Connecticut Tobacco Use Prevention and Control Program

Community Cessation Programs

2011 FUNDING CYCLE

PREPARED FOR:

Connecticut Tobacco Use Prevention and Control Programs

PREPARED BY:

UNC School of Medicine

Tobacco Prevention and Evaluation Program

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DPH Keeping Connecticut Healthy

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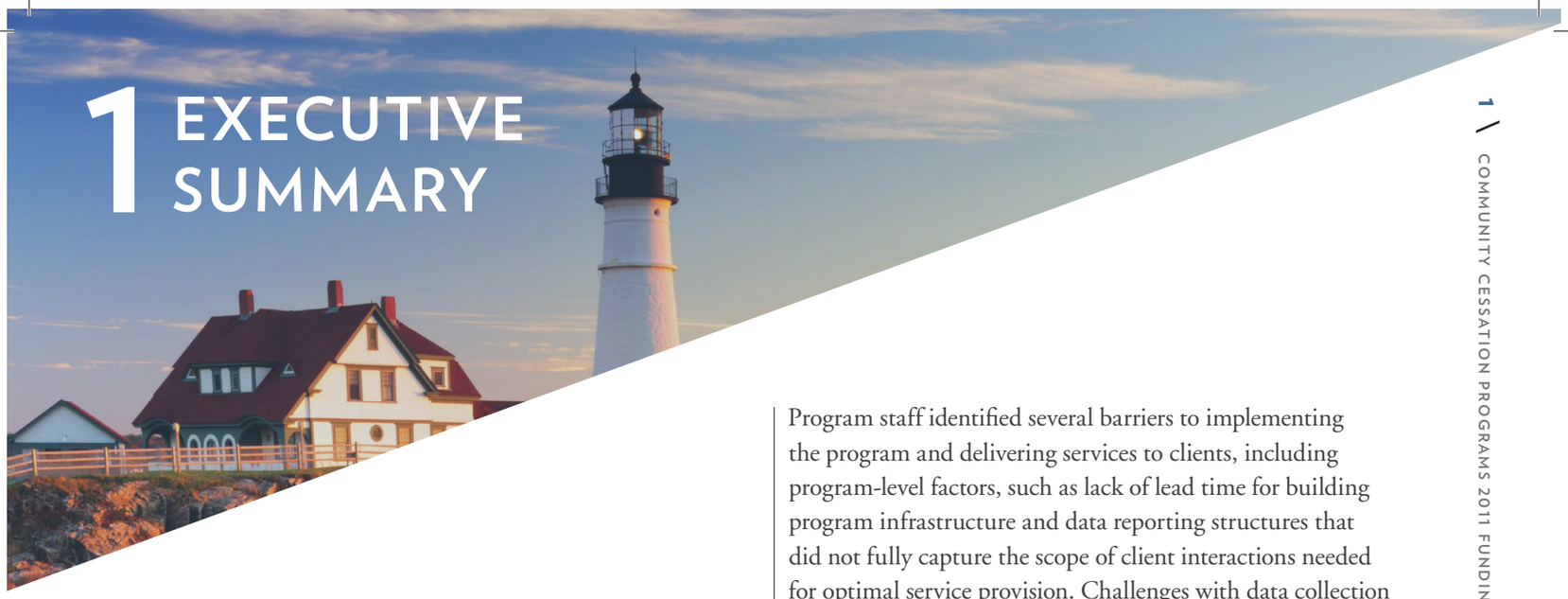


1 EXECUTIVE SUMMARY

Evaluation data suggest that the 2011 Connecticut (CT) community-based cessation programs reached tobacco users from disparate populations, most of whom had no prior access to evidence-based cessation counseling and medication. Providing access to in-person counseling in community settings, the programs offered high-risk (i.e., high addiction, challenging social circumstances, and co-occurring mental illness and/or substance abuse) tobacco users choices and support towards becoming tobacco-free, reaching clients who might not choose online or telephone cessation services. Despite variations in enrollment across agencies, the program appeared cost effective, helped a substantial number of clients, and achieved quit rates comparable to the CT Quitline. Improved data collection and reporting systems, more lead time to build program infrastructure, continuation of free Nicotine Replacement Therapy (NRT), and strategies to increase client engagement should be considered for future community-based programming.

In 2009, the CT Department of Public Health (DPH) Tobacco Use Prevention and Control Program incorporated community-based tobacco cessation programs as a key component of CT's comprehensive tobacco control efforts. The community-based cessation programs provide face-to-face counseling in individual and group settings, offering clients up to 12 weeks of free NRT. The four community-based programs funded with the 2011 CT Tobacco and Health Trust Fund allocation provided evidence-based cessation treatment to over 700 tobacco users, serving clients from populations that experienced disparities in tobacco use and related health conditions at rates higher than the proportion of adult smokers in CT. Client quit rates at the time of program completion or dropout were between 16.5% and 35%, comparable to CT Quitline rates, impressive given the high-risk status of many clients.

Program staff identified several barriers to implementing the program and delivering services to clients, including program-level factors, such as lack of lead time for building program infrastructure and data reporting structures that did not fully capture the scope of client interactions needed for optimal service provision. Challenges with data collection and reporting are also evident in the number of program indicators with high rates of missing data and/or low response rates, especially related to client follow-up data. Staff reported barriers to keeping clients engaged in services related to clients' heavy addiction, challenging social circumstances, and co-occurring mental illness and/or substance abuse.

The provision of free NRT, to both engage clients initially and keep them engaged, was a key component of program success. Agencies highlighted the importance of personal connections through in-person outreach for securing buy-in from partnering or sub-contracting agencies and for establishing referral networks. On the client level, staff emphasized the importance of personally connecting with clients at the time of referral to increase the likelihood of enrollment and of providing peer models of success. Clients that attended more than one session had the highest likelihood of quitting.

Future community-based cessation programming should consider the following recommendations:

1. Prior to program launch, engage stakeholders to develop data collection and reporting systems that minimize staff time, capture process and outcome measures, and maximize output data.
2. Provide lead time and resources to promote the program and build program infrastructure.
3. Maintain free NRT as a core component of program.
4. Consider strategies, such as adding telephone support or incentivizing completing a certain number of sessions, that will encourage clients to stay engaged with the program across multiple sessions, thus increasing their chances of quitting.

2 PROGRAM OVERVIEW AND METHODS

The four community-based cessation programs funded with the 2011 funding cycle were based in local health and mental health agencies and were designed to provide tobacco users with face-to-face tobacco cessation counseling in individual and group settings. At enrollment, each client received an intensive one-on-one counseling session. Clients could then opt to continue with individual sessions, group sessions, or a combination of individual and group support. Clients were eligible to receive up to 12 weeks of free nicotine replacement therapy (NRT) or other cessation medication (as medically appropriate) and were allowed to re-enroll in the program as needed. Agencies were contracted to report client enrollment and program utilization data via a CT DPH maintained database.

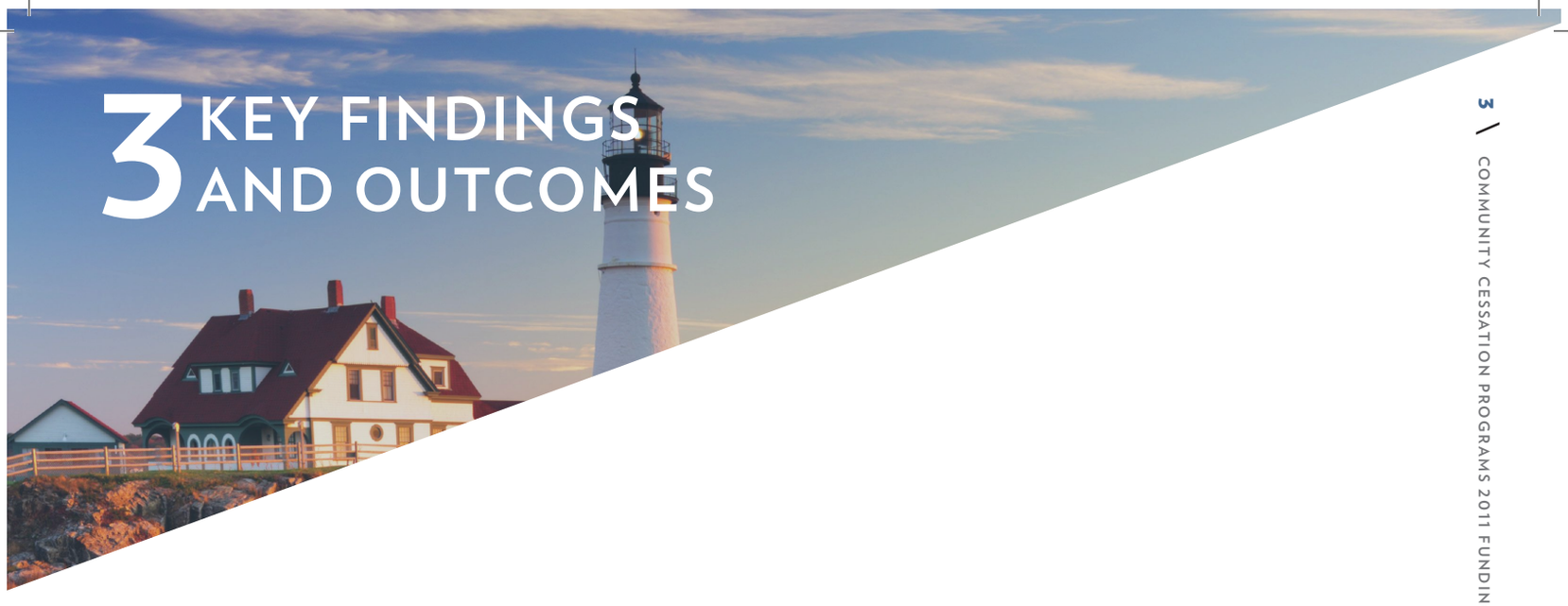
Each agency targeted its outreach and services to tobacco users from populations that experience disparities in tobacco use and tobacco-related disease (e.g., people with low socio-economic resources or mental illness). All agency contracts specified program enrollment goals and target outcomes of reduced tobacco use in 70% of clients and environmental changes (e.g., no longer smoke inside house) in 75% of clients.

The CT DPH contracted with the Tobacco Prevention and Evaluation Program at the University of North Carolina at Chapel Hill (TPEP) to conduct a final evaluation of the four community cessation programs funded by the 2011 funding cycle. The evaluation is based on a logic model developed with CT DPH. All data reported are drawn from participant data entered into the CT DPH database by agency staff and telephone interviews conducted by TPEP with agency staff. Due to contract execution delays and contract extensions that vary by agency, the evaluation period is not consistent across agencies. As summarized in Table 1, the evaluation period for each agency reflects the actual date of contract execution and the latest date for which data could feasibly be included in this report.

The main body of this report focuses on cumulative program indicators and outcomes, with select agency-specific data points highlighted. Agency-specific snapshots are provided as appendices to this report. This report does not include agency names in an effort to protect the identity of agency staff who provided qualitative data for this report. Evaluation findings for a fifth agency funded in the 2011 funding cycle are provided in a separate report.

TABLE 1. AGENCY TIMELINES

Agency	Contract Period	Evaluation Period
A	Jan 4, 2012 – Oct 31, 2013	Nov 1, 2011 – Oct 31, 2013
B	Jan 17, 2012 – Dec 31, 2014 (contract extended)	Nov 1, 2011 – March 31, 2014
C	Jan 17, 2012 – Oct 31, 2013	Nov 1, 2011 – Oct 31, 2013
D	Feb 5, 2013 – Aug 31, 2014 (contract extended)	March 1, 2012 – March 31, 2014



3 KEY FINDINGS AND OUTCOMES

A. To what extent did programs meet their contracted enrollment goals?

The degree to which agencies met target enrollment goals varied dramatically (Table 2). Agency A exceeded its enrollment goal and Agency B was on track to meet or exceed its goal by the end of its contract in December, 2014. Agency C reached nearly 60% of its enrollment goal and identified several logistical barriers to enrolling clients related to the space available at their main clinic site and lack of control over scheduling groups at a satellite clinic. Providing parking vouchers, encouraging providers to send clients directly to the clinic at the time of referral, and identifying a key staff partner at the satellite clinic were identified as important strategies to overcome these barriers.

Based on the data reported, Agency D reached only 7% of its target enrollment. The Agency D grant was structured significantly differently, with Agency D serving as a coordinating site for multiple behavioral health sub-contracting agencies (e.g., hospital outpatient clinics, psychosocial clubs) that provided cessation services. While program staff reported services being offered at nine sub-contracting agencies, partial data was reported for only three agencies. Agency D staff reported that staff resources at both the coordinating and sub-contracting sites were too limited to meet the data reporting needs and that, for some sites, requiring data reporting may have prevented services from being offered. As such, accurate conclusions about the extent to which Agency D met enrollment goals cannot be drawn.

Across agencies, program staff identified direct, in-person outreach to healthcare providers within and outside their agencies as the most effective method of program outreach and promotion. This is reflected in client referral sources, with most clients (58%) referred from a health care or behavioral health provider or clinic. However, three agencies reported challenges with early program enrollment related to the payment structure and timing of the contracts that limited time for building program infrastructure and conducting initial outreach to referral sources and/or partnering agencies.

TABLE 2. AGENCY ENROLLMENTS

Agency	Unique Client Enrollment Goal	Total Enrollments	Unique Clients	Clients Re-Enrolling (%)	% Enrollment Goal Met
A	210	260	236	23 (8.8%)	100%+
B	150	144	144	0	96.0%
C	500	339	297	35 (10.3%)	59.4%
D	400	28	28	0	7.0%

Includes only clients who attended at least 1 session

B. What are the characteristics of clients served by the programs?

Overall client demographics are presented in Table 3. Clients were predominately female (61%), over the age of 34 (84%), and white (56%). Most clients (84%) reported smoking cigarettes only; 10% reported using multiple tobacco products. Many clients (44.5%) live with someone who smokes and/or have a costly tobacco-related health condition such as COPD (54%). Most clients (88%) reported a previous quit attempt and most (72%) reported previous experience using NRT or prescription cessation medication, but only 6% of all clients reported previous experience with cessation counseling.

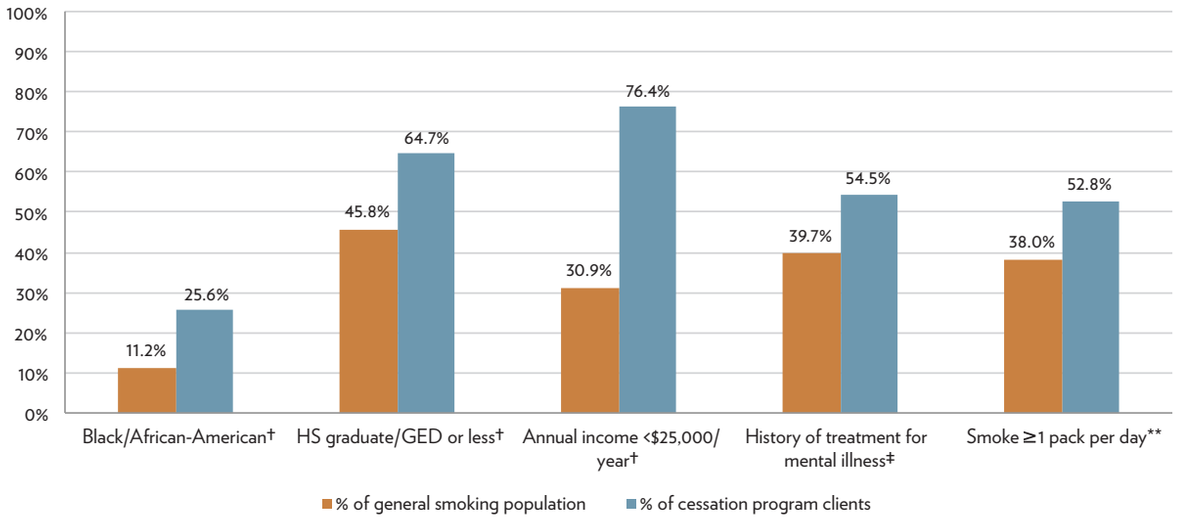
TABLE 3. CLIENT DEMOGRAPHICS

Demographic Characteristic		#	%
Gender	Female	429	60.9%
	Male	271	38.4%
	Unknown	5	0.7%
Age	18 – 24	29	4.1%
	25 – 34	84	11.9%
	35 – 64	528	74.9%
	65+	63	8.9%
	Unknown	1	0.1%
Race/Ethnicity	White, non-Hispanic	395	56%
	Black, non-Hispanic	173	24.5%
	Other race, non-Hispanic	13	1.8%
	Hispanic	96	13.6%
	Unknown	28	4%
Primary Language	English	657	93.2%
	Spanish	29	4.1%
	Other	6	0.85%
	Unknown	13	1.8%
Sexual Orientation	Heterosexual/Straight	602	85.4%
	LGBT	38	5.4%
	Other	6	0.85%
	Unknown	59	8.4%
Health Insurance Status	Private Insurance	151	21.4%
	Medicaid	360	51%
	Medicare	117	16.6%
	No Insurance	54	7.7%
	Unknown	23	3.3%
Education Level	Less than High School	145	20.6%
	High School/GED	311	44.1%
	Some College/College or more	224	31.8%
	Unknown	25	3.6%
Annual Household Income	< $25,000	488	69.2%
	$25,000 - $34,999	45	6.4%
	$35,000 - $74,999	89	12.6%
	≥ $75,000	17	2.4%
	Unknown	66	9.4%

These programs successfully reached clients from groups with disparities in tobacco use and related health outcomes, serving clients with low educational attainment, low income, history of treatment for mental illness, and/or being non-Hispanic Black at rates higher than their proportion of CT adult smokers (Figure 1). Among clients who smoke cigarettes, 53% reported smoking 20 or more cigarettes per day (i.e., one pack or more per day), a higher proportion compared to the national rate of 38%.

Qualitative data from staff interviews corroborate the quantitative data presented here to paint a picture of a high-risk, difficult to treat client base. Program staff identified heavy addiction, co-occurring mental illness and/or substance abuse, and multiple social stressors (e.g., low income, lack of transportation) as substantial barriers to clients staying engaged in the program and successfully quitting their tobacco use.

FIGURE 1. CLIENTS FROM DISPARATE POPULATIONS*



* Program client estimates exclude missing data
† Estimates based on 2012 Connecticut Behavioral Risk Factor Surveillance Survey
‡ Estimate based on 2009-2011 National Survey on Drug Use and Health
** Estimate based on 2012 National Health Interview Survey

C. To what extent are clients utilizing cessation services provided by the funded programs?

Overall, individual counseling sessions, either by themselves or in combination with group sessions, appear to be preferred by most (86.5%) clients (Table 4). Group counseling was structured differently across agencies, with some agencies offering more consistent groups than others. It is likely that the group counseling utilization rate reported here is an underestimate, given that Agency D sub-contracting sites primarily offered group support.

Program completion was contractually defined as completing five individual sessions or eight group sessions. Client retention through program completion was a challenge across agencies, with less than a third of clients attending five or more sessions per enrollment (Table 4). Across the four agencies, program staff reported significant barriers to sustained client engagement related to loss of motivation and the nature of addiction, describing clients dropping out of services as they found quitting to be more difficult than anticipated. Staff across agencies also cited challenging social circumstances and co-occurring mental illness and/or substance abuse as important client-level barriers to staying engaged with the program. One staff summarized these challenges by saying, "…once they start trying to quit, I think life just kind of gets them."

The provision of free cessation medication was cited by all programs as a key factor for getting and keeping clients engaged. While 95% of client records lacked data on NRT provision during program enrollment, 94% of clients who reported a quit attempt (n=317) at program completion or dropout used cessation medication during their enrollment. Staff at three agencies identified exposure and connection to peers who successfully quit as an important factor in retaining clients, and two of these agencies modified the structure of groups to encourage clients to stay engaged with group sessions after quitting.

Programs were contracted to provide relapse-prevention follow-up care in the form of individual or group sessions for those clients who successfully quit during program enrollment. Program staff reported a number of barriers around implementing this component of the program, including lack of client interest, difficulty reaching clients after program completion or dropout, and lack of consistent operationalization of what constituted a relapse prevention session. These barriers are evident in the program data, with relapse prevention sessions reported for only 12% of clients. Programs reported moderate use of the CT Quitline as a relapse prevention referral, with 37% of clients referred to the Quitline.

It is also important to note that staff at all agencies reported doing additional "behind the scenes" client work that was not captured in the data reporting system. Such work included phone calls to remind a patient about an appointment or check in with them between in-person sessions and making time during the day for brief, unscheduled face-to-face interactions with potential clients. Staff identified these interactions as playing an important role in keeping clients engaged and helping clients quit their tobacco use and expressed some frustration that such activities did not "count" in the data and were not accounted for in the structure of the grant.

TABLE 4. PROGRAM UTILIZATION INDICATORS (n=705)

		n	%
Type of session	Individual Only	486	68.9%
	Group Only	95	13.5%
	Combination	124	17.6%
Number of sessions attended	1	248	35.2%
	2	119	16.9%
	3	75	10.6%
	4	50	7.1%
	5+	213	30.2%

D. What are tobacco abstinence rates?

Agencies were contracted to collect client tobacco use status at the time of program completion or dropout and at four and seven months after a client's last session. Tobacco use data are self-reported, with an unknown number of clients completing carbon monoxide verification. Program staff reported that reaching clients for four and seven month follow-up sessions was very difficult. As response rates for four and seven month follow-up were low (34% and 26%, respectively), quit rates for those time periods are not reliable and are not reported here. Table 5 presents 30-day point prevalence (i.e., no tobacco use in past 30 days) responder and intent-to-treat quit rates at program completion or dropout. Responder rates do not account for the tobacco use status of clients with missing data and are an overestimate of the actual quit rate. Intent-to-treat rates assume that all clients with missing data continue to use tobacco and are an underestimate of the actual quit rate. The true quit rate lies somewhere between these two measures.

TABLE 5. TOBACCO USE AT COMPLETION/DROPOUT (n=705)

30-Day point prevalence quit rate		
	n	**% (95% CI)**
Response Rate	334	47%
Responder Quit Rate	116	34.7% (29.6% - 39.8%)
Intent-to-treat Quit Rate	116	16.5% (13.8% - 19.2%)
Quit attempts & behavior changes		
	n	**%**
Quit attempt made[1]	317	45%
Reduced use or made other changes[2]	275	39%

1. Data missing for 51.5% of clients; this is likely an underestimate
2. Includes reducing/stopping smoking at home, in public, at work, in the car, or smoking only outside. Data missing for 51.4% of clients; this is likely an underestimate.

With a true quit rate of between 16.5% and 35%, the program as a whole achieved quit outcomes that compare favorably to the 28% responder rate reported for the CT Quitline in 2011. (It should be noted that Quitline rates are measured at seven months post-Quitline registration.) Importantly, many clients reported making a quit attempt, reducing daily use, or making other changes to their smoking behaviors (e.g., smoking only outside their homes) that indicate progress towards quitting. Due to a high degree of missing data for these indicators, it is likely that the numbers presented here underestimate the extent to which programs met their contractual goals related to client tobacco use reduction and behavior changes.

Multivariable logistic regression models were used to identify factors associated with quit status at program completion or dropout. Odds of being quit at time of program completion were significantly lower for clients with a history of treatment for mental illness (Table 6). The likelihood of quitting significantly increased for each counseling session attended. Use of NRT or prescription cessation medication approached significance, suggesting that clients using medication in combination with counseling had greater odds of quitting than those that did not use medication.

TABLE 6. PREDICTORS OF QUIT AT TIME OF PROGRAM COMPLETION OR DROPOUT

Adjusted Odds Ratios[1] (AORs) for multivariable logistic regression model of 30-day point prevalence smoking abstinence at program completion/dropout (n=239)[2]		
	Adjusted Odds Ratio (95% CI)	**P value**
History of mental health treatment	0.54 (0.30, 0.96)	**0.04**
# sessions attended	1.12 (1.06, 1.18)	**.0001**
Used NRT	2.03 (0.93, 4.46)	0.076
Used prescription medication	2.60 (0.91, 7.48)	0.077

1. Model is adjusted for all listed variables, as well as gender, age, race/ethnicity, education, insurance status, living with a smoker, and history of substance abuse treatment
2. Includes only clients who had smoked in the 30 days prior to enrollment and had a recorded smoking status at program completion/dropout and excludes observations with missing predictor variables

E. How satisfied were clients with the services they received?

Agencies were contracted to provide clients with a satisfaction survey to be returned to CT DPH via a pre-addressed stamped envelope. Among clients who returned the survey, 99% reported being very or mostly satisfied with the program. However, survey response rates were insufficiently low (23%) to achieve a reliable estimate of client satisfaction.

F. What was the cost per enrollment across agencies?

Cost per enrollment calculations are based on total program expenditures as reported by CT DPH for the time period October 1, 2011 – March 31, 2014 (Table 7). Expenditures reflect all program costs (e.g., agency staff time, promotional materials, NRT) but do not reflect CT DPH administrative and staff costs, which are not paid with Trust Fund dollars. Cost estimates excluding NRT expenditures offer a fairer point of comparison between agencies, as not all agencies offered the same types of medication. NRT costs made up a greater proportion of Agency C expenditures compared to Agencies A and B. Conclusions about Agency D are difficult to reach due to the lack of client enrollment data reported; it is likely that the numbers presented here are overestimates of the true cost per enrollment.

Agencies A, B, and C showed comparable cost per enrollment to CDC recommendations for state Quitlines, which use an estimate of $220.40 per caller including two weeks of NRT (1). Cost per enrollment for these programs is slightly higher, reflecting the longer duration of medication provided (up to 12 weeks). Cost per enrollment for agencies A, B, and C align with cessation program cost estimates cited in a recent study that reported a return on investment for Connecticut of between $1.14 and $2.26 per dollar spent on cessation programs combining counseling and medication, suggesting that these programs are on track to result in positive return on investment (2).

TABLE 7. COST PER ENROLLMENT BY AGENCY

Agency	Total expenditures	Total expenditures without NRT	# Enrollments	Cost per enrollment with NRT costs	Cost per enrollment without NRT costs
A	$79,126.73	$58,534.56	260	$304	$225
B	$37,890.29	$30,372.94	144	$263	$210
C	$85,367.89	$38,151.89	339	$251	$112
D	$44,607.77	$41,588.57	28	$1,593	$1,485

G.What was the cost per quit across agencies?

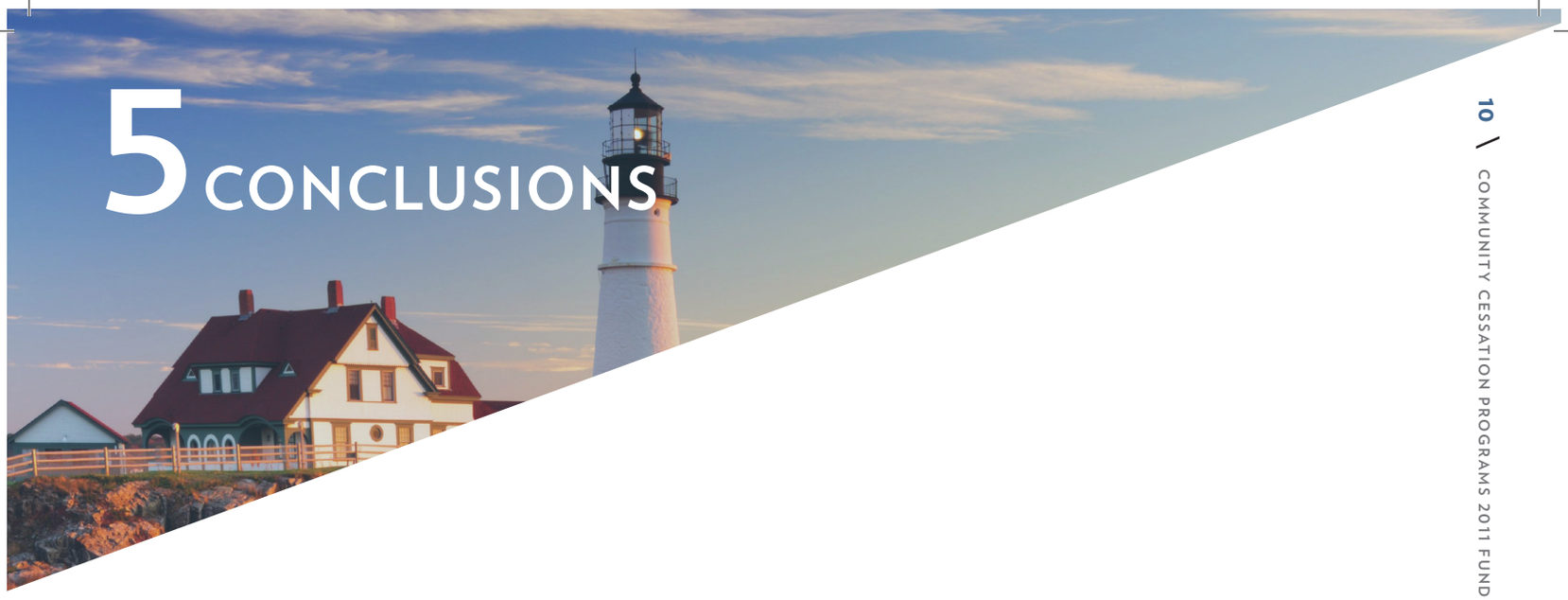
Cost per quit calculations are based on total program expenditures as above and use both responder and intent-to-treat quit rates. As such, the true cost per quit lies somewhere within the range presented here (Table 8). While cost per quit standards for similar community based programs have not been established in the literature, cost per quit for agencies A, B, and C compares favorably with cost per quit estimates for state Quitlines, which typically range between $1,000 and $2,000 with NRT costs (3).

TABLE 8. COST PER QUIT BY AGENCY

Agency	Quit rate estimate	Number of clients quit	Cost per quit with NRT costs	Cost per quit without NRT costs
A	34.3% - 42.6%	81-101	$783 - $976	$579 - $722
B	4.9% - 28.0%	7-40	$947 - $5,412	$759 - $4,338
C	8.4% - 25.3%	25-75	$1,138 - $3,414	$508 - $1,526
D	10.7% - 15.0%	3-4	$11,151 - $14,869	$10,397 - $13,862

4 LIMITATIONS

Several limitations to the data exist. The lack of reporting from Agency D presents a barrier to drawing full conclusions at the agency-specific and overall program level. While Agency D staff reported that a substantially greater number of clients were enrolled and served than reported, it is difficult to know to what extent those clients had similar demographic characteristics or outcomes to the Agency D clients that were reported. Across all agencies the lack of data for client NRT use during program enrollment and confusion around how to define and track relapse prevention sessions precluded full conclusions about the extent to which the program was implemented as intended. Inconsistent tracking of program completion measures and low response rates on the satisfaction survey also make it difficult to draw full conclusions about how clients engaged with and perceived program services. Due to low response rates at four and seven month follow-up, longer term program quit rates and impact cannot be determined.



5 CONCLUSIONS

Evaluation data suggest that the 2011 Connecticut (CT) community-based cessation programs reached tobacco users from disparate populations, most of whom had no prior access to evidence-based cessation counseling and medication. Providing access to in-person counseling in community settings, the programs offered high-risk (i.e., high addiction, challenging social circumstances, and co-occurring mental illness and/or substance abuse) tobacco users choices and support towards becoming tobacco-free, reaching clients who might not choose online or telephone cessation services. Despite variations in enrollment across agencies, the program appeared cost effective, helped a substantial number of clients, and achieved quit rates comparable to the CT Quitline.

Based on program data and qualitative findings from staff interviews, the following recommendations are offered for future community based cessation programs:

1. Prior to program launch, engage evaluation and program stakeholders to develop a data collection and reporting system that minimizes demands on program staff time, captures important process and outcome measures, and maximizes utility of output data.
2. Provide lead time and resources for agencies to promote program and build program infrastructure.
3. Maintain free NRT as a core component of program.
4. Consider strategies, such as incentives for completing a certain number of sessions or adding telephone support, that will encouraged clients to stay engaged with the program across multiple sessions, thus increasing their chances of quitting.

6 REFERENCES

1. Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Control Programs – 2014. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

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3. NAQC. (2012). Quitline Service Offering Models: A Review of the Evidence and Recommendations for Practice in Times of Limited Resources. (B. Schillo, PhD). Phoenix, AZ. Available online at: http://c.ymcdn.com/sites/naquitline.site-ym.com/resource/resmgr/Issue_Papers/QuitlineServiceOfferingModel.pdf. Accessed September 23, 2014.

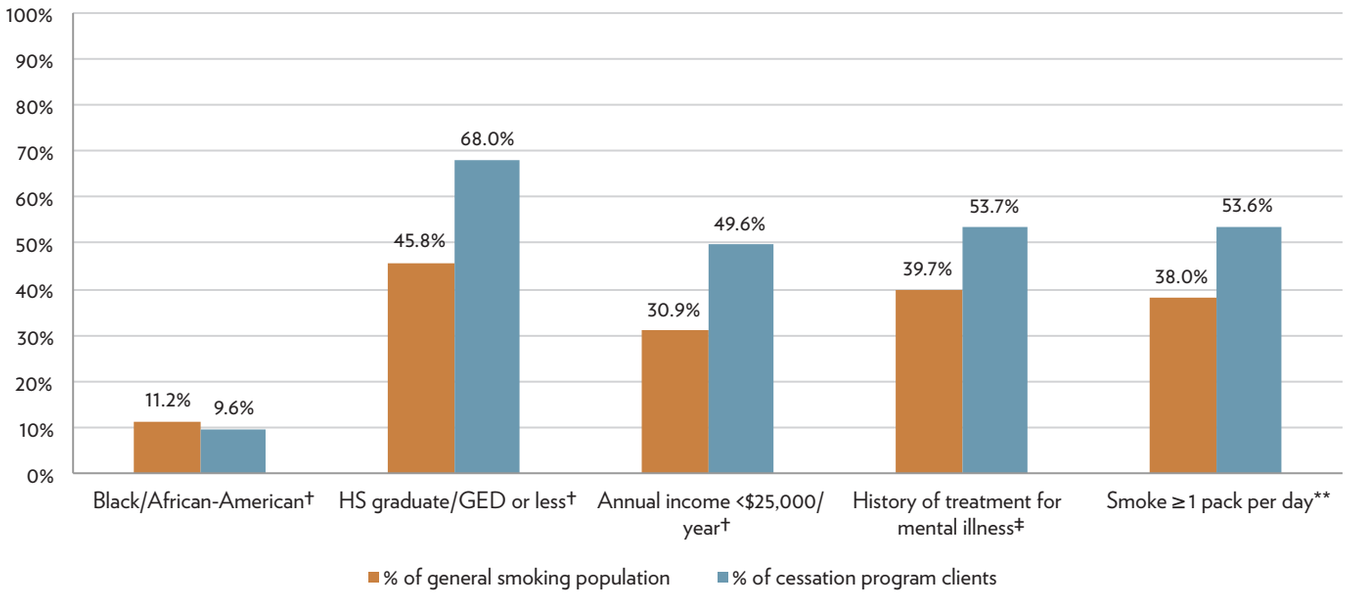
APPENDIX

A

AGENCY A SNAPSHOT

Client Characteristics: Agency A enrolled 236 unique clients, exceeding its contracted goal of 210 clients. Agency A served clients from populations that experience disparities in tobacco use and tobacco-related disease at rates similar to or greater than their proportion adult smokers in Connecticut (Figure 1).

FIGURE 1. CLIENTS FROM TARGET POPULATIONS*



* Program client estimates exclude missing data
† Estimates based on 2012 Connecticut Behavioral Risk Factor Surveillance Survey
‡ Estimate based on 2009-2011 National Survey on Drug Use and Health
** Estimate based on 2012 National Health Interview Survey

Program Utilization and Outcomes: Nearly 92% of Agency A clients attended more than one counseling session, with more than half of all clients attending at least five sessions (Figure 2). Quit rates at time of program completion/ dropout were high, with clients quitting any tobacco use at a rate between 34.3% (intent-to-treat rate [ITT]) and 42.6% (responder rate [RR]) (Figure 3). At the time of program completion/dropout roughly two-thirds of clients were referred to the Quitline for relapse prevention.

FIGURE 2. NUMBER OF SESSIONS ATTENDED

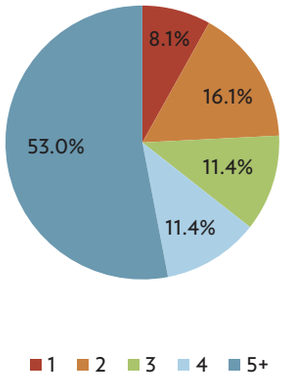
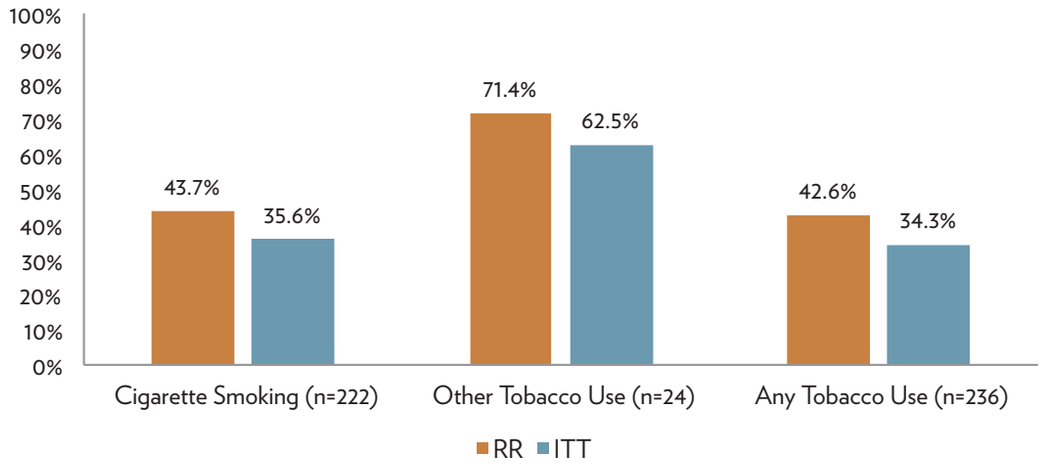


FIGURE 3. 30-DAY POINT-PREVALENCE QUIT RATES*



*Response rates: cigarette smoking=81.5%; other tobacco use=87.5%; any tobacco use=80.5%

Program Cost: Agency A served clients in a cost-effective manner (Table 1).

TABLE 1. PROGRAM COSTS

Total expenditures[1]	Total expenditures without NRT	Cost per enrollment[2] with NRT costs	Cost per enrollment without NRT costs	Cost per quit[3] with NRT costs	Cost per quit without NRT costs
$79,126.73	$58,534.56	$304	$225	$783 - $976	$579 - $722

Abbreviations: NRT=nicotine replacement therapy

1. Total expenditures reflect the period beginning Oct. 1, 2011 rather than Nov. 1, 2011 (start date of evaluation)
2. Number of enrollments reflects all enrollments, including clients re-enrolling (n=260)
3. Cost per quit reflects the number of clients quit based upon the responder and ITT quit rate estimates (34.3%-42.6%)

Summary: Agency A enrolled a diverse population of clients, particularly clients of low socioeconomic status, heavy smokers and clients with mental illness. Most clients attended multiple counseling sessions, contributing to the high proportion of clients either reducing or quitting tobacco use while enrolled in the program.

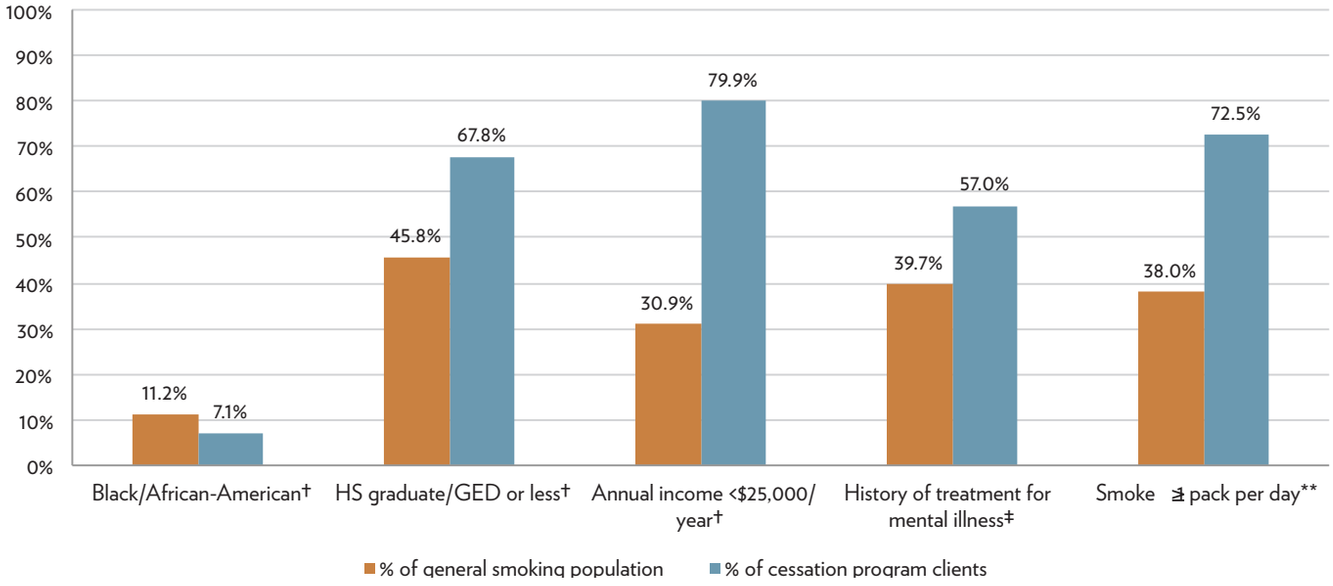
APPENDIX

B

AGENCY B SNAPSHOT

***Client Characteristics*:** Agency B enrolled 144 unique clients, nearly reaching its contracted goal of 150 clients. The program was successful at enrolling many clients from groups that experience disparities in tobacco use and tobacco-related disease—including clients who were low education, low income, mentally ill and heavy smokers—with proportions exceeding the proportions estimated in the Connecticut adult smoking population (Figure 1).

FIGURE 1. CLIENTS FROM TARGET POPULATIONS*



* Program client estimates exclude missing data
† Estimates based on 2012 Connecticut Behavioral Risk Factor Surveillance Survey
‡ Estimate based on 2009-2011 National Survey on Drug Use and Health
** Estimate based on 2012 National Health Interview Survey

***Program Utilization and Outcomes*:** Approximately half of clients attended more than one counseling session, with 15% of all clients attending at least five sessions (Figure 2). Quit rates at time of program completion/dropout (30-day abstinence) varied greatly due to low response rates, with clients quitting any tobacco use at a rate between 4.9% (intent-to-treat rate [ITT]) and 28.0% (responder rate [RR]) (Figure 3). At the time of program completion/dropout roughly 20% of clients were referred to the Quitline for relapse prevention.

FIGURE 2. NUMBER OF SESSIONS ATTENDED

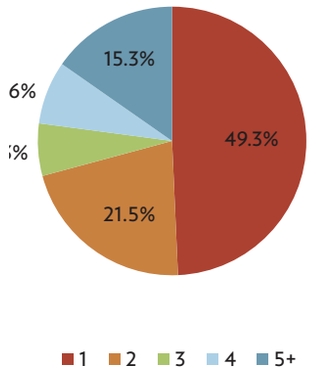
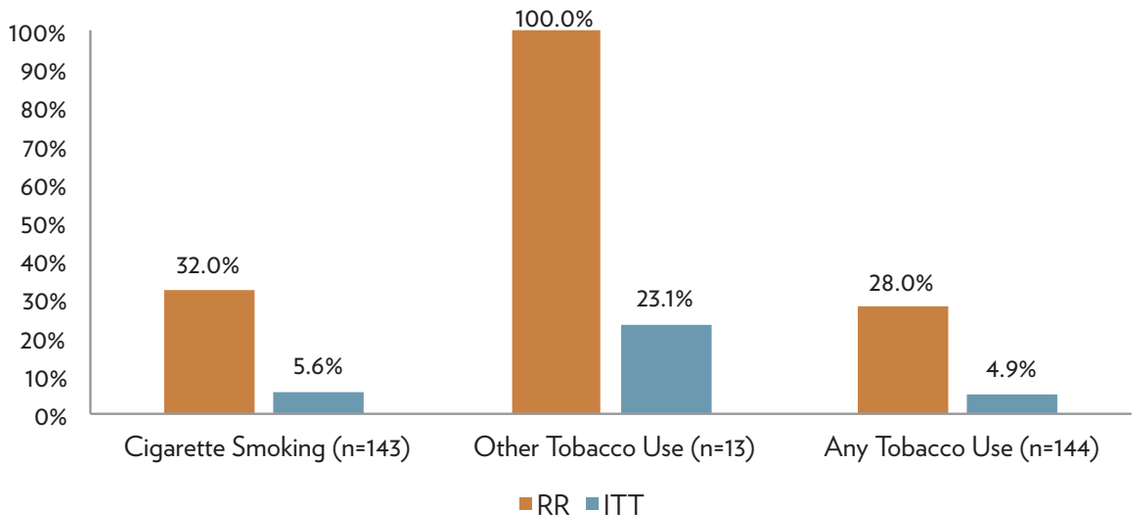


FIGURE 3. 30-DAY POINT-PREVALENCE QUIT RATES*



*Response rates: cigarette smoking=17.5%; other tobacco use=23.1%; any tobacco use=17.4%

Program Cost: Agency B served clients in a cost-effective manner when low response rates are considered in cost per quit calculations (Table 1).

TABLE 1. PROGRAM COSTS

Total expenditures[1]	Total expenditures without NRT	Cost per enrollment[2] with NRT costs	Cost per enrollment without NRT costs	Cost per quit[3] with NRT costs	Cost per quit without NRT costs
$37,890.29	$30,372.94	$263	$210	$947 - $5,412	$759 - $4,338

Abbreviations: NRT=nicotine replacement therapy

1. Total expenditures reflect the period beginning Oct. 1, 2011 rather than Nov. 1, 2011 (start date of evaluation)
2. Number of enrollments reflects all enrollments, including clients re-enrolling (n=144)
3. Cost per quit reflects the number of clients quit any tobacco based upon the responder and ITT quit rate estimates (4.9%-28.0%)

Summary: Agency B was extremely successful in enrolling clients from disparate populations, including clients of low socioeconomic status, clients with mental illness and those smoking more than one pack of cigarettes per day. One half of clients attended multiple counseling sessions, but quit rates are hard to interpret given the low response rates for tobacco use at time of program completion/dropout.

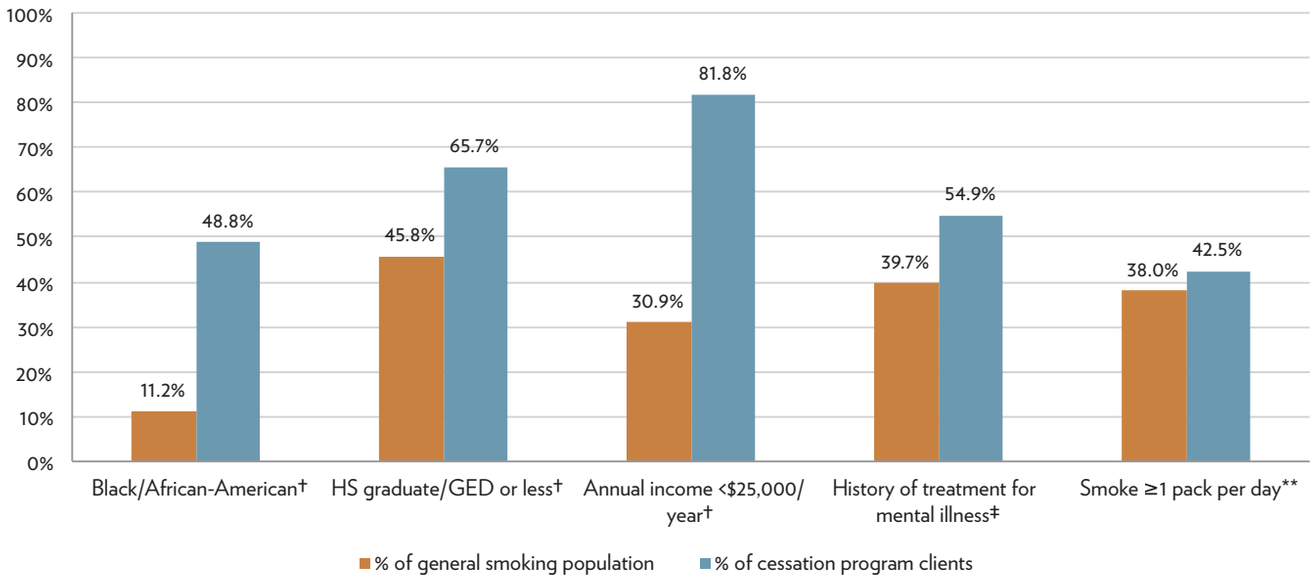
APPENDIX

C

AGENCY C SNAPSHOT

***Client Characteristics*:** Agency C enrolled 297 unique clients, meeting 60% of its contracted goal. Clients were primarily from high-risk target groups, including clients who are black/African-American, low education, low income and mentally ill, with proportions much higher than the proportions estimated in the Connecticut adult smoking population (Figure 1).

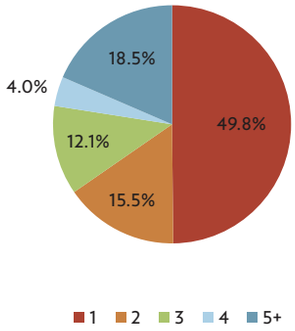
FIGURE 1. CLIENTS FROM TARGET POPULATIONS*



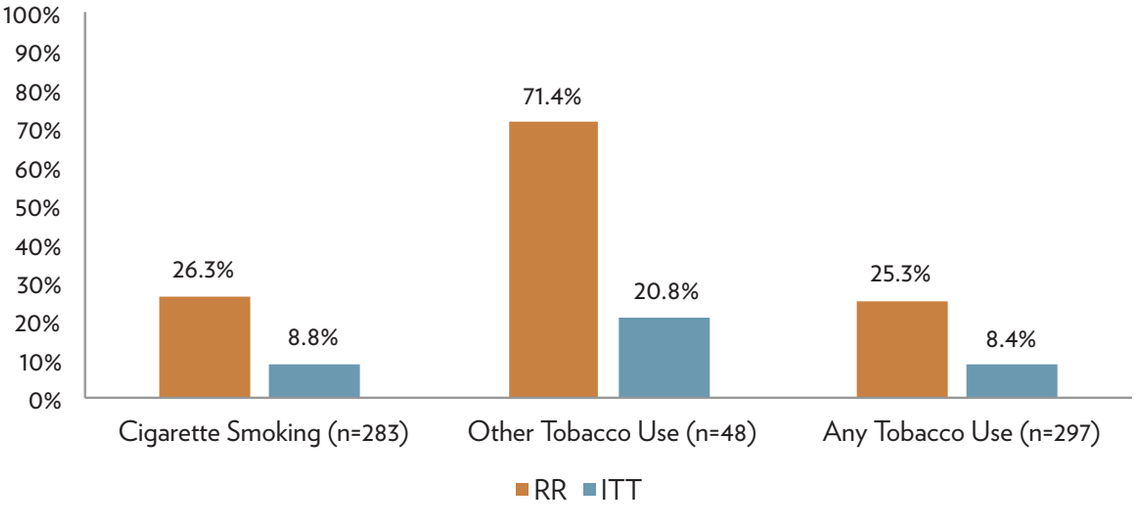
* Program client estimates exclude missing data
† Estimates based on 2012 Connecticut Behavioral Risk Factor Surveillance Survey
‡ Estimate based on 2009-2011 National Survey on Drug Use and Health
** Estimate based on 2012 National Health Interview Survey

***Program Utilization and Outcomes*:** Approximately half of clients attended more than one counseling session, with nearly one-fifth of clients attending at least five sessions (Figure 2). Quit rates at time of program completion/dropout (30-day abstinence) varied greatly due to low response rates, with clients quitting any tobacco use at a rate between 8.4% (intent-to-treat rate [ITT]) and 25.3% (responder rate [RR]) (Figure 3). At the time of program completion/dropout, one-fourth of clients were referred to the Quitline for relapse prevention.

FIGURE 2. NUMBER OF SESSIONS



ATTENDED FIGURE 3. 30-DAY POINT-PREVALENCE QUIT RATES*



*Response rates: cigarette smoking=33.6%; other tobacco use=29.2%; any tobacco use=33.3%

***Program Cost*:** Agency C served clients in a cost-effective manner, especially when the proportionally high cost of NRT is excluded (Table 1).

TABLE 1. PROGRAM COSTS

Total expenditures[1]	Total expenditures without NRT	Cost per enrollment[2] with NRT costs	Cost per enrollment without NRT costs	Cost per quit[3] with NRT costs	Cost per quit without NRT costs
$85,367.89	$38,151.89	$251	$112	$1,138 - $3,414	$508 - $1,526

Abbreviations: NRT=nicotine replacement therapy

1. Total expenditures reflect the period beginning Oct. 1, 2011 rather than Nov. 1, 2011 (start date of evaluation)
2. Number of enrollments reflects all enrollments, including clients re-enrolling (n=339)
3. Cost per quit reflects the number of clients quit any tobacco based upon the responder and ITT quit rate estimates (8.4%-25.3%)

***Summary*:** Most clients enrolled at Agency C were from groups disproportionately affected by tobacco, including clients who are black/African-American, low socioeconomic status and mentally ill. One half of clients attended multiple counseling sessions but program outcomes are hard to interpret given the low response rates for tobacco use at time of program completion/dropout.

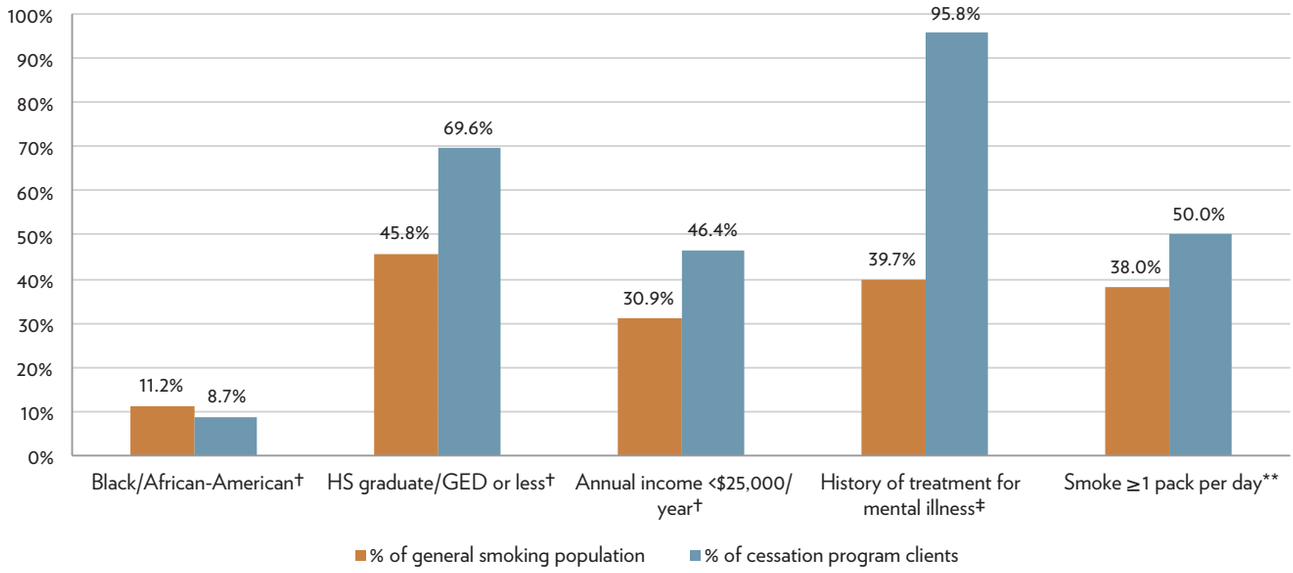
APPENDIX

D

AGENCY D SNAPSHOT

***Client Characteristics*:** Agency D enrolled 28 unique clients, many from disparate populations, including clients with low educational status, low income, mental illness and heavy smoking, with proportions much higher than the proportions estimated in the Connecticut adult smoking population (Figure 1).

FIGURE 1. CLIENTS FROM TARGET POPULATIONS*



* Program client estimates exclude missing data
† Estimates based on 2012 Connecticut Behavioral Risk Factor Surveillance Survey
‡ Estimate based on 2009-2011 National Survey on Drug Use and Health
** Estimate based on 2012 National Health Interview Survey

***Program Utilization and Outcomes*:** Nearly 40% of clients attended more than five counseling sessions, though roughly one-third attended only one session (Figure 2). Quit rates at time of program completion/dropout (30-day abstinence) were average, with clients quitting any tobacco use at a rate between 10.7% (intent-to-treat rate [ITT]) and 15.0% (responder rate [RR]) (Figure 3). At the time of program completion/dropout 14.3% of clients were referred to the Quitline for relapse prevention.

FIGURE 2. NUMBER OF SESSIONS ATTENDED

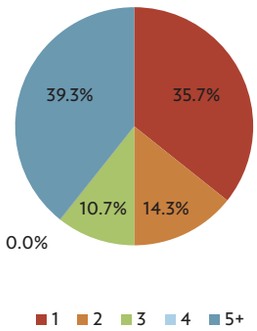
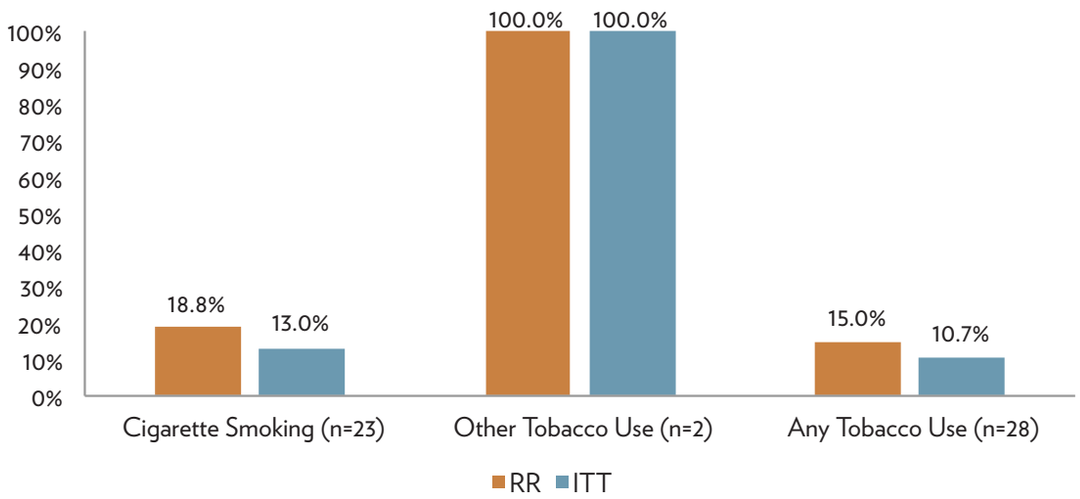


FIGURE 3. 30-DAY POINT-PREVALENCE QUIT RATES*



*Response rates: cigarette smoking=69.6%; other tobacco use=100%; any tobacco use=71.4%

***Program Cost*:** Due to lack of client enrollment data reported, cost data is likely highly overestimated for Agency D.

TABLE 1. PROGRAM COSTS

Total expenditures	Total expenditures without NRT	Cost per enrollment[1] with NRT costs	Cost per enrollment without NRT costs	Cost per quit[2] with NRT costs	Cost per quit without NRT costs
$44,607.77	$41,588.57	$1,593	$1,485	$11,151 - $14,869	$10,397 - $13,862

Abbreviations: NRT=nicotine replacement therapy

1. Number of enrollments reflects all enrollments, including clients re-enrolling (n=28)
2. Cost per quit reflects the number of clients quit any tobacco based upon the responder and ITT quit rate estimates (10.7%-15.0%)

***Summary*:** Due to limited staff resources for data reporting, accurate conclusions about program outcomes for Agency D cannot be drawn. However, of clients with recorded data, the program was successful in reaching target populations, including clients with low socioeconomic status, mental illness and heavy smoking.

Connecticut Tobacco Use Prevention and Control Program

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