Connecticut Tobacco Use Prevention and Control Program

Communicare Cessation Program

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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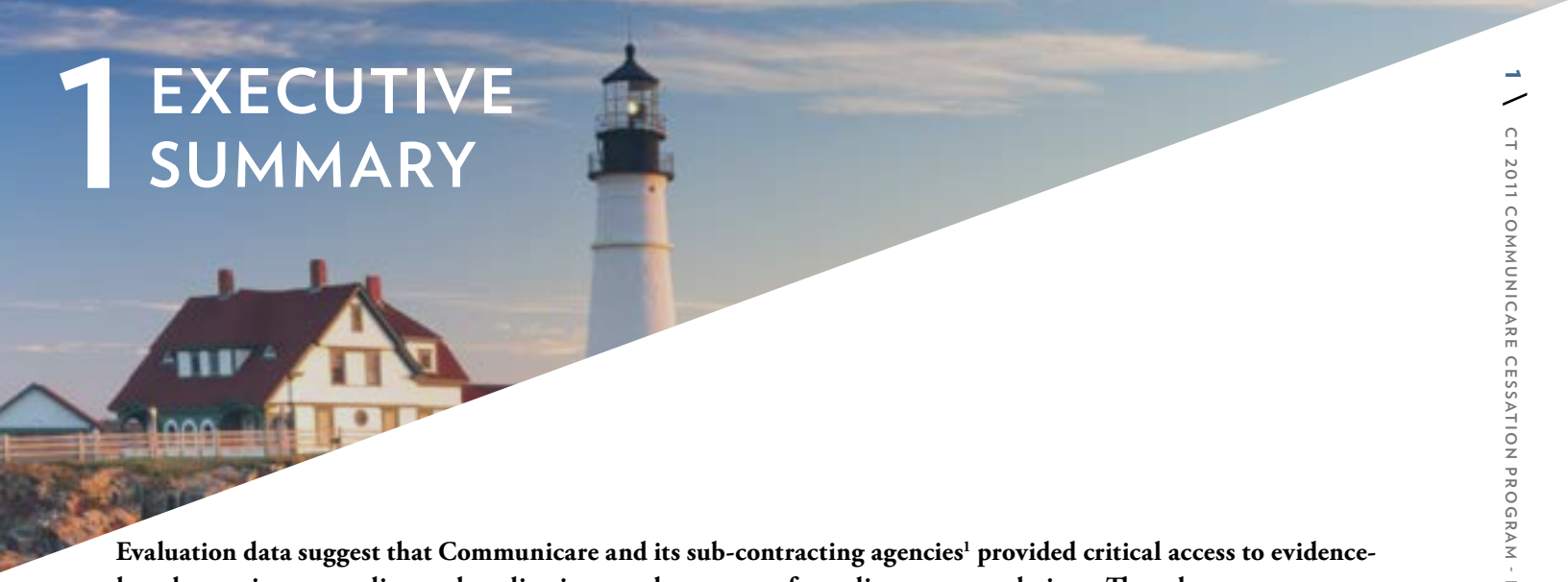


1 EXECUTIVE SUMMARY

Evaluation data suggest that Communicare and its sub-contracting agencies[1] provided critical access to evidence-based cessation counseling and medication to tobacco users from disparate populations. Though program costs were relatively high in terms of cost per quit, Communicare worked with a difficult to treat client base consisting primarily of low-income adults living with mental illness and showed success in helping clients quit or reduce tobacco use and in changing agency norms and policies to support both staff and clients in their cessation efforts. Improved data collection and reporting systems, longer sub-contract periods, continuation of free Nicotine Replacement Therapy (NRT), and strategies to increase client engagement should be considered for future cessation programming with Communicare.

In 2009, the Connecticut Department of Public Health (CT 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 provided tobacco users with face-to-face tobacco cessation counseling in individual and group settings, offering clients up to 12 weeks of free NRT. Communicare and its sub-contracting behavioral health agencies enrolled nearly 600 tobacco users who were predominantly low income adults living with mental illness.

Communicare staff cited lack of provider support for clients' cessation efforts as a major barrier to client retention, reflecting well documented reluctance among many behavioral health clinicians to address tobacco use with their clients (1-3). Cost effectiveness was less favorable in terms of cost per enrollment and cost per quit compared to state Quitlines, possibly resulting from longer term provision of free cessation medication and working with a high-risk, difficult to treat client base. Evaluation of some program outcomes, including long term quit rates, was limited by missing data and low response rates.

Free on-site cessation medication was identified by staff as a key factor in retaining clients across multiple sessions, as well as having open communication with clients, especially through telephone support. Few clients attended relapse prevention sessions after program completion, but most clients were referred to the CT Quitline for additional support. While quit rates at the time of program completion or dropout (13.5% - 18%) were lower than the CT Quitline, nearly half of clients reported reducing their tobacco use or making other changes in their tobacco use, indicating program success in moving these high-risk clients toward quitting. Staff training and client engagement helped promote tobacco-free agency norms and polices, which were identified as a crucial component of promoting quitting and tobacco use reduction in this client population.

Future 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 longer term funding to allow adequate time to achieve agency and client buy-in 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.

[1]Communicare's sub-contracting agencies include: Birmingham Group Health Services, Inc.; Harbor Health Services (in 2012, Birmingham Group Health Services and Harbor Health Services merged to become BHCare); Bridges, A Community Support System; Community Health Resources; Fellowship Place; Intercommunity Mental Health Group, Inc.; Rushford Center; and United Services, Inc.

2 PROGRAM OVERVIEW AND METHODS

Communicare, a behavioral health agency, contracted with CT DPH in 2009 to implement a program providing tobacco users with face-to-face tobacco cessation counseling in individual and group settings. Clients were also eligible for 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. Communicare was contracted to report client enrollment and program utilization data via a CT DPH maintained database. In addition to providing cessation treatment, Communicare was contracted to work towards a number of policy and program changes to promote tobacco cessation and tobacco-free policies and norms among its sub-contracting agencies.

Communicare and its sub-contracting agencies are behavioral health agencies and target cessation outreach and services specifically to tobacco users with a history of treatment for mental illness. The agency contract identified an enrollment goal and deliverables related to policy, systems change, and staff training at sub-contracting agencies. 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 cessation service related activities for the period covered by the 2011 Tobacco and Health Trust Fund funding cycle; policy and systems change outcomes are evaluated under a separate contract.

3 KEY FINDINGS & OUTCOMES

A. To what extent did the program meet its contracted enrollment goal?

Communicare met nearly 40% of its contracted client enrollment goal for the evaluation time period (Table 1). Communicare staff reported enrollment challenges related to shorter-term funding at select sub-contracting agencies where it lacked a direct connection and needed to invest significant time in securing buy-in and establishing referral and service infrastructure.

TABLE 1. CLIENT ENROLLMENT

Unique Client Enrollment Goal	Total Enrollments*	Unique Clients*	Clients Re-Enrolling (%)	% Enrollment Goal Met
1566	802	576	145 (18.1%)	36.8%

*Includes only clients who attended at least 1 session

Communicare trained clinicians in sub-contracting agencies on discussing tobacco use and cessation with their patients. That training proved key to enrollment, as most clients (73%) were referred to the program from a health care provider, behavioral counselor, or health clinic. However, sustaining clinician support for providing supplemental cessation motivation and resources to clients presented a significant challenge to keeping clients engaged over multiple cessation program sessions.

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

Overall client demographics are presented in Table 2. Clients were primarily over the age of 34 (85%), and white (76%). Most clients (78%) reported smoking cigarettes only, while 10% reported using multiple tobacco products. Many clients (43%) live with someone who smokes and/or have a costly tobacco-related health condition such as COPD (59%). Most clients (88%) reported a previous quit attempt and most (74%) reported previous experience using NRT or prescription cessation medication, but only 19.5% of all clients reported previous experience with cessation counseling.

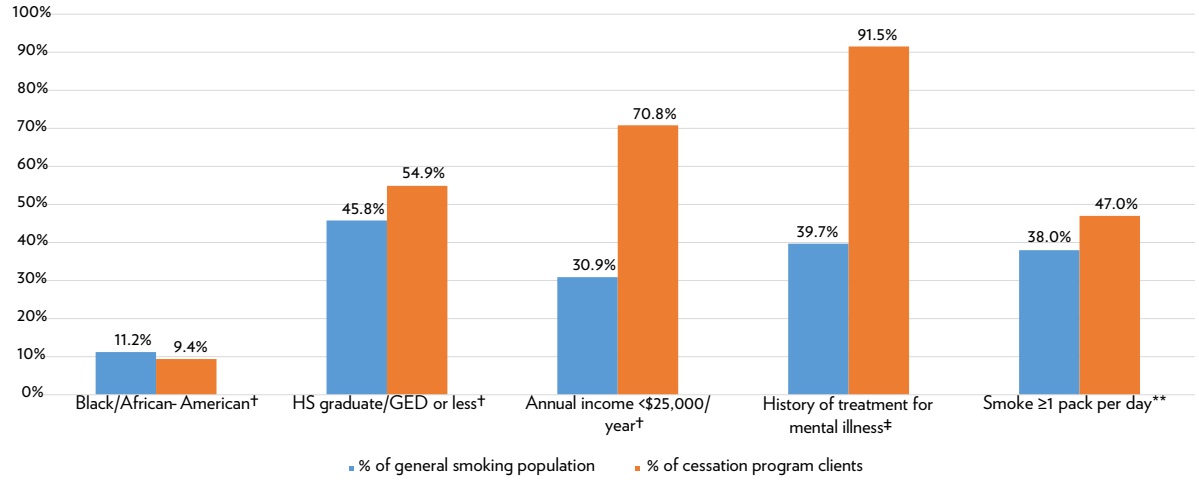
TABLE 2. CLIENT DEMOGRAPHICS

Demographic Characteristic		#	%
Gender	Female	294	51.4%
	Male	268	46.5%
	Unknown	14	2.4%
Age	18 – 24	28	4.9%
	25 – 34	58	10.1%
	35 – 64	456	79.2%
	65+	34	5.9%
	Unknown	0	0%
Race/Ethnicity	White, non-Hispanic	437	75.9%
	Black, non-Hispanic	54	9.4%
	Other race, non-Hispanic	12	2.1%
	Hispanic	54	9.4%
	Unknown	19	3.3%
Primary Language	English	541	93.9%
	Spanish	17	3.0%
	Other	5	0.9%
	Unknown	13	2.3%
Sexual Orientation	Heterosexual/Straight	478	83.0%
	LGBT	35	6.1%
	Other	2	0.35%
	Unknown	61	10.6%
Health Insurance Status	Private Insurance	63	10.9%
	Medicaid	351	60.9%
	Medicare	107	18.9%
	No Insurance	39	6.8%
	Unknown	16	2.8%
Education Level	Less than High School	114	19.8%
	High School/GED	202	35.1%
	Some College/College or more	238	41.3%
	Unknown	22	3.8%
Annual Household Income	< $25,000	408	70.8%
	$25,000 - $34,999	33	5.7%
	$35,000 - $74,999	29	5.0%
	≥ $75,000	11	1.9%
	Unknown	95	16.5%

Communicare successfully reached clients from groups experiencing disparities in tobacco use and related health outcomes, serving clients with low educational attainment, low income, history of treatment for mental illness, and/or non-Hispanic Black race at rates approximately equal to or higher than their proportion of CT adult smokers (Figure 1). Among clients who smoke cigarettes, 47% 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%.

These data illustrate the high-risk, difficult to treat client base enrolled in the program. Communicare and its sub-contracting agencies work specifically with adults living with mental illness and, as such, emphasized the need for culture change within the agencies to better support this specific population in quitting. The existing culture of tobacco use in the behavioral health community was a substantial impediment to client engagement throughout the program. For instance, staff in some sub-contracting agencies expressed concern that trying to quit smoking would exacerbate clients' psychiatric symptoms, and many staff that used tobacco expressed discomfort providing tobacco cessation treatment to clients.

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 program?

Overall, group counseling sessions, either by themselves or in combination with individual sessions, were utilized by most (85%) clients (Table 3). Communicare focused on two levels of groups through the Healthy Living Curriculum—pre-contemplative and contemplative, though these were not differentiated in the database during this evaluation period. The pre-contemplative group emphasized education and motivation to change, while the contemplative group stressed action to quit. Agency staff reported greater barriers with implementing the pre-contemplative group, due to lack of client motivation and fewer agency resources for an education-focused rather than action-oriented group.

Program completion was contractually defined as completing five individual sessions or eight group sessions. Communicare staff identified client retention as the biggest barrier to program completion, with less than 40% of clients attending five or more sessions per enrollment (Table 3). The existing culture of tobacco use within the behavioral health community likely contributed to clients becoming disinterested and discouraged by the difficulty of quitting. However, the provision of free cessation medication on-site was identified as a primary driver in client retention throughout the program, as well as open communication with the clients, particularly being available to clients for additional support over the telephone. Though 43% of client records lacked data on NRT provision during program enrollment, 86% of clients who reported a quit attempt (n=233) at program completion or dropout used cessation medication during their enrollment.

TABLE 3. PROGRAM UTILIZATION INDICATORS

		n	%
Type of session	Individual Only	85	14.8%
	Group Only	396	68.8%
	Combination	95	16.5%
Number of sessions attended	1	144	25.0%
	2	81	14.1%
	3	75	13.0%
	4	52	9.0%
	5+	224	38.9%

Communicare was also contracted to provide relapse-prevention focused follow-up care in the form of individual or group sessions for those clients who successfully quit during program enrollment. However, Communicare staff reported lack of agency resources (e.g., time, space, and staffing), as well as lack of client interest as contributing to the low utilization of these types of sessions. Though only 3% of clients had recorded relapse prevention sessions, agencies did refer 70% of clients to the CT Quitline after the program for further support.

D. What are tobacco abstinence rates?

Communicare was 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. As response rates for four and seven month follow-up were low (29% and 12%, respectively), quit rates for those time periods are not reliable and are not reported here.

Table 4 presents 30-day point prevalence (i.e., no tobacco use in the past 30 days) responder and intent-to-treat quit rates at program completion or dropout. Responder rates do not include clients with missing data on tobacco use 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 in the range of these two measures.

TABLE 4. TOBACCO USE AT COMPLETION/DROPOUT (N=576)

30-Day point prevalence quit rate		
	n	**% (95% CI)**
Response Rate	439	76.2%
Responder Quit Rate	78	17.8% (14.2% - 21.4%)
Intent-to-treat Quit Rate	78	13.5% (10.7% - 16.3%)
Quit attempts & behavior changes		
	n	**%**
Quit attempt made[1]	233	40.5%
Reduced use or made other changes[2]	275	47.7%

[1]Data missing for 23% 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 21% of clients; this is likely an underestimate.

With a true quit rate of between 13.5% and 18%, Communicare achieved quit outcomes that are lower than the 28% responder rate reported for the CT Quitline in 2011 at seven months post-Quitline registration. The Communicare quit rates are likely influenced by including clients who participated in only the pre-contemplative group sessions; excluding these clients who were not ready to make a quit attempt would likely result in a higher quit rate that more accurately reflects program success. 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), indicating success in moving clients towards quitting, though not necessarily captured by the quit rate (Table 4).

Multivariable logistic regression analysis showed that clients with certain characteristics had lower odds of being quit at the time of program completion or dropout, including those who had Medicare, lived with another smoker, or had a history of mental health treatment (Table 5). However, the chances of quitting increased for each counseling session attended, and with the use of NRT or prescription medication while enrolled in the program.

TABLE 5. PREDICTORS OF QUIT AT TIME OF PROGRAM COMPLETION/DROPOUT

Adjusted Odds Ratios[1] (AORs) for multivariable logistic regression model of 30-day point prevalence smoking abstinence at program completion/dropout (n=386)[2]		
	Adjusted Odds Ratio (95% CI)	**p-value**
Insurance status (Medicaid vs. private insurance)	0.33 (0.12, 0.91)	0.031
Live with smoker	0.29 (0.14, 0.61)	0.001
History of mental health treatment	0.36 (0.12, 1.07)	0.067
# sessions attended	1.20 (1.09, 1.32)	0.0002
Used NRT	5.05 (2.32, 11.0)	<.0001
Used prescription medication	3.65 (1.16, 11.51)	0.027

[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?

Communicare was 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, 100% reported being very or mostly satisfied with the program. However, survey response rates were insufficiently low (24%) to achieve a reliable estimate of client satisfaction.

F. What was the cost per enrollment?

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 6). Expenditures reflect all program costs (e.g., agency staff time, promotional materials, NRT) but do not reflect CT DPH administrative and staff costs. Communicare showed higher cost per enrollment compared to CDC budget recommendations for state Quitlines (4). Communicare's higher cost per enrollment may be partially reflective of the longer duration of cessation medication it provided (up to 12 weeks).

TABLE 6. COST PER ENROLLMENT

Total expenditures	Total expenditures without NRT	# Enrollments	Cost per enrollment with NRT costs	Cost per enrollment without NRT costs
$1,008,044	$897,623	802	$1,256	$1,119

G. What was the cost per quit?

Cost per quit calculations are based on total program expenditures as above and are calculated using both responder and intent-to-treat quit rates. As such, the true cost per quit lies somewhere within the range presented here (Table 7). While cost per quit standards for similar community based programs have not been established in the literature, cost per quit is less favorable than some state Quitlines (5).

TABLE 7. COST PER QUIT

Quit rate estimate	Number of clients quit	Cost per quit with NRT costs	Cost per quit without NRT costs
13.5% - 17.8%	78-103	$9,786 - $12,923	$8,714 - $11,507

4 LIMITATIONS

Several limitations to this data exist. Program evaluation is limited to the extent to which data was reported to CT DPH. Low response rates and/or missing data were observed for certain key outcome measures, including cessation medication given, program completion, relapse prevention sessions attended, four and seven month follow-up, and satisfaction data. Therefore, the data reported here is likely an underestimate of the services provided by Communicare and the long-term outcomes of the program.

5 CONCLUSIONS

Evaluation data suggest that Communicare and its sub-contracting agencies provided critical access to evidence-based cessation counseling and medication to tobacco users from disparate populations. Though program costs were relatively high in terms of cost per quit, Communicare worked with a difficult to treat client base consisting primarily of low-income adults living with mental illness and showed success in helping clients quit or reduce tobacco use and in changing agency norms and policies to support both staff and clients in their cessation efforts. Improved data collection and reporting systems, longer sub-contract periods, continuation of free Nicotine Replacement Therapy (NRT), and strategies to increase client engagement should be considered for future cessation programming with Communicare.

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6 REFERENCES

1. Hitsman B, Moss TG, Montoya ID, George TP. Treatment of tobacco dependence in mental health and addictive disorders. Canadian journal of psychiatry. Revue canadienne de psychiatrie. Jun 2009;54(6):368-378.
2. Johnson JL, Malchy LA, Ratner PA, et al. Community mental healthcare providers' attitudes and practices related to smoking cessation interventions for people living with severe mental illness. Patient education and counseling. Nov 2009;77(2)289-295.
3. Morris CD, Waxmonsky JA, May MG, Giese AA. What do persons with mental illnesses need to quit smoking? Mental health consumer and provider perspectives. Psychiatric rehabilitation journal. Spring 2009;32(4):276-284.
4. 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.
5. 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.

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