



Impact of the Smoking Cessation System on Young Male Smokers

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Executive Summary

This report presents the results from an evaluation study that assessed the extent to which Ontario's smoking cessation system meets the needs of young male smokers who are 19-29 years old. In 2008, young males had the highest prevalence of current smoking in Ontario, more than double that of their female counterparts.¹ Thus, cessation for this sub-population was identified as an evaluation priority. Essential components of this evaluation included determining what programs and services are currently working for this subpopulation, as well as how programs and services can be tailored to become more engaging. Using a mixed method approach, this evaluation aims to identify potential gaps in Ontario's smoking cessation system and to highlight possible future directions.

This evaluation synthesizes information collected from five sources:

- An environmental scan
- Interviews with key informants
- Street intercept interviews with smokers and recent smokers
- Semi-structured interviews with smokers and recent smokers
- Ontario Tobacco Survey data

Key findings of the study include:

1. Over the course of one year, 61% of young male smokers attempted to quit, 42% reduced their daily consumption of cigarettes, but only 13%ⁱ reported quitting (not smoking for the past 30 days) at their twelve-month follow-up.
2. A larger proportion of young male smokers intend to quit within the next month (17%) compared to 13% of male smokers 30-49 years old and 16% of 50-69 year old male smokers. Almost half of all young male smokers (45%) intend to quit in the next six months, compared with 37% of 30-69 years old male smokers.
3. Despite their desire to quit, young adult male smokers, make limited use of existing services to help them quit or reduce their smoking. Older male smokers had greater odds for use of an evidence-based quit aid (OR=2.04; 95% CI: 1.51-3.61) than younger male smokers. Young men are not interested in using many of the services currently offered.
4. The current cessation system reaches less than 3% of young adult male smokers per year.

ⁱ Interpret with caution: subject to moderate sampling variability

5. Existing cessation services are as effective in promoting quit attempts and inducing successful quits for young male smokers as they are for older male smokers.
6. Many young adult smokers are not attracted to using existing cessation services. Key informants and young adult smokers suggest a need for specific tailoring of cessation services for young adult smokers. Young adult smokers are a diverse group and services should have a variety of characteristics.
7. There is little evidence to guide the development of cessation interventions for young adults. However, the use of social networks to promote smoking cessation to young men and to offer help in quitting is a promising strategy.
8. Providers of cessation services, and young male smokers themselves, identified a need for an integrated and coordinated smoking cessation system to serve the needs of young adult males.

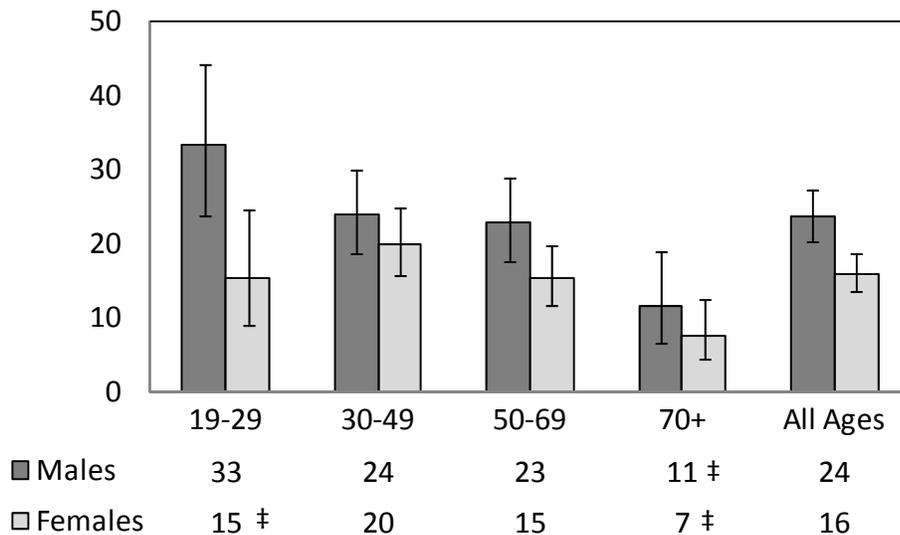
Introduction

Increasing smoking cessation among young adults is a key goal of tobacco control. It is particularly important to focus on young adults, since their quitting has large potential benefits at both the public health and societal impact levels. Quitting before the age of 35 can result in a life expectancy comparable to that of someone who has never smoked.^{2,3}

According to Fagan, “the greatest benefits of quitting can be seen among those who have smoked for relatively few years, smoked only a few cigarettes per day, or who have an absence of disease at the time of quitting”.⁴ Many of the health risks associated with smoking decrease upon quitting. Within one year of quitting smoking, the risk of a heart attack decreases by 50%; within five years this risk returns to the level of a person who has never smoked.⁴ For lung cancer, it takes approximately 10 to 15 years after quitting to approach the risk levels of a “never smoker”.⁴

Data from the Center for Addiction and Mental Health Monitor¹ shows that in 2008 young men from Ontario, aged 19-29, had the highest prevalence of current smoking at 33%; more than double that of their female counterparts (15%ⁱⁱ) (see Figure 1). Young men had significantly higher prevalence compared to the adult population (aged 19 or older) in Ontario (33% vs. 18%; p-value<0.0001) (data not shown).

Figure 12: Current Smoking by Sex and Age, Ontario, 2008



‡ Interpret with caution: subject to moderate sampling variability
 Source: Center for Addiction and Mental Health Monitor 2008

ⁱⁱ Interpret with caution: subject to moderate sampling variability.

While there is general agreement about the importance of helping young adults to quit smoking there is a dearth of knowledge regarding tobacco cessation for young adults.^{5,6,7}

The aim of this study is to evaluate the success of Ontario's smoking cessation system in reaching, promoting and supporting quit attempts by 19-29 year old male smokers. In this study, Ontario's smoking cessation system is defined as the programs and services that are funded by the Ontario Ministry of Health Promotion. These include: Smokers' Helpline, Smokers' Helpline Online, Driven to Quit Challenge, STOP Study, Ottawa Model for Smoking Cessation, Leave the Pack Behind, as well as mass media campaigns that promote smoking cessation. Indicators used in this study include:

1. Intention to quit smoking
2. Number of quit attempts
3. Number of cigarettes smoked per day
4. Level of addiction to cigarettes
5. Knowledge of the smoking cessation services available

In order to evaluate the success of the smoking cessation system for young male adult smokers, it is necessary to understand their smoking behaviours (e.g. daily smokers, occasional smokers, average number of cigarettes smoked, Heaviness of Smoking Index (HSI) score, etc), as well as their smoking cessation behaviours (e.g. intentions to quit, past quit attempts). In addition, we compare their success in quitting, reduction in consumption, and other smoking cessation behaviours (e.g. quit attempts, use of quit aids) to older male smokers (30-69 years old) and to young adult female smokers (19-29 years old).

Evaluation Questions

This study has five evaluation questions:

1. Which smoking cessation services are young male smokers aware of?
2. What is the reach of the current smoking cessation services for young male smokers?
3. What are the barriers and facilitators to using the existing services?
4. What is the effectiveness of the available services? Effectiveness is measured by changes in: quit intentions, quit attempts, number of cigarettes smoked per day (CPD), Heaviness of Smoking Index (HSI) scores, and successful quits.
5. How can the smoking cessation system be improved to better address the needs of young adult smokers?

Methods

Data for this study were collected from four different sources: Environmental Scan, Key Informant Interviews, Ontario Tobacco Survey, and Interviews with Smokers. Ethical approval for this evaluation was obtained through the University of Toronto's Office of Research Ethics.

Environmental Scan

Organizations that administered smoking cessation programs and offered services in Ontario were contacted and asked about the reach of their programs in the 2007/2008 fiscal year, and to provide data pertaining to young males between 19-29 years. The criteria for choosing these organizations were that they received funding from the Ontario Ministry of Health Promotion and/or the Ontario Ministry of Health and Long-Term Care for provision of cessation services. Organizations contacted were: Smokers' Helpline (including Online), the Driven to Quit Challenge, the STOP Study, the Nicotine Dependence Clinic in Toronto, Leave the Pack Behind, as well as the Ottawa Heart Institute.

Recruitment

A letter was sent to the different organizations to inform them about the study and request their participation (see Appendix A for a sample of the letter). The letter was followed by a phone call to confirm that their organization could respond to the information request and to arrange for the transfer of the information.

Data Collection

All information was collected via email and electronic documents and stored in an Excel spreadsheet. All except one organization provided information about programs and services that are delivered specifically to young males 19-29 years.

Measures

Organizations were asked to provide information regarding the reach of their programs and services for the 2007/2008 year; the reach of the programs and services for young male smokers between 19-29 years and the number of young males (19-29 years) who accessed their programs and services.

Analysis

In order to summarize the information received from different organizations, the cessation program and service information was collected in an Excel spreadsheet.

Key Informant Interviews

Seventeen semi-structured interviews were conducted with “key informants.” Key informants were defined as persons with insights into the smoking cessation needs of Ontarians and who work in some capacity of authority related to the smoking cessation system in Ontario.

Recruitment

A letter was sent to the key informants that described the study and asked them to participate. The letter was followed by a phone call to schedule an interview at their convenience.

Data Collection

All interviews were conducted over the phone or in-person, tape recorded and transcribed verbatim. The interviews lasted approximately 45 minutes (see Appendix C for interview protocol).

Measures

The interviews examined smoking cessation services available for young male smokers from Ontario; the perceived strengths and weaknesses of these services; and the barriers and facilitators required to implement the cessation services that are needed (see Appendix C for interview protocol).

Analysis

QRS N6 software was used to code the interviews by creating cross-indexed, hierarchical classifications of text. The node structure was developed thematically, based upon the interview questions. Once the data from the interviews was identified and coded, matrices were created to analyze the data.

Ontario Tobacco Survey

Data from the Ontario Tobacco Survey (OTS) were used to examine smoking behaviours, smokers’ awareness of services and products, and use of cessation products. The OTS is a regionally-stratified longitudinal survey of smokers and a cross-sectional survey of smokers and non-smokers.

Recruitment

Recruitment and interviews were conducted by the Survey Research Centre (SRC) at the University of Waterloo using computer assisted telephone interview (CATI) technology. Eligible participants include all residents of Ontario, 18 years of age and older, who reside in a dwelling that has a

telephone. Every six months a cohort of 750 recent smokers (those who have smoked at least 100 cigarettes in their life and one cigarette in the past six months) and 500 non-smokers are recruited to participate. Recent smokers from each cohort are subsequently invited to participate in follow-up surveys occurring in six-month intervals.⁸

Data Collection

In this study we restrict our attention to the data on recent smokers at baseline. Data collected from the first five cohorts (conducted between July 2005 and December 2007) were used to assess the baseline measures of the smokers. Longitudinal analyses were based on the first four cohorts (conducted between July 2005 and June 2007) and the available data for the participants' six-month follow-up (cohort 1 through 4) and twelve-month follow-up (cohort 1 through 3).

A sample was purchased from ASDE Survey Sampler, Gatineau, Quebec. ASDE uses a geographically stratified, general phone population random sampling program. It samples using Random Digit Dialing (RDD) methodology and checks its samples against published phone lists to divide the RDD frame into "directory listed" and "directory not listed" components. Their method is adapted from the Mitofsky-Waksberg Method.⁹ The list of telephone numbers was randomly stratified to equally represent four regions in Ontario: Northern Ontario (area code = 807/705), Eastern Ontario (area code= 613), Toronto (area code= 416/647/905/289), and Western Ontario (area code= 519). 71,363 records were loaded into the Computer Assisted Telephone Interviewing (CATI) system. Of those 22,009 did not reach a final disposition and were considered out of sample.

Appendix D shows the demographic and smoking characteristics of the participants used in this study.

Measures

The following were our main variables of interest:

1. Awareness of smoking cessation services and products.
2. Past use of smoking cessation services (ever used, and used in the last six months).
3. Smoking behaviours (daily vs. less than daily smoking, number of cigarettes smoked per day, level of nicotine addiction as determined by the Heaviness of Smoking Index¹⁰).
4. Quit intentions, quit attempts and successful quits.

Analysis

Analyses were carried out using cross sectional and longitudinal data from the OTS sub-sample of recent smokers. The cross sectional analysis used the first five cohorts, conducted between July 2005

and December 2007, of the OTS baseline data. The sample consisted of 3,807 recent smokers of whom 3,445 are current smokers (i.e., smoked at least 100 cigarettes in his or her life and some within the last 30 days). The data was weighted to represent the population of Ontario in 2001. The cross sectional component examined two outcomes: 1) awareness of quit aids and media campaigns; and 2) use of available services.

Awareness of quit aids was measured through an open-ended question: “name five aids or resources that help people quit smoking”. Smoking cessation aids/resources mentioned were divided into evidence-based and non-evidence-based. Based on Cochrane reviews^{11,12,13} we define the following services as evidence-based: pharmacotherapy, telephone helpline, and counselling. While receiving advice from a health professional to quit is also considered evidence-based by the Cochrane reviews¹⁴ we did not include it in this aggregate variable since we considered it to be very different than the other variables. Specifically, receiving advice from a health professional can be considered more passive than deciding: 1) to call a quitline, 2) go to a counsellor to help specifically with tobacco use, or 3) to take pharmacotherapy in order to quit or reduce smoking.

Again, based on Cochrane reviews,^{15,16} the following services were considered non-evidence-based: laser, hypnosis and acupuncture, food and herbal remedies.

Awareness of media campaigns included participants’ experience 30 days prior to their interview. Logistic regression for survey data was used to determine the difference in awareness of media campaigns between 19-29 year old males and others (i.e. 30-49 year old males, 50-69 year old males, and 19-29 year old females).

Multiple logistic regression analyses for survey data were conducted to identify the characteristics associated with the use of available services among young male smokers. Variation across demographic characteristics (education, marital status, and region) and smoking behaviour were examined.

Data for the longitudinal analysis draws upon the first four recruitment waves (conducted between July 2005 and June 2007) and the available data for the participants’ six month follow-up (cohort 1 through 4) and 12 month follow-up (cohort 1 through 3). Ninety-nine percent of surveys for the first follow-up were completed within seven months and 98% of surveys for the second follow-up were completed within 13 months. A total of 3,038 baseline participants were recent smokers, of whom 2,753 were current smokers (smoked 100 cigarettes in lifetime and one or more in previous 30 days). Of the recent smokers, 2,559 completed their six month interview (wave 1 through 4) and 1,695 had complete data for both their six month and twelve month interviews (wave 1 through 3).

The longitudinal component examined two outcomes: 1) use of available services 6 months prior to the interview; and 2) effectiveness of available services. Generalized estimation equation techniques were used to account for the correlated data structure.

All analyses were conducted using SAS 9.1.3.

Street Intercept Interviews with Smokers

One hundred young male smokers and recent smokers were interviewed in order to gain insight into their awareness and use of existing cessation services, and their reasons for choosing particular smoking cessation methods. Interviews also explored perceptions about the suitability of the current supply of services.

Recruitment

During August and September, outreach workers traveled throughout Toronto, Sault Ste. Marie and Hamilton to recruit and interview young male smokers and recent smokers. These three cities were chosen for their differences in smoking prevalence and rural versus urban character. The Canadian Community Health Survey shows that Algoma Public Health Unit, which includes Sault St. Marie, had the highest prevalence rate, followed by Hamilton, and then Toronto (Table 1). Participants were recruited at local shopping malls, colleges, universities, bars, restaurants, youth employment centers, sport events, and as they waited for public transportation.

The outreach workers approached 222 people as potential participants. Potential participants were asked a number of initial questions from a screener to determine eligibility (see Appendix E). Eligible candidates were asked to participate in an interview of approximately fifteen minutes (see Appendix F). Participants were offered a \$15 AMEX card as compensation for their time.

Of those approached:

- 89 were ineligible (45 were either too young or too old and 44 did not fit our definition of smoker (had not smoked 100 cigarettes in their life or had not smoked at least 1 cigarette in the past 6 months)
- 33 were either not interested in participating or had no time to participate
- 100 agreed to be interviewed

Table 11 in Appendix G shows participants' demographic information and smoking behaviours.

Table 1: Recruitment Sites for Street Intercept Participants

Public Health Unit	Prevalence of Smoking*	Urban/ Rural	Number of Participants
Toronto	18%	Urban	55
Hamilton	23%	Urban	19
Algoma	23%	Both Urban and Rural	26

*Canadian Community Health Survey, 2008

Analysis

QRS N6 software was used to code the interviews by creating cross-indexed, hierarchical classifications of text. The node structure was developed thematically, based upon the interview questions. Once the data from the interviews was identified and coded, matrices were created to analyze the data.

Results

The results of the research are presented in six sections:

1. Smoking behaviours and quit intentions of young male smokers
2. Awareness of services and products
3. Reach of smoking cessation services
4. Barriers and facilitators to using services
5. Effectiveness of services and products
6. Recommendations for improving Ontario’s cessation system in order to better serve young males

Smoking Behaviours and Quit Intentions of Young Male Smokers

Data from the OTS were used to identify smoking behaviours of young male smokers compared to other age groups. Male smokers 19-29 years old are significantly less likely to be daily smokers than male smokers 50-69 years old (79% vs. 92%; p-value<0.05) (Table 2). Young male smokers (19-29 years old) smoke fewer cigarettes per day than older male smokers (mean number of cigarettes smoked per day, on the days that participants smoked was 13 for 19-29 year olds, compared to 16 for male smokers 30-49 years old and 20 for male smokers 50-69 years old, p-value<0.001) (data not shown).

Smokers from all groups had similar 30 day and six month quit intentions. The mean number of quit attempts in the smoker’s lifetime was three for young male smokers (19-29 years old) and for

30-49 year old male smokers. On average, older male smokers (50-69 years old) had made more quit attempts (4), while young female smokers had made less quit attempts (2). Table 2 presents a comparison of the smoking behaviours of young males, older male smokers and young females.

Table 2: Baseline Characteristics of Current Smokers (n=3,445)

Characteristics	Males Aged 19–29 (%)	Males Aged 30–49 (%)	Males Aged 50–69 (%)	Females Aged 19–29 (%)
Smoking Type*				
Daily	79	85	92 [†]	80
Occasional	21	15	8 [‡]	20
Heaviness of Smoking[†]				
Low	51	42	28	69 [‡]
Medium	40	45	52 [‡]	29 [‡]
High	8 [§]	13	20 [‡]	F
Intention to quit smoking*				
30 days	17 [§]	13	16	15 [§]
6 months	45	37	37	47

* Current smokers

[†] Daily smokers

[‡] Significantly different than young males (p-value<0.05)

[§] Interpret with caution: subject to moderate sampling variability

F: Estimate is too unreliable to be published

Source: Ontario Tobacco Survey: Baseline (July 2005- December 2007)

Awareness of Services and Products

We assessed young male smokers' awareness of services in a two stage process:

1. Analysis of the following question from the Ontario Tobacco Survey:
 - a. "Name five aids or resources that help people quit smoking."
2. Analysis of the following questions posed to participants in the street intercept survey:
 - a. "If you were to decide to stop smoking tomorrow, where could you go for help?"
 - b. "Have you heard about any other help that is available for stopping to smoke?"

When asked the question "Name five aids or resources that help people quit smoking" the average number of services and supports that young male smokers can recall is two, which is not significantly different than older male smokers or 19-29 years old female smokers. Table 3 shows the most common services and supports that OTS participants mentioned.

Table 3: Awareness of Services and Supports, Recent Smokers (n=3,807)

Quit Aid	Males Aged 19-29 (%)	Males Aged 30-49 (%)	Males Aged 50-69 (%)	Females Aged 19-29 (%)
Nicotine Patch	51	57	49	55
Nicotine Gum	50	51	48	50
Non NRT pharmacotherapy	13	28 [§]	23 [§]	22 [§]
Family and Friends	11*	6* [§]	5* [§]	6*
Counselling/Support groups	8*	4* [§]	5*	9*
Health professionals	7*	6*	F	4*
Resources off the internet	4*	3*	F	7*
Telephone helpline	F	3*	F	51
Unable to mention at least one quit aid	29	22	25	21 [§]
At least one evidence-based therapy [‡]	61	67	65	65
At least one non-evidence-based therapy [†]	17	25 [§]	28 [§]	21

[†] Interpret with caution: subject to moderate sampling variability

[‡] Non-evidence-based therapy includes laser therapy, hypnosis, acupuncture, foods, and herbal supplements

[‡] Evidence-based therapy includes use of helpline, support group, counselling, patch, Nicorette gum, pharmacotherapy, lozenge/inhaler/puffer, hospitals, clinics, and detox centers

[§] Significantly different than young males (p-value<0.05)

F Estimate is unreliable to be published

Source: Ontario Tobacco Survey: Baseline (July 2005-December 2007)

These results demonstrate differences in the awareness level of smokers between the types of cessation products and services available. As found in other studies, young male smokers were more aware of pharmaceutical aids than behavioural treatments, such as the internet or telephone helplines.¹⁷ Interestingly, only 7% of young male smokers mentioned health professionals as a resource that they could access to help them quit.

The analysis reveals some important differences between young male smokers and older male smokers. Young male smokers were significantly less likely to identify non-NRT pharmacotherapy (OR=0.46, CI=0.32-0.68), and non-evidence-based methods (OR=0.42, CI 0.26-0.66) as a quit aid; however, they had higher odds for identifying family or friends' support as one of the quit aids compared to older male smokers (OR=2.03, CI=1.13-3.64). This is consistent with findings from the street intercept interviews where some participants would first mention that they did not know where to go for help, but would then mention they would probably ask family or friends for help:

"I don't know anyplace I could go for help... maybe I could quit with a friend."
(Toronto, age 27)

“Don’t know. I know there’s a phone number out there. I could probably talk to my mom I guess, and maybe my brother.” (Hamilton, age 29)

However, when smokers from the street intercept interviews were probed about specific services, they acknowledged being aware of some services and products, especially NRT.

“Yeah, I’ve heard of the inhalers, and I think lozenges are just new aren’t they?” (Hamilton, age 22)

Regarding young male smokers’ awareness of services, the results from the street intercept survey were similar to those of the OTS. One exception is that fewer street intercept participants mentioned pharmacotherapy than did OTS participants (see Table 4).

Table 4: Street Intercept Participants’ Awareness of Services and Strategies, After Probing (n = 100)

Products and Services	Number of Street Intercept Participants Aware of Service/Strategy (Without Probing)	Number of Semi-Structured Participants Aware of Service/Strategy (After Probing)
Cold Turkey	27	51
NRT	26	74
Family and Friends	11	35
Health Professional	11	33
Internet	6	38
Non- NRT Pharmacotherapy	5	39
Self-help Material	2	46
Telephone Helpline	4	43
Counseling	3	30

Source: Street Intercept Survey

Awareness of Media Campaigns

OTS analysis revealed that 56% of 19-29 year old smokers had seen or heard of a news story about smoking in the past 30 days, and 64% of young male smokers had seen an advertisement about stop smoking medications, such as the patch or gum. There were no significant differences between 19-29 year old male smokers’ awareness of advertisements that encourage smokers to quit smoking compared to that of smokers aged 30-49 or 50-69 years.

Many smokers interviewed using the street-intercept approach could speak only vaguely about the current campaigns and advertisements. Participants were optimistic, however, saying that campaigns and advertisements could be changed to become more appealing to themselves and their peers.

“When I see these commercials of guys that are talking out their, their larynx and smoking out of it and stuff like that, that stuff really, really gets me. That stuff makes me, you know, for that time being and 2 minutes after that commercial I, it’s on my mind but slowly it dissipates and then I don’t think about it anymore.” (Toronto, age 29)

The Driven to Quit Challenge appears to offer a real opportunity to encourage young males to quit smoking. Although none of the smokers interviewed had ever participated, a majority of participants (56%) said that they would register in the future.

“[Driven to Quit] never heard of it, but absolutely[I would register]. If I knew there was a car being given away for quitting smoking.” (Toronto, age 24)

Reach of Smoking Cessation Services

The reach of most programs to young adult males is quite low. Administrative data provided by Leave the Pack Behind, the Driven to Quit Challenge, the STOP study, Smokers’ Helpline Online, Smokers’ Helpline and the Ottawa Heart Model for Smoking Cessation show that most cessation programs served a relatively low proportion of this population. In the fiscal year of 2007-2008:

Leave the Pack Behind distributed self help booklets to approximately 3,250 male smokers in this age group. This represents 40% of all the booklets that were distributed (8122).

- The proportion of young male Ontario smokers reached by the Leave the Pack Behind in 2007/2008 was approximately 1%.

The Driven to Quit Challenge was taken up by 2,765 male smokers 19-29 years old, which represents just over 10% of all registrants (26,632).

- The proportion of Ontario smokers reached by the Driven to Quit Challenge in 2007/2008 was approximately 1%.
- The proportion of young male Ontario smokers reached by the Driven to Quit Challenge in 2007/2008 was approximately 0.9%.

The STOP Study gave free NRT to 1,804 male smokers 19-29 years old, which represents 6% of all STOP participants (29,509).

- The proportion of Ontario smokers reached by the STOP Study in 2007/2008 was approximately 1%.
- The proportion of young male Ontario smokers reached by the STOP Study in 2007/2008 was approximately 0.6%.

Smokers' Helpline encompasses both the telephone helpline and the online services.

Smokers' Helpline Online had 807 young male smokers register, which represents over 10% of all the registrants (7,703). Not all visitors to the site choose to register.

- The proportion of Ontario smokers reached by Smokers' Helpline Online in 2007/2008 was approximately 0.4%.
- The proportion of young male Ontario smokers reached by Smokers' Helpline Online study in 2007/2008 was approximately 0.3%.

Smokers' Helpline (telephone) served 275 calls from young men, which represents 1.6% of all its calls (16,795 calls).

- The proportion of Ontario smokers reached by Smokers' Helpline in 2007/2008 was approximately 0.3%.
- The proportion of young male Ontario smokers reached by Smokers' Helpline in 2007/2008 was approximately 0.1%.

The Ottawa Model for Smoking Cessation delivered interventions to 165 young men between the ages of 19-29. This represents approximately 3% of people involved in the program.

- The proportion of Ontario smokers reached by the Ottawa Model for Smoking Cessation in 2007/2008 was approximately 0.3%.

Less than 10,000 of the 308,100 male smokers in Ontario between the ages of 19-29 years old received help from one of the services funded by the Ontario Ministry of Health Promotion (CAMH Monitor 2008). Thus, all of these services together are helping less than 3% of all male smokers 19-29 years old quit smoking.

Similarly, results from the OTS showed that even though young male smokers were trying to quit smoking (17% had plans to quit in the next 30 days; 45% in the next 6 months), and had attempted to do so in the past (an average of three quit attempts per person), very few had used services and products to help them. Table 5 shows the variability in the use of different products and services among young male smokers, young female smokers and older male smokers. Young male smokers were less likely to have ever used the patch, the gum, non-NRT pharmacotherapy, and self help materials compared to older male smokers.

Table 5: Smoking Cessation Services and Supports Recent Smokers Have Ever Used (n=3,807)

Products and Services	Males Aged 19-29 (%)	Males Aged 30-49 (%)	Males Aged 50-69 (%)	Females Aged 19-29 (%)
Health professional advice	59	75	81	68
Nicotine patch	18	29	41	21
Nicotine gum	20	31	45	21
Ontario Smokers' Helpline	F	F	F	F
Smokers' Helpline Online	F	F	F	F
Counselling	F	4*	5*	F
Zyban or Bupropion	7*	19	24	9 [†]
Self-help materials	8*	10	14	13*
AGGREGATE VARIABLES				
NRT	29	44	57	28
Behavioural aids [†]	5*	8*	10*	8*
Evidence-based quit aids [‡]	31	48	59	34
Non-evidence quit aids [§]	F	61	20	F

* Interpret with caution: subject to moderate sampling variability

† Group counselling, group support program, specialized addiction counsellor, Ontario Smokers' Helpline, or other quit programs

‡ Evidence-based quit aids include NRT and behavioural aids

§ Non-evidence-based quit aids include laser therapy, hypnosis, and acupuncture

^{||} Significantly different than young males (p-value<0.05)

F Estimate is unreliable to be published

Source: Ontario Tobacco Survey: Baseline (July 2005-December 2007)

In order to understand the use of cessation services and products, it is necessary to look at what services have ever been used (Table 5) as well as what services and products are currently being used (Table 6). Table 6 shows the services and products smokers used six months prior to their interview. Use of most cessation services and supports (listed in Table 6) were too unreliable to be published when reported within a six month period.

Table 6: Use of Smoking Cessation Services in the Past Six Months, Recent Smokers (n=2,559)

Products and Services	Males Aged 19-29 (%)	Males Aged 30-49 (%)	Males Aged 50-69 (%)	Females Aged 19-29 (%)
Nicotine patch	F	F	F	F
Nicotine gum	F	5*	6*	F
Zyban or Bupropion	F	4*	F	F
Self-help materials	F	8*	F	F
Ontario Smokers' Helpline	F	F	F	F
Smokers' Helpline Online	F	F	F	F
Counselling	F	F	F	F
AGGREGATE VARIABLES				
NRT	8*	12	14*	13*
Behavioural aids [†]	F	6*	F	F
Non-evidence-based quit aids [‡]	F	F	F	F
Evidence-based quit aids [§]	10*	19	19	17*

[†] Interpret with caution: subject to moderate sampling variability

[‡] Group counselling, group support program, specialized addiction counsellor, Ontario Smokers' Helpline, or other quit programs

[‡] Non-evidence-based quit aids include laser therapy, hypnosis, and acupuncture

[§] Evidence-based quit aids include pharmacotherapy and behavioural aids

|| Significantly different than young males (p-value<0.05)

F Estimate is unreliable to be published

Source: Ontario Tobacco Survey: Six-Month Follow-up (January 2006-December 2007)

In an attempt to reduce smoking, or to quit completely, 10% of young male smokers had used an evidence-based method (use of NRT, and behavioural aid) in the six months prior to their interview, compared to 19% of 30-49 year old males and 19% of 50-69 year olds males. **Young male smokers were significantly less likely to have used an evidence-based quit aid six months prior to their interview than older male smokers (OR=0.49, 95% CI=0.28-0.87).**

Visits to health professionals in the six months prior to their interview was much lower among young males than older males (6-month follow-up=63% vs. 71%, p-value>0.05; 12 month interview=66% vs. 78%, p-value<0.05). Among those who visited a health professional, there was no significant difference in receipt of health professional advice to quit smoking between young males and older males. More than half of young male smokers (six month follow-up=54%, n=68; 12-month follow-up=52% n=47) and older male smokers (six month follow-up=63%, n=294; 12-month follow-up=57% n=235) who saw a health professional received quit advice during their visit (data not shown).

We also assessed the reach of smoking cessation products and services to young male smokers by asking the following questions during street intercept interviews:

- a. “What kind of help have you had in the past when trying to stop smoking?”
- b. “What kind of help have friends and family members had in the past when trying to stop smoking?”

We used street intercept interviews to explore whether participants had tried to quit smoking in the past. The majority of young male smokers (n=96) had tried to quit in the past. It is interesting to note that in the semi-structured interviews a majority of young males 61% stated that they have used family and friends in the past to help them quit smoking. This was higher than those who mentioned using an NRT product. Further, 45% of participants plan to use family and friends again in the future to help them in their quit attempt. Young males said that family and friends could help them by making sure that they used their NRT products and by distracting them when they have a craving.

“When I tried to quit and I quitted for a month all my friends and family that surrounded me they helped me like... when I wanted to have a cigarette they used to help me like don’t do it or let’s do something else so my mind will not go to cigarettes so that was good.” (Toronto, age 28)

Another way that family and friends have helped young males in their quit attempts is by quitting with them and by offering incentives to quit.

“They actually quit with me. It was actually really useful, because I find being around my friends, and trying to quit smoking is harder, because I want to have a smoke with my friends. So it’s good to have your friends with you, because then less chance of having a smoke.” (Toronto, age 19)

“Given me incentive you know if you quit smoking I’ll buy you this for your birthday... I think the best thing to do is if you find someone maybe a close friend someone that smokes and you say okay we’ve got to quit together. If you have someone with you I think it’s a lot easier, because if they’re not smoking then you don’t want to be the one to light up.” (Toronto, age 20)

Barriers and Facilitators to Using Services

Interviews with key informants, as well as with young male smokers, provided insight into the reasons why the reach of many programs is so low.

Need for an Integrated and Coordinated Smoking Cessation System

According to one third of the key informants interviewed (n=17), many of the problems of the current smoking cessation strategy stem from the lack of a coordinated smoking cessation system. Many key informants stressed the need for a comprehensive system throughout the interviews.

“I would like to see a strategy. In particular I think a lot of the other places that we’ve gone with tobacco control we’ve been very strategic in going in there. I think the cessation piece is very disjointed, and I don’t know that there is one central hub, or agency, or overarching committee.” (Key Informant 6)

“I don’t think we have that [continuum of services]. When I think of cessation services in Ontario I don’t really think of continuum...It’s disjointed, it’s sporadic, it varies from health unit to health unit, it varies from region to region, and it varies from city to city.. It’s just very sporadic, very kind of if the interest happens, and if not and people aren’t willing to dedicate resources to it, then it doesn’t happen.” (Key Informant 8)

“There’s no funding of a cessation strategy, either provincially or federally. There’s not incentive for people to work together, although there’s pockets of people collaborating to work together. It’s not a coherent system. Compared to some of the affects yes there’s a lot of collaboration, but is it appropriate collaboration, is it the level that we need and require. I don’t know, I don’t think so.” (Key Informant 12)

“I would be incredibly confused if I was a young smoker looking for answers... there’s no place to go that explains everything, as far as what’s available. It’s different in every area so that’s quite different. You can’t get advice from somebody you find in a different city, because what is offered there might be completely different than what’s offered in your area.” (Key Informant 6)

Young male smokers also mentioned how much they could benefit from having one place to get information on what services and products are available.

“They should have internet they can go find [services], if they want to quit smoking.”
(Toronto, age 28)

Need Attractive Services for Young Adults

A majority of key informants found that smoking cessation services are not attractive to young males.

“I think many of our cessation strategies already ear-marked the population group that sort of that 35+ you know when people started getting serious about their quitting smoking...[campaigns and interventions] do not target them.”

(Key Informant 17)

All key informants believed that the current system lacks tailored services for young adults, in general, and for young male smokers in particular.

“A lack of tailoring... I know is one of the gaps because we often get calls from across the province saying, you know how can you guys support us to do this (help young adults quit) because we don’t have this in our communities.”

(Key Informant 14)

“In terms of young adults in general there’s a huge gap and I think one of the issues is... how do we engage this population...? Because they’re invincible and you know they’re at that age where nothing’s going to happen to me and I’m in the prime of my life.”

(Key Informant 14)

Similar to the key informants, young male smokers also perceived that services were not developed with them in mind. Throughout the interviews, a common belief was that services would be ineffective. Although participants acknowledged that some of the quit services would probably work, they said they were not appealing to them.

“[the smoking cessation services are] weird, and they’re not going to tell me something I don’t already know.” (Hamilton, age 24)

“No it won’t [work] because it’s different for everybody. I mean my addiction is mostly psychological... more people are physically dependent on it...haven’t heard anything that’s successful yet.” (Hamilton, age 23)

When talking about tailored programs, key informants mentioned that young male smokers are not a homogenous population.

“Different things work for different people, but I couldn’t tell you what would be the most useful place for young males.” (Key Informant 3)

“Specifically, [we] need to do something special for these different groups in our mix. We have to find ways to attract them into these strategies, whatever we come up with as well. Because youth are different...” (Key Informant 7)

Lack of Trained Healthcare Professionals

Most key informants agreed that many young males do not go to see healthcare professionals for two key reasons; first, because they are

“...young, healthy, untouchable, strong, no pain... typically single... very tough to get them there.” (Key Informant 17)

The second reason has less to do with personality characteristics and has more to do with a lack of family doctors.

“We also need to look at the availability of family physicians which has been reduced in the recent past and therefore some individuals don’t have family physicians.” (Key Informant 7)

Most (n=13) key informants, however, believed that it was essential to train health professionals to provide smoking cessation advice for young adults since this could be an important strategy.

“And of course doctors and allied professionals need to be taught to intervene in an age appropriate way.... I mean, I think a lot of young males do smoke in a pattern that resembles older adults but I think a lot of them are social smokers also and that needs to be taken into account.” (Key Informant 5)

This need was evident in the street intercept survey as well. Of the 32 participants who received advice to quit smoking from a health professional, very few (2) found the advice to be effective.

“[Health professionals] just tell me... “Don’t smoke it’s bad for your health”... Not really helpful.” (Toronto, age 19)

Participants admitted, however, that as the key informants suspected, they rarely go to see healthcare professionals. This is confirmed by the OTS analysis, which shows that young male smokers were less likely to have recently visited a healthcare professional than older male smokers (63% vs. 71%, p-value>0.05).

Effectiveness of Services and Products

While smoking cessation is the ultimate goal of the smoking cessation strategy, we also decided to include reduction in cigarettes smoked per day (CPD) as an outcome measure that might be more attainable in the short term. Empirical evidence suggests that reduced smoking is a beneficial option for smokers who are unable or unwilling to quit.^{18,19}

Some participants from the street intercept survey believed that by reducing their CPD they would then reduce their addiction and this would in turn lead to smoking cessation.

“I’ve been smoking for so long if I tried to quit I’d probably go crazy. So I just, I’ve been cutting back gradually but yeah I want to quit eventually.” (Toronto, age 22)

According to the OTS, over the course of a year, most (61%) young male smokers attempted to quit smoking, which is significantly higher than older male smokers (Table 7). Unfortunately, only 13%ⁱⁱⁱ of young male smokers succeeded to quit (defined as “someone who has not smoked in the past month and who has smoked at least 100 cigarettes in his or her lifetime”) at the twelve-month follow-up, which is not significantly different than older males or young females. Interestingly, 42% of young male smokers reduced consumption of cigarettes. Among the four groups, only 30-49 year old male smokers showed a significant decline in mean CPD over the year. They reduced their mean CPD by 1 cigarette (-1.43, p-value<0.05).

Table 7: Quitting Behaviours of Current Smokers at the Twelve-Month Follow-up (n=1,539)

	Males Aged 19-29 (%)	Males Aged 30-49 (%)	Males Aged 50-69 (%)	Females Aged 19-29 (%)
Attempted to quit smoking	61	44 [†]	41 [†]	59
Reduced smoking (CPD)	42	47	39	51
Quit smoking (past 30 days)	13 [*]	17 [*]	7 [*]	19 [*]

* Interpret with caution: subject to moderate sampling variability

† Significantly different from 19-29 year old males

Source: Ontario Tobacco Survey: Twelve-month follow-up (July 2006-December 2007)

Most young adult male smokers did not change their quit intentions throughout the year. This was also the case for older males and young adult females. However, young males with a higher level of education were more likely to change their quit intentions. Among the young males with an intention to quit at baseline, those with more than secondary education (62%) had a higher quit

ⁱⁱⁱ Interpret with caution: subject to moderate sampling variability.

intention at their six month follow-up compared to those with secondary education or less (38%) (OR=10.47; 95%CI: 2.26-48.58). Longitudinally no other significant differences were seen in young male smokers' quit intentions by their demographic characteristics (i.e. education, marital status, and region).

It is important to note that the type of quit aid the participants used within the past year was not a significant predictor for successful quits, quit attempts, change in quit intentions or reduction of mean CPD among the young male smokers. However use of some quit aids benefited other groups we examined. For example:

1. Use of evidence-based quit aids (pharmacotherapy and behavioural aids) and non-evidence-based methods (use of laser, acupuncture, or hypnosis) in the past year showed a significant reduction in 30-49 year old male smokers' CPD (p-value<0.05). (Table 8)
2. Young female smokers who used non-evidence-based methods in the past year also showed a significant decline in their CPD (p-value<0.05). (Table 8)
3. Older male smokers, 30-49 year olds and 50-69 year olds, who had used evidence-based quit aids (including NRT, pharmacotherapy, and behavioural aids) in the past six months were more likely to attempt to quit in the future compared to those who did not use evidence-based quit aids. This was seen when we controlled for the smokers lifetime history of quit attempts (Table 9).

Table 8: Change in Cigarettes per Day (CPD) among Current Smokers by their Quit Aid Use (n=1,539)

Quit Aid Use (12 months)	Males Aged 19-29	Males Aged 30-49	Males Aged 50-69	Females Aged 19-29
	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)
Health professional advice	-0.67(0.9)	-1.09 (0.6)	-1.11 (0.65)	0.80 (0.89)
NRT	-2.52 (3.07)	-2.71 (1.15)*	-1.90 (1.79)	0.98 (1.94)
None (cold-turkey)	-0.70 (1.1)	-0.41(0.78)	0.36 (1.2)	0.64 (1.03)
AGGREGATE VARIABLES				
Evidence-based quit aids	-1.99 (2.89)	-2.43 (1.0)*	-2.21 (1.48)	0.50 (1.49)
Non-evidence-based quit aids	-1.22 (1.46)	-3.42 (1.44)*	-1.59 (0.93)	-2.26 (1.02)*

*p-value<0.05

Source: Ontario Tobacco Survey: Six-month and Twelve-month follow-up (January 2006-December 2007)

Table 9: Change in Quit Attempts from Six-Month Follow-up to Twelve-Month Follow-up, Current Smokers (n=1,459)

Quit Aid Use (6 months prior)	Males Aged 19-29	Males Aged 30-49	Males Aged 50-69	Females Aged 19-29
	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)
Health professional advice	0.15 (0.14)	0.18 (0.11)	0.06 (0.13)	-0.2 (0.14)
NRT	0.06 (0.13)	0.84 (0.23) [†]	0.66 (0.2) [†]	0.16 (0.15)
AGGREGATE VARIABLES				
Evidence-based quit aids	0.06 (0.13)	0.9 (0.22) [‡]	0.76 (0.2) [†]	0.11 (0.13)
Non-evidence-based quit aids	0.14 (0.29)	0.66 (0.29) [*]	0.37 (0.29)	0.84 (0.34) [*]

Note: The analysis controlled for lifetime of quit attempts.

* p-value <0.05

† p-value <0.01

‡ p-value <0.001

Source: Ontario Tobacco Survey: Six-month and Twelve-month follow-up (January 2006-December 2007)

It is likely that the lack of significance in the difference of successful quits or CPD among young male quit aid users may be due the fact that very few of them used the services and products to begin with. Thus, we contacted Smokers' Helpline and the STOP Study, and obtained their evaluation data in order to compare young male smokers who had used these services to older males and young females with regards to quitting behaviours.

Smokers' Helpline

The Center for Behavioural Research and Program Evaluation (CBRPE) conducted an analysis on Smokers' Helpline (SHL) evaluation data. The data were collected from October 1, 2006 to August 31, 2008. Using this data they compared changes in smoking behaviours of young male smokers, older male smokers and female smokers who had called Smokers' Helpline. During this time there were 3,605 new callers from these four groups, of whom 735 had completed their follow-up evaluation.

Results showed similar effects for all groups. A similar proportion of young males who called SHL and set a quit date, reduced their CPD, and attempted to quit as older males and young females (Table 10). Specifically, 80% of young male smokers who completed their evaluation had attempted to quit; 78% had cut down the amount smoked; and 68% had set a quit date. The mean change in CPD was -4.1 (SD=1.6). These figures were very similar to those of older males and young females. Table 10 compares the change in smoking behaviours in young males, older males and young females who called SHL.

Table 10: Change in Smoking Behaviours among Smokers' Helpline Callers from October 1, 2006 to August 31, 2008, Smokers' Helpline (n=3,605) [ref CBRPE]

Change in Smoking Behaviours	Males Aged 19-29	Males Aged 30-49	Males Aged 50-69	Females Aged 19-29
New callers at intake	540	1,363	1,039	663
Smokers at intake who completed follow-up	81	242	273	139
Set a quit date	67.9%	53.9%	60.2%	67.2%
Decreased CPD	77.6%	70.1%	68.9%	73.9%
Attempted to quit	79.7%	68.4%	66.2%	75.4

STOP Study

STOP Study staff analyzed evaluation data on two different modes of the STOP Study, namely the workshops and the mass distribution. The workshop participants received 10 weeks of NRT and 40 minutes of group education, where information related to tobacco dependence and cessation strategies were given. Participants in the Mass Distribution intervention received five weeks of NRT by mail.

Given that they had calculated similar analyses prior to our request the age categories are slightly different than what we present in this report.

Results show that the effects of the STOP Study were similar for young male smokers (18-29 years of age), older male smokers (30 -59) and young female smokers (18-29). Tables 11 and 12 compare the changes in smoking behaviours of young male smokers, older male smokers and young female smokers who participated in the STOP workshop and the STOP Study Mass Distribution.

Table 11: Change in Smoking Behaviours among Participants of the 10-week Workshop by the STOP Study (n=1,602)

Change in Smoking Behaviours	Males Aged 18-29	Males Aged 30-39	Males Aged 40-49	Males Aged 50-59	Males Aged 60+	Females Aged 18-29
Quit Smoking	50.0	40.8	39.7	36.7	46.9	28.9
Decreased CPD	37.5	45.6	44.3	49.5	41.3	51.1
Increased CPD	5	1.9	2.3	1.4	0.7	4.4
No change in CPD	7.5	11.7	13.8	12.4	11.2	15.6

Note: For Workshops the analysis was conducted on 1,602 participants who had completed the treatment (i.e. 10 weeks)

Table 12: Change in Smoking Behaviours among Participants of the 5-week Mass Distribution Intervention by the STOP Study (n=4,443)

Change in Smoking Behaviours	Males Aged 18-29	Males Aged 30-39	Males Aged 40-49	Males Aged 50-59	Males Aged 60+	Females Aged 18-29
Quit Smoking	47.2	59.3	50.8	54.8	56.2	54.9
Decreased CPD	46.3	34.7	45.2	40.9	40.1	40.0
Increased CPD	0.4	0.8	0.8	0.2	0.3	0
No change in CPD	6.1	5.2	3.1	4.1	3.4	5.1

Smokers Talk about the Products and Services They Have Used

Throughout the interviews, participants were prompted to talk about what they liked and disliked about the different services and products they had used. For the most part, participants found the behavioural aids that they had tried to be ineffective.

“They said a lot of stuff that didn’t really work for me like, you know, I mean, they’d talk about substituting smoking with like other things –but I was always thinking about smoking anyway.” (Toronto, age 27)

Although many participants had tried pharmaceutical aids, the majority found them to be ineffective. In particular participants (38) mentioned the gum as being unhelpful.

“I’ve tried the chewing gum, which I didn’t find worked; I’ve tried the patch, which was successful for three months. I tried Zyban I didn’t find that very successful.” (Hamilton, age 23)

“Well I was trying like those chewing nicotine gums but they taste awful and nicotine patches but they’re quite expensive and I just don’t believe in that.” (Toronto, age 23)

“I tried the nicotine patch that’s right, I forgot about that. It didn’t work at all. I smoked more when I was on it.” (Toronto, age 26)

“I tried the inhalers before and that didn’t seem to help at all.” (Toronto, age 27)

Recommendations for Improving Ontario’s Cessation System in Order to Better Serve Young Males

All of the key informants believed that the basic smoking cessation infrastructure exists and provides fertile ground upon which to build a strong cessation system. Throughout their interviews, key informants and smokers suggested ways to improve the existing smoking cessation system so as to better serve the needs of young adult smokers.

Tailored Programs

Most of the key informants believed that tailoring the smoking cessation programs would not require a complete makeover of the system.

“There’s the general cessation principles and then the, the best practices in smoking cessation. They don’t change for a different smokers, or different demographic but they do have to be somewhat tailored.” (Key Informant 14)

Sixty-five percent of key informants believed that many of the existing programs and services currently tailored for older adults could be modified to make them more attractive to young adults— young males in particular. For example, when talking about the telephone helpline, key informants suggested:

“It would have to change its name. I don’t think young men want to call a helpline. I think that promotion of it would have to be tailored just like the service itself would have to be tailored.” (Key Informant 5)

“I think that younger populations are more inclined to use Internet or text versus voice calling in for telephone counselling.” (Key Informant 10)

With regards to self help materials, key informants suggested expanding their reach by placing them in different venues (e.g. Facebook), as well as condensing the information.

“I would say the self help materials need to be... hugely condensed and, attached to something.”(Key Informant 17)

“[they] spend a lot of time speaking with... friends on Facebook. So if there’s a message in there... You know it’s up and coming and it’s technology and kids are really into this technology thing, those who have access to it.” (Key Informant 7)

Further, key informants agreed that there were already some programs tailored to young adults, which provided a good foundation for future programs.

“Leave the Pack Behind is a good start because you know about almost half of young adult Ontarians are in some type of school, so I mean that’s a good start to reach half the population. But... I think more needs to be done.”

(Key Informant 5)

Young male smokers from the street intercept survey believed that the services themselves, as well as the messages given by the services, needed to be tailored to their life style.

“Ahh, I don’t think [I would be interested in counselling to help me quit smoking], um for smoking I don’t know. No probably not. I don’t know if it’s that extreme, like obviously smoking’s not good for you but I don’t know. I think I’d be able to do it on my own free will.” (Sault Ste. Marie, age 22)

Using Social Networks

As many other researchers have shown,^{20,21,22} involving social networks in smokers’ quit attempts might be beneficial. The results of the present study show that young men are more aware of using family and friends to help them quit than older male smokers (OR=2.03, CI=1.13-3.64). They find this involvement helpful and stated they would possibly use it in the future.

“They actually quit with me. It was actually really useful.” (Toronto, age 19)

Furthermore, young male smokers reported having at least one person whom they could count on for support to quit smoking, compared to 50-69 year old male smokers (89% vs. 77%, p-value<0.05). However, a greater percentage of young male smokers reported having someone who might make it difficult for them to quit smoking (62%) compared to 30-49 year old males (43%) and 50-69 year old males (28%) (p-value<0.05). Non-married young male smokers reported 2.44 (95% CI=1.26-4.72) greater odds of having someone who might make it difficult for them to quit compared to married young males.

More than half (8) of the key informants stated that using text messaging could be attractive to young males because it provides them with a social network with which to quit. Text messaging could be a method that would aid young males in cessation efforts.

“They receive some [text messages] plus while you can be buddied up with someone else. So not only do you get messages that are sent to you from the program, you also can be

buddied up with someone [who has similar] ... demographics [and] characteristics [and] level of addiction as you.”(Key Informant 17)

“Based on the research from New Zealand [text messaging] would prove to be very effective for the youth and young adult populations. I would love to see that project be implemented in Ontario to be able to kind of evaluate it in the Canadian context, because it’s never been tested in the Canadian context.”
(Key Informant 8)

The idea of using online resources and text messaging as a way to help young male smokers to quit or reduce their smoking resonated with the young male smokers we interviewed. Many participants had heard of online resources to help them quit, and said that they would be interested in using them. However, very few had actually used them. Of the 15 participants who had used the internet to help them quit smoking, most (n=11) had found it to be effective.

“Yes, online I think I like to do my own research. Something I like passing time, sometimes you’re bored and you want to learn some stuff. I think that would be pretty cool to learn about... Mostly basically tips on how to quit, and method on how it would be possible, and kind of rank the easier ways. Like this step is easier, plus like surveys and stuff like that, and from other people to see whether it worked or not if that kind of really influenced the person’s judgment?” (Hamilton, age 19)

Increasing Availability and Locations of Smoking Cessation Services and Products

Key informants believed that offering products and services where young males usually frequent would be relatively easy to do, particularly since the infrastructure is already there, and many initiatives had been tried out in the recent past. For example, all key informants thought that worksite programs would be an effective service for smoking cessation.

“The work place is another area where certainly this age group; this is where they are... (this could) make it easy for them to access... evidence-based services in those settings, and or in some other setting that they’re comfortable with.”
(Key Informant 1)

Participants in the street intercept interviews also believed that products and services should be available in the places that they frequent. This was especially evident when participants were talking about their experiences with the *Smoke-Free Ontario Act*.

“Yeah, like at baseball games, and stuff [services should be offered]. I don’t know if you’ve ever been to a Blue Jays game, but they give out free Nicorette, because you can’t go outside anymore. That’s good, because enough people wouldn’t even go to the games if they didn’t give you that.” (Hamilton, age 19)

*“I wasn’t able to find anything in my area... I know they have some places downtown but they’re difficult to get to when I’m working all the time.”
(Toronto, age 27)*

While the key informants thought this would be an effective service for smoking cessation, they said that funds need to be made available to help workplaces start programs.

“I think back to the day when we had the work site innovative grants. When you had dedicated staff at the health units, where their focus was tobacco, looking at work site interventions. We saw some significant work at that time... cessation being integrated, and delivered at workplaces. Since those grants have ceased there has been kind of over the last year a decreasing decline of smoking cessation services being offered.” (Key Informant 8)

Training Healthcare Professionals

Several key informants believed that the infrastructure to teach healthcare professionals is already in place through the Centre for Addiction and Mental Health’s TEACH program. Moreover, with the introduction of the TEACH program, they believed that there is a momentum in training that can be capitalized upon.

“I think TEACH has been able to train pretty significant series of cohorts of... practitioners in more intensive interventions. I think its had a ripple effect in raising awareness among the organizations, and communities where those people have been trained just around even offering brief interventions.” (Key Informant 10)

Some key informants also identified the important role of healthcare providers in promoting smoking cessation.

“If somebody goes in with a complaint you know, with a cold, it makes perfect sense to me that they [are] asked if they’re smokers.” (Key Informant 7)

“I really think that, that medical professionals underestimate the impact that they can have. And I think they overestimate patient resistance. And I think that it’s really

important for them to understand that even, even 30-45 seconds can make a difference.”
(Key Informant 5)

However, when considering the effect of healthcare providers, it is essential to consider

“...how often individuals attend their family physicians” and “the availability of family physicians which has been reduced in the recent past and therefore some individuals don’t have family physicians.” (Key Informant 7)

Therefore, Ontario needs to address its human resources for chronic disease prevention as it moves forward in its smoking cessation strategy.

Introducing New Policies

Key informants found that the implementation of the *Smoke-Free Ontario Act* has motivated many young male smokers to quit.

“We got a lot of feedback from (smokers)... when the bars and restaurants went smokefree and even though they were angry about the policy they came and said well now I have to quit smoking because it’s just... too impossible to smoke anywhere in Toronto.” (Key Informant 14)

Indeed, some participants stated that more policies could help them to quit or further reduce their smoking.

“In terms of policies... perhaps if there was something more punitive in terms of smoking in the street... there’s some places that have outlawed smoking in public completely, you have to be at home.” (Toronto, age 29)

“I think the policies where you can’t smoke in cars around kids, I can see that being effective, in cars.” (Toronto, age 28)

Results from the OTS also show that almost half of young men (47%) believe that restrictions should be increased to help smokers quit.

Although none of the street intercept participants who had recently quit said that it was a result of the smoking ban in public places, many of the males did say that their implementation had helped

them to reduce their number of daily cigarettes. A few participants even suggested that implementing more smokefree areas could act as a deterrent.

“It [smoking restrictions] just sort of reminds you how socially unacceptable it’s becoming... I’m conscious of it on some level all the time... it helps me cut down.”
(Toronto, male, age 29)

“They’re doing a pretty good job of it right now with the laws. Definitely makes you want to quit good.” (Toronto, male, age 22)

At the same time, there was also a fear of adding new policies that would restrict where people could smoke before cessation services are more readily available.

“You can’t continue to have, impose these restrictions on people when there’s no support to help them to quit because ultimately they are addicted.”
(Toronto, age 27)

Without probing, 14 participants also mentioned that the price of cigarettes has a direct impact on their desire to quit. Young males mentioned that:

“At this point and time, the price of cigarettes [is going to affect when I quit]... the more people are going to have to cut back, if you can’t afford to smoke then you’re going to have to find alternative ways to deal with your craving.” (Toronto, age 23)

A few young males also stated that they are aware of the growing contraband problem in Canada and that fellow smokers are smoking more contraband products.

“Eliminate all tobacco fields in aboriginal societies, because now I have to support my Aboriginal brother now. I’m an avid consumer of contraband cigarettes; all I ever do is buy contraband cigarettes... Unfortunately we’re in an era right now where we’re trying to ensure that those who produce the contraband tobacco are creating industries for themselves. To have them switch over to something else maybe, but might be some historical tension that may not allow that to go out as we would hope.”
(Hamilton, age 29)

Fifty-three percent of key informants were concerned with the enforcement of the legal smoking age and contraband cigarettes. Without probing, just under half (n=7) of key informants suggested that smoking cessation among young adult males could be helped with a stronger anti-contraband policy.

“I think the one [policy] that I would like to see would be about doing something about contraband. The easy access to cheap cigarettes is a real detriment for that population [young males] I think. I think it’s only a disservice to that population, and encourages higher rates of smoking.” (Key Informant 11)

“They are a cash strapped group, I mean the other thing about contraband is indirectly it’s really a slap at government policy, right? Because it says you know what I beat government, I found a cheap source of cigarettes and I love it, you know? And... you know it’s well documented that cheap supply of tobacco whether legitimate, legal or not... doesn’t help the quitting smoking process.” (Key Informant 17)

However, analysis from the OTS shows that the majority of young males usually buy their cigarettes from convenience stores or gas stations in Ontario (90%). Older males in the sample were twice as likely to purchase cigarettes from a First Nations reserve on a regular basis compared to young male smokers (19-29 year old =6%; 30-49 year old =13%; 50-69 year old=12%). Less than 1% of young males reported buying over the internet or through mail.

Develop Best Practices

A common theme throughout the key informant interviews is the lack of best practices concerning smoking cessation services for young males. Key informants acknowledged that best practices exist for cessation, but they also stated that they cannot rely on previous studies because young males are a distinct group who need to have best practices tailored to them.

“Well I think we have to make a concerted effort to look at what the needs are of that population... to see what the best practice could be. So we haven’t identified what to do yet.” (Key Informant 2)

“I would encourage us not to go to the World Health Organization or to CDC best practice because I don’t think there is any best practices when it comes to working with young people and young males and smoking. I think this is one that we need to chart as new water.” (Key Informant 17)

Given the lack of services identified by key informants, it is not surprising that most key informants believe that the cessation system lags behind that of prevention and protection.

“Essentially I think the only policy we have that might encourage the cessation is the smokefree workplaces or public places... so we don’t have a lot of policy that directly supports cessation in my mind.” (Key Informant 7)

“I would like to see a strategy. In particular, I think a lot of the other places that we’ve gone with tobacco control we’ve been very strategic in going in there. I think the cessation piece is very disjointed...” (Key Informant 6)

Subsidizing Pharmacotherapy

Almost all key informants (n=16) believe that Ontario’s smoking cessation system should offer free or subsidized NRT. They agree that the STOP Study (a research study evaluating the effectiveness of providing free NRT to Ontario smokers) is an effective first step, but they believe that a sustainable program is needed now.

“It is hugely unfortunate that... something that’s been identified by the Chief Medical Officer of Health on two separate reports as the most significant public health concern to address we still have 1 in 5 people smoking. I don’t understand what the debate is, why just not NRT but universal provision of all of them. Not subsidized, it should be universal... imagine if we, you were on your own to get immunized for a rubella mumps and measles, there would be chaos in society, right? ... I think the cost benefit speaks for itself.” (Key Informant 17)

Some key informants believe that by offering free NRT one could attract young male smokers to effective services that they would generally not use, as well as serve an important symbolic purpose.

“I’m not trying to promote medication but giving something if they know they’re going to get something... like free NRT, um, then there might be more males, [calling telephone helplines].” (Key Informant 14)

“I think that... being able to offer stuff free particularly pharmacotherapies does tip people over, and does induce them to make a quit attempt.” (Key Informant 1)

Most key informants recognize the importance of coupling NRT with counselling and/or different types of support programs.

“I think that... free or subsidized NRT is fantastic. I think... it gets sucked up very quickly... of course the research has shown that NRT, when used effectively, the right dosages and everything, increases chances of quitting I think by 50%... combined with some sort of quick way to introduce it or having a pharmacist come in or some sort of incentive or something at their worksite that may be a good way of reaching them.” (Key Informant 16)

Further, key informants believe that offering free/subsidized NRT is particularly important for young males since they are a group that tends to be price sensitive and:

“...have this mental framework in which they see free NRTs as almost being both an entitlement as well as magic. It’s an entitlement because I know I’m spending so much on cigarette taxes you guys owe me!... The other side though is um, the magic bullet.”
(Key Informant 15)

Analysis from the OTS also shows that 68% of young males thought that pharmacotherapies were too expensive, although 52%^{iv} believe that they would make their quit attempt easier. Important to note is that young male smokers with a secondary education or less were less likely to believe that pharmacotherapy (NRT and non-NRT) would help them quit, compared to young male smokers with more than a secondary education (38% vs. 83%, OR=0.12 95%CI:0.03-0.53).

STOP Study results show that NRT is as effective for its young male participants (19-29) as it is for its older male participants, and that most of its participants either quit smoking or reduce their CPD (measured at 5 and 10 weeks). Around 50% of young male smokers quit smoking and around 40% decreased their CPD.

During the street intercept interviews several smokers mentioned being interested in using NRT in their next quit attempt. Of the 69 participants who mentioned they wanted to quit smoking, 59 participants (86%) stated that they would try NRT, especially the patch, in their next quit attempt.

“Actually when I did contemplate quitting, that [the patch] would be the one thing that I would try. Friends tried it and said that it really does work.”
(Toronto, age 29)

Many participants (37) mentioned the price of NRT as being a barrier to using NRT products.

“People want to quit, but there’s always a price to it and people aren’t willing to pay that price.” (Toronto, age 27)

“It’s cheaper for me to buy cigarettes than it is for me to purchase any smoking cessation aids.” (Hamilton, age 29)

However, participants also mentioned that they are concerned about the side effects that NRT might have.

^{iv} Marginal reportability

“I heard it’s pretty intense though...you put it on the patch goes right to your heart, so that’s pretty scary.” (Toronto, age 26)

“Horrible nightmares. Being a heavily addicted smoker I left them [the patch] on overnight for fear of waking with a horrible craving, and they gave me several nightmares.” (Hamilton, age 23)

Conclusion/Discussion

Enhancements to existing smoking cessation services in Ontario are needed in order to decrease the smoking prevalence of young male smokers. Current smoking cessation services reach less than 3% of smokers per year, even though 17% report they want to quit in the next month.

Many young men want to quit smoking and are actively trying to quit. Unfortunately, only a small proportion use cessation services. Young men are 51% less likely to use evidence-based therapy than older male smokers (OR=0.49, 95% CI=0.28-0.87). It is important to note that the effectiveness of the existing cessation services for those few who use them is the same as that for other smokers.

One promising avenue for promoting young male smoking cessation might be to involve social networks in smokers’ quit attempts. Data shows that young males are more likely than older males to mention family and friends as a quit aid, and the young male smokers we interviewed also talked about the advantages of including social networks in their quitting strategies. This finding is further supported by findings from several researchers who have recognized social support as a crucial factor associated with the maintenance of health behaviours, including smoking abstinence.^{5,23,24,25,26,27,28,29} Further, since the late 1990s, clinical practice guidelines for smoking cessation both in the USA³⁰ and in the UK³¹ have recognized the importance of social support.

Policies that affect the entire population, such as smoking bans and taxes, seem to be helpful smoking cessation strategies for young men.

Important to note is the finding that young male smokers perceive themselves as a heterogeneous group, and that different programs might be needed to serve sub-groups within this population. For example, smokers with a secondary education or less were less likely to believe that stop smoking medication would help them quit, compared to young male smokers with more than a secondary education (38% vs. 83%, OR=0.12 95% CI:0.03-0.53).

Appendix A: Sample Letter to Organizations



UNIVERSITY OF TORONTO
DALLA LANA SCHOOL OF PUBLIC HEALTH

<<Date>>
<<First Name>> <<Last Name>>
<<Street>> <<Apt>>
<<City>> <<Province>> <<Postal Code>>

Dear _____ <<Salutation>>:

The Ontario Tobacco Research Unit (OTRU) is evaluating how well Ontario's smoking cessation system serves the needs of adult smokers who are over age 24 with a high school education or less. One of our first goals is to identify the reach of the existing programs to this population. We would appreciate if you could share with us how many smokers over the age of 24 years who have a high school education or less have used your services in the fiscal year of 2008. We are also interested in learning about the efficacy of the services for this sub-population. We are gathering this information from Public Health Units that have smoking cessation programs, from Smokers' Helpline (including Online), the Driven to Quit Challenge, the STOP Study, the Nicotine dependence Clinic in Thunder Bay and in Toronto, as well as the Ottawa Heart Institute. If there are any other institutions that might have useful information, please let them know about this study. We can provide you with a letter explaining this study to give them.

By sharing this information you will help us determine needs in the smoking cessation services for adult smokers with a high school education or less. In the next couple of days OTRU will contact you to discuss this further, and make arrangements of how the data can be shared. If you have any questions, feel free to call me at 416.978.8137. We would be happy to hear from you.

Sincerely,

Nadia Minian, PhD.

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Appendix B: Demographics of Key Informants

Key Informants were:

- Paid employees
- Staff providing direct frontline support and programming for smokers or responsible for planning, communication, and collaboration of tobacco control in Simcoe Muskoka
- Majority (77%) were females
- 44% of staff had worked on tobacco related issues for more than 8 years
- Majority between 50-60 years old

Appendix C: Interviews with Key Informants

The Ontario Tobacco Research Unit (OTRU) is conducting an evaluation of Ontario's tobacco cessation system. The purpose of this part of the evaluation is to describe the availability and reach of cessation services for young male smokers (19-29 years old). The evaluation explores if there are groups or communities of male smokers 19-29 years old who are and are not accessing various existing cessation services and seeks to identify what other services might be needed. We are also interested in learning about the strengths and weaknesses of the existing continuum of services. Before the interview, I will review the informed consent form with you, which explains your rights as a participant in this evaluation. If you decide to consent, we will begin the interview, which will take no more than one hour. If you are participating over the phone, the researcher will read you the informed consent, and ask you to fax it back or mail it back before the interview can be conducted.

If consent has been received: Thank you for sending us back the signed informed consent, do you have any additional questions regarding the study?

1. Before we begin, I would like to know what you think are the two most important questions this evaluation needs to answer or address? _____

Thank you. Now, let's begin with the interview.

The next few questions are general questions about PHU as an organization

YOUNG MALE SMOKERS

2. According to Canadian Community Health Survey males aged 25-29 have the highest prevalence of current smoking at 39%, almost double Ontario's smoking prevalence. Does this seem correct to you? If not, is it higher? Lower?

3. Do you think there are certain "communities" or groups of young male smokers who smoke more than others? PROBE: Do you think that the young males who are francophone smoke more than others? How about the LGBTTTQ? How about Aboriginal young males? Low SES? Those who are unemployed? Not in school?

Smoking Cessation SERVICES Available

4. What smoking cessation services are available for smokers 18-29 years old? I will read you a list, and for each service I will ask you to tell me if the service exists in your PHU. If the service is offered I will also ask you how effective the service is for those who use it, and the proportion of smokers in your PHU who uses this service. The scales we will use are: Ineffective (1); somewhat ineffective (2); somewhat effective (3); effective (4). all (100%); most (50-99%); some (25-49%); few (1-24%) or none (0%).

Services for smokers	Available/who offers it? PHU? CCS? Etc.	Attractive strategy for young males? If not, could it be modified to make it attractive?	Effective for young male smokers?	What are the strengths/weaknesses of the service for young male smokers?	If Not available, needed?/ What infrastructure is there to help it start?	Who would use the service more?
Telephone Helplines						
Online support						
specialized nicotine dependence clinics						
Individual counseling services from a variety of healthcare providers						
interventions and counseling for hospitalized patients						
worksite innovation projects						
innovative projects for younger smokers						
Provide free or subsidized pharmacotherapies to some smokers						
Provide specifically-tailored programs for marginalized special groups (low SES, mentally ill, aboriginal peoples, incarcerated, etc).						
Group counseling						
Self help materials						
Other						

5. What do you think about the smoking cessation services available for young male smokers?
 a. Do you think they are sufficient to meet the existing needs?

- b. What is good about the existing services?
 - c. What changes would you like to see happen in the next year?
6. What do you think about the overall continuum / range smoking cessation services available in Ontario for young smokers?
- a. To what extent do they meet the existing needs?
 - b. What are the strengths of the existing service package?
 - c. How could it be made stronger?
 - d. What are the weakness of the existing service package?
7. What are some obstacles that smoking cessation services face in general? For male young smokers in particular?

8. Are there enough campaigns to motivate young male smokers quit or reduce their tobacco use?
- a. Are they effective?
 - b.
9. Are there enough campaigns to improve the utilization of smoking cessation services by young male smokers?
- a. Is this needed? Is it effective?
10. What policies do you think would benefit the smoking cessation for young male smokers What recommendations can you make to improve the current smoking cessation services?

11. What recommendations can you make to improve the current smoking cessation services for young males?

*Please answer the following questions as best as you can. Do **NOT** put your name or any other identifying information in this form. If you have any questions please let us know. After completing the form, please hand it back to the interviewer. Thank you very much for your participation.*

1. What year were you born in? _____ (year)

2. Are you: Female? Male?

3. When did you start working on tobacco related issues? _____

4. When did you start working for this agency/organization?|_____|_____|
i. Month Year

5. What is your job title? _____

Appendix D: Demographic Characteristics of OTS Participants

Table 13: Demographic Characteristics of Current Smokers (n=3,445)

	Males Aged 19-29 (%)	Males Aged 30-49 (%)	Males Aged 50-69 (%)	Females Aged 19-29 (%)
Education				
Less than secondary school	12	13	28*	12 [†]
Secondary diploma	44	30*	28*	30*
Some college	11 [†]	10	9 [†]	16 [†]
College or university degree	34	48*	35	43
Marital status				
Married	24	69*	73*	59*
Not Married	76	31*	28*	41*
Region				
Rural	11	16*	21*	13
Urban	89	84*	79*	87

* Significantly different than young males (p-value<0.05)

[†]Interpret with caution: subject to moderate sampling variability

Source: Ontario Tobacco Survey: Baseline (July 2005- December 2007)

Appendix E: Screener for Smokers

Date: ___ ___ / ___ ___ / ___ ___ Time: ___ ___ : ___ ___ Location: ___ ___

Hello. My name is _____. I work for OTRU. We're talking to young smokers about smoking cessation services that exist for people in your community. I'd like you to answer a few general questions first. Based on how you answer those questions, I may want to ask you a few more questions or I may just thank you for your time and not ask anymore questions.

Screener Administered

A. Do you have a few minutes to answer some questions?

___ Yes (Proceed to next question)

___ No (If no, thank the person for their time)

1. Have you ever smoked tobacco?

___ Yes (If yes, for how long) _____

___ No (If no, thank the person for their time)

2. Have you smoked at least 100 cigarettes in your life? : That is approximately 4-5 packs of cigarettes

PROBE: [If respondent does not know or refuses – “We require this information to determine eligibility for this survey.”]

[DO NOT READ]

01 - Yes

02 – No-----→ (If no, thank the person for their time)

3. Have you smoked at least one cigarette in the past six months?

01 – Y

02 – N-----→ (If no, thank the person for their time)

B. How old are you?

___ ___ -----→ less than 18 years old or more than 29 years old, thank the person for their time

What is your birth date?

___ ___ / ___ ___ / ___ ___ (reconcile inconsistencies)

Are you:

Male Female

If female terminate.

Person eligible to continue?

___ Yes (Go to next page)

___ No (Thank person for their time.)

0.0

Now, I'd like you to answer a few more questions. Would you be willing to answer a few more questions?

___ Yes (Read the paragraph below)

___ No (Explain)_____

I would like to invite you to participate in a short interview. All information will be kept strictly confidential and will not be shared with any person or group that is not associated with this survey. Participation is voluntary and you may stop at any time. If you do not want to answer a question, just let me know and we can skip that question. I will ask you questions regarding your smoking behaviour, intentions to quit smoking and services to help people quit that might be available in your community. The interview should take 10 to 15 minutes. To thank you for your time, we give you \$15

Are you interested in participating?

Y

N---→ Thank and terminate

To terminate: Thank you very much. We appreciate you taking the time to answer these questions. If you have any questions or concerns and would like to talk with someone regarding this study please feel free to call Nadia Minian who is coordinating this study. Would you like her card?

For those who refuse say: Thank you very much. We appreciate you taking the time to answer these questions. If you have any questions or concerns and would like to talk with someone or if you change your mind and decide that you would like to participate in our study please call Nadia Minian who is coordinating this study. Here is her card.

I will read you the informed consent before we begin. Here all your rights as participants will be explained. Please feel free to stop me and ask me any questions you might have. I will then ask you to sign the consent form and we can begin with the survey. I will give you a copy of a consent form for your records.

READ CONSENT FORM ANSWER QUESTIONS

CONDUCT SURVEY WITH ELIGIBLE PARTICIPANTS

Appendix F: Interviews with Smokers

SEMI STRUCTURED INTERVIEW WITH SMOKERS

INTERVIEW QUESTIONS

1. How much do you usually smoke these days? Does this vary from weekends and weekdays?
With whom do you smoke?
2. Do most of your friends smoke?
3. Do you want to quit or reduce your smoking?
 - a. Why do you want to quit smoking?
 - b. What are some things that are keeping you from quitting or reducing smoking?
4. If you were to decide to stop smoking tomorrow, where could you go for help? What kind of help have you had in the past when trying to stop smoking?
 - a. What kind of help have friends and family members had in the past when trying to stop smoking?
 - b. Have you heard about any other help that is available for stopping to smoke?
5. So you mentioned that you knew _____ (name of service). Have you used it?
 - a. PROBE: Why did you use it? Did it help?
 - b. PROBE: Why haven't you used it? Do you think that you might use it in the future? Why? Why not? Is there anything that could be done to _____ that would make it more likely for you to use it?
 - c. PROBE: Have your friends used it? If yes, what do they say about it? If not, why not?

[continue with other services mentioned]

6. What are things that you have done/used that have helped you quit or reduce your tobacco smoking in the past?
 - a. PROBE: How well did they work for you?
7. IF PARTICIPANT DID NOT MENTION SHL: Have you ever heard of Smokers' Helpline?
 - a. Have you ever called SHL?
 - b. How useful was it in helping you quit smoking? Would you call it again during your next quit attempt?
 - c. If not, why haven't you called it? Do you think you will call SHL next time you try to quit?
8. IF PARTICIPANT DID NOT MENTION SHLO: Have you ever heard of Smokers' Helpline Online?
 - a. Have you ever accessed SHLO?
 - b. How useful was it in helping you quit smoking? Would you access it again during your next quit attempt?
 - c. If not, why haven't you accessed it? Do you think you will access SHLO next time you try to quit?
9. IF PARTICIPANT DID NOT MENTION Driven to Quit: Have you ever heard of Driven To Quit?
 - a. Have you ever participated in the Driven To Quit?
 - b. How useful was it in helping you quit smoking? How useful was it in providing you with resources available to help you quit? Would you participate again?
 - c. If not, why haven't you participated? Do you think you will participate next time?

10. IF PARTICIPANT DID NOT MENTION nicotine patch: Have you ever heard of the nicotine patch?
- Have you ever used a nicotine patch to help you quit or reduce your smoking? What did you like about it? What didn't?
 - How useful was it in helping you quit smoking? Would you use it next time you try to quit?
 - If not, why haven't you used it? Do you think you will use it next time?
11. IF PARTICIPANT DID NOT MENTION nicotine gum: Have you ever heard of the nicotine gum?
- Have you ever used a nicotine gum to help you quit or reduce your smoking? What did you like about it? What didn't?
 - How useful was it in helping you quit smoking? Would you use it next time you try to quit?
 - If not, why haven't you used it? Do you think you will use it next time?
12. IF PARTICIPANT DID NOT MENTION nicotine inhaler or lozenge: Have you ever heard of nicotine inhaler or lozenge?
- Have you ever used nicotine inhaler or lozenge to help you quit or reduce your smoking? What did you like about it? What didn't?
 - How useful was it in helping you quit smoking? Would you use it next time you try to quit?
 - If not, why haven't you used it? Do you think you will use it next time?
13. IF PARTICIPANT DID NOT MENTION non-NRT pharmacotherapy: Have you ever heard of a pill prescribed by doctors such as Zyban, bupropion, welbutrin, Champix to help you quit?

- a. Have you ever used Zyban, bupropin, wellbuterin, or Champix to help you quit or reduce your smoking? What did you like about it? What didn't?
 - b. How useful was it in helping you quit smoking? Would you use it next time you try to quit?
 - c. If not, why haven't you used it? Do you think you will use it next time?
14. IF PARTICIPANT DID NOT MENTION self help materials: Have you ever heard of self help books or booklets, videos, website or chat groups to help people quit?
- a. Have you ever used self help books or booklets, videos, website or chat groups to help you quit or reduce your smoking? What did you use? What did you like about it? What didn't?
 - b. How useful was it in helping you quit smoking? Would you use it next time you try to quit?
 - c. If not, why haven't you used it? Do you think you will use it next time?
15. IF PARTICIPANT DID NOT MENTION counseling: Have you ever heard of the counseling to help people quit or reduce their smoking?
- a. Have you ever gone to a counselor (individual or group therapy) to help you quit or reduce your smoking? What did you like about it? What didn't?
 - b. How useful was it in helping you quit smoking? Would you go to a counselor the next time you try to quit?
 - c. If not, why haven't you used it? Do you think you will use it next time?
16. IF PARTICIPANT DID NOT MENTION cold turkey: Have you ever tried to quit or reduce your smoking "cold turkey"?
- a. Have you ever tried to quit or reduce your smoking "cold turkey"?

- b. How useful was it in helping you quit smoking? Would you try this method again the next time you try to quit?

17. Are there smoking restrictions in the places you hang out?
 - a. What are these restrictions? Are these enforced?
 - b. How do you feel about these restrictions?
 - c. Are they useful in helping people like you quit?

18. What do you think would help you quit smoking? Please think of all possibilities, programs, services, pharmacotherapy, social support, policies, etc.
 - a. What do you think would help smokers in your community quit smoking or reduce their tobacco use? Please think of all possibilities, programs, services, pharmacotherapy, social support, policies, etc.
 - b. What characteristics are important for a program to have? (e.g., proximity to your house; promising confidentiality;; free of charge; availability; have childcare services; group/individual/ web based; etc)

19. Now I would like to ask you if you about a service that does not exist here in Canada. Would you be interested in participating in a VOLUNTARY smokers' registry which would provide you with the following benefits:
 - a. Provide ongoing contact with smoking cessation professionals
 - b. Get the latest information about smoking cessation services and products
 - c. Information on what is the most appropriate service/product for you to use in order to quit smoking
 - d. Hear about special studies for which you may be eligible

- e. PROBE: What would you like about such a registry? What wouldn't you like about it?
Why would you decide to be part of it? Why would you decide not to be part of it?
20. Thinking of all the services that have been mentioned in this discussion, what do you think is a reasonable amount of services that smokers should be entitled to use? Should they vary depending on the type of service it is? A telephone helpline? Free NRT? Should these services be provided by the government for free? Up to how much? Should there be any limits or restrictions placed?
21. One last question, is there anything else that you would like to say about your experience with the smoking cessation system in your community?

Appendix G: Demographic and Smoking Characteristics of Smokers Who Participated in Semi-Structured Interviews

Average age: 23 years old

Smoking status: 87% smoked daily

- 67% of participants want to quit
- Only 4% have never tried to quit

Table 14: Demographic and Smoking Characteristics of Semi-Structured Participants

Characteristics	Total n	Toronto % (n)	Sault St. Marie % (n)	Hamilton % (n)
Education Level				
High School or less	43	48 (26)	54 (14)	16 (3)
Some Post-secondary	29	26 (14)	23 (6)	47 (9)
Completed Post-Secondary	27	26 (14)	23 (6)	37 (7)
Marital Status				
Single	75	82 (45)	54 (14)	84 (16)
Married/Common-law	19	13 (7)	42 (11)	5 (1)
In Relationship	2	2 (1)	4 (1)	0
No Answer	4	4 (2)	0	0
Smoking Status				
Daily	87	89 (49)	88 (23)	79 (15)
Occasional	6	4 (2)	4 (1)	16 (3)
Number of Cigarettes per Day				
0-5	17	15 (8)	8 (2)	37 (7)
5-10	25	33 (18)	19 (5)	11 (2)
10-15	17	13 (7)	27 (7)	16 (3)
15+	41	38 (21)	50 (13)	37 (7)
Amount varies from weekend to weekday	69	69 (38)	50 (13)	95 (18)

Table 15: Quitting Patterns of Street Intercept Participants

Quit Patterns	Total n	Toronto % (n)	Sault St. Marie % (n)	Hamilton % (n)
Prefer to gradually reduce	42	56 (31)	15 (4)	27 (7)
Have never tried to quit	4	7 (4)	0	0
Undecided between want to quit and want to continue smoking	39	33 (18)	23% (6)	26% (5)
Reason wants to quit				
Health Reasons	60	58 (32)	65 (17)	58 (11)
Money worries	13	11 (6)	23 (6)	5 (1)
Pressure from Family and Friends	12	11 (6)	23 (6)	5 (1)
Reason still smoking				
Stress	28	38 (21)	15 (4)	16 (3)
Habit	27	22 (12)	42 (11)	21 (4)
Part of Identity	12	13 (7)	8 (2)	16 (3)

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