

July 2009

Vermont Cessation Services

Final Report

Prepared for

Stephen Morabito

Administrator

Vermont Tobacco Evaluation and Review Board

103 South Main Street

Waterbury, VT 05671

Prepared by

Nathan Mann

Joshua Goetz

Ghada Homs

RTI International

3040 Cornwallis Road

Research Triangle Park, NC 27709

RTI Project Number 0211783.001.002

RTI Project Number
0211783.001.002

Vermont Cessation Services

Final Report

July 2009

Prepared for

Stephen Morabito
Administrator
Vermont Tobacco Evaluation and Review Board
103 South Main Street
Waterbury, VT 05671

Prepared by

Nathan Mann
Joshua Goetz
Ghada Homsy
RTI International
3040 Cornwallis Road
Research Triangle Park, NC 27709

Contents

Section	Page
1. Overview	1-1
1.1 Quit by Phone.....	1-1
1.2 Quit in Person.....	1-1
1.3 Quit Online.....	1-2
1.4 Nicotine Replacement Therapy	1-2
1.5 Cost of Providing Cessation Services	1-2
1.6 Purpose of this Report.....	1-3
1.7 Organization of this Report	1-3
2. Data Sources	2-1
2.1 Intake Data.....	2-1
2.2 Session Data	2-1
2.3 Follow-Up Evaluation Data.....	2-2
3. Program Utilization and Cost, Reach, Client Characteristics, and Source of Referral	3-1
3.1 Utilization of Quit Network Programs and Cost Per Client.....	3-1
3.2 Reach of the Quit Network.....	3-2
3.2.1 Effects of Media Promotion on the Reach of Quit Network Programs	3-2
3.3 Characteristics of Quit Network Program Clients	3-4
3.3.1 Client Demographics.....	3-5
3.3.2 Smoking Behaviors at Intake	3-6
3.3.3 Self-Efficacy at Intake.....	3-7
3.4 Source of Referral to Quit Network Programs	3-7
4. Service Utilization and Program Fidelity	4-1
4.1 Quit Network Services Received by Clients.....	4-1
4.2 Cross-Program Referral and Utilization	4-4
4.3 Use of Cessation Medications during Quit Attempts	4-5
5. Efficacy of Services	5-1

5.1	Quit Attempts.....	5-2
5.2	Quit Rates.....	5-3
5.3	Cost Per Quit.....	5-7
5.4	Client Satisfaction with Services Received.....	5-7
6.	Discussion	6-1
Appendixes		
A	Data Sources.....	A-1
B	Quit Rates.....	B-1

Figures

Number	Page
3-1. Cost Per Client, FY 2008.....	3-2
3-2. Reach of Vermont Quit Network Programs, FY 2008	3-3
3-3. Actual New Quit by Phone Clients and Predicted New Quit by Phone Clients in the Absence of Media, Q1 2003–Q1 2008.....	3-4
3-4. Average Self-Efficacy at Intake, FY 2008	3-8
3-5. Source of Referral to Quit Network Programs, FY 2008	3-9
4-1. Percentage of Quit in Person Clients by Predominant Session Type, FY 2003–FY 2008	4-2
4-2. Number of Counseling Sessions Received, FY 2008.....	4-3
4-3. Total Time Spent on the Quit Online Web Site, FY 2008	4-4
4-4. Percentage of Clients Who Reported Using Cessation Medication in Quit Attempt, FY 2008	4-6
4-5. Type of Cessation Medications Used, FY 2008	4-7
5-1. Percentage of Current Smokers at Intake Who Made a Serious Quit Attempt Lasting at Least 24 Hours in the Past 12 Months, FY 2008	5-2
5-2. Percentage of Quit by Phone Clients Who Made a Serious Quit Attempt Lasting at Least 24 Hours in the Past 12 Months by Service Received, FY 2008	5-3
5-3a. 7-Day Smoke-Free Point Prevalence at 3 Months, FY 2008	5-4
5-3b. 7-Day Smoke-Free Point Prevalence at 6 Months, FY 2008	5-4
5-3c. 7-Day Smoke-Free Point Prevalence at 12 Months, FY 2008	5-4
5-4a. 30-Day Smoke-Free Point Prevalence at 3 Months, FY 2008	5-5
5-4b. 30-Day Smoke-Free Point Prevalence at 6 Months, FY 2008	5-5
5-4c. 30-Day Smoke-Free Point Prevalence at 12 Months, FY 2008.....	5-5
5-5a. Continuous Quit Rates at 3 Months, FY 2008	5-6
5-5b. Continuous Quit Rates at 6 Months, FY 2008	5-6
5-5c. Continuous Quit Rates at 12 Months, FY 2008	5-6
5-6. Cost Per Quit, FY 2008	5-7

Tables

Number		Page
1-1.	Costs of Providing Cessation Services through the Vermont Quit Network, FY 2002–FY 2008	1-3
3-1.	New Clients Served by the Vermont Quit Network, FY 2008	3-1
3-2.	Demographic Summary of New Quit Network Current Smoker Clients, FY 2008	3-5
3-3.	Smoking Behaviors, FY 2008.....	3-6
4-1.	Quit Network Services Used by Smokers, FY 2008.....	4-2
4-2.	Cross-Program Referrals, FY 2008	4-5
4-3.	Cross-Program Utilization, FY 2008	4-5
5-1.	Completion Rates for Follow-Up Evaluations, FY 2008	5-1
5-2.	Client Satisfaction with Quit Network Programs, FY 2008	5-8

1. OVERVIEW

The Vermont Tobacco Control Program (VTCP) promotes smoking cessation through a variety of programs and services. Free smoking cessation counseling is available to all Vermont smokers. In 2008, all cessation services were consolidated under a single unifying framework and newly branded as the Vermont Quit Network. The Quit Network provides help to Vermont smokers in four ways:

- By phone: free telephone counseling through the Quit Line
- In person: free group and individual counseling through the Quit in Person hospital-based cessation counseling program
- Online: free access to QuitNet, an interactive, secure Web site that provides individual smoking cessation plans, information about quitting, and referrals to Vermont smoking cessation services
- Nicotine replacement therapy (NRT): free or discounted NRT shipped directly to Vermont smokers enrolled in any of the Quit Network programs

1.1 Quit by Phone

The American Cancer Society's National Cancer Information Center has operated the Vermont Smokers' Quit Line under a contract with the Vermont Department of Health (VDH) since February 2001. Smokers can call the Quit Line 24 hours a day, every day of the year. When counselors or quit coaches are not available, callers can listen to prerecorded messages and quit tips. For clients interested in receiving telephone counseling, the Quit by Phone program provides a research-based, five-session counseling program. The program will also refer callers to their local hospital if they wish to participate in face-to-face or in-person counseling programs. Smokers who prefer to quit on their own can elect to receive a packet of self-help materials instead of telephone counseling. Finally, the Quit by Phone program provides information to callers who are only interested in receiving specific information in response to questions. In addition to counseling services, Quit by Phone clients can receive up to an 8-week supply of NRT, such as gum, patches, or lozenges shipped directly to their homes.

1.2 Quit in Person

VDH grants funds to all 13 public hospitals in Vermont for them to provide individual or group cessation counseling sessions. Hospitals use either the American Cancer Society's "Fresh Start" curriculum or the American Lung Association's "Freedom from Smoking" curriculum, both of which are evidence-based. The Quit in Person program connects Vermont smokers with a network of trained cessation counselors who are located in every hospital in the state. These hospital-based clinicians coordinate and provide a variety of services at the local level, including providing individual and group cessation counseling opportunities, approaching smokers who are hospitalized, working in the local community,

and collaborating with community partners to promote their services. The program aims to increase its reach by offering cessation classes in locations that are most convenient for smokers (e.g., community center, workplace). Offering classes at locations that make it easier for smokers to attend encourages smokers to attend classes and stick with them. Quit in Person clients are also eligible to receive an 8-week supply of NRT. In fiscal year (FY) 2009, VDH implemented a fee-for-service model for the Quit in Person program. Under this model, hospitals will receive \$250 for each new client and \$100 for each returning client.

1.3 Quit Online

The QuitNet Web site provides Vermont smokers with access to an online community of smokers and former smokers who provide encouragement and tips for quitting. Clients can be active or passive participants in a social networking community designed to assist smokers in their quit attempt. In addition to social support, the Quit Online program offers members expert support, quit planning, and access to quit resources. The Web site also provides users with interactive tools and features that members can use anytime and for as long as they need them.

1.4 Nicotine Replacement Therapy

All Vermont smokers are eligible to receive free NRT if they pass a medical screening. In FY 2008, both the Quit by Phone and Quit in Person programs offered direct shipment of free NRT to Vermont smokers, regardless of insurance coverage. Both programs referred Medicaid/Vermont Health Access Plan (VHAP) recipients to their health care providers to get a prescription for NRT. Several insurance companies, including Blue Cross/Blue Shield, MVP, and Cigna, contributed all or part of the cost of providing NRT to their members. The Online program began providing free NRT to Vermont smokers in FY 2009 through a pilot program funded by VDH. Clients who registered with QuitNet, set a quit date, and passed a medical screening were eligible to receive a 4-week supply of NRT. VDH has reported that offering free NRT through QuitNet led to an increase in registrations for cessation programs.

1.5 Cost of Providing Cessation Services

The cost of providing cessation services to Vermont smokers varies greatly across Quit Network programs. **Table 1-1** presents a summary of the total operational costs associated with each of the Quit Network programs for FY 2002 through FY 2008. The costs presented include direct costs of providing services, administrative costs, and the cost of NRT. In FY 2005, the Quit by Phone program began offering NRT to clients and VDH started to get reimbursement from insurance companies for NRT dispensed through hospitals. Those reimbursements are not included in the costs presented in Table 1-1.

Table 1-1. Costs of Providing Cessation Services through the Vermont Quit Network, FY 2002–FY 2008

Fiscal Year (FY)	Quit by Phone	Quit in Person	Quit Online
FY 2002	\$150,000	\$710,719	N/A
FY 2003	\$160,000	\$710,719	N/A
FY 2004	\$169,711	\$710,719	N/A
FY 2005	\$141,798	\$710,973	N/A
FY 2006	\$190,450	\$708,545	\$42,500
FY 2007	\$209,709	\$833,255	\$50,000
FY 2008	\$155,463	\$939,084	\$52,500

Note: There is some uncertainty about the cost estimates presented for FY 2002–FY 2004. The Vermont Department of Health (VDH) does not have current access to detailed records. However, during that time, VDH typically paid the full amount of the contract or grant regardless of the number of people that were served. As such, these estimates represent VDH's best estimates of the total operational costs for those years and should be reasonably accurate.

1.6 Purpose of this Report

This report addresses the following evaluation questions:

- What is the utilization and reach of the Quit Network programs?
- How much does it cost to provide cessation services to Vermont smokers?
- Who uses the Quit Network programs?
- Are there differences in the characteristics of clients across programs?
- Are there differences between Quit Network clients and Vermont smokers as a whole?
- What program services are Quit Network clients receiving?
- Are Quit Network programs being implemented with fidelity?
- What is the efficacy of Quit Network programs?

1.7 Organization of this Report

Section 2 presents a brief summary of the data sources used for this evaluation. In Section 3, we summarize the program utilization, reach, client characteristics, and source of referral for each of the Quit Network programs. Section 4 addresses the service utilization and program fidelity of Quit Network programs. Section 5 summarizes cessation outcomes, including quit attempts and quit rates, and client satisfaction with services received from Quit Network programs.

2. DATA SOURCES

Each of the Vermont Quit Network cessation programs collects information about clients at various stages of service, including

- when a client registers for the program,
- during the period of time a client receives services from the program, and
- after a client has completed the program.

Clients are defined as individuals who provide intake information and agree to receive services from the program. Available client data allow us to measure use of the programs, understand who is using each program, track utilization of program services, and monitor outcomes such as quit attempts and quit rates. This section briefly describes the available data sources and summarizes the measures contained in each data source. For a more detailed description of the measures contained in each data source, see Appendix A.

2.1 Intake Data

Intake data consist of information collected from clients when they register for or begin using one of the Quit Network programs. Key measures contained in the intake data include

- client demographics,
- current smoking status,
- smoking history,
- smoking behaviors at intake,
- previous quit attempts,
- source of referral to the program, and
- services requested from the program.

The Quit by Phone and Quit in Person programs also collect information about participants' confidence in quitting at intake.

2.2 Session Data

Quit Network clients may receive multiple counseling sessions or attend multiple class sessions. Data collected during a client's participation with a Quit Network program are collectively referred to as *session data*. Session data provide a way to monitor and measure use of services for each of the Quit Network programs. Key measures contained in the session data include

- type of counseling sessions received and
- number of counseling sessions completed.

2.3 Follow-Up Evaluation Data

Follow-up evaluations track a client's quit status after completion of services with a Quit Network program. Follow-up interviews are typically conducted at 3, 6, and 12 months after completion of services with the program. Information collected from clients during follow-up interviews includes

- quit attempts,
- current smoking status,
- use of medication during quit attempt,
- environmental factors (e.g., lived with another smoker during quit attempt), and
- satisfaction with services received.

Calculating Outcomes Using Follow-Up Evaluation Data. One method for calculating outcomes based on follow-up evaluation data is to base all calculations only on clients who completed follow-up interviews. However, the completed evaluation approach may produce biased and unreliable measures if there are differences in the rate of quitting among clients who completed follow-up evaluations and among those who did not. To account for clients who were not reached for follow-up, an alternative method for calculating follow-up evaluation outcomes is the intent-to-treat approach. This method assumes that all clients who did not complete follow-up evaluations either did not attempt to quit or have relapsed to smoking. Accurately obtaining estimates of cessation outcomes, such as quit attempts and quit rates, is greatly dependent on successfully reaching clients to complete follow-up evaluations. In cases where the response rate is low, the intent-to-treat approach is likely to understate the true rate while the completed evaluation approach is likely to overstate the true rate. In this report, we use both the completed evaluation approach and the intent-to-treat approach to present a range for each outcome presented.

3. PROGRAM UTILIZATION AND COST, REACH, CLIENT CHARACTERISTICS, AND SOURCE OF REFERRAL

This section summarizes the utilization, cost, and reach of Quit Network programs as well as the characteristics of clients and source of referral to Quit Network programs. We also compare the demographic characteristics of Quit Network program clients to Vermont smokers as a whole. The tables and figures presented in this section are based on Quit Network service intake data from fiscal year (FY) 2008 as well as data from the 2007 Vermont Adult Tobacco Survey (ATS) (collected during FY 2008). Results presented in this report do not include Quit in Person clients from the Department of Veterans Affairs hospitals or the Community Health Center of Burlington.

3.1 Utilization of Quit Network Programs and Cost Per Client

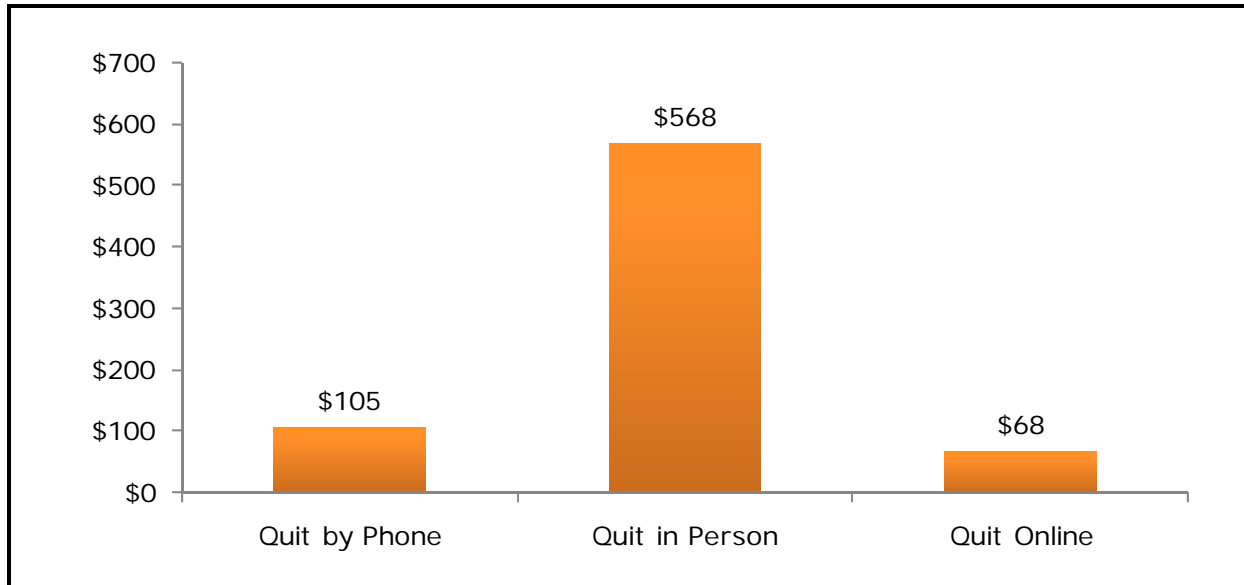
The number of new clients served by each of the Vermont Quit Network programs in FY 2008 is presented in **Table 3-1**. Clients are individuals who provide intake data and agree to receive Quit Network programs. These estimates may under-represent the total number of Vermonters who received services from the Quit Network during FY 2008 because clients whose counseling bridges more than 1 year and repeat clients returning for additional support are not included in these figures. The vast majority of new Quit Network clients in FY 2008 were current cigarette smokers. The Quit in Person program attracted the largest number of new clients in FY 2008, followed by the Quit by Phone and Quit Online programs. The Quit Online program had the highest percentage of clients who came to the program as former smokers seeking help remaining quit (14.6%).

Figure 3-1 presents the cost per client for each of the Quit Network programs in FY 2008. Cost per client was calculated by dividing the total operational costs of each program (see Table 1-1) by the total number of new clients (shown in Table 3-1). In FY 2008, the cost per client was highest for the Quit in Person program at \$568 per client served, compared with \$105 for the Quit by Phone program and \$68 for the Quit Online program.

Table 3-1. New Clients Served by the Vermont Quit Network, FY 2008

Type of Client	Quit by Phone	Quit in Person	Quit Online
Total New Clients	1,475	1,653	776
Cigarette smokers	1,173	1,609	776
Current smokers	1,083	1,609	663
Former smokers	90	0	113
Other tobacco users	24	44	0

Figure 3-1. Cost Per Client, FY 2008



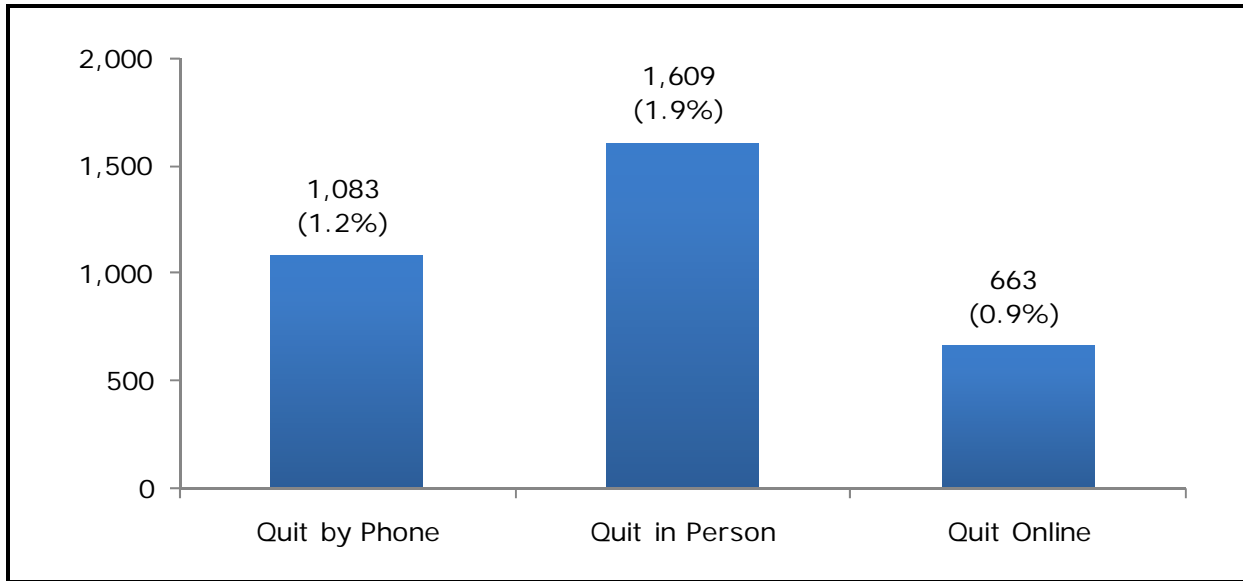
3.2 Reach of the Quit Network

The reach of a program is the percentage of the target population served by the program over a specified period of time. The measure of reach presented in this report represents the percentage of current adult smokers in Vermont who were served by one of the Quit Network programs in FY 2008. Estimates of the number of current smokers ages 18 and older in Vermont were obtained from the Behavioral Risk Factor Surveillance System (BRFSS). **Figure 3-2** presents the reach of the Vermont Quit Network programs in FY 2008. Each of the Quit Network cessation programs reached between 1% and 2% of current adult smokers in FY 2008. Total reach for the entire Vermont Quit Network could have been as high as 4% in FY 2008. However, the available data do not allow us to identify clients who used more than one program in FY 2008. As a result, the Vermont Quit Network actually served somewhere between 1.9% and 4% of Vermont's adult smokers in FY 2008, depending on how many clients used more than one program during the year.

3.2.1 Effects of Media Promotion on the Reach of Quit Network Programs

The reach of Quit Network programs is significantly influenced by promotion of the programs through mass media campaigns and direct mail. Currently, mass media and direct mail efforts have focused on promoting the Quit by Phone program.

To more formally examine the relationship between media promotion and Quit by Phone program utilization, we estimated an ordinary least squares (OLS) regression model. Gross rating points (GRPs) measure the amount of exposure to paid media messages. We modeled the quarterly number of new Quit by Phone clients who are current smokers at

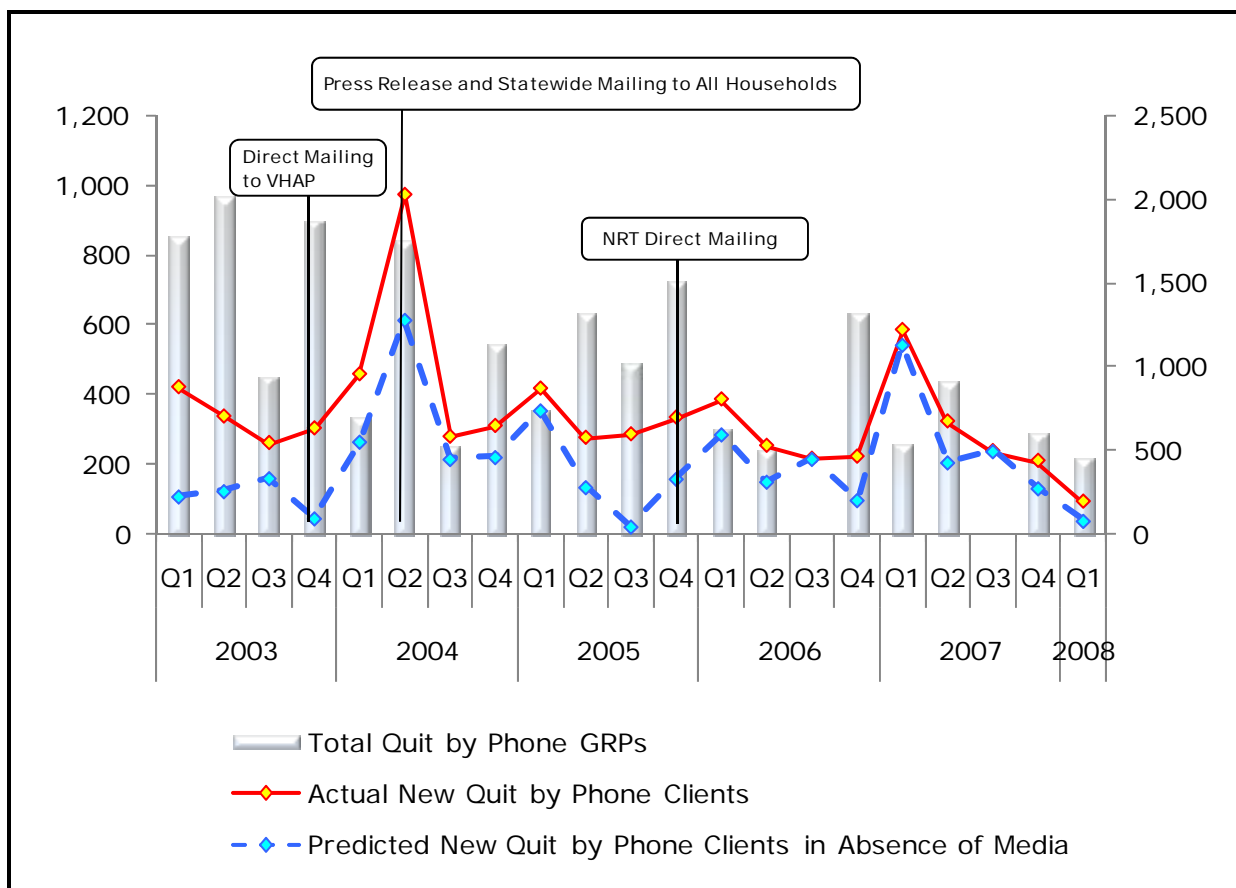
Figure 3-2. Reach of Vermont Quit Network Programs, FY 2008

intake as a function of quarterly Quit by Phone GRPs, an indicator for direct mailings, demographic characteristics of clients, county fixed effects (i.e., an indicator variable for each county, with one omitted as a reference), and secular trends (i.e., a linear time trend). Quarter indicators were also included to control for any seasonality in Quit by Phone program utilization.

Results of our regression model indicate that both GRPs and direct mailings appear to be effective mechanisms for promoting use of the Quit by Phone program. Model coefficients are positive and statistically significant ($p < 0.01$) for network television and radio GRPs but are not statistically significant for cable television. These results suggest that both network television and radio media spots are effective at encouraging Vermont smokers to use the Quit by Phone program. Our model also indicates that direct mailings are an effective mechanism for promoting use of the Quit by Phone program among Vermont smokers.

To further investigate the effects of paid media and direct mailings on Quit by Phone program utilization, we used the results from our regression model to estimate a what-if scenario that predicts what Quit by Phone utilization would have been in the absence of any paid media or direct mailings promoting the program. **Figure 3-3** presents trends in the actual number of new Quit by Phone clients who were current smokers at intake as well as the predicted number of clients who would have used the Quit by Phone program if there had not been any promotion of the program. The figure clearly shows that, if there had not been any media promotion of the program, the predicted number of new clients would have been consistently lower than the number of actual new clients. Our model predicts that, between January 2003 and March 2008, a total of 9,136 current smokers were served by

Figure 3-3. Actual New Quit by Phone Clients and Predicted New Quit by Phone Clients in the Absence of Media, Q1 2003–Q1 2008



Note: GRP = gross rating points; NRT = nicotine replacement therapy; VHAP = Vermont Health Access Plan

the Quit in Person program. If there had not been any media promotion of the program, an estimated 3,685 fewer current smokers would have been served by the program. These results suggest that from January 2003 through March 2008, media promotion of the Quit by Phone program resulted in an estimated 40% increase in program utilization by current smokers in Vermont.

3.3 Characteristics of Quit Network Program Clients

To answer the question of who uses Vermont Quit Network services, we examined the demographic characteristics and smoking behaviors of new clients who used each of the Quit Network programs during FY 2008. We first compare these data across programs to see if there are differences in who uses each of the Quit Network programs. We then compare demographic characteristics and smoking behaviors of Quit Network clients to data from the Vermont ATS to examine whether Quit Network clients are similar to the general smoking population in Vermont. Next, we examine baseline confidence in quitting among

Quit Network clients. Finally, we address the question of how clients hear about Quit Network programs by examining the source of referral reported by Quit Network clients.

3.3.1 Client Demographics

In FY 2008, there were slight differences in the demographic characteristics of current smokers using each of the Quit Network programs (**Table 3-2**). The Quit by Phone program reached the largest percentage of clients between the ages of 18 to 24 as well as the largest percentage of non-white clients compared to the other Quit Network programs. The Quit in Person program had the oldest group of new clients, with over half being 45 or older. Quit Online clients tended to be more educated; the Quit Online program had the highest percentage of clients with some college education or more in FY 2008. The Quit Online program also had the highest percentage of clients between the ages of 25 and 44. Quit Online clients were also predominantly white and female.

Table 3-2. Demographic Summary of New Quit Network Current Smoker Clients, FY 2008

Demographics	Quit by Phone	Quit in Person	Quit Online	Vermont ATS
Age				
Under 18	1.0%	N/A	0.6%	N/A
18–24	16.1%	6.9%	9.7%	19.07%
25–44	39.1%	35.9%	43.0%	39.09%
45–65	34.7%	45.6%	29.1%	34.84%
Over 65	5.8%	11.6%	1.8%	6.35%
Unspecified	3.2%	N/A	15.8%	0.65%
Race				
White	84.3%	N/A	89.3%	90.48%
Non-White	8.5%	N/A	2.9%	8.38%
Unspecified	7.2%	N/A	7.8%	1.13%
Sex				
Female	56.9%	53.4%	67.6%	47.31%
Male	43.1%	46.6%	32.4%	52.69%
Education				
< High school	15.5%	16.3%	5.6%	11.88%
High school graduate	39.7%	39.7%	28.7%	42.72%
Some college	25.1%	25.5%	30.2%	26.10%
College graduate	13.3%	16.4%	27.3%	19.07%
Unspecified	6.4%	2.1%	8.3%	0.23%

On average, Quit Network clients were similar to the overall smoking population in Vermont with respect to age, race, and education. The Quit by Phone program client population was the most similar to the overall Vermont smoking population in FY 2008. The Quit Network programs were particularly effective at reaching female smokers but not as effective at reaching male smokers. Although 52.7% of all Vermont smokers are male, no Quit Network program had higher than 46.6% male participation.

3.3.2 Smoking Behaviors at Intake

The intake data contain a number of measures of smoking behaviors at intake, including the number of cigarettes smoked per day, the amount of time between waking and smoking, and previous quit attempts. Measures of smoking behaviors at intake serve as a proxy of an individual's addiction level. An examination of the available data suggests that individual Quit Network programs attract different types of smokers to their programs (*Table 3-3*).

Table 3-3. Smoking Behaviors, FY 2008

Smoking Behavior	Quit by Phone	Quit in Person	Quit Online	Vermont ATS
Cigarettes Per Day				
< 1 pack	34.8%	23.9%	36.3%	59.7%
1 pack	32.7%	45.4%	27.9%	25.5%
1–2 packs	20.8%	26.2%	19.0%	12.3%
> 2 packs	2.6%	3.0%	0.9%	0.5%
Unspecified	9.1%	1.5%	15.8%	1.9%
Time To First Cigarette After Waking				
Immediately	N/A	48.3%	33.6%	8.1%
< 30 minutes	N/A	25.6%	42.5%	30.4%
30–60 minutes	N/A	14.0%	14.5%	22.8%
> 1 hour	N/A	10.1%	9.4%	36.7%
Unspecified	N/A	1.9%	0.0%	2.0%
Made Serious Quit Attempt In Past 12 Months				
Yes	54.9%	N/A	65.9%	47.3%
No	37.8%	N/A	33.9%	51.6%
Missing	7.4%	N/A	0.2%	1.2%

Among the Quit Network programs, the Quit in Person program appears to attract the smokers with the highest levels of addiction based on measures of cigarettes per day and time to first cigarette after waking. The Quit Online program had the highest percentage of clients who made a quit attempt in the past 12 months.

Quit Network clients appear to be more addicted smokers than the general smoking population in Vermont. ATS data indicate that nearly 40% of smokers in Vermont smoke 1 pack or more per day and that roughly 8.1% of Vermont smokers report smoking immediately after waking (less than 5 minutes). Additionally, fewer than half of all Vermont smokers (47.3%) report making a serious quit attempt in the past 12 months. By comparison, over 70% of Quit in Person clients reported smoking 1 pack or more of cigarettes per day, and 48% reported smoking immediately after waking. More than half of all Quit by Phone callers smoke 1 pack or more per day, and more than 50% made a serious quit attempt in the past year. Even Quit Online clients, with less than 50% smoking a pack or more per day, smoke sooner after waking and have attempted to quit at higher levels than Vermont smokers.

3.3.3 Self-Efficacy at Intake

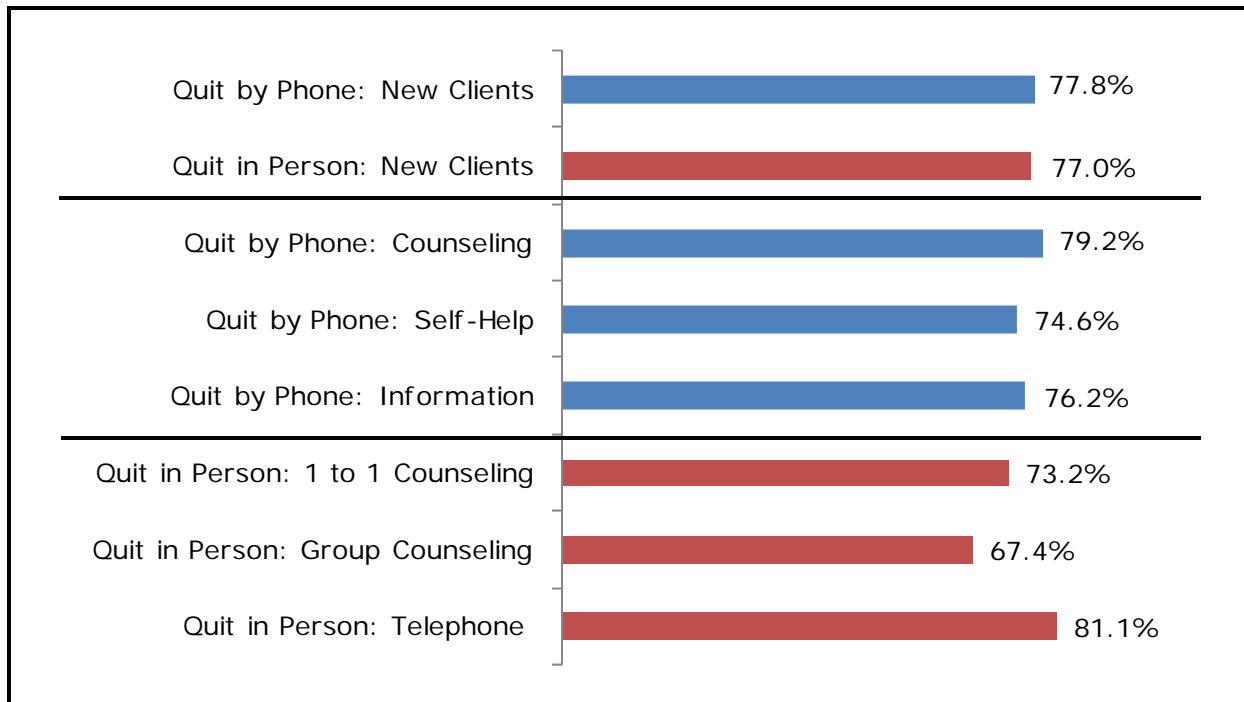
We are also interested in client's self-perception of their ability to successfully quit smoking. Smokers who participate in the Quit by Phone or Quit in Person programs are asked at intake to rate their own chances, from 0% to 100%, of being able to quit successfully. The resulting answer provides a measure of self-efficacy that represents confidence in quitting. Quit Online program self-efficacy is measured at follow-up and therefore is not comparable.

Figure 3-4 presents the average self-efficacy reported during Quit by Phone or Quit in Person intake by current smokers stratified by service requested. On average, self-efficacy reported by Quit Network clients at intake has been relatively high, indicating that clients are optimistic about their ability to successfully quit smoking. Average self-efficacy at intake reported by both Quit by Phone and Quit in Person clients was around 77%. The data suggest that clients who received telephone counseling, either from the Quit by Phone or Quit in Person programs, had the highest reported self-efficacy at intake, at 79.2% and 81.1%, respectively. Quit by Phone clients who participated in group counseling services had the lowest levels of self-efficacy at intake (67.4%).

3.4 Source of Referral to Quit Network Programs

Data indicate that there is variation in where current smokers are learning about the different Quit Network programs (**Figure 3-5**). In FY 2008, over 50% of new Quit by Phone clients reported hearing about the program from health care professionals, including physicians, nurses, health care workers, and dental offices. The remaining sources were fairly evenly distributed among media and other referral sources. Nearly 37% of new Quit by Phone clients reported hearing about the program through media sources, with printed word being the dominant source at roughly 18%.

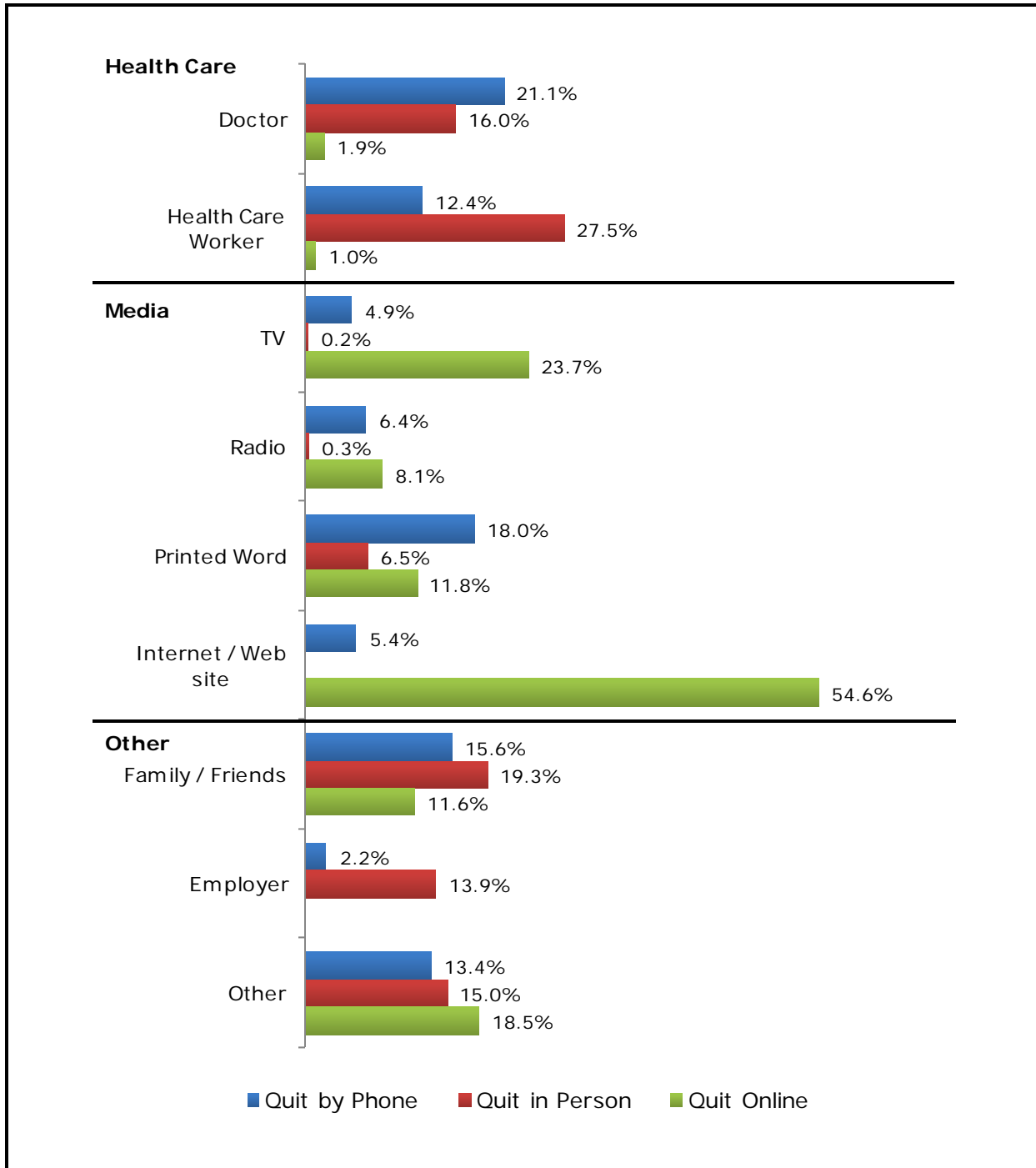
Figure 3-4. Average Self-Efficacy at Intake, FY 2008



Slightly less than half of all Quit in Person clients (43.5%) reported hearing about the program from a doctor or health care worker. The largest single source of referrals for the Quit in Person program was non-physician health care workers (27.5%), followed by family or friends (19.3%) of the client. The Quit in Person program had the lowest levels of referrals from media sources, with less than 10% of clients reporting media as their referral source.

The Quit Online program had the largest number of clients referred to the program via a media source. Not surprisingly, over half of all new Quit Online clients (54.6%) reported hearing about the program from the Internet. The next closest source of referral to the program was television (23.7%). Only 2.9% of new Quit Online clients reported being referred to the program by a health care professional.

Figure 3-5. Source of Referral to Quit Network Programs, FY 2008



4. SERVICE UTILIZATION AND PROGRAM FIDELITY

This section addresses the following questions:

- What services are Quit Network clients receiving?
- Are Quit Network programs being implemented with fidelity as expected by the Vermont Department of Health (VDH)?

Our examination of service utilization looks at the type of services used in each program by Quit Network clients and explores the available session data for each program individually. This information helps us address program fidelity by determining if individual programs are following service mandates. Information on cessation services used by Quit Online clients is collected from clients during their follow-up evaluations. As a result, data are not available for clients who did not complete follow-up evaluations. Therefore, data concerning the types of services used by Quit Online clients are not directly comparable to the service utilization data collected by the Quit by Phone and Quit in Person programs. This section also summarizes cross-program service utilization, clients' self-reported use of cessation medications during their quit attempt, and client satisfaction with the services received from Quit Network programs.

4.1 Quit Network Services Received by Clients

The most common service received by Quit by Phone and Quit in Person clients in fiscal year (FY) 2008 was cessation counseling (*Table 4-1*). The Quit by Phone program offers three types of services to smokers: cessation counseling, self-help materials, and information. Over 60% of current smokers who received services from the Quit by Phone program received cessation counseling.

Quit in Person clients have several cessation services they can choose from: telephone counseling, individual counseling, or group cessation classes. Clients typically receive multiple counseling sessions and often receive a combination of different types of counseling from the program. Slightly less than half of all Quit in Person clients (42%) used multiple services (e.g., individual counseling and telephone counseling) during their enrollment in the program.

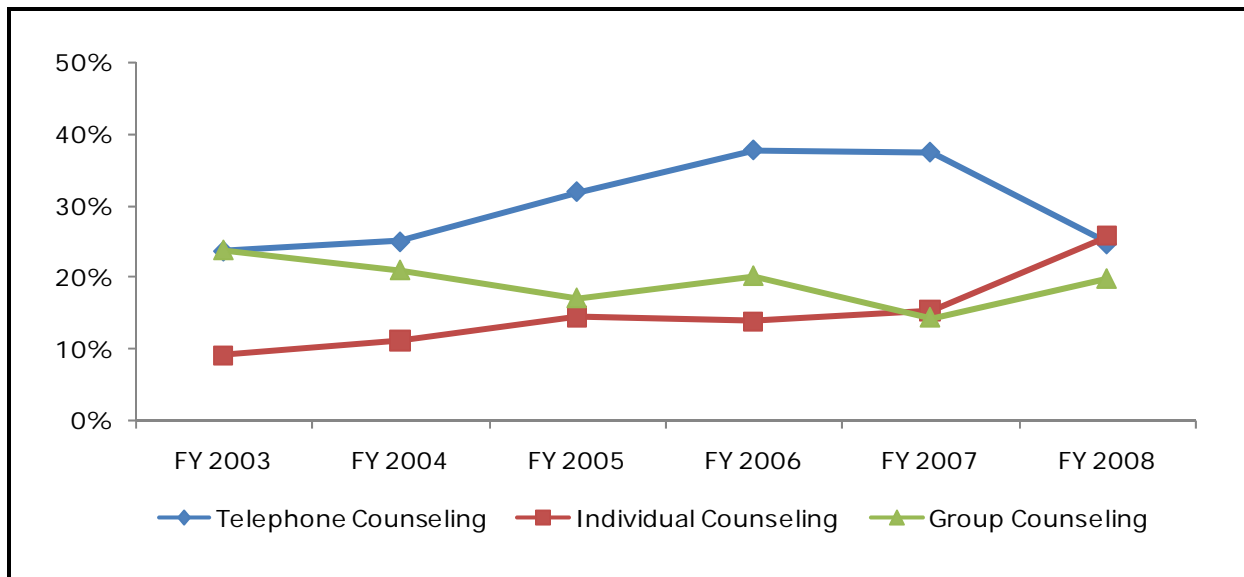
For clients who received multiple types of services from the Quit in Person program, we calculated the predominant session type, defined as the service that comprises 80% or more of a client's total sessions. For instance, a client's predominant session would be group classes if four of five sessions he participated in were group cessation classes. Not all Quit in Person clients have a predominant session type.

Between FY 2004 and FY 2007, there was a noticeable increase in the percentage of Quit in Person clients who received telephone counseling as their predominant session type (*Figure 4-1*). In response to VDH concerns about the disproportionate number of Quit in Person

Table 4-1. Quit Network Services Used by Smokers, FY 2008

Quit Network Service	% of N
Quit by Phone	
Counseling	60.2%
Self-help	17.3%
Information	22.5%
Quit in Person	
Telephone counseling only	19.3%
Individual counseling only	22.8%
Group counseling only	15.8%
Other service combinations	42.0%

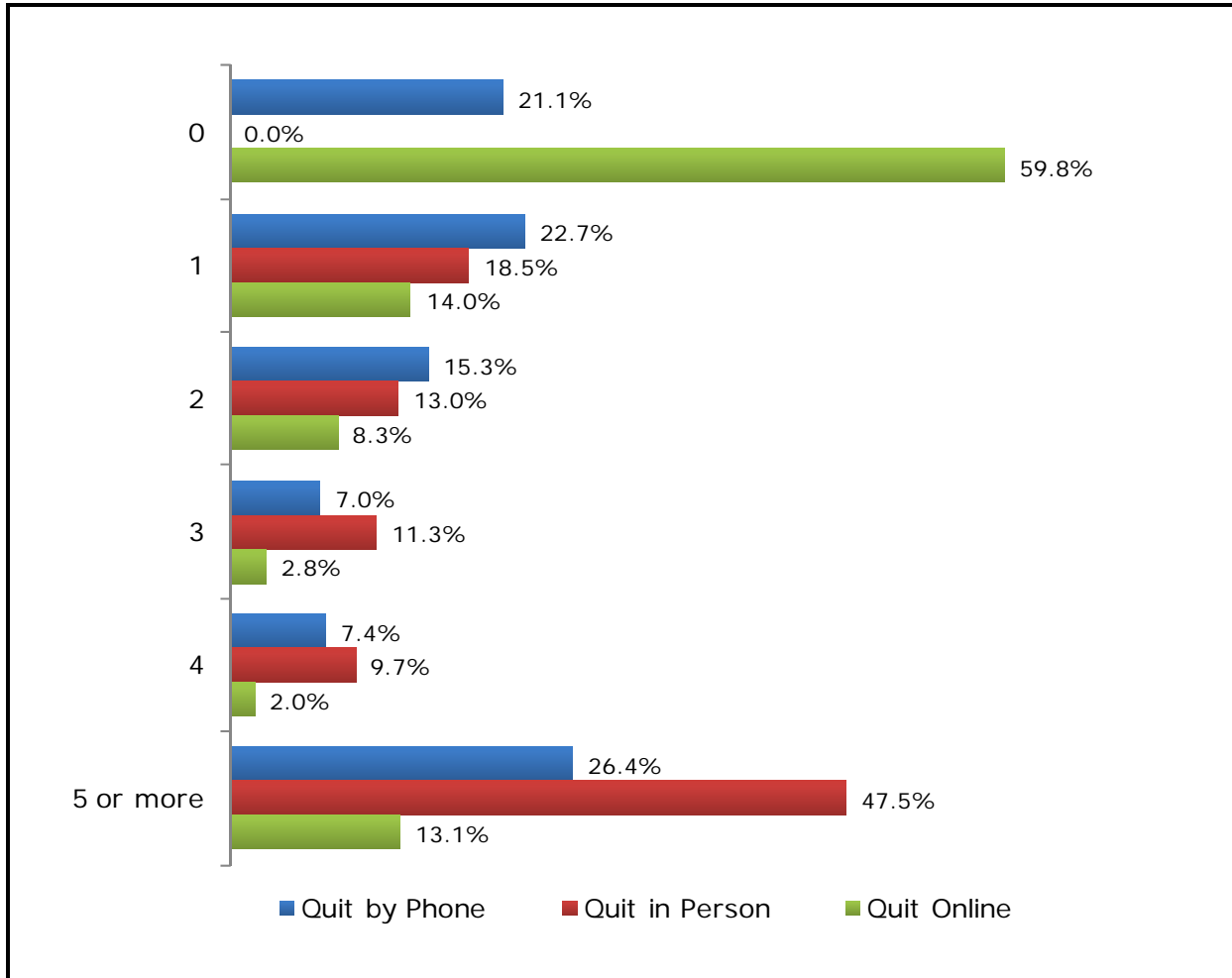
Figure 4-1. Percentage of Quit in Person Clients by Predominant Session Type, FY 2003–FY 2008



clients primarily receiving telephone counseling only from the program, policies were instituted to limit the number of clients with telephone counseling only as a predominant counseling session type. The data indicate that in FY 2008 these policies had an effect as seen in the sharp decrease in the number of clients with telephone counseling as their predominant session type. At the same time, the number of clients with individual or group counseling as their predominant session type increased.

Figure 4-2 presents a summary of the number of counseling sessions received by Quit Network clients in FY 2008. Approximately 21.1% of the Quit by Phone clients did not receive any counseling sessions beyond their initial intake session. At 47.5%, the Quit in Person program had the highest percentage of clients who received five or more counseling sessions. Over half of the Quit Online clients (59.8%) did not return to the site after initially registering with the site.

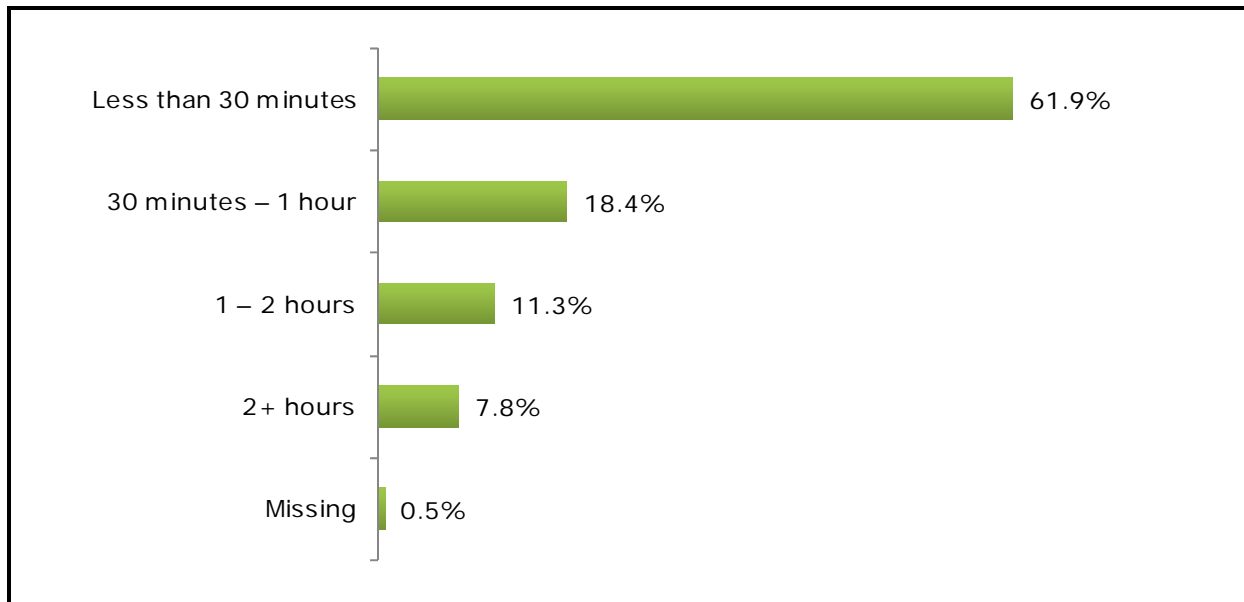
Figure 4-2. Number of Counseling Sessions Received, FY 2008



Note: Quit by Phone data were limited to cigarette smokers who completed at least one follow-up evaluation.

Due to the high number of Quit Online clients that did not return to the Web site following registration, we took a deeper look into Quit Online session-level data. **Figure 4-3** presents a summary of the total time users spent on the Quit Online Web site. Over 60% of clients spent less than 30 minutes logged on to the Quit Online Web site. Nearly 92% of Quit Online clients spent less than 2 hours on the Quit Online Web site.

Figure 4-3. Total Time Spent on the Quit Online Web Site, FY 2008



4.2 Cross-Program Referral and Utilization

The Quit Network programs were designed as complementary programs that were intended to work synergistically to provide clients with comprehensive cessation services.

Understanding how the Quit Network programs work together will help VDH develop a better understanding of how the Quit Network can leverage the multiple service offerings across programs and promote cross-referral and cross-utilization of services among programs.

We explored cross-program referrals and cross-program utilization by examining data on the source of program referrals reported by Quit Network clients. The existing data do not enable us to systematically isolate and account for cross-program referrals or cross-program utilization among Quit Network programs. This limits the type of analysis we can conduct with these data. However, self-reporting of referral sources does allow us to glean important insights into how programs are working together and how clients are using Quit Network programs.

Table 4-2 presents the number of cross-program referrals in FY 2008. The available data show the Quit by Phone program is the most active in providing referrals to other Quit Network programs. In FY 2008, 543 Quit by Phone clients indicated that they were interested in receiving a referral to the Quit Online Web site, and 43 Quit Online clients reported hearing about the Web site from the Quit by Phone program. In the other direction, 63 Quit by Phone clients reported hearing about the program from the Quit Online

Table 4-2. Cross-Program Referrals, FY 2008

Referred By	Referred To		
	Quit by Phone	Quit in Person	Quit Online
Quit by Phone	N/A	27 ^a	543 ^b 41 ^c
Quit in Person	N/A	N/A	1 ^c
Quit Online	63 ^d	N/A	N/A

^aBased on Quit in Person clients' self-reported source of referral to the Quit in Person program.

^bBased on the number of Quit by Phone clients who expressed interest in receiving a referral to the Quit Online Web site.

^cBased on Quit Online clients' self-reported source of referral to the Quit Online Web site.

^dBased on the number of Quit by Phone clients who cited the Internet or a Web site as a source of referral to the Quit by Phone program. The data do not specifically indicate that the referring Web site was the Quit Online site.

Web site. The Quit by Phone program refers callers to their local hospital when they express interest in receiving face-to-face counseling. In FY 2008, 27 Quit in Person clients reported hearing about the program from the Quit by Phone program.

Table 4-3 presents a summary of cross-program utilization. This information is based on client-reported measures of other cessation services or programs utilized. Although these numbers are not large, they do provide some evidence that Vermont smokers are receiving services from more than one Quit Network program.

Table 4-3. Cross-Program Utilization, FY 2008

Program Used	Other Program Used		
	Quit by Phone	Quit in Person	Quit Online
Quit by Phone	N/A	46 (group counseling) 34 (individual counseling)	48
Quit in Person	N/A	N/A	N/A
Quit Online	12	8 (group counseling) 8 (individual counseling)	N/A

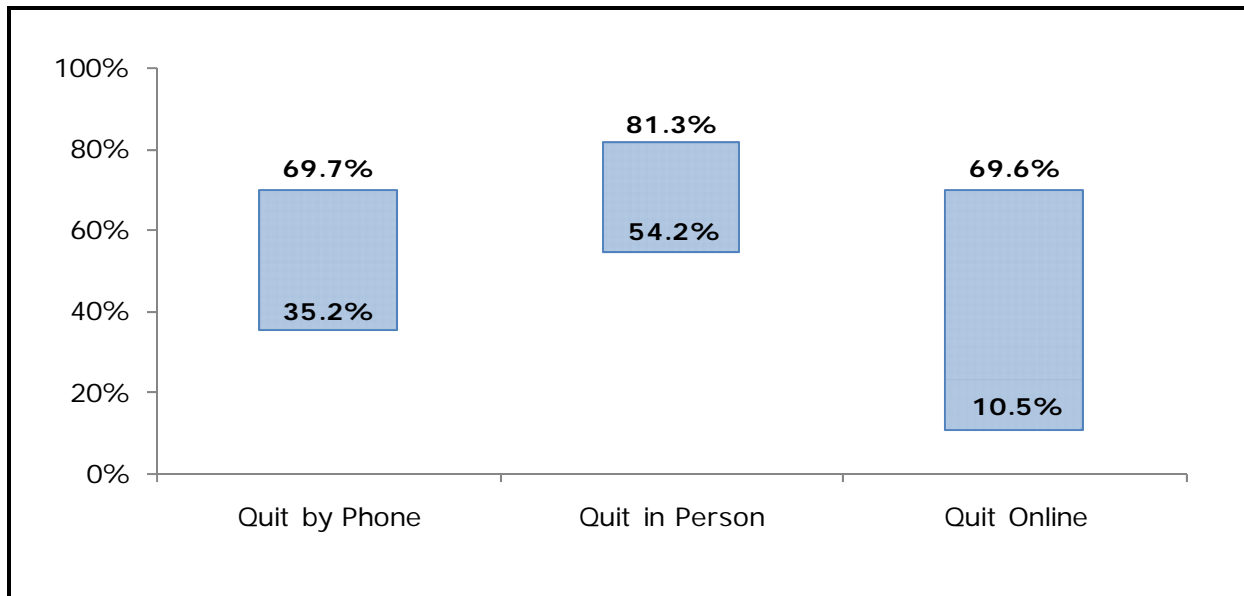
4.3 Use of Cessation Medications during Quit Attempts

This section summarizes self-reported use of cessation medications during clients' quit attempts. Data on use of medications are collected during follow-up evaluations. To account for clients who did not complete follow-up interviews, we present estimates as a range

using the *completed evaluation* approach and the *intent-to-treat* approach as upper and lower bounds, respectively. For Quit in Person clients who had multiple follow-up cycles corresponding to different episodes of quitting, data are restricted to the client’s first follow-up cycle.

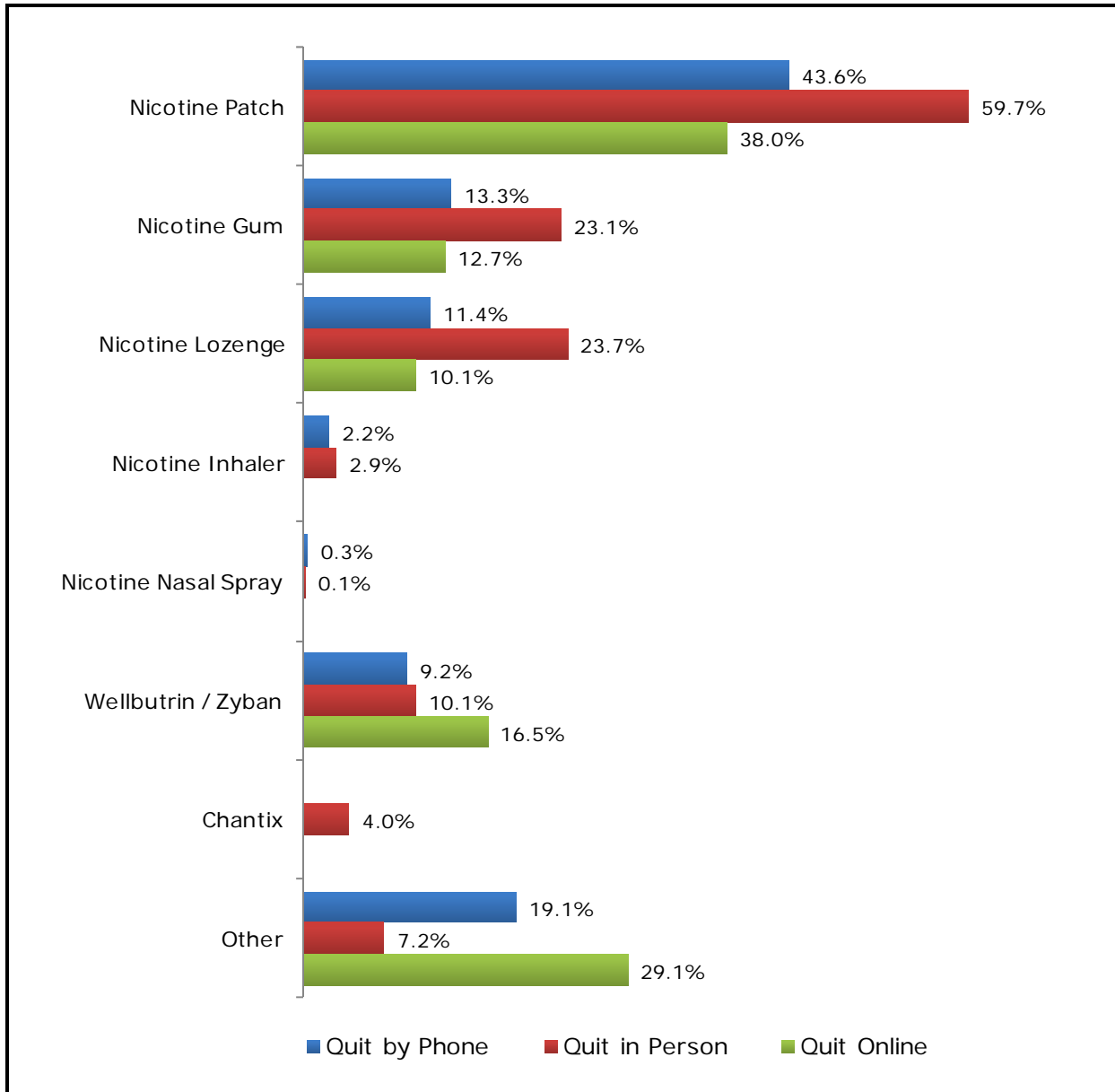
Figure 4-4 presents the percentage of Quit Network clients who reported using cessation medication or other forms of nicotine replacement therapy (NRT) during their quit attempts. NRT was used by more than half of all Quit in Person clients and somewhere between 35% and 70% of Quit by Phone clients. Results are less clear for the Quit Online program because of low follow-up response rates. At least 10.5% of Quit Online clients reported using cessation medications during their quit attempt. For clients who completed follow-up evaluations, we also looked at the type of cessation medications used during quit attempts. Clients used over-the-counter NRT at a much higher rate than prescription NRT such as Wellbutrin, Chantix, or Zyban (**Figure 4-5**). The most common NRT used was the nicotine patch, with 39.9% of Quit in Person and 21.9% of Quit by Phone clients who completed follow-up evaluations reporting use. Less than 2% of Quit by Phone and Quit in Person clients who completed follow-up evaluations reported using nicotine spray or nicotine inhaler products.

Figure 4-4. Percentage of Clients Who Reported Using Cessation Medication in Quit Attempt, FY 2008



Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not use medications during their quit attempt.

Figure 4-5. Type of Cessation Medications Used, FY 2008



Notes: Results are among those clients who completed follow-up evaluations. Percentages may add up to more than 100% because clients can report all that apply.

5. EFFICACY OF SERVICES

The American Cancer Society attempts to conduct follow-up evaluations with every smoker who received services from the Quit by Phone program. Macro International is contracted by the Vermont Department of Health (VDH) to conduct follow-up evaluations with every smoker who received services from the Quit in Person program. Quit Online clients are asked to complete follow-up evaluations online. Follow-up evaluations collect information on client quit attempts, current smoking status, and satisfaction with services received. Follow-up evaluations are conducted at approximately 3, 6, and 12 months after completion of services with the program.

This section presents a summary of quit attempts and quit rates among Quit Network clients as well as a summary of client satisfaction with the services received from the Quit Network programs. Results presented in this section are based on available follow-up evaluation data. **Table 5-1** presents completion rates for follow-up evaluations in fiscal year (FY) 2008. The Quit in Person program had the highest completion rates at each evaluation interval (e.g., 3, 6, and 12 months) of any Quit Network program. More than half of all eligible Quit in Person clients completed their 3-month follow-up evaluations, and nearly half completed their 12-month evaluations. The Quit Online program had the lowest completion rates at each evaluation interval. Only 7.1% of Quit Online clients completed a 3-month evaluation and less than 5% completed a 12-month evaluation.

Table 5-1. Completion Rates for Follow-Up Evaluations, FY 2008

Survey	Quit by Phone		Quit in Person		Quit Online	
	Eligible	Complete	Eligible	Complete	Eligible	Complete
3-Month	1,069	32.4%	1,524	57.5%	466	7.1%
6-Month	1,391	26.9%	1,505	51.4%	568	4.6%
12-Month	1,344	25.1%	1,401	45.2%	454	4.2%

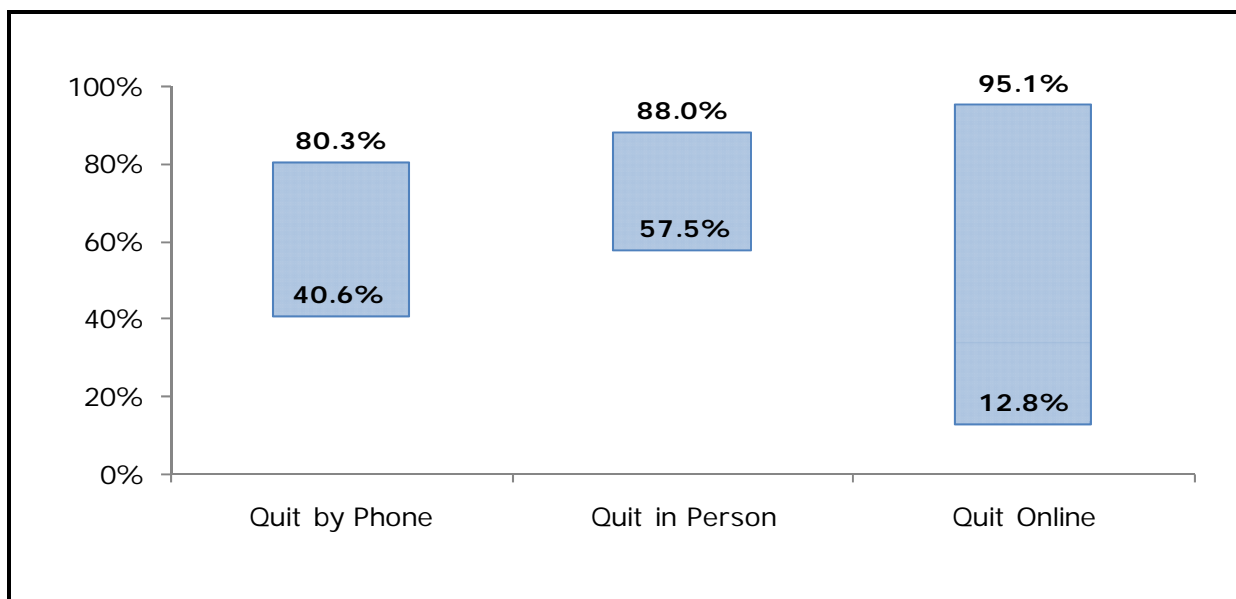
We present cessation outcomes for each of the Quit Network programs as a range using the *completed evaluation* and *intent-to-treat* approaches as upper and lower bounds, respectively. Comparisons in quit rates among programs are limited by the lack of intra- and inter-program controlled design. In other words, comparisons are limited by potential differences between clients who use one Quit Network program over another, as well as the differences between clients who request different services within a single program. Comparisons should also be interpreted with caution because the rates presented are largely a function of the response rate, which differs greatly among the Quit Network programs. For a more detailed breakdown of cessation outcomes, see Appendix B.

5.1 Quit Attempts

This section presents the percentage of current smokers at intake who made a serious quit attempt lasting at least 24 hours at some point during the 12 months following completion of services with a Quit Network program. This measure is collected at each follow-up evaluation until the smoker responds that he/she has quit for 24 hours or more. By using the year the caller was scheduled to complete the 12-month evaluation as a reference point, this measure can be interpreted as an indicator for whether a caller made a serious quit attempt during the previous 12 months. The question used to derive this measure was asked in a similar manner by all programs at follow-up, so the ability to monitor serious quit attempts across different network programs is consistent across programs.

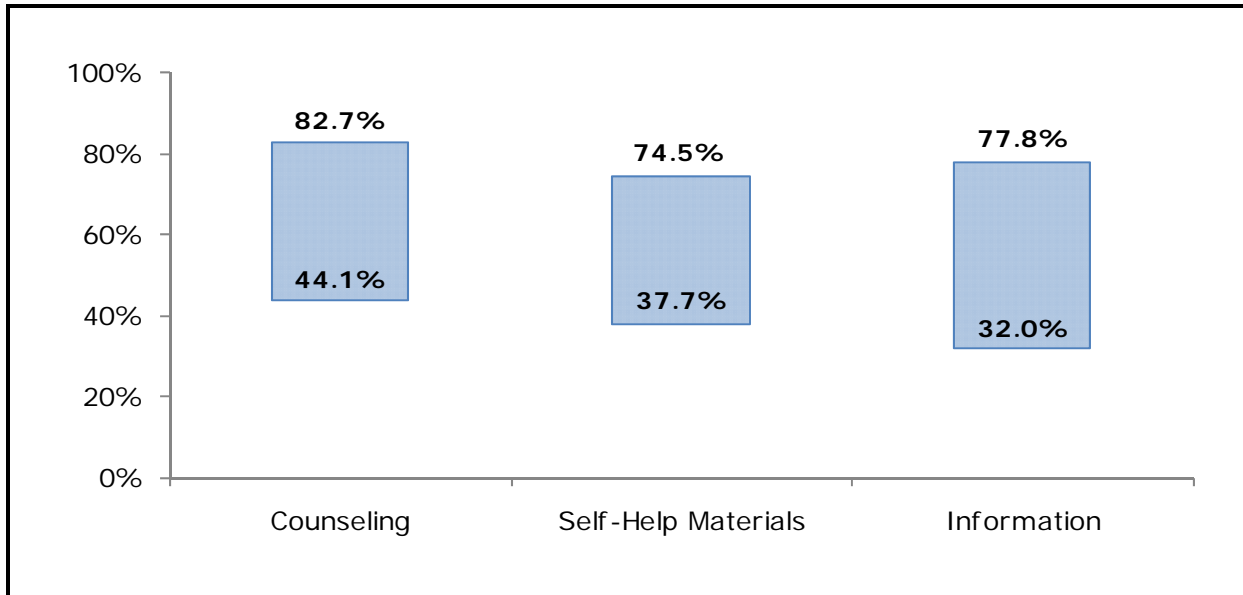
Figure 5-1 presents the percentage of current smokers at intake who made a serious quit attempt lasting at least 24 hours at any point during the 12 months following completion of Quit Network services. In FY 2008, the percentage of Quit by Phone clients who made a serious quit attempt ranged from 40.6% to 80.3%, while the percentage among Quit in Person clients ranged from 57.5% to 88.0%. The results are not meaningful for the Quit Online program because of extremely low follow-up response rates. **Figure 5-2** presents the rate of making a quit attempt among Quit by Phone clients by the type of service received from the program. Quit attempts were highest among Quit by Phone clients who received telephone counseling (44.1%–82.7%) as compared to self-help materials (37.7%–74.5%) and information only (32%–77.8%).

Figure 5-1. Percentage of Current Smokers at Intake Who Made a Serious Quit Attempt Lasting at Least 24 Hours in the Past 12 Months, FY 2008



Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not make a serious quit attempt lasting at least 24 hours.

Figure 5-2. Percentage of Quit by Phone Clients Who Made a Serious Quit Attempt Lasting at Least 24 Hours in the Past 12 Months by Service Received, FY 2008



Notes: Results are for Quit by Phone clients who were current smokers at intake. The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not use medications during their quit attempt.

5.2 Quit Rates

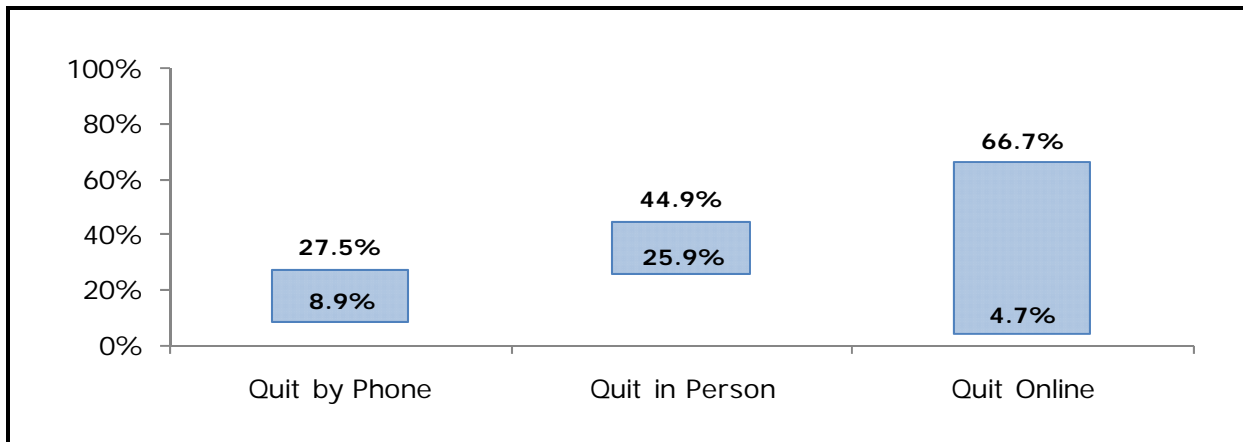
This section presents estimates of quit rates among Quit Network clients in FY 2008.

Figures 5-3a through **5-3c** present 7-day smoke-free point prevalence by program.

Figures 5-4a through **5-4c** present 30-day smoke-free point prevalence by program.

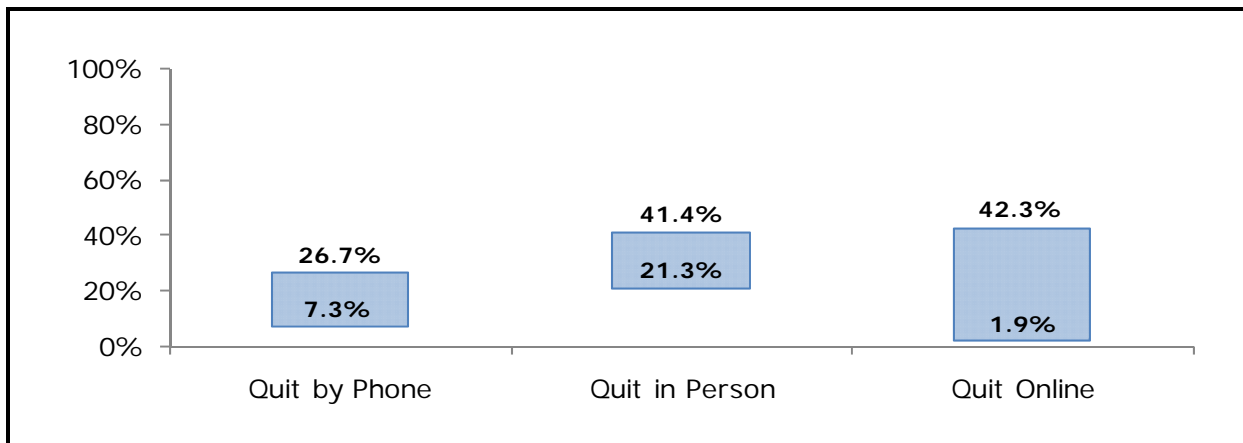
Figures 5-5a through **5-5c** present continuous quit rates by program. All of the quit rates presented in this section are presented as a range between the estimates calculated using the *completed evaluation* and *intent-to-treat* approaches. The accuracy and reliability of these estimates are greatly affected by the percentage of clients who completed follow-up evaluations. Because of somewhat low response rates, these results should be interpreted with caution. Comparisons in quit rates across programs should also be interpreted with caution because the follow-up evaluation response rates and characteristics of clients differ considerably among the programs.

Figure 5-3a. 7-Day Smoke-Free Point Prevalence at 3 Months, FY 2008



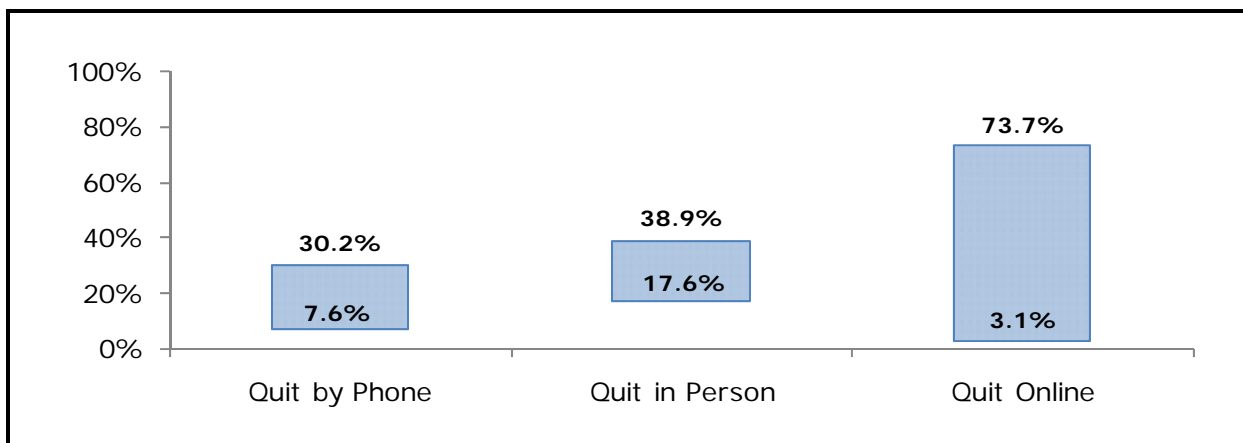
Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not maintain 7-day smoke-free point prevalence.

Figure 5-3b. 7-Day Smoke-Free Point Prevalence at 6 Months, FY 2008



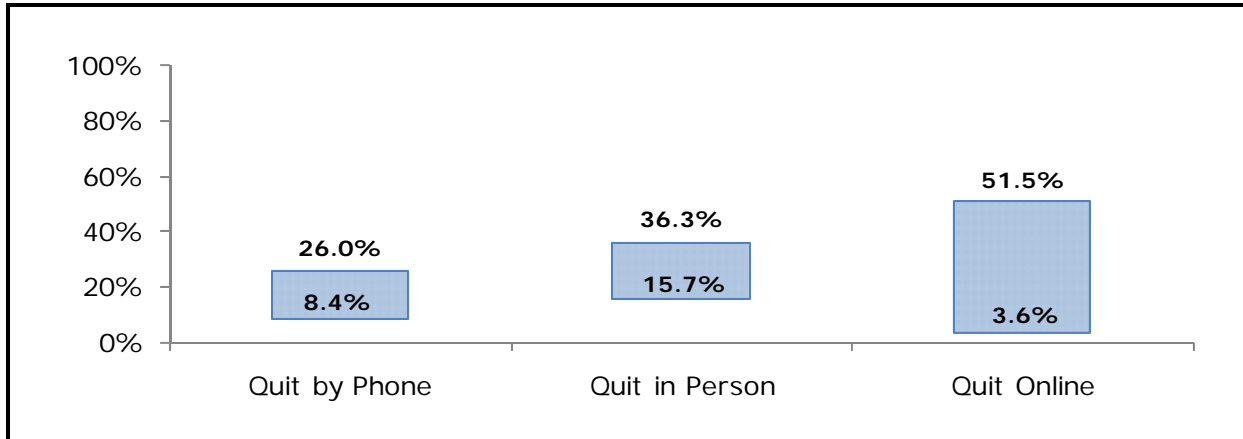
Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not maintain 7-day smoke-free point prevalence.

Figure 5-3c. 7-Day Smoke-Free Point Prevalence at 12 Months, FY 2008



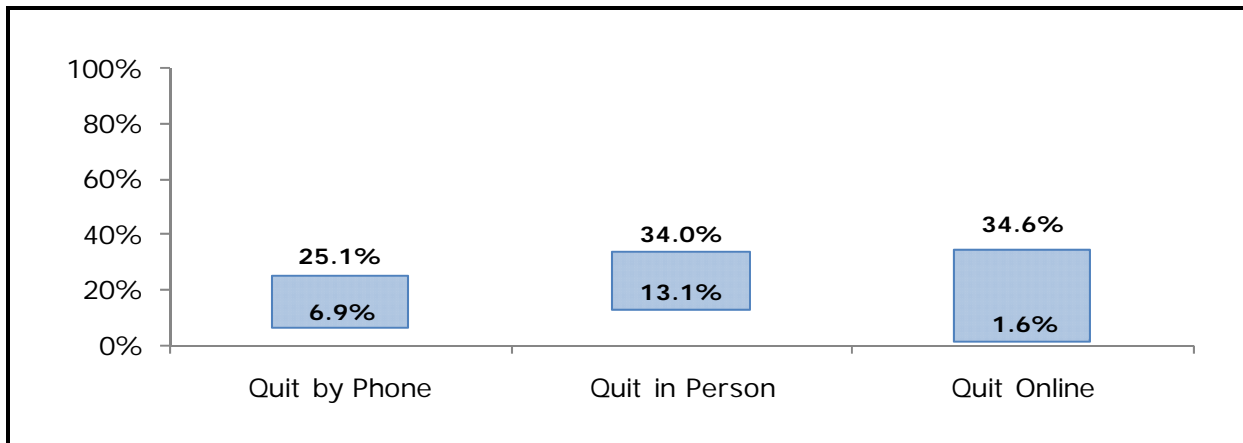
Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not maintain 7-day smoke-free point prevalence.

Figure 5-4a. 30-Day Smoke-Free Point Prevalence at 3 Months, FY 2008



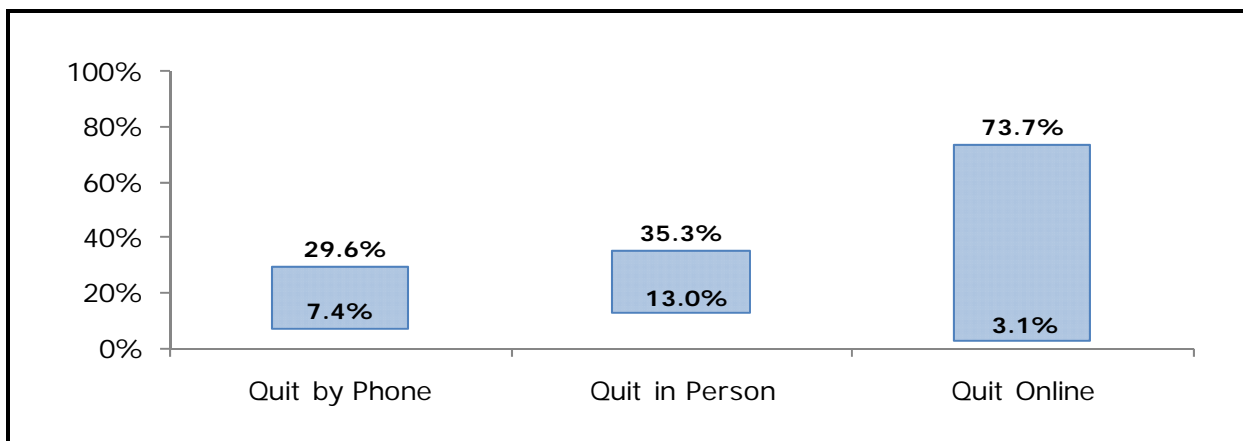
Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not maintain 30-day smoke-free point prevalence.

Figure 5-4b. 30-Day Smoke-Free Point Prevalence at 6 Months, FY 2008



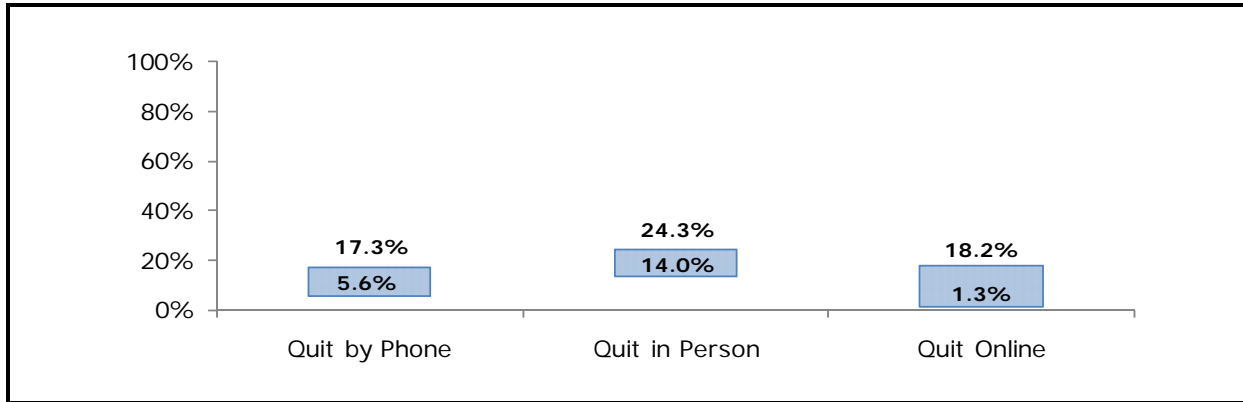
Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not maintain 30-day smoke-free point prevalence.

Figure 5-4c. 30-Day Smoke-Free Point Prevalence at 12 Months, FY 2008



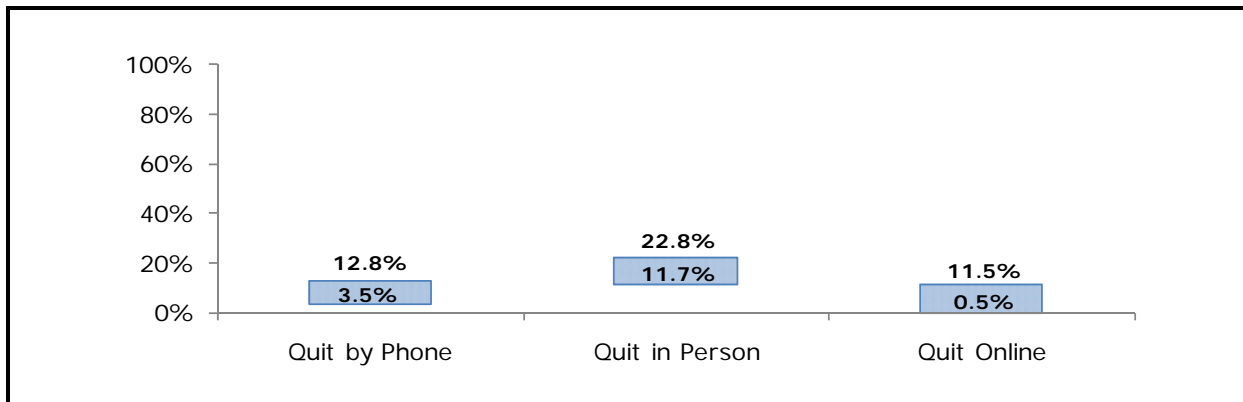
Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not maintain 30-day smoke-free point prevalence.

Figure 5-5a. Continuous Quit Rates at 3 Months, FY 2008



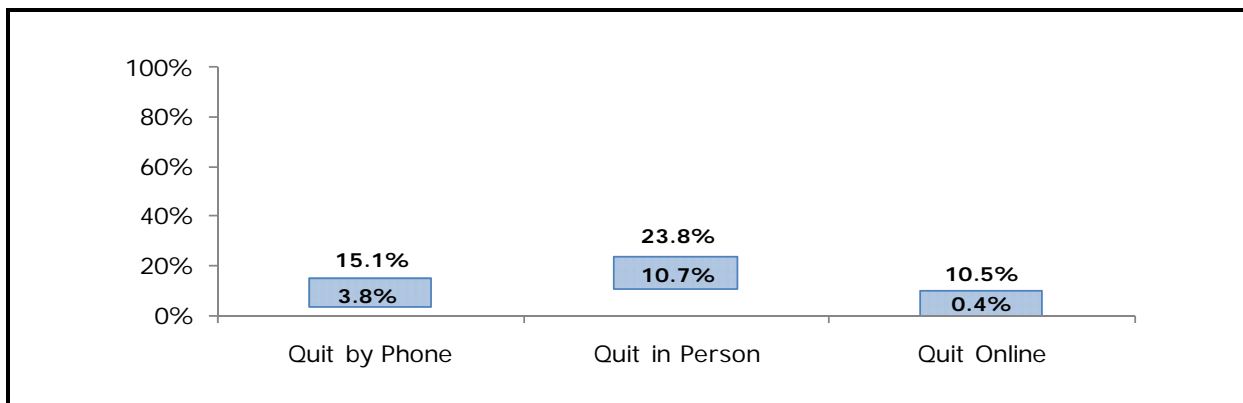
Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not remain continuously quit prior to the date of their scheduled evaluation.

Figure 5-5b. Continuous Quit Rates at 6 Months, FY 2008



Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not remain continuously quit prior to the date of their scheduled evaluation.

Figure 5-5c. Continuous Quit Rates at 12 Months, FY 2008

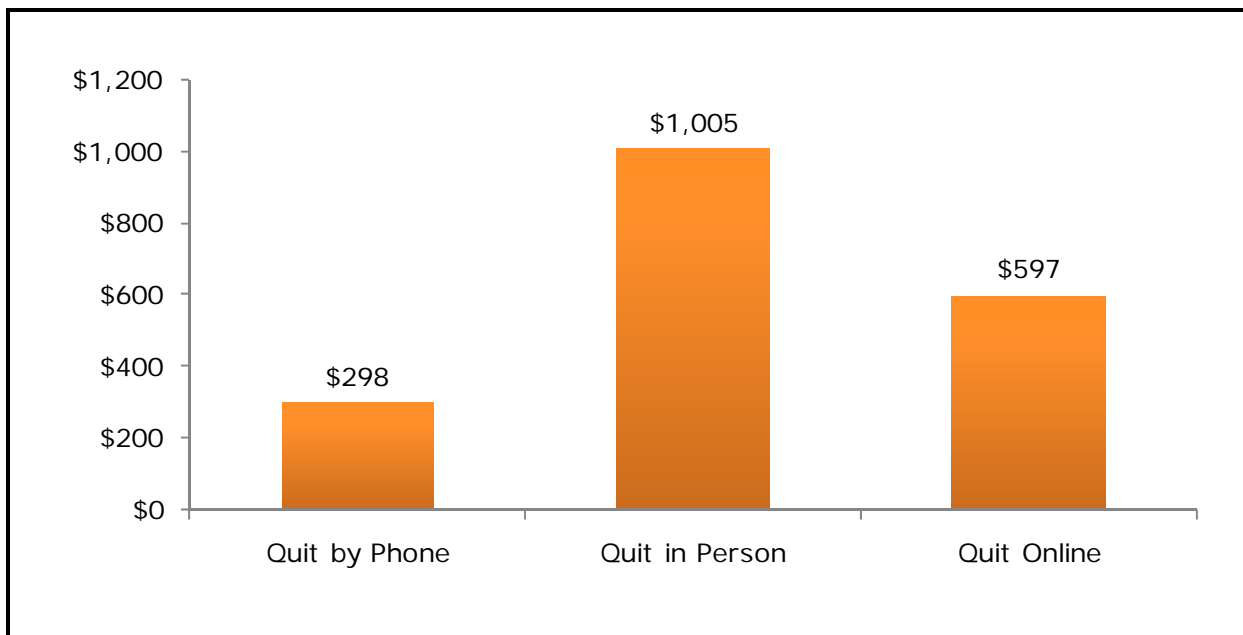


Note: The upper bound is based only on those clients who completed follow-up evaluations. The lower bound assumes that clients who were not reached for follow-up did not remain continuously quit prior to the date of their scheduled evaluation.

5.3 Cost Per Quit

To examine the relative cost-effectiveness of the Quit Network programs, we also estimated an average cost per quit for each Quit Network program (**Figure 5-6**). Cost per quit was calculated by dividing the total program expenditures (see Figure 1-1) by the number of clients who were continuously quit at 6 months following completion of services with the program. To generate reasonable cost per quit estimates, we use different assumptions than those used for the other results presented in this report. Using either a completed evaluation approach or an intent to treat approach for a cost per quit calculation would result in unrealistically large cost per quit estimates because the total operational costs are fixed and the number of quits would be too small using either approach. Thus, to account for clients who did not respond to follow-up evaluations, we assumed that clients who did not complete follow-up evaluations remained continuously quit at the same rate as clients who completed follow-up evaluations. In FY 2008, the cost per quit was highest for the Quit in Person program (\$1,005), followed by the Quit Online program (\$597) and the Quit by Phone program (\$298). Cost per quit as a percentage of total operating expenses was highest for the Quit Online program (1.1%), followed by the Quit by Phone program (0.2%) and the Quit in Person program (0.1%).

Figure 5-6. Cost Per Quit, FY 2008



5.4 Client Satisfaction with Services Received

The Quit by Phone and Quit in Person programs both received high satisfaction ratings from their clients in FY 2008 (**Table 5-2**). Satisfaction data are collected from clients during their

first follow-up evaluation. Because many of the clients who received counseling services from the Quit Network are not reached for follow-up evaluations, the satisfaction of those clients with the services they received from the Quit Network is not known. Among the clients who were reached for follow-up evaluation in FY 2008, 72% of Quit by Phone clients and 94.1% of Quit in Person clients reported being “very satisfied” or “mostly satisfied” with the services they received from the program. Because these findings are based only on the ratings provided by clients who completed follow-up evaluations, they may not accurately reflect the overall level of client satisfaction with the services received from the Quit Network.

Table 5-2. Client Satisfaction with Quit Network Programs, FY 2008

Self-Reported Satisfaction	Quit by Phone	Quit in Person
Completed at Least One Evaluation	757	1,210
Very satisfied	54.0%	50.0%
Mostly satisfied	18.0%	44.1%
Somewhat satisfied	14.3%	
Not at all satisfied	7.5%	3.8%
Don't know		1.5%
Missing	6.2%	0.6%

6. DISCUSSION

In this report, we examined the utilization and reach of the Vermont Quit Network programs. We assessed the costs of providing cessation services to Vermonters by analyzing program cost per client. We also sought to better understand who uses the Quit Network programs and whether there are differences in the types of clients who use each program or between Quit Network clients and Vermont smokers as a whole. We presented a summary of the program services used by Quit Network clients and explored whether the programs are being implemented with fidelity. Finally, we analyzed follow-up evaluation data for each program to examine the efficacy of Quit Network services on cessation outcomes such as quit attempts and quit rates.

In fiscal year (FY) 2008, each of the Quit Network programs reached between 1% and 2% of the adult smokers in Vermont. The Quit Network, as a whole, provided services to approximately 2% to 4% of Vermont's adult smoking population. Data show that the reach of Quit Network programs is positively influenced by promotion of Quit Network programs through mass media campaigns and direct mailing. Findings also show that referrals from health care providers also play an important role in raising awareness and promoting use of Quit Network programs.

The Vermont Quit Network programs were designed to be complementary and work together to provide Vermont smokers with a wide range of cessation services to meet their needs. Findings suggest these programs are working together to reach a wider audience. In FY 2008, there were differences in the types of smokers who used each of the Quit Network programs. The Quit in Person program tended to serve older clients, whereas the Quit Online program tended to serve clients with higher levels of educational attainment. With respect to demographic characteristics, the Quit by Phone program clients most closely resembled the overall smoking population in Vermont. Findings presented in this report also show that there are differences between Quit Network program clients and the general adult smoking population in Vermont. The Quit Network provides services to a much higher percentage of female clients than there are in the overall smoking population. Consequently, males appear to be consistently under-reached across all Quit Network programs. Findings also suggest that the Quit Network clients are more addicted smokers than the overall adult smoking population in Vermont. When compared to Vermont Adult Tobacco Survey (ATS) data, a larger percentage of Quit Network clients have reported making quit attempts in the previous 12 months. Consistently high levels of self-efficacy reported by Quit Network clients at intake also suggest that Quit Network clients may be more motivated to quit, or more confident in their ability to do so, than Vermont smokers as a whole.

Most Quit Network clients receive counseling services from the program. The Vermont Tobacco Evaluation and Review Board (VTERB) has been concerned about recent increases in the percentage of Quit in Person clients receiving the majority of their counseling sessions via telephone. However, efforts have been made to address the disproportionate use of telephone counseling by the Quit in Person program. In FY 2008, the percentage of Quit in Person clients receiving most of their counseling sessions via telephone dropped sharply and was offset by increases in the percentage of clients primarily receiving group or individual counseling from the program. Findings show that the majority of smokers who register for Quit Network programs receive at least one counseling session from the program. The Quit in Person program clients received more counseling sessions than the other Quit Network programs in FY 2008, with almost 48% receiving 5 or more counseling sessions. Somewhat disappointing is that a large percentage (59.8%) of the individuals who register with the Quit Online Web site did not return to the site after their initial visit. Additionally, nearly 62% of the Quit Online users spent less than 30 minutes on the Web site.

Effective collaboration between Quit Network programs is essential to the success of the program. The available data do not provide us with a way to systematically measure or assess the extent to which cross-referral and cross-utilization of Quit Network programs is taking place. However, information collected from clients about how they heard about the program provides some indication that Quit Network programs are referring clients to other programs within the Quit Network. Clients are also asked about the methods they have used to help them quit. These measures suggest that clients may be using multiple Quit Network programs. Better systems or measures for tracking cross-program referrals and use of multiple Quit Network programs may be necessary to evaluate how well, and to what extent, the Quit Network programs are working together to provide Vermont smokers with the most comprehensive and effective set of cessation services possible.

Encouraging results presented in this report include relatively high levels of self-reported use of cessation medications among Quit Network clients. We evaluate the efficacy of Quit Network services by examining cessation outcomes such as the rate of quit attempts or quitting among program clients. Although the cessation outcomes are consistently highest among Quit in Person program clients, these findings should be interpreted with caution. The cessation outcomes are directly influenced by the number of clients who are successfully reached for follow-up evaluations. Differences in follow-up evaluation response rates make it difficult to make meaningful comparisons in cessation outcomes across Quit Network programs. While the Quit in Person program has the most favorable measures of quit attempts and quit rates, that program also has the best follow-up response rates. Follow-up evaluation response rates were low for the Quit by Phone program and extremely low for the Quit Online program in FY 2008. Differences in the characteristics of clients across programs also make it difficult to make meaningful comparisons in cessation outcomes across Quit Network programs. Finally, client satisfaction with the support they

received from the Quit Network has been consistently high. Positive client satisfaction results should be interpreted with caution, however, because there may be some self-selection bias or correlation between the decision to complete follow-up evaluations and satisfaction with the program.

The cost of providing cessation services to Vermonters varies greatly across Quit Network programs. In FY 2008, the cost per client for the Quit in Person program was more than 5 times greater than the Quit by Phone program and more than 8 times greater than the Quit Online program. Although the Quit in Person program has consistently demonstrated the best quit outcomes, the difference in quit rates among Quit in Person clients and other Quit Network program clients is not proportional to the differences in costs associated with each of the Quit Network programs. The cost per quit estimates presented in this report suggest that the Quit in Person program is spending considerably more to generate successful quit outcomes. The dramatically higher costs associated with operating the Quit in Person program may prove to be problematic given limited program resources and the possibilities of impending budget cuts to the program. Given these findings, the Vermont Tobacco Control Program may need to explore options for reducing some of the costs associated with the Quit in Person program.

APPENDIX A: DATA SOURCES

Table A-1. Intake Data Measures

Data Source	Measures in the Data
Quit by Phone	<ul style="list-style-type: none"> ▪ Age ▪ Race/ethnicity ▪ Gender ▪ Marital status ▪ Educational attainment ▪ Location of residence (county and/or zip code) ▪ Caller type (self, family/friend, other) ▪ Tobacco product indicator (cigarettes or other tobacco) ▪ Current use indicator (currently using or already quit) ▪ Service requested (counseling, self-help, information) ▪ Number of years caller has been smoking ▪ Average number of cigarettes per day ▪ Lifetime quit attempts ▪ Quit attempts in the past 12 months ▪ Intentions to quit in the next 30 days ▪ Quit stage ▪ Self-efficacy at intake
Quit in Person	<ul style="list-style-type: none"> ▪ Fiscal year of initial enrollment ▪ Hospital site ▪ Hospital service area ▪ Location of residence (county and/or zip code) ▪ Age ▪ Gender ▪ Educational attainment ▪ Age first regularly used cigarettes ▪ Time of day smoke most ▪ Time to first cigarette after waking ▪ Client's insurance provider ▪ Source of referral ▪ Quitting episode number ▪ Quitting episode date

(continued)

Table A-1. Intake Data Measures (continued)

Data Source	Measures in the Data
Quit Online	<ul style="list-style-type: none"> ▪ Age ▪ Gender ▪ Race/ethnicity ▪ Educational attainment ▪ Pregnancy status ▪ Time to first cigarette after waking ▪ Number of cigarettes smoked per day ▪ Number of quit attempts ▪ Treatment used in quit attempt ▪ State of change ▪ Quit date

Table A-2. Session Data Measures

Data Source	Measures in the Data
Quit by Phone	<ul style="list-style-type: none"> ▪ Number of counseling sessions completed ▪ Self-efficacy at each counseling session ▪ Whether the caller was able to quit at any point during the period in which he or she was receiving counseling services from the Quit Line ▪ Whether the caller was quit as of the last counseling session
Quit in Person	<ul style="list-style-type: none"> ▪ Session date ▪ Type of counseling received
Quit Online	<ul style="list-style-type: none"> ▪ Last logon date ▪ Number of "buddies" ▪ Number of club memberships ▪ Number of times individual set quit date ▪ Number of Q-mails sent and received ▪ Number of users individual sent Q-mail to ▪ Average time spent online per logon ▪ Total number of page views ▪ Source of referral

Table A-3. Follow-Up Evaluation Data Measures

Data Source	Measures in the Data
Quit by Phone	<ul style="list-style-type: none"> ▪ Serious quit attempt (quit for 24 hours since contacting the Quit Line) ▪ Number of days smoked ▪ Number of days smoked in a row ▪ Last day smoked ▪ Average number of cigarettes per day ▪ Self-efficacy at follow-up ▪ Lived with smoker during quit attempt ▪ Other smoker tried to quit with caller ▪ Took medications to help quit ▪ Medications taken during quit attempt ▪ Satisfaction with Quit Line services
Quit in Person	<ul style="list-style-type: none"> ▪ Follow-up cycle indicator ▪ Follow-up evaluation indicator (3, 6, or 12 months) ▪ Serious quit attempt (quit for 24 hours since using Quit in Person services) ▪ 7-days smoke-free ▪ 30-days smoke-free ▪ Continuous quit status ▪ Length of current quit attempt ▪ Number of days smoked ▪ Number of days smoked in a row ▪ Last day smoked ▪ Average number of cigarettes per day ▪ Self-efficacy at follow-up ▪ Attended quit smoking class ▪ Location of quit smoking class attended ▪ Reported helpfulness of quit smoking class ▪ Other type of help received from the program ▪ Reported helpfulness of the counselor ▪ Use of cessation medications ▪ Method of obtaining cessation medications ▪ Satisfaction with direct shipment of cessation medications ▪ Program method that helped client the most in the quit attempt ▪ Satisfaction with Quit in Person services

(continued)

Table A-3. Follow-Up Evaluation Data Measures (continued)

Data Source	Measures in the Data
Quit Online	<ul style="list-style-type: none">▪ Follow-up evaluation indicator (3, 6, or 12 months)▪ Serious quit attempt (quit for 24 hours since using Quit in Person services)▪ 7-days smoke-free▪ Number of quit attempts▪ Continuous quit status▪ Average number of cigarettes per day▪ Time to first cigarette after waking▪ Use of cessation medications▪ Use of other cessation programs (e.g., telephone quit line, counseling)▪ Self-efficacy at follow-up

APPENDIX B: QUIT RATES

Table B-1. Percentage of Current Smokers at Intake Who Made a Serious Quit Attempt Lasting at Least 24 Hours in the Past 12 Months, FY 2008

	N	% of N
Quit by Phone	1,344	40.6%
Quit in Person	1,859	57.5%
Quit Online	454	12.8%

Table B-2. Percentage of Quit by Phone Clients Who Made a Serious Quit Attempt Lasting at Least 24 Hours in the Past 12 Months by Service Received, FY 2008

Service	N	% of N
Counseling	830	44.1%
Self-help materials	273	37.7%
Information	241	32.0%

Note: Results are for Quit by Phone clients who were current smokers at intake.

Table B-3. 7-Day Smoke-Free Point Prevalence, FY 2008

Survey	Quit by Phone	Quit in Person	Quit Online
3-Month			
Completed evaluation	N = 346 (27.5%)	N = 877 (44.9%)	N = 33 (66.7%)
Intent to treat	N = 1,069 (8.9%)	N = 1,524 (25.9%)	N = 466 (4.7%)
6-Month			
Completed evaluation	N = 374 (26.7%)	N = 773 (41.4%)	N = 26 (42.3%)
Intent to treat	N = 1,391 (7.3%)	N = 1,505 (21.3%)	N = 568 (1.9%)
12-Month			
Completed evaluation	N = 338 (30.2%)	N = 633 (38.9%)	N = 19 (73.7%)
Intent to treat	N = 1,344 (7.6%)	N = 1,401 (17.6%)	N = 454 (3.1%)

Table B-4. 30-Day Smoke-Free Point Prevalence, FY 2008

Survey	Quit by Phone	Quit in Person	Quit Online
3-Month			
Completed evaluation	N = 346 (26.0%)	N = 662 (36.3%)	N = 33 (51.5%)
Intent to treat	N = 1,069 (8.4%)	N = 1,524 (15.7%)	N = 466 (3.6%)
6-Month			
Completed evaluation	N = 374 (25.1%)	N = 580 (34.0%)	N = 26 (34.6%)
Intent to treat	N = 1,391 (6.9%)	N = 1,505 (13.1%)	N = 568 (1.6%)
12-Month			
Completed evaluation	N = 338 (29.6%)	N = 516 (35.3%)	N = 19 (73.7%)
Intent to treat	N = 1,344 (7.4%)	N = 1,401 (13.0%)	N = 454 (3.1%)

Table B-5. Continuous Quit Rates, FY 2008

Survey	Quit by Phone	Quit in Person	Quit Online
3-Month			
Completed evaluation	N = 346 (17.3%)	N = 871 (24.3%)	N = 33 (18.2%)
Intent to treat	N = 1,069 (5.6%)	N = 1,524 (14.0%)	N = 466 (1.3%)
6-Month			
Completed evaluation	N = 374 (12.8%)	N = 766 (22.8%)	N = 26 (11.5%)
Intent to treat	N = 1,391 (3.5%)	N = 1,505 (11.7%)	N = 568 (0.5%)
12-Month			
Completed evaluation	N = 338 (15.1%)	N = 626 (23.8%)	N = 19 (10.5%)
Intent to treat	N = 1,344 (3.8%)	N = 1,401 (10.7%)	N = 454 (0.4%)