

BRIEF REPORT

Who uses the Smoker's Quitline in Massachusetts?

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Quitting remains a daunting task for smokers. Telephone hotlines deliver less intensive cessation services to large populations with some evidence for smoking cessation and relapse prevention.¹⁻⁵

Smokers who completed an assessment for the Massachusetts Smoker's Quitline, a part of the Massachusetts Tobacco Control Program, are described here. The Quitline services, modelled on the California Smoker's Helpline, included information about smoking cessation, referral to community based tobacco treatment services, printed materials, and telephone counselling to smokers, recent quitters, family, friends, and health service providers of smokers. We compared smokers who completed the assessment for the Quitline to smokers in the general population in Massachusetts.

METHODS AND RESULTS

Data are included on currently smoking Massachusetts residents who called the Quitline between 1 January 1994 and 31 December 1997 and completed an interview by trained counsellors. We obtained interview data on smokers from the Massachusetts Behavioral Risk Factor Surveillance System

(BRFSS) for the years 1994-1997 to represent population based estimates. Both interviews included questions on demographic characteristics, smoking history, level of nicotine addiction, quitting history, and current readiness to quit smoking, but only Quitline interviews asked about confidence in trying to quit smoking.

The BRFSS is a telephone health survey, jointly funded by the Centers for Disease Control and Prevention and state health departments, that collects information on a variety of health issues including smoking among adults 18 and older throughout the year. The BRFSS survey utilises a complex sampling design, and data we present are appropriately weighted to provide statewide prevalence estimates.⁶

We used χ^2 tests to assess differences between Quitline callers and all smokers in the Massachusetts BRFSS sample. Differences were also assessed between Quitline callers and a subset of the BRFSS sample who were planning to quit in 30 days because Quitline callers differ from all smokers in Massachusetts by their interest in quitting. We restricted comparisons of time to first cigarette to daily smokers in both the Quitline and the Massachusetts BRFSS data.

Table 1 Demographic and smoking characteristics of smokers who completed assessments for the Massachusetts Smokers Quitline compared to all smokers from the Massachusetts Behavioral Risk Factor Surveillance System (MA BRFSS) and smokers who planned to quit in 30 days (MA BRFSS), 1994-1997

	MA Quitline callers, 1994-97 (%)	Smokers, MA BRFSS 1994-97 (%)	Smokers who plan to Quit in 30 days, MA BRFSS 1994-97 (%)
Age	n=23805	n=3306	n=961
<20	9.8	2.3	2.4
20-39†	56.2	50.9	49.9
40-59	28.0	32.7	32.4
60+	5.9	14.2	15.3
Sex	n=23866	n=3320	n=965
Female†	60.2	50.6	48.3
Male	39.4	49.4	51.7
Ethnicity	n=23938	n=3292	n=956
White†	83.3 (82.8 to 83.8)*	88.2 (86.2 to 88.5)*	86.6 (83.4 to 87.8)*
Black	6.2	4.1	3.7
Hispanic	4.8	3.7	5.1
Other	4.0	4.0	4.6
Education	n=22780	n=3308	n=962
≤High school†	47.5	53.1	52.5
≥Some college	50.9	46.9	47.5
Ready to quit in 30 days (%)	92.9	29.1	100
Daily smokers	n=23938	n=3320	n=965
Daily smokers (%)††	98.1	82.8	73.7
Median number of cigarettes per day	23	20	20
Time to first cigarette:	n=23477	n=2724	n=700
Immediately ††	40.0 (39.4 to 40.6)*	14.4 (12.5 to 16.4)*	8.5 (5.8 to 11.2)*
<15 minutes	16.3	16.4	14.5
15-30 minutes	16.7	25.7	26.3
31+ minutes	26.4	43.5	50.7

*Denotes 95% confidence interval.

†Denotes "MA Quitline callers" are significantly different ($p<0.01$) from "Smokers, MA BRFSS" and "Smokers who plan to Quit in 30 days, MA BRFSS".

††Denotes "Smokers who plan to Quit in 30 days, MA BRFSS" are significantly different ($p<0.01$) from "Smokers, MA BRFSS".

A total of 23 938 individual smokers completed assessments for the Massachusetts Smoker's Quitline between 1 January 1994 and 31 December 1997 (11 789 in 1994 and 4818, 3619, and 3579 in 1995–1997; this decline in completed assessments mirrored a decline in total calls). These individuals represented 83% of assessments; assessments from proxy (9%) and non-smoking (8%) callers were excluded. The assessments represented approximately 40% of calls to the Quitline; repeat calls (15%), calls for advice or information without completed assessments (25%), and calls during unstaffed hours for recorded tips on quitting (20%) were excluded.

Table 1 summarises and compares the demographic and smoking characteristics of smokers who completed Quitline assessments and the Massachusetts BRFSS samples. Compared to both all smokers and the subset who planned to quit in 30 days in the Massachusetts BRFSS, Quitline callers were more likely to be younger, female, and to have attended at least some college and were less likely to be white, non-Hispanic.

The vast majority of Quitline callers planned to quit in 30 days (93%), were daily smokers (98.1%), who smoked a median of 23 cigarettes per day. Forty per cent had their first cigarette immediately upon awakening and an additional 33% smoked within 30 minutes. The proportion of daily smokers was significantly lower in the Massachusetts BRFSS data. Among those daily smokers, the proportion who smoked immediately in the BRFSS samples was significantly lower than in Quitline callers. Few Quitline callers felt confident (8.9%) or very confident (5.8%) that they could quit in the next week.

From 1994 to 1997 significant changes occurred in some of the demographic data, but it is not possible to say whether these were due to differences in the assessed calls or the targeting of advertisements during this time.

DISCUSSION

Profiles of over 23 000 smokers who completed assessments suggest that the Quitline service attracted highly addicted smokers with low probability of success at times when they planned to quit.^{7,8} Key markers of addiction included daily smoking (98% of callers), smoking more than one pack per day, and smoking within 30 minutes after awakening (73% of callers). More than 90% said they planned to quit in 30 days but less than 15% were confident or very confident that they could.

These findings in Massachusetts complement the report from the California Smokers' Helpline.⁹ Smokers who called quitlines in Massachusetts and California were more likely to smoke their first cigarette within 30 minutes after awakening than smokers in national surveys (over 70% *v* less than 65%) and more planned to quit in 30 days (over 70% *v* less than 15%).¹⁰

The higher proportions of women, young people, and diverse populations in callers to the Massachusetts Quitline suggest that the Quitline appealed to groups who may have difficulties accessing other cessation services, bypassing obstacles such as transportation, child care, appointments, and face-to-face interaction that may discourage some self quitters from using more traditional services.^{1,4}

There are some limitations to the data, which was collected by counsellors at a busy public service. Missing responses to specific questions among those who completed the assessments were infrequent (3%) and unlikely to distort the findings because of the large sample size. Although the questions asked were identical we acknowledge potential methodological differences between trained cessation counsellors and interviewers for BRFSS. Our analyses were based on aggregated tables of Massachusetts BRFSS data and did not account for sampling design in calculating standard errors or

What this paper adds

Telephone services for smoking cessation have rapidly expanded from research studies to public programmes. Prior descriptions of the research participants and the effects of carefully defined cessation services must now be supplemented by information on users of public services. Descriptions of callers compared to all smokers in the population from California and New York have shown that callers are more likely to be female and a minority, and more highly addicted than all smokers.

Our comparison of callers to the Massachusetts Quitline with both the general population of smokers in Massachusetts and a subset of these who were planning to quit in the next 30 days demonstrated that callers are more addicted. Although more than 90% planned to quit in the next 30 days, less than 15% were confident that they could quit. Future studies of public programmes need to refine the effectiveness of telephone services in the context not only of who calls but also what additional services they utilise, so that services may be tailored for specific populations.

χ^2 test statistics. However, given the size of the differences between the Quitline and the Massachusetts BRFSS samples, as well as the size of the Quitline sample, we expected no impact on our results.

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