluntary agencies at the state level, such as the American Lung Association and American Heart Association, to leverage their statewide and local media and policy networks.

- Continue to monitor and support required contractor collaborations with allied organizations and individuals in their catchment areas to ensure that contractors actively engage their partners in planning, leading, and implementing tobacco control activities.
- Continue to engage youth members of Reality Check and other youth-focused organizations in community education, government policy-maker education, and decision-maker advocacy activities focused on POS and TFO policy change.
- Work with contractors to identify and build collaborations with organizations and individuals representing groups disproportionately affected by retail tobacco marketing and tobacco use in their catchment areas. Ensure that contractors actively engage these organizations in community education, government policy-maker education, and decision-maker advocacy activities.



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