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Evaluating New York Tobacco Control Program Efforts to Promote Cessation

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Evaluating New York Tobacco Control Program Efforts to Promote Cessation

Executive Summary

The New York Tobacco Control Program (NY TCP) set a goal of having 1 million fewer smokers by 2010. NY TCP supports a variety of evidence-based strategies to increase smoking cessation, including making cessation interventions a standard part of health care in New York State. This strategy is supported by Cessation Center activities, services offered by the New York State Smokers' Quitline (Quitline), and public health communications to motivate tobacco users to quit.

Survey data from the New York Adult Tobacco Surveys show improvements in several key cessation outcomes. Over time, more New York smokers report intentions to quit and recent quit attempts. In 2008, these numbers were significantly higher than national averages. An increasing number of health care providers in New York assist tobacco users with quit attempts. Awareness of and calls to the Quitline have increased over the past 5 years. Data from surveys of health care organizations and providers show increased awareness of cessation resources in New York State and improvements in guidelines to identify and treat tobacco dependence.

Analyses link program efforts to improvements in key cessation outcomes. Provider cessation interventions are positively related to quit attempts. New York State residents who were aware of cessation media messages were more likely to make quit attempts, as were those who called the Quitline. Higher cigarette prices were associated with a greater likelihood of making quit attempts.

Based on these findings, we recommend that NY TCP continue to work toward the goal of 1 million fewer smokers by 2010 by doing the following:

- Continue to advocate for improvements in tobacco dependence assessment and treatment systems among primary care providers, targeting practices with multiple providers and those that provide services to populations with higher smoking rates. Identify these providers by focusing on practices that offer services to low-income populations, including practices with high proportions of Medicaid or uninsured patients.
- Continue to run the health care provider media campaign.
- Increase call volume to the Quitline (to 300,000 to 350,000 calls) and visits to the Quitsite (at least 1 million visits annually), with sufficient resources to provide high quality, effective service and nicotine replacement therapy (NRT) to smokers seeking to quit. The Quitline may be able to achieve this goal by improving efficiency.
- Continue to promote the Quitline and Quitsite with media, and continue to coordinate media efforts with Quitline staffing to avoid problems associated with capacity constraints.
- Further study the effectiveness and cost-effectiveness of NRT distribution channels.
- Continue to promote policy changes that further create an environment promoting cessation (e.g., tax increases, smoking restrictions).

Introduction

Smoking cessation is a dynamic process, and smokers generally make several quit attempts before succeeding (USDHHS, 1990). Myriad influences can promote or impede smoking cessation, including personal factors, such as the smoker's health, level of nicotine dependence, and social support for quitting, and environmental influences, such as smoking restrictions and antismoking media messages. The New York Tobacco Control Program (NY TCP) set a goal of having 1 million fewer smokers by 2010 and established a programmatic goal in its strategic plan focused on promoting cessation from tobacco use. NY TCP supports a variety of evidence-based strategies to leverage environmental and organizational influences to increase smoking cessation.

NY TCP strategies focus on instituting durable policy change that will integrate cessation interventions as a standard part of health care in New York State. System-based interventions enable sustainable change and increase the reach and efficiency of cessation efforts. This approach is strongly recommended by the Centers for Disease Control and Prevention's (CDC's) *Best Practices for Comprehensive Tobacco Control Programs* (CDC, 2007), the independent Task Force on Community Preventive Services' *Guide to Community Preventive Services* (Zaza, Briss, and Harris, 2005), and the Public Health Service's evidence-based clinical practice guideline, *Treating Tobacco Use and Dependence* (Fiore et al., 2008).

This report reviews NY TCP efforts to support cessation over the past 5 years. To the extent that data are available, we describe progress in implementing cessation interventions and indicators of New York State residents' exposure to and awareness of program efforts. We then summarize changes in key cessation outcome indicators over time and, where feasible, assess the impact of NY TCP efforts on these outcomes. Finally, we discuss the findings and offer some recommendations grounded in the findings to improve cessation efforts in New York State.

Efforts to Support Smoking Cessation in New York State

NY TCP funds 19 Cessation Centers across the state to facilitate implementation of systems within health care organizations and provider offices to screen patients for tobacco use and prompt providers to offer advice and assistance to quit. To complement this effort, the New York State Smokers' Quitline (Quitline) provides cessation support and services to help New Yorkers quit. NY TCP also uses public health communications, including mass media, public relations, and media advocacy, to motivate tobacco users to quit. Many of these communications promote the Quitline. Additionally, NY TCP supports efforts to reduce out-of-pocket costs for effective therapy, increase the unit price of tobacco, and promote smoke-free environments. Combined, these efforts provide a comprehensive, evidence-based approach to promote tobacco use cessation across New York State. This section describes NY TCP activities to promote cessation and how these efforts have changed over time.

Cessation Centers

Brief advice to quit smoking by a health care provider significantly increases the odds that a smoker will quit (Zaza, Briss, and Harris, 2005; Fiore et al., 2008). Cessation Centers partner with health care provider organizations, providing technical assistance on how to implement systems to institutionalize screening all patients for tobacco use, providing brief advice to quit at all visits, and providing assistance to help patients quit successfully. Cessation Centers help with the process of policy and systems change, offering guidance and resources. They provide training for health care providers on implementing cessation interventions. Cessation Centers also developed a

unique media campaign to raise health care providers' awareness of the importance of addressing cessation in clinical settings.

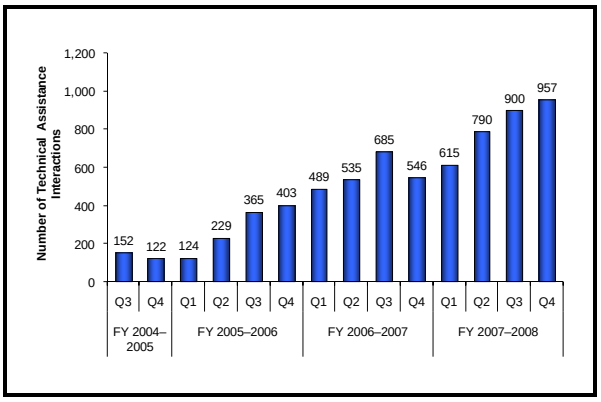
Cessation Centers model their approach on the Public Health Service clinical practice guideline, *Treating Tobacco Use and Dependence* (Fiore et al., 2008). Cessation Centers encourage health care organizations across New York State to implement tobacco dependence identification and treatment policies, guidelines, protocols, and standards of care; update reminder systems, databases, and screening and documentation systems; and improve practices for patient care related to tobacco cessation. As health care organizations institutionalize tobacco use cessation treatment into their service expectations, evidence-based interventions are integrated in a sustainable way.

Cessation Centers began partnering with hospitals across New York State in 2004. Hospitals were logical and manageable targets for Cessation Centers, because many Cessation Centers are housed within hospitals, and there are just over 200 hospitals across New York State. Hospitals have large numbers of staff and often have associated clinics in their regions. Some physicians work in both inpatient and outpatient settings, further increasing the chance that changes implemented and trainings conducted in the hospital setting will have an impact on other settings.

Expansion of Cessation Center Initiative

Cessation Centers have reached out to health care organizations across New York State. They have increased the number of interactions with health care organizations each year, indicating increased Cessation Center capacity and greater reach across the state (Figure 1). Over the past year, Cessation Centers increased the number of organizations they worked with by more than 50% (source: Cessation Center reports in Community Activity Tracking [CAT] online system; data not shown).

Figure 1. Number of Cessation Center Technical Assistance Interactions with Health Care Organizations, Community Activity Tracking (CAT) System, Q3 FY 2004–2005 to Q4 FY 2007–2008

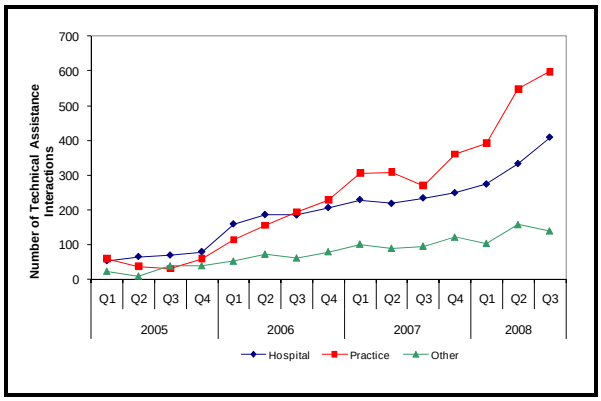


Note: FY = fiscal year; Q = quarter

Increasing Outreach to Medical Practices

Since 2004, Cessation Centers have worked with nearly all of the hospitals in the state. However, 92% of smokers' health care takes place in office-based settings, rather than hospital settings (RTI International, 2007). Therefore, to increase reach, Cessation Centers shifted their primary focus from hospitals to medical practices. NY TCP adapted its guidance and Cessation Centers expanded their efforts further into group practices. Working with local medical practices has been more challenging because of the vast number of practices and the fact that practices do not face the same regulatory pressure to maintain specific quality assurance measures as hospitals. Cessation Centers have focused more on medical practices than hospitals over time (Figure 2). To help with outreach to practices, NY TCP developed a Performance Improvement Project that gave continuing education credits to providers at medical practices who agreed to work with Cessation Centers to implement cessation-related systems changes.

Figure 2. Number of Cessation Center Technical Assistance Interactions by Type of Health Care Organization, CAT System, Q1 2005–Q3 2008



Note: Q = quarter

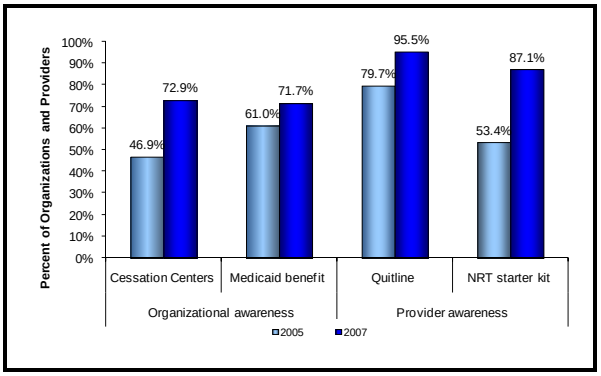
Health Care Provider Media Campaign

To further reach out to providers at local medical practices, Cessation Centers developed a health care provider media campaign. This unique campaign used attention-grabbing images to encourage health care providers to talk to their patients about quitting smoking. Featured in medical journals, on medical Web sites, and in newspapers, the campaign directed providers to a Web site with information and resources to offer patients. With a limited budget, the campaign successfully reached 38% of primary care providers, 26% of physician assistants, and 25% of nurse practitioners. Health care providers surveyed responded very positively to the campaign messages, with 8 out of 10 agreeing that the ads "grabbed their attention." Moreover, more than 60% of health care providers agreed that the ads made them think about doing more to help their patients stop using tobacco.

Awareness of Cessation Centers and Cessation Resources

Awareness of Cessation Centers among hospitals in New York State increased significantly from 2005 to 2007, as did awareness of Medicaid coverage of tobacco cessation pharmacotherapy (Figure 3). Health care providers reported increased awareness of cessation resources from 2005 to 2007, including the Quitline and nicotine replacement therapy (NRT) starter kits. These data indicate that an increasing number of health care organizations are exposed to the Cessation Center initiative and that efforts to raise awareness of cessation resources are effective.

Figure 3. Health Care Organization and Provider Awareness of Cessation Resources in New York State, Health Care Organization and Provider Study (HCOPS) 2004–2005 and 2007



Note: All differences from 2005 to 2007 are statistically significant.

The Cessation Center initiative facilitates implementation of organization-level change at health care organizations across New York so that health care providers ask all patients about tobacco use and provide advice and assistance with quitting. This approach is complemented by the Quitline and supporting media campaigns. From 2005 to 2007, there was no change in the proportion of hospitals with systems in place to cue and document tobacco dependence identification and treatment. Policies, guidelines, and systems will be assessed again during 2009 among hospitals and medical practices.

New York State Smokers' Quitline

Summary of Quitline Services

The New York State Smokers' Quitline was established in 2000 and has seen a steady increase in the number of callers (largely driven by mass

media efforts aimed at promoting the Quitline) and the types of services it provides. The telephone Quitline's core service is to provide quit smoking support to those who call. This support is provided by Quitline specialists who work with smokers to develop quit smoking plans, assess eligibility for and provide NRT, and send smokers packets of quit smoking information. The Quitline specialists also contact callers again to offer encouragement, provide additional tips, and determine quit progress. This service is available to all New York residents by calling 1-866-NY QUITS (1-866-697-8487). Telephone Quitline specialists are available Monday through Wednesday from 9:00 a.m. to 11:30 p.m., Thursday and Friday from 9:00 a.m. to 9:00 p.m., and Saturday and Sunday from 9:00 a.m. to 1:00 p.m. Quitline hours were expanded in 2008 to increase capacity during media campaigns promoting the Quitline.

In addition to the core service, residents can access taped "tips of the day" and taped messages on a variety of topics, leave voicemail messages to receive informational materials through the mail, and visit the Quitsite. The Quitsite provides Web-based services to smokers in New York to obtain information about quitting smoking and to request free NRT. Through the Quitline's Fax-to-Quit program, following health care provider referrals, Quitline specialists will contact clients to offer help with the quit process, including providing NRT to eligible clients, and send reports to the providers describing the services the patients received and the patients' progress.

Evolution of Quitline Services

The Quitline has continuously evolved, making numerous changes to enhance service, including improved call center facilities, staff trainings, expanded counseling and Web site services in Spanish, extension of operating hours, protocol development, and a new NRT distribution system. The Quitline has also undertaken a number of studies to explore ways to improve service, including a study of the side effects of NRT, among others. Reflective of the Quitline's focus on improving service, callers to the Quitline have consistently expressed high levels of satisfaction with the Quitline (Table 1).

Table 1. Caller Satisfaction with the Quitline, FY 2005–2008

Survey Question	FY 2005	FY 2006	FY 2007	FY 2008
When you first contacted the Quitline, did you have any trouble getting through to speak with one of our Quitline specialists? (yes)	5.2%	5.5%	5.1%	4.2%
Overall, how satisfied were you with your initial call to the Quitline? (very)	87.5%	82.5%	92.0%	87.7%
If you were asked to seek help again, would you call the Quitline? (yes)	97.0%	90.3%	89.9%	85.2%
Would you recommend the Quitline to another smoker? (yes)	97.3%	90.7%	90.0%	85.6%
Did you share the information you received with anyone else? (yes)	67.9%	66.6%	68.6%	61.2%

Source: New York State Smokers' Quitline Annual Reports (Cummings and Celestino, 2004–2005, 2005–2006, 2006–2007, 2007–2008)

Note: FY = fiscal year

Some of the most significant changes to the Quitline occurred in 2004 when NY TCP launched an expanded Quitline service, including proactive callbacks to offer services to residents who have recently spoken with Quitline counselors, the Fax-to-Quit program, an expanded Web site, and free NRT to eligible callers. In 2008, NY TCP increased radio promotions at times when there are relatively few television advertisements. Data suggest that this increased call volume during these times, such as during the summer. In addition, the Quitline is exploring ways to continue to improve services to reach a greater number of new smokers, reach smokers in sociodemographic groups with the highest smoking rates, and better coordinate media campaigns and Quitline activities to ensure that

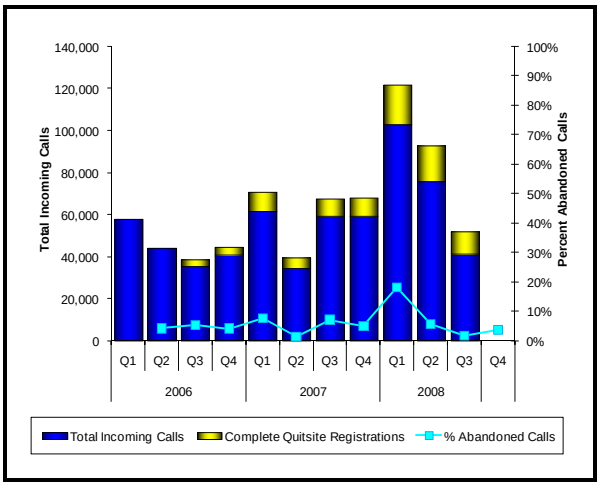
the two are synchronized and the highest quality of service is offered by the Quitline.

Recent Quitline Call Volume

Total incoming calls to the telephone Quitline were at a record level of 256,000 for Q2 2007 to Q1 2008. Call volume increased by about 75,000 calls or 41% compared with the same period in the previous year. The increase in call volume was largely driven by media promotion of the Quitline (NY TCP spent approximately $9 million on cessation advertising). The Quitline (including Quitsite) was funded at $2.9 million from July 2007 to June 2008, an increase of 21% from the previous fiscal year. The increase in funding was a result of the increase in call volume, as the call volume determines Quitline funding.

During the peak period (Q1 2008), 18% of the callers who asked to speak with a specialist hung up before they spoke with one (Figure 4). In response to the unexpected increase in call volume and the related abandonment rate, NY TCP immediately replaced television advertisements tagged with the Quitline telephone number with advertisements tagged with the Quitsite Web address. This strategy resulted in a reduction in the percentage of abandoned calls, a decrease from 15% in Q1 2006 to 11% in Q1 2007. However, the percentage of abandoned calls during peaks in call volume increased significantly to reach a record of 25% in Q1 2008. Callers who wait to speak to a specialist hear a message that directs them to apply for NRT online, suggesting that callers who hang up might still be requesting NRT via the Quitsite. The number of callers who hung up increased by 263% from Q1 2007 to Q1 2008, but the percentage of interviews completed online increased by only 106% during the same period, suggesting that the Quitsite is not completely compensating for those hanging up on the Quitline. Abandonment rates are a function of resources available to staff the Quitline and are impacted by increased calls in response to media buys.

Figure 4. Total Quitline Incoming Calls, Total Completed Quitsite Intake Interviews, and Percentage of Abandoned Calls, Quitline Tracking System, Q1 2006–Q3 2008

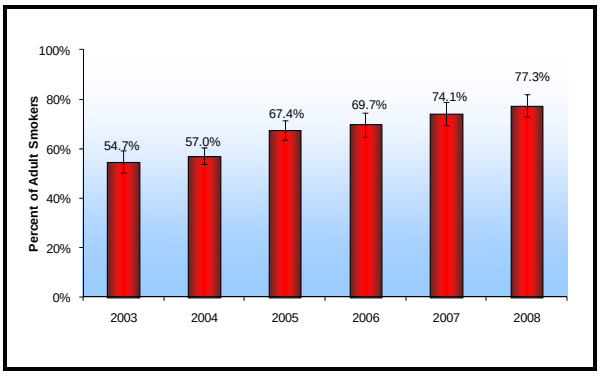


Note: Q = quarter

Awareness of the Quitline

Consistent with increased media promotion of cessation and the Quitline, New York State residents' awareness of the Quitline has increased over the past 5 years (Figure 5).

Figure 5. Percentage of Adult Smokers Who Have Heard of the New York State Smokers' Quitline, Adult Tobacco Survey (ATS) 2003–2008



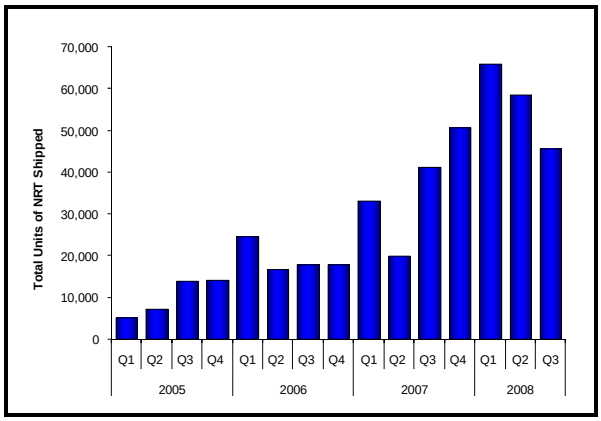
Note: Statistically significant upward trend from 2003 to 2008. Data from 2008 include quarters 1 through 3.

Availability and Use of NRT

The availability of free NRT starter kits through the Quitline and the Quitsite has provided smokers with an important evidence-based

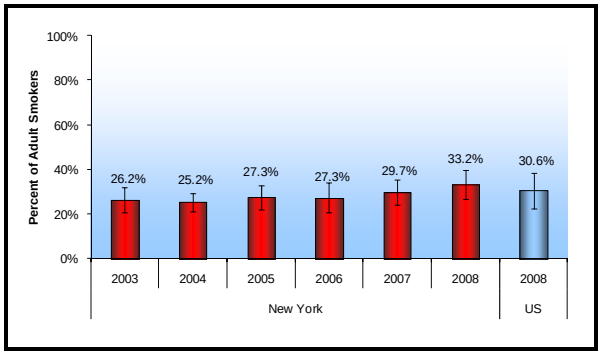
intervention to assist them with their quit attempts. In addition, the New York Medicaid program provides medications to enrollees that help smokers quit, including nicotine inhalers and nasal sprays, medication such as Zyban (bupropion) and Chantix (varenicline), and over-the-counter nicotine patches and gum. The Medicaid program provides two annual 90-day courses of medication. Quitline distribution of NRT has increased significantly over time (Figure 6). In addition, self-reported use of NRT has increased significantly over time and is similar to the level in the rest of the United States in 2008 (Figure 7).

Figure 6. Quitline NRT Distribution, Quitline, Q1 2005–Q3 2008



Note: Q = quarter

Figure 7. Percentage of Adult Smokers and Recently Quit Smokers Who Reported Use of NRT, ATS 2003–2008 and National Adult Tobacco Survey (NATS) 2008



Note: Data from 2008 include quarters 1 through 3.

In the past year, as part of the New York State Office of Alcoholism and Substance Abuse Services (OASAS) policy mandating that all substance abuse treatment facilities be smoke-free, NRT was made available to OASAS clients. In addition, NRT has been provided to local health departments (LHDs) for distribution to eligible smokers. NRT distributed via OASAS and LHDs has become a significant portion of all NRT distributed by NY TCP. In the past, the Quitline accounted for almost all of the NRT distributed; however, from October 2007 through June 2008, OASAS and LHDs accounted for 34% of all NRT distributed by NY TCP, while the Quitline accounted for 58% and Cessation Centers accounted for 8%. Partly as a result of the NRT distribution to OASAS and LHDs, the budget for NRT has increased substantially from approximately $6.7 million to $9.6 million for FY 2008.

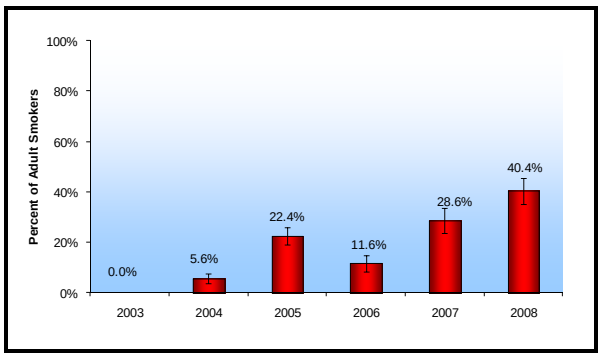
Public Health Communication Promoting Cessation

Resources for cessation paid advertising have increased over time, and the implementation of media campaigns has significantly improved with regard to choice of advertisements and execution of the media plan. NY TCP's media budget for FY 2007–2008 represented approximately 25% of the overall budget for the program, and NY TCP devoted a significant portion of its resources to advertisements promoting cessation. Confirmed awareness of cessation-related advertisements has increased significantly over time (Figure 8).

Policy Change

In addition to funding of Cessation Centers, funding of the Quitline, and media promotion of cessation, NY TCP also supports other policy change in New York intended to promote cessation. In July 2003, New York State amended the Clean Indoor Air Act, prohibiting smoking in all workplaces, including bars and restaurants. Additionally, New York State increased the state

Figure 8. Confirmed Awareness of Cessation Ads in New York, ATS 2003–2008



Note: No cessation ads were aired in 2003. Statistically significant upward trend from 2003 to 2008. Data from 2008 include quarters 1 through 3.

cigarette excise tax to $2.75 per pack in June 2008, making it the highest tax in the nation. Higher taxes can provide an incentive for smokers to quit, cut down, buy cheaper (discount brand) cigarettes, or attempt to avoid the tax by buying from sources that do not pay the tax. New York State has implemented measures to reduce tax avoidance behavior (e.g., the New York State Attorney General reached an agreement with credit card companies to not process online tobacco transactions). The 2008 *Independent Evaluation of New York's Tobacco Control Program* summarizes these and other policy changes in more detail (RTI International, 2008).

Assessing Progress in Promoting Smoking Cessation

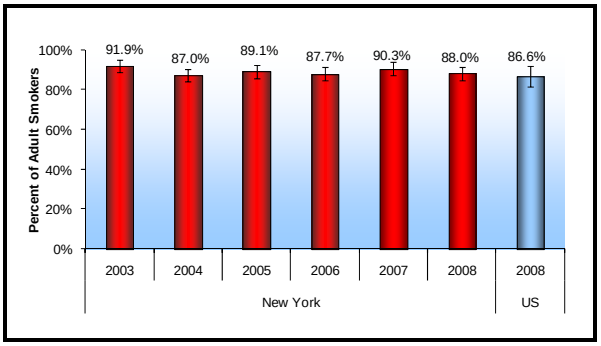
Smokers generally make several quit attempts before succeeding, and the process of smoking cessation might differ by individual smoker. Some smokers will exhibit interest in quitting, make plans to quit, and then make quit attempts. Others might make a spur-of-the-moment decision to quit without expressing prior interest or intentions. Important indicators related to cessation include

- the number of smokers reporting that their health care providers talked with them about tobacco cessation (asking if they use tobacco, advising them to quit, and providing assistance with quitting),
- interest in quitting (as measured by wanting to quit "a lot"),
- intentions to quit (as measured by plans to quit in the next 30 days),
- quit self-efficacy (as measured by reporting being "very likely" to succeed in quitting),
- quit attempts in the past 12 months, and
- cigarettes smoked per day.

Health Care Provider Cessation Interventions

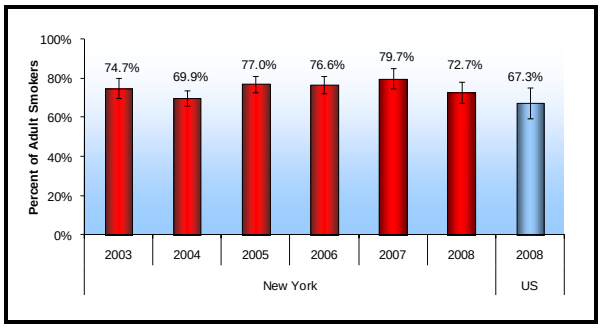
Because the goal of Cessation Center efforts is to integrate cessation interventions into health care visits, we looked at the number of smokers who visited health care providers in the past year and reported that their health care providers asked if they smoked, advised them to quit, and provided assistance with quitting. A majority of New York State smokers reported that their health care providers asked them if they used tobacco (Figure 9), and more than three-quarters reported that their providers advised them to quit (Figure 10). An increasing percentage of smokers reported that their health care providers assisted them with smoking cessation, significantly greater than the national average (Figure 11).

Figure 9. Percentage of Adult Smokers Who Were Asked by Their Health Care Providers if They Smoked in the Past 12 Months, ATS 2003–2008 and NATS 2008



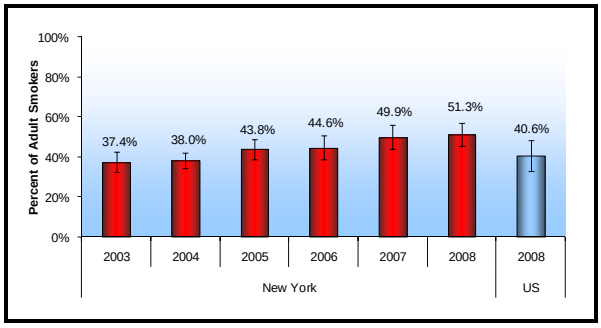
Note: Data from 2008 include quarters 1 through 3.

Figure 10. Percentage of Adult Smokers Who Were Advised by Their Health Care Providers to Quit Smoking in the Past 12 Months, ATS 2003–2008 and NATS 2008



Note: Data from 2008 include quarters 1 through 3.

Figure 11. Percentage of Adult Smokers Who Report That Their Health Care Providers Assisted Them with Smoking Cessation in the Past 12 Months, ATS 2003–2008 and NATS 2008



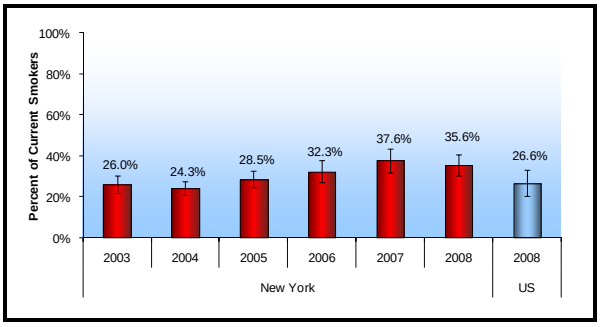
Note: Statistically significant upward trend from 2003 to 2008. The difference between New York and the United States in 2008 is statistically significant. Data from 2008 include quarters 1 through 3.

Intentions to Quit and Quit Attempts

Plans to quit in the next 30 days and quit self-efficacy have been shown to be predictive of future quit attempts (Zhou et al., 2009; Hyland et al., 2006). A history of quit attempts is also predictive of future quit attempts, highlighting the importance of promoting quit attempts (Zhou et al., 2009; Hyland et al., 2006). Based on recent evidence that reductions in the amount smoked might lead to future quit attempts (Hughes, 2000; Hughes and Carpenter, 2005; Hyland et al., 2005), we include the number of cigarettes smoked as an outcome in this section. Interactions with health care providers and exposure to cessation-focused media campaigns would be expected to influence smokers' plans to quit in the next 30 days and quit self-efficacy.

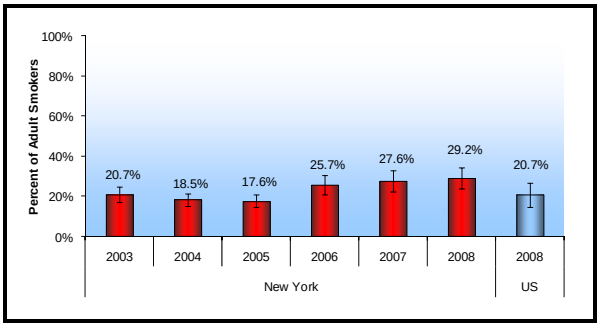
The percentage of New York smokers who intend to make a quit attempt in the next 30 days increased from 26.0% in 2003 to 35.6% in 2008 and is well above the national average for 30-day intentions to quit (Figure 12). Quit self-efficacy, or the percentage of smokers who believe they are very likely to succeed in quitting, has increased over time and was significantly higher than the national average in 2008 (Figure 13).

Figure 12. Percentage of Current Smokers Who Plan to Quit in the Next 30 Days, ATS 2003–2008



Note: Statistically significant upward trend from 2003 to 2008. The difference between New York and the United States in 2008 is statistically significant. Data from 2008 include quarters 1 through 3.

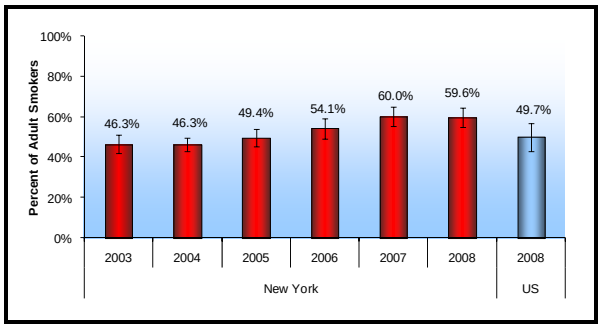
Figure 13. Percentage of Adult Smokers Who Believe They Are Very Likely to Succeed in Quitting, ATS 2003–2008 and NATS 2008



Note: Statistically significant upward trend from 2003 to 2008. The difference between New York and the United States in 2008 is statistically significant. Data from 2008 include quarters 1 through 3.

Since 2003, there has been a substantial increase in the number of smokers who reported making a quit attempt during the past 12 months (Figure 14). The percentage of smokers who made at least one quit attempt in the past 12 months increased from 46.3% in 2003 to 59.6% in 2008. The percentage of New York smokers who tried to quit in 2008 is significantly higher than the national average.

Figure 14. Percentage of Adult Smokers Who Made a Quit Attempt in the Past 12 Months, ATS 2003–2008



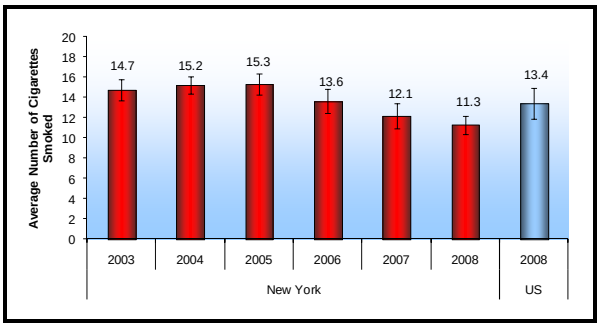
Note: Statistically significant upward trend from 2003 to 2008. The difference between New York and the United States in 2008 is statistically significant. Data from 2008 include quarters 1 through 3.

The average number of cigarettes smoked per day by current smokers has decreased from 14.7 in 2003 to 11.3 in 2008, a decline of nearly 25% (Figure 15). Moreover, daily cigarette consumption among smokers is significantly lower in New York compared with the national average (13.4 cigarettes per day) in 2008.

Linking Program Efforts to Cessation Outcomes

Trends in cessation outcomes and reports of health care provider cessation interventions are improving overall and are better than national averages. As the Cessation Center initiative continues to institutionalize provider interventions, these changes are likely to be sustained. Combined with the media campaign targeting health care providers, New York is likely to continue to see improvements. In this section, we consider whether the trends in outcomes are associated with the trends in NY TCP efforts to the extent possible.

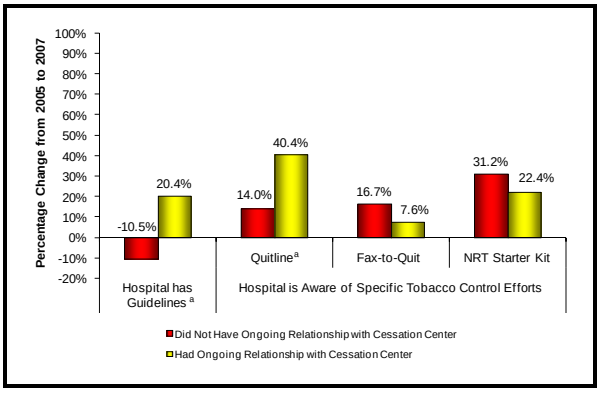
Figure 15. Average Number of Cigarettes Smoked Per Day by Current Smokers, ATS 2003–2008 and NATS 2008



Note: Statistically significant downward trend from 2003 to 2008. The difference between New York and the United States in 2008 is statistically significant. Data from 2008 include quarters 1 through 3.

Cessation Center interactions with hospitals are linked to cessation-related awareness, guidelines, and practices in hospitals in New York State. Hospitals that had relationships with Cessation Centers saw greater increases in the existence of guidelines on tobacco dependence treatment and awareness of cessation resources than hospitals that did not work with Cessation Centers (Figure 16).

Figure 16. Percentage Change between 2005 and 2007 in Guidelines and Awareness by Ongoing Relationships with Cessation Centers among Hospitals, HCOPS Hospital Data (2004–2005 and 2007) and CAT System (2005–2007)



[a] Statistically significant difference between hospitals with and without ongoing relationships with Cessation Centers.

At the individual health care provider level, there was significantly greater awareness of cessation resources among health care providers whose hospitals worked with Cessation Centers. Among registered nurses, awareness of the Medicaid benefit covering tobacco cessation pharmacotherapy and the NRT starter kit available through the Quitline was greater at hospitals that worked with Cessation Centers than at hospitals that did not. Among physician assistants and nurse practitioners, awareness of the Quitline was 72.2% among hospitals that did not have relationships with Cessation Centers and 91.7% among the same type of providers at hospitals that had relationships with Cessation Centers.

Quitline Quit Rates and NRT Distribution

Including NRT in the Quitline services appears to have contributed to the increase in the 12-month quit rate from 9.7% in 2003 to 22.2% in 2007. Based on the total number of callers in the past year, approximately 36,000 smokers quit with assistance from the Quitline and the Quitsite. Of these, approximately 9,300 quit as a result of the availability of NRT.[1]

Media and Quitline Call Volume

Assessment of the relative effectiveness and cost-effectiveness of television, radio, and print advertisements to generate calls to the Quitline has established a link between media promotion of the Quitline and call volume to the Quitline (Farrelly et al., 2007; RTI International, 2007, 2008). There was a significant, positive relationship between call volume and expenditures for television and radio advertisements and a marginally significant effect for expenditures on newspaper advertisements. Although increases in expenditures for television were most effective, the significantly higher cost of television advertising suggests that an efficient mix of media should place greater emphasis on radio than television.

Modeling the Association between Program Efforts and the Likelihood of Quitting

We estimated the relationship between program variables and outcomes while controlling for other variables. Self-reports of providers asking patients if they smoke, advising tobacco users to quit, and assisting tobacco users with quit attempts are positively related to quit attempts (Figure 17). In addition, those who report being aware of cessation media messages and those who called the Quitline in the past 12 months were more likely to make a quit attempt.

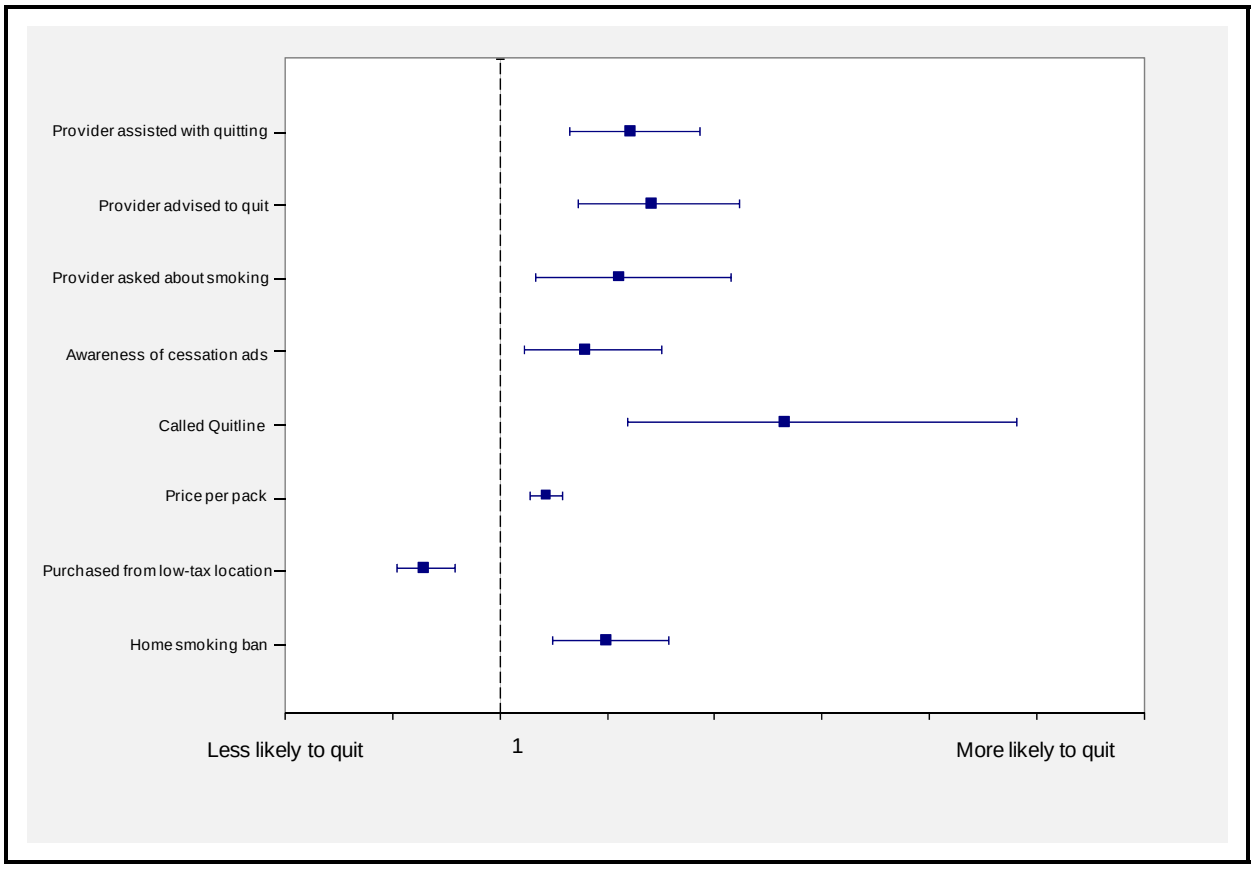
Furthermore, cigarette prices were positively associated with making a quit attempt, with higher cigarette prices associated with a greater likelihood of making a quit attempt. Those who evaded the tax by making purchases from tax-free sources all of the time were less likely to make a quit attempt. Finally, those who have complete bans on smoking in the home are more likely to make a quit attempt.

Conclusions and Recommendations

In this report, we present data that show key cessation outcomes are improving. Based on our findings, we have recommendations for NY TCP as they continue to work toward the goal of 1 million fewer smokers by 2010.

[1] The difference in quit rates attributed to the distribution of NRT was 12.5% (22.2% [after distribution of NRT] minus 9.7% [before distribution of NRT]). To calculate the number of smokers expected to quit as a result of receiving NRT, we multiplied the number of smokers who reported receiving and using NRT (74,600, which was calculated based on the self-reported percentages of smokers who report receiving and using NRT) times the difference in quit rates attributable to NRT (12.5%) (i.e., 0.125*74,600 = 9,325).

Figure 17. Influences on Quit Attempts in the Past 12 Months (Odds Ratios), ATS



Note: Odds ratios controlled for age, race/ethnicity, income, gender, living in New York City versus the rest of the state, and a continuous quarterly trend.

Cessation Centers

Over the past several years, Cessation Centers have increased their capacity, working with a greater number and range of health care provider organizations. Organization-level and provider-level outcomes are generally better for hospitals that have ongoing relationships with Cessation Centers. While providers in New York and across the United States are asking most patients if they use tobacco, New York residents report higher percentages than national averages for being advised to quit and receiving assistance with quitting. It should be noted that these outcomes in New York differed from the nation as a whole prior to the Cessation Center initiative. Ongoing data collection will allow for additional analysis over time.

Cessation Centers have continued outreach to primary care providers. However, local providers do not have the same incentives to participate as hospitals, where assessment of documenting cessation advice is factored into accreditation. Additionally, the sheer number of primary care provider offices makes this outreach challenging. Cessation Centers' innovative health care provider media campaign is a promising intervention with potentially significant reach, especially to primary care offices.

Given the large number of primary care providers in New York State, Cessation Centers will need to continue to be strategic in their approach to create significant change in population-level outcomes. It may be more productive and manageable to target primary care physicians most likely to reach population groups with higher smoking rates,

including those with lower income and education, substance abuse problems, and/or mental illness. New York State's OASAS implemented regulations requiring substance abuse treatment facilities certified by OASAS to be tobacco-free and provide tobacco dependence treatment as of July 24, 2008. The New York State Department of Health funded technical assistance to assist facilities with this process. Some Cessation Centers have reported working with LHDs, substance abuse and mental health facilities, and offices providing services for low-income populations, including local offices of the U.S. Department of Agriculture's Special Supplemental Nutrition Program for Women, Infants, and Children. Increasing collective emphasis on population groups with higher smoking rates are likely to help reduce disparities and reach the goal of 1 million fewer smokers by 2010.

Continued efforts to implement policies and systems to institutionalize health care provider cessation interventions are expected to increase quit attempts among New Yorkers. We recommend that NY TCP

- continue to advocate for improvements in tobacco dependence assessment and treatment systems among primary care providers, targeting practices with multiple providers and those that provide services to populations with higher smoking rates, such as low-income populations; and
- continue to run the health care provider media campaign.

New York State Smokers' Quitline

The Quitline continues to provide effective services to help smokers quit. Including NRT in the Quitline services appears to have contributed to the increase in the 12-month quit rate. NY TCP, Cessation Centers, and Community Partnerships continued efforts to promote use of the Quitline. As a result, total calls to the Quitline have increased significantly. NY TCP also successfully promoted the Quitsite with visits to the site increasing significantly. This is likely due to tagging television and print advertisements with the Web site address for the Quitsite.

Despite the positive findings regarding the overall performance of the Quitline, several challenges remain. During the past year, there was a significant increase in the percentage of callers who hung up while waiting to speak to a Quitline specialist. In an effort to ease this capacity problem, NY TCP reduced paid advertising of the Quitline and rotated in advertisements tagged with the Quitsite Web address rather than the Quitline telephone number.

We recommend that NY TCP

- increase call volume to the Quitline (300,000 to 350,000 calls) and visits to the Quitsite (at least 1 million visits annually) by more efficiently aligning resources to provide high quality, effective service and NRT to smokers seeking to quit; and
- continue to promote the Quitline and Quitsite with media, and continue to coordinate media efforts with Quitline staffing to avoid problems associated with capacity constraints.

NRT Distribution

An increasing percentage of NRT distribution is occurring through substance abuse treatment facilities (OASAS) and LHDs. The cost-effectiveness of distributing NRT through OASAS-type facilities or LHDs or to populations of smokers dealing with other addictions has not yet been established. A few studies address the effectiveness of NRT in smokers undergoing treatment for abuse of other substances with mixed results (Grant et al., 2007; Stein et al., 2006).

In contrast, evidence suggests that NRT is effective at promoting successful cessation for the general smoking population (e.g., Stead et al., 2008) and that Quitlines are a cost-effective way to distribute NRT (e.g., An et al., 2006; Bauer et al., 2006; Bush et al., 2008; Cummings et al.,

2006; Fellows et al., 2007; Hollis et al., 2007; Swartz et al., 2005; Tinkelman et al., 2007). Data from the independent evaluation have shown that the distribution of NRT via the New York State Smokers' Quitline has improved quit rates for Quitline callers (as well as those receiving NRT via the Quitsite).

One issue that is not clear is the most cost-effective amount of NRT the Quitline should provide. The Quitline has addressed this issue in a pilot study with preliminary evidence suggesting that a 2-week supply is most cost-effective (Cummings and Celestino, 2006–2007 Annual Report). An additional study of this question is planned. Another study (McAfee et al., 2008) has concluded that an 8-week supply is more effective than a 2-week supply and is cost-effective.

Evidence suggests that distribution of NRT via the Quitline is an effective strategy, whereas no such evidence base exists to support distribution via other channels, such as OASAS and LHDs. However, at this time, we do not know the relative cost-effectiveness of offering free or reduced cost NRT in inducing quit attempts and improving long-term quit rates versus media or some other intervention or policy. To better address this question and provide a more definitive answer would require a study beyond the scope of this report—perhaps building a model of cessation and conducting simulations. We recommend

- further study of the cost-effectiveness of NRT distribution channels.

Policy Change

The tobacco use policy environment, including cigarette prices, extent of tax evasion, and smoking restrictions, has been improving in New York since the inception of NY TCP, and our data suggest that these variables are related to smoking cessation outcomes. Thus, NY TCP's multicomponent approach appears to be effective in promoting cessation.

We recommend that NY TCP

- continue to promote policy changes that further create an environment promoting cessation (e.g., tax increases, smoking restrictions).

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