The Maine Tobacco HelpLine and Medication Voucher Program

An Evaluation of Service Utilization in 2007, User Satisfaction, and Quit Outcomes

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MaineHealth Center for Tobacco Independence

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Relevant websites:
For more information about the Partnership For A Tobacco-Free Maine, MaineHealth, or the Center for Tobacco Independence, please visit their respective websites:

Partnership For a Tobacco-Free Maine	www.tobaccofreemaine.org.
MaineHealth	www.mainehealth.org
Center for Tobacco Independence	www.tobaccoindependence.org

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Table of Contents

Executive Summary

While tobacco use rates in Maine have decreased over the past decade, about one in five adults continue to smoke cigarettes.[1] These smokers, and other adults and children exposed to cigarette smoke, remain at high risk for suffering preventable disease and early loss of life.

A growing body of evidence has demonstrated that telephonic counseling is effective in helping smokers to quit, especially when coupled with medication.[2] Quitting tobacco use saves lives, and it reduces healthcare expenditures, estimated at $2,400 in 1990 dollars over the five years following the quit.[3]

With Tobacco Settlement dollars administered by the Fund for Healthy Maine, the **Partnership for a Tobacco-Free Maine** has continuously supported the Maine Tobacco HelpLine since 2001. The HelpLine is one component of an integrated treatment program that includes distribution of nicotine replacement products through the Tobacco Medication Voucher program and an education program to increase 1) the use of evidence-based tobacco treatment among health care providers and 2) the availability of Tobacco Treatment Specialists in Maine.

This report presents the evaluation of 2007 HelpLine activities and Tobacco Medication Voucher utilization. It includes a follow-up survey of 503 HelpLine callers who reported on quit rates and satisfaction with HelpLine services.

Maine Tobacco HelpLine Utilization

The Maine Tobacco HelpLine is a service that all Maine residents can access through a toll-free number, 1-800-207-1230. The HelpLine provides information about the counseling program, written materials, access to a quit support website for enrolled callers, and multiple-session behavioral tobacco treatment counseling. The service is implemented through a contract with the Center for Tobacco Independence of MaineHealth and a subcontract with Free & Clear of Seattle, Washington.

In 2007, the HelpLine provided assistance to 8,420 Maine residents. Eighty-seven percent of these callers were tobacco users seeking assistance; most callers smoked cigarettes, although some also reported use of pipes, cigars and smokeless tobacco. Based on the estimated smoking population derived from the 2007 Behavior Risk Factor Surveillance Survey data (20.2% smoking prevalence), the HelpLine assisted about 3.4% of the approximate 213,000 adult smokers currently residing in Maine.[1] Most (82%) of the tobacco users who called the HelpLine enrolled in the multiple-call behavioral counseling, provided by tobacco treatment specialists. HelpLine participation rates corresponded well to the geographic distribution of smokers in Maine (2005, 2006, and 2007 Maine Behavioral Risk Factor Surveillance Surveys).[4]

Uninsured smokers accounted for 29% of HelpLine callers, although they represent just 18% of Maine smokers. This group of smokers are typically harder to reach through traditional medical settings, yet at the same time may be more vulnerable to the negative health effects of tobacco use, facing reduced access to

medical diagnostic and treatment services. The HelpLine is an especially important resource for the uninsured tobacco-using population, and the high rates of use among this demographic group are encouraging.

When compared to all adult smokers in Maine, those calling the HelpLine were similar in age except for two groups. Adult smokers aged 45-64 years old were more likely to use the HelpLine. In contrast, the reach to younger smokers continued to lag behind the estimated statewide smoking rates: the 18-24 year old group represented 13% of tobacco users calling the HelpLine, while accounting for 17% of Maine smokers. Young adults are an important group for outreach efforts, to increase HelpLine use rates.

Tobacco Medication Voucher Utilization

Nicotine replacement therapy (NRT) continues to be an important, evidence-based component of treating tobacco use.[2] In Maine, vouchers for NRT are provided, free-of-charge, through the HelpLine. The program is managed by a partnership between CTI and Goold Health Services, Augusta, Maine. Up to 8 weeks of nicotine patch, gum, or lozenge are provided, distributed as an initial 4-week supply, plus an additional 4-week supply for callers who remain involved in the HelpLine counseling program. To be eligible for this service, smokers must be at least 18 years old, agree to speak to a HelpLine specialist, and either be uninsured or have no pharmacy benefit for these products. Pregnant women are eligible for counseling, but are not eligible for nicotine replacement vouchers due to limited evidence for safety of these products during pregnancy.

Since August 2002, PTM's Tobacco Medication Voucher program has provided access to over-the-counter nicotine replacement products to over 23,000 Maine residents. In 2007, 3,587 tobacco users received nicotine replacement therapy vouchers via the HelpLine, with the distribution of vouchers closely resembling the geographic, age, and gender distribution of HelpLine program participants.

HelpLine Quit Outcome and User Satisfaction with Services

At seven months after enrolling for services, the estimated quit rate for HelpLine participants is 30.2%. This estimate is based on those who responded to the follow-up survey. A more conservative estimate also has been calculated, for which we assume that all HelpLine users who did not respond to the survey were still smoking. The conservative estimate of 11.9% is comparable to expectations based on published studies of U.S. telephonic tobacco treatment.[2, 5]

Success in quitting was more likely to be achieved by smokers who were older, were more highly educated, and had lower levels of nicotine dependence. Success was also more likely among those who used FDA-approved medications to help with the quit, regardless of whether the source of the medication was the state medication voucher program, prescription benefit, or self-pay. Among smokers who used the state funded voucher program, quitting was more likely to be achieved by those who accessed the full 8 weeks of nicotine replacement benefit.

The majority of tobacco users who had not quit at the time of the follow-up survey were notably still motivated to quit, although many reported low confidence in being successful with another attempt.

Satisfaction ratings in 2007 exceeded the already high rates reported in the 2002 HelpLine follow-up survey. Ninety-two percent of survey respondents reported being satisfied or very satisfied with the HelpLine services, and 94% said that they would recommend the HelpLine to others.

Conclusions

The Maine Tobacco HelpLine continues to implement effective, "best practices" with its telephonic behavioral counseling and integration of the nicotine replacement product voucher program. Geographic reach of smokers was excellent through these programs, corresponding to population-based distribution of smokers across Maine. Some variability in reach was present for other demographic characteristics, most notably for younger smokers, who were less represented among HelpLine users than older age groups.

Introduction

Tobacco Use in Maine

In the five years between 2002 and 2007, Maine adult smoking rates fell from 23.6% to 20.2%.[1,6] This difference is small but meaningful, given the illness and early death rate associated with direct and indirect tobacco smoke exposure. The gender gap is small, with males smoking at a rate of 21.1% versus females at 19.3%.

While the overall smoking rate is down, smoking rates in younger adults exceed those for older adults and are a significant concern. Adults aged 25-34 years smoke at a rate of 26.9%, while those aged 18-24 years smoke at an even higher rate of 28.7%. These rates are higher than the national median for the United States (at 24.0% and 23.9%, respectively).[7] Smoking rates are highest among low-income Maine residents, and smoking rates decrease as income level rises: rates range from 33.2% for annual income less than $15,000 to 9.3% for those with an income greater than $75,000. Smoking rates also decrease with higher level of education, with a smoking rate of 35.6% for adults with less than a high school degree compared to 8.3% for college graduates.[1]

Quitting Smoking

While most smokers try to quit on their own, and many are successful with this, quit rates increase with use of specific tobacco treatment interventions. Evidence-based treatments include behavioral counseling, support provided by the counselors, and medication (nicotine replacement, bupropion, and varenicline). These are described in detail in the U.S. Public Health Service *Treating Tobacco Use and Dependence 2008 Update.*[2] In the years since the previous version of this clinical practice guideline, the evidence supporting telephonic tobacco treatment counseling has grown. According to this update, quit rates with telephonic counseling average 12.7% at 1-year follow-up, compared to 8.5% for self-help, no counseling, or minimal counseling. Telephonic counseling combined with medication significantly increases quit rates compared to medication use alone, with combined treatment quit rates of 28.1% compared to 23.2% for medication alone.

Tobacco Treatment Initiative

The Tobacco Treatment Initiative, launched in 2001 by the **Partnership For A Tobacco-Free Maine (PTM)**, Maine Center for Disease Control, is supported by the Fund for Healthy Maine (Tobacco Settlement). The Initiative provides evidenced-based treatment for tobacco dependence, based on the U.S. Public Health Service Practice Guidelines. The components include (1) the Maine Tobacco HelpLine, (2) nicotine replacement provided through the Medication Voucher program, and (3) Tobacco Treatment Training to educate health professionals about tobacco use and train Tobacco Treatment Specialists. This report presents the 2007 evaluation of direct tobacco treatment services supported by PTM.

Maine Tobacco HelpLine

A major component of the PTM Treatment Initiative is the Maine Tobacco HelpLine, which began operation on August 22, 2001. Through its toll-free number 1-800-207-1230, the HelpLine provides information, written materials (Quit Kits), and multiple-session behavioral counseling for tobacco use to any Maine resident. Treatment is enhanced by 8 weeks of nicotine replacement products (patch, gum, and lozenge) provided to eligible adult smokers enrolled in the HelpLine multiple-session counseling program.

The HelpLine is managed by the Center for Tobacco Independence (CTI) of MaineHealth. HelpLine Tobacco Treatment Specialists located in Portland, Maine provide telephonic counseling. These specialists receive intensive training in evidence-based tobacco treatment. The CTI Medical Director (a licensed physician) and a master's level licensed clinician provide additional support through review of specific cases, quality assurance procedures, and ongoing training. Free & Clear, Inc., of Seattle, Washington, licenses a specialized software and counseling program to CTI. Free & Clear also provides screening and registration services, extended hours of telephonic support, and an integrated, web-based quit coach service to smokers enrolled for tobacco treatment through the Maine HelpLine.

The HelpLine provides individual assistance seven days per week. With each call, a HelpLine Screener identifies a caller's needs and triages the call. Tobacco users are assessed for interest in quitting and are informed about available services. The HelpLine sends written information to each interested caller who smokes, addressing that caller's needs. This may be material to support self-help quitting or material to encourage quit attempts for smokers who have not yet made the commitment to quit. Other callers, such as a nurse from a medical office or family member of a smoker, receive information about how to support someone trying to quit.

All tobacco users are encouraged to speak to a HelpLine Specialist to receive evidence-based behavioral counseling for quitting tobacco use. After screening and enrollment, the caller may choose immediate transfer to a tobacco treatment specialist or schedule a follow-up call at a more convenient time. During this first counseling session, those tobacco users who want to quit within the next 30 days are encouraged to enroll in the HelpLine's "Multiple Call" counseling service. Specialists schedule up to three additional proactive (outbound) calls. The second call is timed to coincide with the caller's selected 'quit date'. Two subsequent calls are planned to support continued abstinence from tobacco. In summary, up to four specialist-initiated (outbound) counseling sessions are offered to motivated callers who set a date to quit smoking. Callers may make additional, unscheduled inbound calls to the HelpLine for support. Of note, not everyone enrolled in the Multiple Call Program takes advantage of all four counseling calls. To encourage additional support for a quit attempt, letters are sent to the primary care physicians of callers who have provided permission for this. Finally, referrals may be made to local community smoking cessation programs.

Tobacco Medication Voucher Program

Through a partnership with CTI and Goold Health Services, PTM began support of the Tobacco Medication Voucher Program in August 2002.

Access to over-the-counter nicotine replacement products is through the toll-free Maine Tobacco HelpLine. Tobacco users who speak with a HelpLine Specialist and meet the eligibility criteria are offered a medication voucher. Individuals are eligible for a voucher if they have no health insurance or no pharmacy benefit for nicotine replacement therapy, are not pregnant, are aged 18 or over, are planning to quit in the next 30 days,

and schedule follow-up counseling sessions with a HelpLine Specialist. The CTI Medical Director provides clinical supervision of the Tobacco Medication Voucher program.

Eligible clients can obtain up to 8 weeks of nicotine replacement therapy at any Maine pharmacy. Once a voucher is approved, the HelpLine faxes instructions to Goold, who then contacts the pharmacy with the appropriate information. Four weeks of medication are available for each voucher. To obtain a second voucher, the client must speak to a HelpLine Specialist and discuss his or her progress with quitting tobacco.

Evaluation and Outcomes

This report presents outcome and evaluation data on the Maine Tobacco HelpLine and the Tobacco Medication Voucher Program – the direct service arms for the statewide Treatment Initiative. The report describes outcomes for 2007, organized in three sections:

1. Maine Tobacco HelpLine Utilization
2. Tobacco Medication Voucher Utilization
3. Maine Tobacco HelpLine Seven-Month Quit Outcomes

Maine Tobacco HelpLine Utilization & Reach of Services

Caller Characteristics

Between January and December 2007, 8,420 Maine residents received services by the Maine Tobacco HelpLine. The vast majority (86.7%) of these callers were tobacco users who received assistance with becoming tobacco free, as shown in **Table 1**. Based on the estimated smoking population derived from the 2007 Behavior Risk Factor Surveillance Survey data (20.2% smoking prevalence), the HelpLine assisted about 3.4% of the approximate 213,000 adult smokers currently residing in Maine.[1]

Table 1. Callers Assisted by the Maine Tobacco HelpLine January-December 2007

	Number	Percent
Tobacco user	7296	86.7%
Family or friend calling for smoker	230	2.7%
Health professional wanting information	228	2.7%
Public wanting information	666	7.9%
Total	**8420**	100.0%

Approximately 2.7% of callers in 2007 were seeking information about helping a friend or family member quit smoking, and 2.7% were health professionals asking about the HelpLine. The remaining 7.9% of callers were from the general public seeking information about the HelpLine or the statewide tobacco program.

Demographics of Tobacco Users Calling the HelpLine

The demographics of tobacco users calling the HelpLine in 2007 are presented in **Table 2.** When compared to the age distribution of all adult smokers in Maine, those calling the HelpLine were similar in age except for two groups; callers were less likely to be 18-24 years of age and more likely to be 45-64 years old. Approximately 13% of callers were between 18 and 24 years of age, while 17% of Maine adult smokers are in this age range. In contrast 40% of HelpLine callers were 45-64 years old, while only 34% of smokers in Maine are that age. Of note, 1% of tobacco users calling the HelpLine were under 18 years of age. Examining gender, proportionally more women smokers call the HelpLine than men. Approximately 55% of HelpLine callers were women, while only 50% of all smokers in Maine are women.

The education level of tobacco users calling the HelpLine was similar to the education level of all smokers in the state. Approximately 13% of HelpLine callers had less than a high school diploma, while 46% graduated from high school or passed the GED. The remaining 14% had a college or university degree.

Compared to the health insurance status of all Maine smokers, tobacco users calling the HelpLine were more likely to be uninsured or MaineCare recipients and less likely to have commercial insurance. Approximately 55% of HelpLine tobacco users were in one of these categories, while only 34% of all Maine smokers are uninsured or MaineCare recipients. In contrast, just over one-third (35%) of HelpLine callers had commercial health insurance, while this group comprises 55% of all tobacco users in Maine.

Table 2. Demographic Characteristics of Tobacco Users Calling the HelpLine

	Tobacco Users Calling Maine Tobacco HelpLine January - December 2007		% of Smokers in Maine[1]
	Number	Percent	
Age			
Less than 18	72	1.0%	--
18 to 24	920	13.0%	17.0%
25 to 34	1325	18.7%	18.7%
35 to 44	1456	20.5%	21.9%
45 to 54	1865	26.3%	21.2%
55 to 64	972	13.7%	13.3%
65 and older	486	6.8%	7.8%
Gender			
Female	4010	55.3%	49.6%
Highest Education Level			
< High school	918	13.4%	12.5%
High school graduate/GED	3192	46.4%	44.8%
Some college or vocational school	1773	25.8%	28.7%
College or university degree	989	14.4%	14.0%
Health Insurance			
No insurance	2023	29.1%	17.9%
Commercial insurance	2421	34.8%	54.6%
Medicare	681	9.8%	11.4%
Medicaid/MaineCare	2023	26.2%	16.1%

[1] For age, gender and education, the percentages represent estimates based on the 2007 Maine Behavioral Risk Factor Surveillance survey[1]. For health insurance, the percentages are based on findings from the 2004 Maine Adult Tobacco Survey.[8]

HelpLine Geographic Reach

Table 3 presents the HelpLine call volume and geographic residence of tobacco users calling during 2007. Also shown are the percent of adult smokers residing in each county across the state. The reach of the Maine Tobacco HelpLine is well distributed within all 16 counties. As importantly, the distribution of HelpLine callers corresponds to the distribution of all Maine smokers by county. The counties with the greatest number of smokers - Cumberland, York, Penobscot, Kennebec and Androscoggin – are also the locations where the largest numbers of HelpLine callers reside.

HelpLine Services Provided to Tobacco Users

Nearly all (97%) of the 7,296 tobacco users accessing HelpLine services only registered for assistance once in 2007. Callers are eligible to utilize the HelpLine once every six months. Eighty-six percent of those calling were planning to quit using tobacco in the next 30 days. **Table 4** presents the intensity of services tobacco users received throughout 2007. Four of every five tobacco users calling the HelpLine received

Table 3. County of Residence of Tobacco Users Calling the HelpLine

Health District/ County	Tobacco Users Calling Maine Tobacco HelpLine January – December 2007 Number	Percent	% of Smokers in Maine[1]
York Health District			
York	863	12.3%	13.2%
Cumberland Health District			
Cumberland	1400	19.9%	14.8%
Western Maine Health District			
Androscoggin	612	8.7%	8.2%
Franklin	210	3.0%	2.1%
Oxford	384	5.5%	5.1%
Mid Coast Health District			
Knox County	167	2.4%	2.5%
Lincoln	176	2.5%	3.2%
Sagadahoc	182	2.6%	2.5%
Waldo	184	2.6%	3.6%
Central Maine Health District			
Kennebec	635	9.0%	10.6%
Somerset	333	4.7%	5.3%
Penquis Health District			
Penobscot	876	12.5%	12.5%
Piscataquis	116	1.7%	2.3%
DownEast Health District			
Hancock	266	3.8%	4.1%
Washington	243	3.5%	3.5%
Aroostook Health District			
Aroostook	383	5.4%	6.5%
Residence Data Missing	266	--	--
Total Number of Tobacco Users Calling the Maine Tobacco HelpLine in 2007	**7296**	**This is 3.4% of the approximate 213,000 smokers in Maine**	

[1] The estimated distribution of all smokers across Maine counties was derived from county-level "current smoker" rates estimated from the Maine Behavioral Risk Factor Surveillance Survey data for 2005, 2006, and 2007, combined. These estimates were provided by Katie Meyers, Ph.D., Epidemiologist, Maine DHHS.

counseling. Among those who were counseled, 70% talked with a HelpLine Specialist two or more times. Thirty percent of those counseled completed four or more counseling sessions with a HelpLine Specialist; four sessions are recommended for maximizing the caller's success at staying tobacco-free.[2] Overall, one in four tobacco users calling the HelpLine participated in the goal of four counseling calls.

Table 4. Most Intensive Service Tobacco Users Received from HelpLine in 2007

	Tobacco Users Calling Maine Tobacco HelpLine January – December 2007	
Most Intensive Service Received in 2007	**Number**	**Percent**
Non-counseling Services	**1287**	**17.6%**
General Questions Answered	271	3.7%
Requested Materials Only	63	0.9%
Requested counseling, but never reached	516	7.1%
Brief call (<=10 minutes) with HelpLine Specialist	437	6.0%
Counseling by a HelpLine Specialist	**6009**	**82.4%**
One call >10 minutes long	1803	24.7%
Two calls in 2007	1188	16.3%
Three calls in 2007	1264	17.3%
Four calls in 2007	1239	17.0%
Five or more calls in 2007	515	7.1%
Total	**7296**	**100.0%**

Conclusions

The overall reach of the HelpLine is comparable to that of other states in recent years.[9] The majority of HelpLine callers are smokers, with relatively small numbers of the general public, friends and family of smokers, and health professionals calling for information. The geographic reach of the HelpLine was excellent. It corresponds well to the geographic distribution of smokers across Maine, and is similar to the geographic distribution found in past assessments of the HelpLine.

When comparing the age-based distribution of smokers in Maine to actual HelpLine users, tobacco users 24 years and younger are less likely to call the HelpLine than older users, and men are less likely to call than women. Based on insurance status, tobacco users with no insurance or with MaineCare (Medicaid) are more likely to call while those with commercial insurance were less likely to call. Four of every five tobacco users calling the HelpLine received counseling. Further, one in four tobacco users calling the HelpLine completed the goal of four counseling calls.

Tobacco Medication Voucher Utilization

Eligibility Review and Medication Dispersement Process

Accessed through the Maine Tobacco HelpLine, vouchers allow clients to obtain up to eight weeks of nicotine replacement therapy (NRT), including nicotine patch, gum, and lozenge. Tobacco users are eligible for nicotine replacement therapy if they are interested in quitting, enroll in the multiple call program, have no insurance or pharmacy benefit coverage for nicotine replacement therapy, and are at least 18 years of age. Medicaid/MaineCare recipients are not eligible for NRT through the HelpLine because the MaineCare pharmacy benefit includes nicotine replacement products, accessed with a prescription from a health care provider.

The HelpLine Specialist inquires about potential medical concerns for use of nicotine replacement products. Women who are pregnant are not eligible for nicotine replacement use through this program because the evidence for safety is still limited and the informed consent and monitoring procedures are too complex for the HelpLine resources.

An extra review process is provided for callers who have had a recent myocardial infarction (heart attack) or stroke, or who have a current heart rhythm problem. The Medical Director of the HelpLine reviews the specific information of smokers with recent or current cardiovascular risk factors. On a case-by-case basis, the caller's personal physician is then asked to review, approve (or deny), and determine the appropriate dose for the nicotine replacement. In general, nicotine replacement is safer than continued smoking. This is based on clinical reasoning and on studies of smokers with these risk factors. Studies have shown that nicotine blood levels are higher in most smokers compared to blood levels from using nicotine replacement. In addition, nicotine replacement medication reduces harm from exposure to carbon monoxide and other chemicals found in cigarette smoke. However, the review process helps to insure that the decision to use nicotine replacement has additional oversight when potential risk factors for NRT are present.

Once a voucher is approved, callers select a pharmacy near their residence. An automated system in the HelpLine software periodically (multiple times each day) electronically sends voucher instructions to Goold. Goold then contacts the selected pharmacy with the appropriate information. Thus, the caller can simply go and pick up the NRT at the pharmacy. This process is both faster and more efficient than mailing vouchers to the caller and having him/her take and redeem the voucher at the pharmacy.

Medication Voucher Utilization

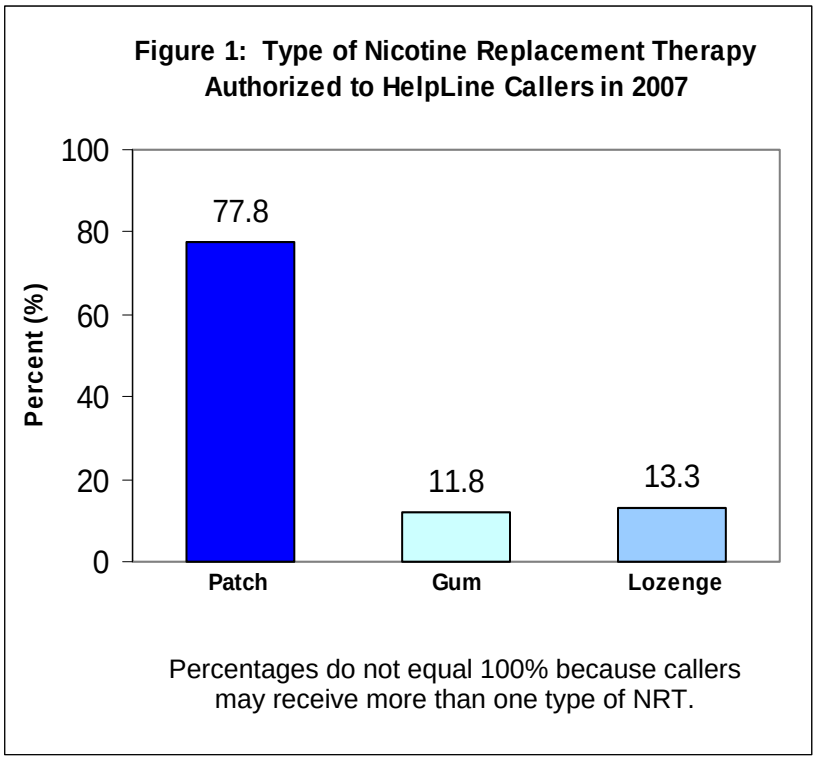
Medication voucher utilization for 2007 is shown in **Table 5**. Of the 5,648 participants in the multiple call program, 3,718 (66%) were authorized NRT by the HelpLine. Specifically, 2,892 participants (51%) were authorized the patch, 437 (8%) were authorized gum, and 493 (9%) were authorized lozenge. A total of 1617 (29% of those enrolled in the multiple call program) received two or more authorizations for NRT in 2007, while 2101 participants (37%) were authorized a single authorization.

Table 5. Medication Vouchers Authorizations, January-December 2007

	Number	Percent
Multiple-Call Program Participants	**5648**	**100.0%**
Provided NRT Voucher(s)	**3718**	**65.8%**
1 NRT authorization	2101	37.2%
2 NRT authorizations	1471	26.0%
3+ NRT authorizations	146	2.6%

The distribution of NRT authorized by the HelpLine is presented in **Figure 1**. Among clients receiving NRT, 77.8% were authorized the patch, 11.8% were authorized gum, and 13.3% were authorized lozenge. Percentages do not equal 100% because participants may receive more than one type of NRT.

Demographics and county of residence of voucher participants are presented in **Table 6** (on the next page). Approximately 11% of voucher clients were between 18-24 years of age, while 38% were age 25-44, 43% were age 45-64, and 8% were over 64 years of age. The age distribution of voucher clients was similar to that of all HelpLine smokers, except that NRT is not provided to clients under age 18. Approximately 53% of voucher clients were female, while 55% of all HelpLine smokers were female. In addition, the geographic distribution of voucher clients was very similar to the region of residence for all HelpLine smokers.



Conclusions

The Tobacco Medication Voucher program successfully provides nicotine replacement treatment to HelpLine callers in Maine. Nicotine patches are preferred by most callers (78% of all vouchers), but both nicotine gum and lozenge provide a valuable alternative to callers who either prefer these products or are unable to use the patch for reasons such as a patch allergy.

The geographic distribution of vouchers is almost identical to the geographic distribution of HelpLine tobacco users. Voucher distribution by age and by gender is similar to the respective distribution of HelpLine users.

Quit rates based on voucher use are presented in the Quit Outcomes Section of this report.

Table 6. Demographic Comparison of All Tobacco Users Calling the HelpLine, Those Enrolling in the Multiple-Call Program and Those Authorized NRT Vouchers, January-December 2007

	% Tobacco Users Calling HelpLine	% Enrolled in Multiple Call Program	% Authorized NRT via HelpLine
Demographic Characteristic	**N= 7296**	**N= 5648**	**N=3718**
Age			
Less than 18	1.0%	0.8%	--
18 to 24	13.0%	12.8%	11.3%
25 to 34	18.7%	18.4%	17.6%
35 to 44	20.5%	20.7%	20.3%
45 to 54	26.3%	26.3%	28.3%
55 to 64	13.7%	14.0%	14.7%
65 and older	6.8%	7.1%	7.8%
Gender			
Female	55.3%	56.1%	52.7%
Highest Education Level			
< High school	13.2%	12.9%	11.0%
High school graduate/GED	46.3%	46.2%	46.5%
Some college or vocational school	25.9%	26.2%	27.2%
College or university degree	14.5%	14.6%	15.4%
Health Insurance			
No insurance	29.1%	32.1%	46.1%
Commercial insurance	34.8%	34.9%	38.8%
Medicare	9.8%	10.5%	13.5%
Medicaid/MaineCare	26.2%	22.5%	1.7%
Health District Where Member Lives			
York District 1	12.3%	12.2%	12.3%
Cumberland District 2	19.9%	19.2%	18.8%
Western Maine District 3 (Androscoggin, Franklin, & Oxford counties)	17.2%	17.8%	18.1%
Mid Coast District 4 (Knox, Lincoln, Sagadahoc & Waldo counties)	10.1%	10.1%	10.3%
Central Maine District 5 (Kennebec & Somerset counties)	13.7%	13.9%	13.0%
Penquis District 6 (Penobscot & Piscataquis counties)	14.2%	14.3%	14.3%
Downeast District 7 (Hancock & Washington counties)	7.3%	7.1%	7.8%
Aroostook District 8	5.4%	5.4%	5.6%

Maine Tobacco HelpLine Seven-Month Quit Outcomes

Methods:

To examine the effect of the HelpLine on quitting tobacco, a random sample of tobacco users was surveyed by telephone ***seven months*** after registering for, and beginning to receive HelpLine services. The period of seven months after registration is the standard evaluation time-frame set by the North American Quitline Consortium.[10] The assumptions with this time period is that most callers will begin quitting sometime within the first month after calling the HelpLine. Thus, by calling at seven months, we are better assured to be surveying callers close to six months after they started quitting tobacco.

The primary aim of the survey was to estimate a seven-month quit rate for callers to the Maine Tobacco HelpLine. Secondary aims were to examine serious quit attempts since calling the HelpLine, to assess confidence (self-efficacy) to stay off tobacco, and to identify smoking behaviors and attitudes of survey respondents who smoked at the time of the survey.

Sample Size and Selection

The Center for Tobacco Independence sought to obtain 500 completed surveys.

Tobacco Users were **included** in the survey sample if :

- They received services between March 1, 2007 and May 15, 2007
- They were counseled by a HelpLine Specialist or given self-help materials (HelpLine Quit Kit)
- They were 18 years of age or older
- They had a valid phone number in the HelpLine database
- They were the first person from a household to receive HelpLine services during the follow-up study period

Callers were **excluded** from the survey sample if:

- They were calling the HelpLine to obtain assistance for someone else
- They were not a tobacco user (physicians, dentists, etc)

Survey Measures

The measures used in the quit survey are listed below. A copy of the survey instrument can be obtained from the Center for Tobacco Independence.

- 7-day abstinence 7 months after registering for HelpLine services (primary outcome)
- 30-day abstinence 7 months after registering for HelpLine services
- Quitting activities since receiving assistance from the HelpLine
    - Quitting for 24 hours or longer
    - Longest time abstinent from tobacco
    - Quitting strategies used since receiving assistance from the HelpLine
    - When last used tobacco

- If respondent using tobacco at the time of the survey…
    - Type and quantity of tobacco used in last 30 days
    - Are they seriously considering quitting now, if smoking
    - Self-rated importance of quitting tobacco
    - Self-rated confidence in staying off tobacco long-term
- Other smoker in the household at time of HelpLine call
- Chronic health conditions
- Demographic characteristics of callers

Survey Administration

Critical Insights, Inc., a strategic market research firm in Portland, Maine, contracted with the Center for Tobacco Independence to conduct the HelpLine surveys. Critical Insights has sound survey experience, and has conducted previous HelpLine surveys for CTI and the Partnership for A Tobacco-Free Maine, Maine Center for Disease Control.

Multiple systems were in place that ensured a high-quality survey. Each phone interviewer had extensive training in interviewing and hands-on experience. Staff received project-specific training that provided a review of the Maine Tobacco HelpLine. Detailed, item-by-item instruction for the survey instrument was also completed. Computer-assisted telephone interviewing (CATI) software was used, allowing for quality assurance as data were entered for each survey call attempt.

The sample call list was divided into 2-week increments to ensure that callers were surveyed within a 2-week window of their 7-month anniversary of first calling the HelpLine. The CATI system randomly selected a tobacco user from the census sample call list for the current 2-week sample. Each individual was called up to 12 times to complete an interview. If an individual was not reached after 12 attempts, the survey was considered not answered and the person was removed from the call list. Then, a new individual was selected and called; this process continued until the target of 500 completed interviews was reached.

Statistical Analysis

This report describes call dispositions of the sample surveyed, demographic characteristics, quitting behavior, and tobacco use patterns since receiving assistance from the HelpLine. Frequency analyses were conducted on sample characteristics.

The demographics of the current survey participants were compared to those who refused or who were not reached (non-responders) using chi-square tests. These comparisons were done to examine how the survey population differs from HelpLine callers who were not surveyed.

HelpLine callers were categorized by the most intensive HelpLine services received. "No counseling" indicates callers who requested materials only, or who requested to speak with a counselor but ultimately did not receive counseling. "Brief call" indicates those who only talked with a HelpLine specialist for 10 minutes or less. This is considered insufficient time for an initial call to include both assessment and counseling. "Single Call" indicates callers who spoke with a counselor for a one-time session (call lasted more than 10 minutes). "Multiple Calls" participants enrolled to receive follow-up counseling by a HelpLine Specialist. Callers who had an initial call of less than 10 minutes followed by one or more calls with a quit specialist are categorized under the multiple counseling calls category.

Chi-square tests were used to compare quit outcome by demographic characteristics, HelpLine services received, and overall medication used. Results in most tables are for survey respondents only. The main quit outcome tables (Tables 11 and 12) also include "intention-to-treat (ITT)" quit rates. ITT rates include all tobacco users who were called for the survey, whether or not they were reached. These analyses assume that those who refused to participate and those who were not reached were smokers at the time of the survey, and therefore the ITT analyses provide the lowest likely estimated quit rates.

Results

Survey Sample

A total of 1,275 randomly selected tobacco users who called the Maine Tobacco HelpLine between March 1, 2007 and May 15, 2007 comprised the survey sample. Individuals were consecutively selected and called in 2-week windows until the goal of 500 completed interviews was reached.

A total of 654 participants (51.3%) in the sample could not be reached for follow-up. Approximately 21% had disconnected or wrong phone numbers, while 30% could not be reached after 12 call attempts or within their corresponding 2-week time window. Of the 621 callers contacted, 81% completed a survey (n=503). The overall survey completion rate was 39.5%.

Comparisons of Survey Respondents and Non-respondents

The characteristics of respondents completing the survey (n=503) are presented in **Tables 7 and 8**, and are compared to those who refused or were not reached for follow-up (n=772). Overall, survey respondents were similar to non-responders in terms of highest education level, cigarettes per day at registration, and stage of change (contemplation, preparation, action) at registration. However, there were a number of significant differences between survey respondents and non-respondents.

Survey respondents were somewhat older than those who were not reached or who refused. While 21% of survey respondents were age 18-34 years, 38% of those not reached or refused were in that age group. In addition, women were more likely to participate in the survey than men; 61% of survey respondents were female, while 55% of those not reached or refused were female.

Insurance status also varied between survey respondents and non-respondents. The proportion of survey respondents insured by Medicare was two times the percent among non-respondents (14% vs. 7%, respectively), while fewer of the survey respondents were uninsured (23%, compared to 31% of non-responders). A higher proportion of survey respondents (35%) had at least one chronic condition - diabetes, coronary artery disease (CAD), chronic obstructive pulmonary disease (COPD), or asthma- compared to those who were not reached or who refused (29%).

In terms of HelpLine services received, 86% of survey respondents enrolled in the multiple call program, compared to 78% among non-respondents. Survey respondents also received a higher number of HelpLine counseling calls: 42% received four counseling calls, while only 19% of non-respondents received four counseling calls.

Finally, survey respondents were more likely to have received nicotine replacement therapy through the HelpLine (57%) than those who were not reached or who declined to be interviewed (48%).

Table 7. Comparison of Survey Participants with Those Who Either Were Not Reached or Declined to Complete the Follow-up Survey: Demographic and Health Characteristics

Demographic & Health Characteristics	Completed Follow-up Survey (N=503)		Not Reached/ Declined to Complete Survey (N=772)	
	Number	Percent	Number	Percent
Age [a]				
18 to 34	104	20.7%	295	38.2%
35 to 54	257	51.9%	370	47.9%
55 to 64	96	19.1%	68	8.8%
65 and older	46	9.2%	38	4.9%
Gender [b]				
Female	308	61.2%	425	55.1%
Highest Education Level				
< High school	59	11.7%	113	14.6%
High school graduate/GED	235	46.7%	373	48.3%
Some college or vocational school	115	22.9%	183	23.7%
College or university degree	87	17.3%	94	12.2%
Refused	7	1.4%	9	1.2%
Health Insurance[b]				
No insurance	115	22.9%	237	30.7%
Medicaid/MaineCare	117	23.3%	219	28.4%
Commercial insurance	198	39.4%	255	33.0%
Medicare	69	13.7%	52	6.7%
Unknown	4	0.8%	9	1.2%
Chronic condition (Diabetes, CAD, COPD, Asthma)[b]				
Yes	174	34.6%	222	28.8%

Mantel Haenszel Chi-square tests: [a] $p<0.0001$ [b] $p<0.05$

Table 8. Comparison of Survey Participants with Those Who Either Were Not Reached or Declined to Complete the Follow-up Survey: Tobacco Status and HelpLine Services

Tobacco Status and HelpLine Services Received	Completed Follow-up Survey (N=503)		Not Reached/ Declined to Complete Survey (N=772)	
	Number	Percent	Number	Percent
Readiness to Quit Stage, at Registration				
Planning to quit in next 6 months	5	1.0%	5	0.7%
Preparing to quit in next 30 days	448	89.2%	706	92.1%
Actively quitting	49	9.8%	56	7.3%
Cigarettes Smoked Per Day at Registration				
0	29	5.8%	34	4.4%
1-9	39	7.8%	55	7.1%
10-19	101	20.1%	152	19.7%
20+	333	66.2%	527	68.3%
Method Accessed HelpLine Services				
Inbound phone call	468	93.4%	718	93.6%
Fax referral (via care provider)	33	6.6%	49	6.4%
Enrolled in Multiple Call Program [a]				
Yes	430	85.5%	599	77.6%
Number of Counseling Calls [a]				
0	48	9.5%	136	17.6%
1	62	12.3%	209	27.1%
2	55	10.9%	155	20.1%
3	126	25.1%	122	15.8%
4	212	42.2%	149	19.3%
Nicotine Replacement Therapy Authorized [b]				
Yes	287	57.1%	373	48.3%

Mantel Haenszel Chi-square tests: [a] $p<0.0001$ [b] $p<0.05$

Quitting Behaviors Since Calling the HelpLine

Self-reported quitting behaviors since calling the HelpLine are presented in **Table 9**. Of the 503 participants surveyed, 435 (87%) reported that they had quit for 24 hours or longer since calling the HelpLine. Approximately 60% of respondents reported they were smoking every day at the time of the follow-up survey, while an additional 8% reported smoking on some days. Nearly 19% of respondents stated that they last used tobacco six months ago or more.

A large number of survey respondents reported using medications since first calling the HelpLine. Over 60% of respondents reported using nicotine replacement patches, while 14% used nicotine gum, and 10% used nicotine lozenges. Approximately 14% of respondents used bupropion (Zyban®) and 26% used varenicline (Chantix®) since calling the HelpLine. Half of respondents used NRT alone, 14% used non-NRT medications (bupropion, varenicline) alone, and 21% used both NRT and non-nicotine medications since calling the HelpLine (see **Figure 2**). Of note, the HelpLine did not provide NRT if the caller

Table 9. Quitting Behaviors of Respondents to Maine Tobacco HelpLine Follow-up Survey

	Number	Percent
Total Number of Survey Respondents	**503**	**100.0%**
Quit for 24 Hours or Longer Since Calling the HelpLine		
Yes	435	86.5%
Current Smoking Status		
Every day	304	60.4%
Some days	39	7.8%
Not at all	160	31.8%
When Last Used Tobacco		
Within the past 24 hours	333	66.2%
1-30 days ago	30	5.9%
1-2 months ago	13	2.6%
3-5 months ago	32	6.4%
6 months ago or more	95	18.9%
Medications Used to Quit Since Calling the HelpLine	**428**	**85.1%**
NRT patches	306	60.8%
NRT gum	72	14.3%
NRT lozenges	52	10.3%
Bupropion/Zyban®	69	13.7%
Varenicline (Chantix®)	128	25.5%
Other Strategies Used to Quit Since Calling the HelpLine[a]		
Changed brands to lower nicotine	107	21.3%
Cut down on tobacco use	335	66.6%
Joined a program to help with quitting	36	7.2%

indicated current or intended use of varenicline due to manufacturer labeling indicating that medication side effects increased with the combination of varenicline and NRT.[11]

Other quit attempt behaviors reported by survey respondents included changing brands to lower nicotine content (21%) and cutting down on tobacco use (67%). Health risk continues to be a significant concern with these latter behaviors, since smokers typically compensate for the reduction in nicotine content or number of cigarettes by inhaling more deeply or holding smoke in their lungs longer. However, these behaviors may represent the first steps toward abstinence from tobacco use.

Combining approved medications with counseling is recommended by the *Clinical Practice Guideline* to boost quit rates.[2] Addressing this issue, **Table 10** presents the 503 survey respondents grouped by the combination of i) the intensity of HelpLine counseling services received (did not talk with Specialist, brief call, single counseling call, and enrolled in multiple call program) and ii) whether or not they self-reported using medication to help them quit. Ninety percent of respondents received counseling by a HelpLine Specialist; 85% enrolled in the multiple call program. Meanwhile, 85% of all respondents reported using at least one FDA-approved medication for quitting (NRT, bupropion, varenicline) since first calling the HelpLine. A majority in each of the four counseling intensity groups reported using medications.

Figure 2: Self-reported medication use since calling the HelpLine

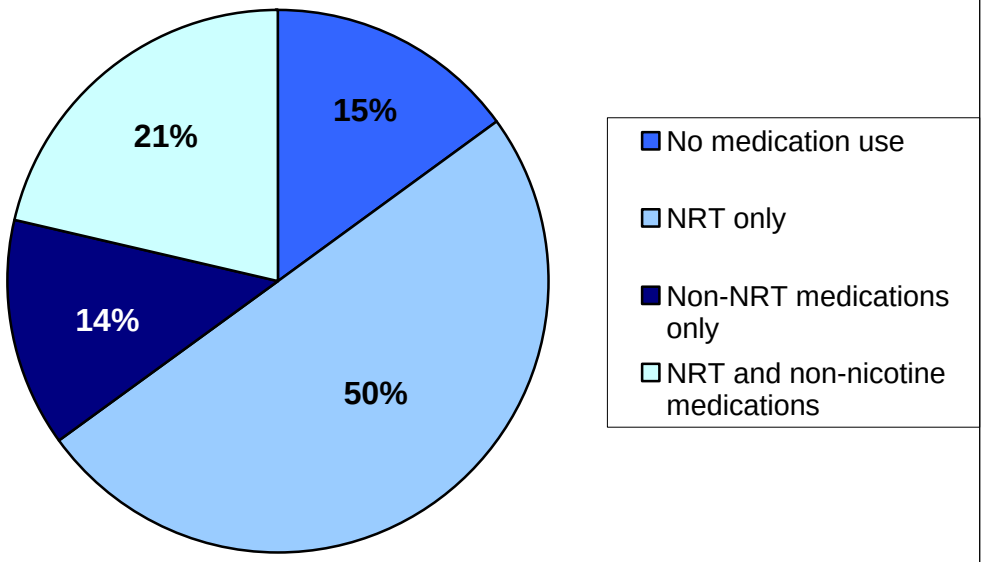


Table 10. HelpLine Services Provided & Self-Reported Medication Use

		Number	Percent
Total Number of Survey Respondents		**503**	**100.0%**
HelpLine Counseling Provided[1] + Medication Use[2]			
Did not talk with Specialist	No meds used	4	0.8%
	Meds used on own	22	4.4%
Brief call (<=10 min)[3]	No meds used	5	1.0%
	Meds used on own	18	3.6%
Single counseling call	No meds used	8	1.6%
	Meds used on own	17	3.4%
Enrolled in multiple call program	No meds used	58	11.5%
	Meds used on own	122	24.3%
	NRT through HelpLine	186	37.0%
	NRT through HelpLine & bupropion/varenicline	64	12.7%

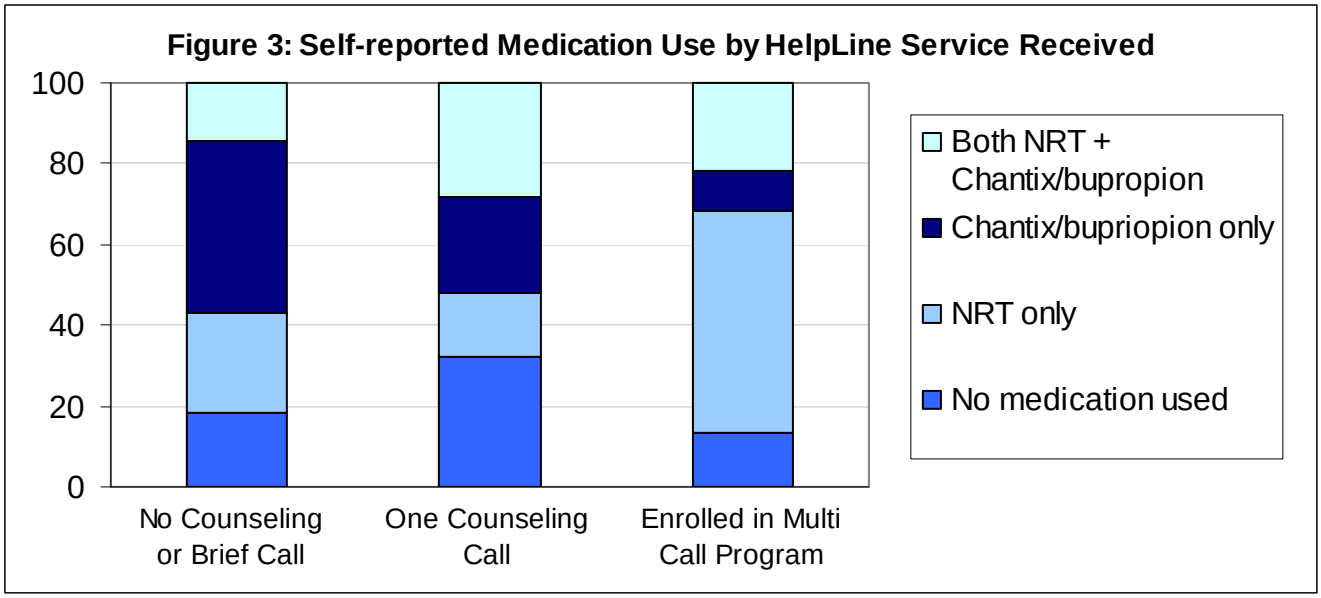
NOTES:

1 Callers are categorized based on the maximum level of HelpLine services received.

2 Medications = NRT (patch, gum, lozenge), bupropion, varenicline. Twenty-four callers who were authorized NRT through the HelpLine but self-reported no medication use were classified as "no meds used". Thirteen callers who used only non-NRT medications were classified as "meds used on own".

3 A brief call indicates callers who only talked with a HelpLine specialist for 10 minutes or less. This is considered insufficient time for an initial call to include both assessment and counseling. Callers who had an initial call of less than 10 minutes followed by one or more calls with a quit specialist are categorized under the multiple counseling calls category.

The combination of medications used and the HelpLine counseling received is also presented in **Figure 3**. The types of medication used varied widely across the three groups (no counseling or a brief call, only one counseling call, and enrolled in multi-call program). More of the tobacco users who enrolled in the multi-call program used medications, particularly compared to those who chose to only have one counseling session with a Specialist. Among those who did not speak or only spoke briefly with a counselor, 18% used no medication, 17% used NRT only, 52% used varenicline and/or bupropion but no NRT, and 14% used a combination of NRT and non-NRT medications during the past seven months. Among those who chose one counseling call, approximately 30% did not use any medication, while 23% used NRT, 25% used varenicline and/or bupropion, and 21% used both. Among those in the Multiple Call Program, 13% did not use any medication, while a full 55% used NRT only, 10% used varenicline/bupropion only, and 22% used NRT and varenicline/bupropion.



Self-Reported Quit Rate

Self-reported quit rates (7-day point prevalence) are presented in **Table 11** by caller demographics and level of tobacco independence at the time of HelpLine registration. The overall standard quit rate among survey respondents was 30.2%. Quit rates did not vary significantly by gender or level of education. However, quit

Table 11. Quit Rates (7-Day Point Prevalence) Seven Months Post HelpLine Registration

Demographics and Level of Tobacco Dependence at Time of HelpLine Registration	Standard Quit Rate		Intent to Treat[1] Quit Rate	
	Total (N)	Rate (%)	Total (N)	Rate (%)
Overall Quit Rate	**503**	**30.2%**	**1275**	**11.9%**
Age[a]				
18 to 34	104	30.8%	399	8.0%
35 to 54	257	30.7%	627	12.6%
55 to 64	96	25.0%	164	14.6%
65 and older	46	37.0%	84	20.2%
Gender				
Female	308	29.9%	733	12.6%
Male	195	30.8%	542	11.1%
Highest Education Level				
< High school	59	28.8%	172	9.9%
High school graduate/GED	235	29.4%	608	11.4%
Some college or vocational school	115	29.6%	298	11.4%
College or university degree	87	34.5%	181	16.6%
Health Insurance[b]				
No insurance	115	32.2%	352	10.5%
Medicaid/MaineCare	117	25.6%	336	8.9%
Commercial insurance	198	31.9%	453	13.9%
Medicare	69	30.4%	121	17.4%
Cigarettes Per Day at Registration[a,c]				
0	29	55.2%	63	25.4%
1-9	39	38.5%	94	16.0%
10-19	101	33.7%	253	13.4%
20+	333	25.8%	860	10.0%
Time to First Cigarette After Waking[b]				
5 minutes	228	24.6%	573	9.8%
6-30 minutes	155	27.1%	437	9.6%
31-60 minutes	47	36.2%	109	15.6%
61+ minutes	49	40.8%	111	18.0%

1 Standard quit rate is among survey respondents. Intent to treat quit rate assumes non-responders are still smoking.

a The intent-to-treat quit rates were significantly different (Chi-square test p value <0.001).

b The intent-to-treat quit rates were significantly different (Chi-square test p value <0.05).

c The standard quit rates were significantly different (Chi-square test p value <0.001).

rates increased with age. Quit rates were also highest for participants with Medicare and commercial insurance coverage, and lowest for those with MaineCare (Medicaid). Quit rates increased as callers' daily smoking rate decreased, from 26% for those who reported smoking a pack or more per day to 55% for those who reported smoking fewer than one cigarette per day at the time they registered in a HelpLine program (the latter includes light smokers and those who started the quit process before calling the HelpLine). The latter finding is consistent with expectations: the level of nicotine dependence generally increases with the rate of smoking, and quitting is harder for individuals with higher levels of dependence. Similarly, time from waking up to first cigarette is associated with degree of nicotine dependence, with shorter time periods indicating greater dependence, and as anticipated, smokers with shorter times to first cigarette were less likely to be quit at seven months than those with longer times.

Consistent with published studies, participation in the multi-call program was associated with higher quit rates than single call participation, perhaps reflecting higher levels of motivation to quit among these participants (see **Table 12**). Quit rates increased as the number of counseling calls increased. The quit rate also was significantly higher for participants who used two NRT voucher authorizations (8 weeks of treatment) compared to one authorization for four weeks of treatment.

Table 12. Quit Rates (7-Day Point Prevalence) Seven Months Post HelpLine Registration

Tobacco Treatment Services Received in 2007	Standard Quit Rate		Intent to Treat[1] Quit Rate	
	Total (N)	Rate (%)	Total (N)	Rate (%)
Number of Counseling Calls [a]				
No counseling/brief call[2]	49	26.5%	185	7.0%
Single call program	25	28.0%	66	10.6%
Multiple call Program:				
One call completed	38	10.5%	206	1.9%
Two call completed	53	24.5%	208	6.3%
Three call completed	126	27.0%	248	13.7%
Four+ calls completed	212	38.2%	361	22.4%
Number of NRT Authorizations[3,b]				
No authorization	142	30.3%	365	11.8%
One NRT authorization	126	18.3%	352	6.5%
Two NRT authorizations	161	41.0%	306	21.6%

[1] Standard quit rate is among survey respondents. ITT quit rate assumes non-responders are still smoking.

[2] Callers either declined to talk with a quit specialist or only talked with one for <10 minutes.

[3] Only callers who enrolled for multiple-call counseling are included in this section, because only those in this program are eligible to receive NRT Authorizations.

a The quit rates for callers grouped by the number of counseling calls received were significantly different. The Chi-square test for the standard quit rates had a p value <0.05 (95% confidence). The Chi-square test for the intent-to-treat quit rates had a p value <0.001.

b The differences in quit rates by the number of NRT Authorizations were statistically significant. The Chi-square tests for the standard and intent-to-treat quit rates both had a p value <0.001.

To enhance understanding of the range of tobacco treatments used by HelpLine participants, additional analyses were performed based on survey respondents' recall of medication use (**Table 13**). The majority (85%) reported use of at least one medication. The use of medication, whether acquired through the HelpLine or through other means (e.g. participant prescription benefit or out-of-pocket expense), was associated with significantly higher quit rates.

Table 13. Quit Rates (7-Day Point Prevalence) By Self-Reported Medication Use[1]

		Standard Quit Rate	
		Total (N)	Rate (%)
Any Medication Used			
None		75	14.7%
NRT Only		252	35.3%
Bupropion or varenicline		68	39.7%
NRT and buproprion/varenicline		108	23.2%
HelpLine Counseling Provided[2] + Medication Use			
All counseling types	No meds used	75	14.7%
No counseling	Meds used on own	40	30.0%
Single counseling call	Meds used on own	17	35.3%
Enrolled in multiple call program	Meds used on own	121	32.2%
	NRT through HelpLine	186	37.0%
	NRT through HelpLine & bupropion/varenicline	64	26.6%

1 Medications = NRT (patch, gum, lozenge), bupropion, varenicline. Twenty-four callers who were authorized NRT through the HelpLine but self-reported no medication use were classified as "no meds used". Thirteen callers who used only non-NRT medications were classified as "meds used on own".

2 Callers are categorized based on the maximum level of services received.

The results also support that counseling with medication use resulted in the highest quit success, although the small number of participants in the single-call program who used mediation on their own (17) warrants caution in making conclusions about this group. The pattern of quit rates for various combinations of medication and counseling service utilization is complex, with high quit rates for those who participated in the Multiple Call program and used medications on their own (32.2%), just used NRT through the HelpLine (37.0%) or a combination of both (26.6%).

We investigated this latter group of 64 respondents further, to help understand plausible reasons for the lower quit rate. Data suggests that those in this group were very motivated to quit. Fifty-nine of the 64 quit for more than 24 hrs after calling the HelpLine. Half (51%) had 4 counseling sessions with a Specialist, compared to just 29% of all tobacco users who talked with a Specialist. More of these respondents had a chronic condition to motivate them to quit compared with the remaining 439 respondents to the follow-up survey (42% vs. 29%, respectively). Finally, 71% of the 47 respondents still smoking were seriously considering quitting within 30 days of the follow-up survey. However, data also indicates that many in this group were highly addicted physiologically. Among those still smoking, 93% smoked every day, half smoked 20+ cigarettes per day, and 71% had their first cigarette within 30 minutes of waking up. These indicators of nicotine dependence all indicate a decreased likelihood of successfully staying tobacco free.

Anecdotally, we encounter many people who have high expectations for finding a medication that will address all of the difficult aspects of cessation. This issue may further explain why this subgroup of highly motivated, but highly addicted smokers reported using both NRT and either buproprion or chantix; these medications could have been used in separate quit attempts since calling the HelpLine.

HelpLine Participants Who Continue to Smoke

To help generate ideas for future HelpLine interventions, we conducted additional analyses on the data from survey participants who continued to smoke at the time of the survey (**Table 14**). The majority (80.%) made at least one quit attempt lasting 24 or more hours, and close to a third (31.3%) reported quitting for at least one month. For 68.9% of these respondents, the time to first cigarette after awakening was less than

Table 14. Characteristics of Follow-up Survey Respondents Who Continue to Smoke

	Number	Percent
Total number who continue to smoke	**343**	**100.0%**
Longest Time Quit Since Calling HelpLine		
0 days (less than 24 hours)	67	19.6%
1-6 days	83	24.3%
7-13 days	35	10.2%
14-29 days	50	14.6%
1 month	32	9.4%
2 months	21	6.1%
3+ months	54	15.8%
How Often Currently Smokes		
Every day	304	88.6%
Some days	39	11.4%
Number Cigarettes Smoked Per Day		
1-9	74	21.6%
10-19	119	34.8%
20+	149	43.6%
Time From Waking to First Cigarette		
<5 minutes	113	32.9%
6-30 minutes	122	35.6%
31-60 minutes	38	11.1%
>60 minutes	68	19.8%
Don't know	2	0.6%
Chronic Health		
Has one or more chronic conditions	122	35.6%
Seriously Considering Quitting in the Next 30 Days		
Yes	214	62.9%
Don't know	21	6.2%
No	105	30.9%

30 minutes, indicating a high degree of nicotine dependence. A sizeable minority (35.6%) reported having a chronic disease associated with tobacco use. The majority (62.9%) were seriously considering quitting in the next 30 days. While the majority considered quitting tobacco use to be important, confidence in quitting varied considerably (**Figures 4** & **5**).

Self-Rated Importance of Quitting vs. Confidence in Staying Off Tobacco for One Month
N=343 Follow-up Survey Respondents Who Continue to Smoke

Figure 4: Importance of Quitting Tobacco

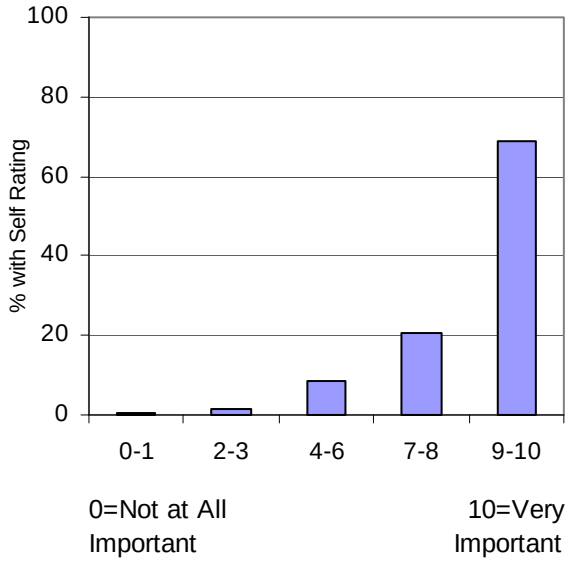
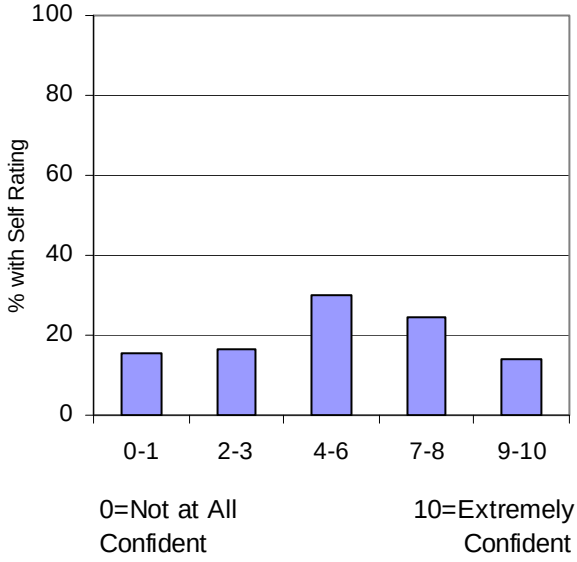


Figure 5: Confidence Could Stay Off Tobacco For One Month



User Satisfaction

Ninety-two percent of respondents were very or somewhat satisfied with the HelpLine **(Table 15)**, compared to 81% with a previous satisfaction assessment conducted in 2002. The majority of respondents reported that they would recommend the HelpLine to others.

Table 15. Maine Tobacco HelpLine Caller Satisfaction

	Number	Percent
Satisfaction Level		
Very satisfied	339	67.8%
Somewhat satisfied	121	24.2%
Somewhat dissatisfied	19	3.8%
Very dissatisfied	21	4.2%
Would You Recommend the HelpLine to Others?		
Yes	470	93.4%

Conclusions

The quit rate for individuals counseled by the Maine Tobacco HelpLine is significantly higher than published rates for those quitting with no assistance. The Maine Tobacco HelpLine quit rates are similar to quit rates for telephonic counseling presented in the 2008 *Clinical Practice Guideline for the Treatment of Tobacco Use and Dependence* meta-analyses and 2008 Cochrane *Telephone Counseling for Smoking Cessation Review*.[2,5] However, caution should be used with these comparisons because studies may differ substantially in terms of sample characteristics (e.g. level of motivation to quit, demographics), time to follow-up, period of abstinence (e.g. 7-day point prevalence, 30-day point prevalence, continuous), provided services (e.g. NRT vs. no-NRT), and historical time period. In addition, the characteristics of individuals who participated in the current survey did not completely match the rates of these characteristics among all HelpLine users. Survey participants were older, and more likely to be female, recipients of Medicare, affected by chronic disease, and more likely to use the multi-call counseling program. This difference may introduce biases, so some caution is necessary when thinking about how these results apply to younger, insured, and healthier HelpLine participants.

Caller characteristics associated with higher quit rates include older age, higher level of education, and lower levels of nicotine dependence. In addition, callers with Medicare and with commercial insurance coverage were more likely to be abstinent from smoking at the time of follow-up. Consistent with published studies, participation in the Multiple Call program was associated with higher quit rates than single call participation, perhaps reflecting higher levels of motivation to quit among these participants. The use of medication to aid the quit attempt, whether acquired through the HelpLine or through other means (e.g. participant prescription benefit or out-of-pocket expense) was associated with higher quit rates. The quit rate also was significantly higher for use of two NRT voucher authorizations (8 weeks of treatment) compared to just one authorization (4 weeks of treatment). Two authorizations is the maximum number covered for a single treatment episode.

Analyses of callers who continued to smoke at the 7-month follow-up suggest that the majority of these callers continue to view smoking cessation as highly important, suggesting that motivation to quit remains high. This supports the importance of continued treatment efforts. Intervention strategies might include the following: enhanced efforts to support confidence in quitting, reduction of time to re-enrollment for HelpLine services, provision of longer periods of nicotine replacement, and developing referral options for more intensive tobacco treatment.

Finally, we report that the HelpLine continues to receive favorable satisfaction ratings, and most survey respondents reported that they would recommend use of the HelpLine to others.

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