Cessation and Cessation Measures among Adult Daily Smokers: National and State-Specific Data

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Reducing initiation rates of cigarette smoking and encouraging smoking cessation are principal goals of tobacco control programs, including those in California, Massachusetts, Arizona, Florida, Oregon, and other states. This volume focuses on cessation, and more specifically on population measures of progress in cessation rates. Its objectives are to examine what we know about what drives cessation on a population basis and to offer our best judgements on what approaches appear to be working and what approaches appear to have less impact.

CESSATION

Cessation is a process rather than a specific event. It begins with a decision to stop smoking and ends with abstinence from cigarettes maintained over a long period of time (U.S.DHHS, 1990). Cessation occurs at the individual level, and a substantial body of science examines the processes that individuals go through as they become former smokers—the individual determinants of success or failure in the process of cessation are also well described (U.S.DHHS, 1990). Several staged measures of change in individual cessation have been developed to link measures of intention to quit and actual cessation behavior in order to define where smokers are in their individual cessation efforts and to predict the likelihood of future cessation activity and success (Prochaska *et al.*, 1991; Pierce *et al.*, 1998a & b; U.S.DHHS, 1990). This volume recognizes and draws upon this important body of work, but the focus here is on examining the impact of programs and strategies that change cessation in the general population, rather than on an examination of the dynamics of the cessation process itself.

Since measurement of programmatic effect is the goal in this work, measures of cessation are selected with the following criteria in mind:

1. The measures should reflect as narrowly as possible the target population of most cessation interventions—*i.e.*, regular daily smokers who have completed the process of taking up cigarette smoking. Other groups, including occasional smokers and young adults still in the process of becoming addicted to cigarettes, are important segments of the smoking problem, but they are often quite different from regular daily smokers in their smoking behaviors. Including them in measures of cessation can lead to confusion in the evaluation of the results. In addition, different cessation intervention strategies are often utilized with these populations.

2. Measures should allow for the establishment of a close temporal link between a programmatic intervention and the cessation measure. For example, the quit ratio (the ratio of former smokers to ever-smokers) may be a good measure of total cessation in a population, but it is a cumulative measure of all successful cessation in a population over time and is therefore less useful in examining the effect of recent programmatic efforts on cessation activity.
3. The measures should also examine both cessation activity and cessation success as separate entities. Some programmatic activity may have an effect principally by stimulating cessation attempts, while not significantly increasing longer term cessation success. Other actions may have their effect predominantly in enabling those who are trying to quit to be more successful in the long term.

None of these criteria require that the chosen measures cover all segments of the smoking population or all stages of cessation in smokers.

We are attempting to analyze the effect of programs on as clean and unambiguous a measure of cessation as possible. As is often true, it is necessary to narrow the population in which a measurement is made in order to improve the ability to identify an effect and to decrease the "noise" in the measure. Those who are still in the process of becoming regular cigarette smokers, and those who do not smoke daily, may respond to the questions on quit attempts (being off for 24 hours or more) with positive answers that reflect variations in their current pattern of use rather than a clear attempt to alter their future smoking behavior. Lumping these two groups together may confuse analyses of the effects of tobacco control programs on cessation rates.

Among smokers who do not smoke every day, it is more difficult to know what measures of voluntary 24-hour cessation (a cessation attempt) mean relative to their future smoking behavior, and it is even more difficult to relate that change in behavior to programmatic-driven cessation.

While still under the age of 25, some smokers are likely to be in the process of developing their addiction to cigarettes. Some of the change in their smoking behavior is due to real cessation activity, but some is due to smokers who are still experimenting with smoking and who will not be progressing to become regular smokers. As it is impossible to determine which of these phenomena are driving the change in behavior, measures that include those smokers under age 25 mix changes due to experimentation with those that are due to actual cessation activity. Elimination of smokers under age 25 from the measure essentially eliminates most of those who are still experimenting with cigarettes and thus makes the measure a cleaner measure of cessation activity. Additionally, someone who is in the process of beginning to smoke and who does not go on to become a regular smoker is likely to have been influenced by quite a different set of factors than someone who was a regular smoker and who has now successfully quit.

In the set of measures presented in this volume we have decreased the "noise" in the measure of cessation behavior by limiting the measure to those who are regular daily smokers and to those who are old enough to have completed the process of smoking uptake (age 25 years and older).

MEASURES OF CESSATION

A variety of cessation measures are used in this report, but much of the analysis of national and state-specific data uses a set of measures designed to meet the criteria described above.

The denominator for all of these cessation measures is that group of smokers who reported that they were daily cigarette smokers 1 year prior to the survey and who were 25 years of age or older at the time of the survey. The broadest measure of cessation activity used for this group is one that includes any change in smoking behavior (a cessation attempt, becoming an occasional smoker, or currently being a former smoker). This is a measure of cessation activity without regard to whether the cessation effort led to a successful change in smoking behavior, and this measure is termed cessation activity in this chapter.

The Current Population Survey (CPS) did not ask current occasional smokers whether they had made a quit attempt in the last 12 months, and so change from being a current daily smoker 12 months prior to the survey to being a current occasional smoker at survey time is reported as a separate measure or as part of the change measure for this survey. It was not possible to measure cessation attempts among current occasional smokers using the CPS data. However, analyses of the California Tobacco Survey (CTS) data, where occasional smokers *were* asked about cessation attempts, reveal that three-quarters of those who reported being daily smokers 1 year prior to the survey, but who reported being occasional smokers at the time of the survey, also reported making a quit attempt in that 12-month period. We therefore included those who changed from being daily smokers to being occasional smokers in the group of smokers who were attempting to change their smoking behavior.

The cessation attempt measure includes all those who have made a successful or unsuccessful cessation attempt in the last 12 months, but excludes current occasional smokers for analyses. A cessation attempt is defined by the question: "During the past 12 months, have you stopped smoking for 1 day or longer because you were trying to quit smoking?"

We also use two measures of cessation success. The first is all those who were daily smokers 1 year prior to the survey and former smokers at the time of the survey. This is a measure that includes former smokers of all durations, and it is the broadest measure of cessation success, but it includes large numbers of individuals who will relapse back to smoking. To more accurately assess the impact of cessation interventions on longer term cessation success, we also calculated the percentage of those who were daily smokers 1 year prior to the survey and were former smokers of 3 or more months duration at the time of the survey. This group contains a much higher fraction of those who will be successful in staying off cigarettes long-term and has been used as a reasonable measure of successful cessation by

numerous smoking cessation interventions. In some instances the fraction of cessation activity that has resulted in successful cessation of 3 months or more (percentage of 3+ month success over percentage with some cessation activity) is calculated to estimate the fraction of cessation activity that results in successful cessation overall. This fraction is called the fraction of cessation activity that has resulted in long-term success.

The numerator for both of these measures of 3+ month cessation success automatically excludes that fraction of daily smokers 1 year prior to the survey who quit within the 3 months immediately preceding the survey, since they cannot have been successfully quit for 3+ months when surveyed. Some of these individuals who are excluded from the numerator will be successful in their efforts to quit, and their exclusion leads to an underestimate of the fraction of the population that will be successful. Correspondingly, some of those who were successfully quit for 3+ months at the time of the survey will relapse to smoking, and their inclusion in the denominator leads to an overestimation of the true rate of successful long-term cessation. The effects of these two sources of error will tend to offset one another, and the purpose of developing these measures is to evaluate the effects of tobacco control interventions on the population, rather than to measure cessation success at the level of the individual. Approximately 65 percent of all quitters relapse in the first 3 months, with 10 percent more relapsing from 3 to 6 months after quitting and an additional 3 percent relapsing between 6 months and 1 year following a quit attempt (Hunt *et al.*, 1971; U.S.DHHS, 1988). As a result, these measures of 3+ month success are useful approximations of actual rates of long-term successful cessation rates in the population and can be used to evaluate the relative impact of tobacco control interventions on rates of long-term cessation in populations of smokers.

Analyses of national and state-specific data are presented for the Current Population Survey Tobacco Use Supplement, which was conducted in the months of September, January, and May during 1992/93 and 1995/96. Analyses are also presented for the California Tobacco Surveys carried out in 1990, 1993, and 1996, as well as for the Massachusetts Tobacco Surveys.

Table 2-1
Current Population Survey: Cigarette Prevalence among All Adults, 18 Years and Older

	Smoking Status								Sample Size
	Daily		Occasional		Former		Never		
1992/93	%	± CI	%	± CI	%	± CI	%	± CI	(n)
Total	19.61	0.18	4.23	0.09	22.49	0.19	53.67	0.22	275,895
Male	21.86	0.27	4.61	0.14	26.99	0.29	46.54	0.32	127,377
Female	17.57	0.24	3.89	0.12	18.39	0.24	60.16	0.30	148,518
	Daily		Occasional		Former		Never		
1995/96	%	± CI	%	± CI	%	± CI	%	± CI	(n)
Total	19.05	0.18	4.04	0.09	21.76	0.19	55.16	0.23	233,741
Male	21.19	0.28	4.47	0.14	25.80	0.30	48.54	0.34	107,527
Female	17.09	0.24	3.64	0.12	18.07	0.25	61.20	0.32	126,214

National and State-Specific Prevalence of Current and Former Smokers

The ultimate measure of success for a tobacco control program is the prevalence of smoking in the general population (Table 2-1). Smoking prevalence is the result of the combined effects of trends in smoking initiation and smoking cessation. However, prevalence is a relatively poor measure of cessation activity because initiation occurs largely during adolescence whereas cessation occurs throughout adult life, and rates of both cessation and initiation have varied markedly over time (Burns *et al.*, 1997).

There is substantial variation in current smoking prevalence in the United States, both geographically and demographically. The prevalences of daily and occasional smoking, estimated from the 1992/93 (Table 2-7) and the 1995/96 CPS (Table 2-8), are presented in Appendix 1, along with the prevalence of former and never smoking status for the major demographic groups and for each state in order of increasing daily smoking prevalence. With the exception of Utah, where a large fraction of the population is of the Mormon faith with its prohibition against smoking, California is the state with the lowest smoking prevalence in both survey years. This difference persists even when smoking prevalence for each state is standardized to the racial/ethnic distribution of the United States, indicating that the lower prevalence of smoking in California is not due exclusively to the higher prevalence of Asian and Hispanic populations in the state.

Two other potential measures of cumulative population-based cessation are presented in Table 2-9 (Appendix 1). They are the prevalence of former smokers and the quit ratio (the ratio of former smokers to ever smokers). The table is arranged in order of decreasing quit ratio. These measures estimate the cumulative cessation that has occurred over time in a population, but are less precise measures of recent cessation activity. In addition, they are heavily influenced by the age of the population and by differences in demographic factors, such as level of education, where small differences in rates of cessation accumulate to create larger differences in the prevalence of former smokers. These difficulties limit the use of former smoker prevalence and the quit ratio as measures of cessation activity in response to recent tobacco control efforts.

Measures of Cessation Activity and Success, National and by State

Table 2-2 presents smoking status at the time of the survey for those who were 25 years of age or older at the time of and who had been daily cigarette smokers 1 year prior to the survey as measured by the 1992/93 CPS. Table 2-3 presents the same measures for the 1995/96 CPS. The measures are presented for the subgroups of age, race/ethnicity, education, income, and number of cigarettes smoked per day, as well as by state.

There are five current smoking status conditions in these tables:

1. Current daily smoker who has not made a quit attempt in the last year,
2. Current daily smoker who has made a quit attempt in the last year,
3. Current occasional smoker,
4. Current former smoker who has been quit for less than 3 months, and
5. Current former smoker who has been quit for 3 or more months.

These measures of smoking status at the time of the survey can be assembled into several measures of cessation activity and success that include progressively higher fractions of those likely to experience long-term success (Figure 2-1). The broadest measure of cessation activity is defined by including all those who have made quit attempts (successful or unsuccessful) or who have become occasional smokers in the last 12 months. This measure is defined by adding together all of the categories in the table except for the first (Daily smoker, No quit attempt). This, then, is a measure of all who were daily smokers 12 months prior to the survey who have had any positive change in their smoking behavior and is presented in Figure 2-1. It is also the broadest measure of any cessation effect for a tobacco control program.

The broadest measure of cessation success is all daily smokers 1 year prior to the survey who are former smokers at the time of the survey, and it is defined by adding former smokers of less than 3 months duration to former smokers of 3+ months duration. This measure includes a substantial number of individuals who will relapse in the future, but it also excludes those who relapse early after a cessation attempt. Since a large fraction of those who relapse do so within the first several weeks of a cessation attempt (U.S.DHHS, 1990), this measure is a better measure of the rate of long-term cessation success.

Figure 2-1 presents measures of cessation for the 1992/93 and 1995/96 Current Population Surveys. There was a statistically significant decline in cessation activity between 1992/93 and 1995/96 for the nation as a whole, with the broadest measure of cessation activity among daily smokers 1 year prior to the survey declining from 36.5 percent in 1992/93 to 31.6 percent in 1995/96. This decline in cessation activity between 1992/93 and 1995/96 was evident and statistically significant in each subcomponent of the cessation activity measure, and both cessation attempts and the fraction of cessation activity that has resulted in 3+ month cessation success declined dur-

Table 2-2

1992/1993 Current Population Survey: Current Smoking Status among Self-Respondents, 25 Years and Older, Identified as Daily Smokers 1 Year Ago

	Current Smoking Status											
	Daily						Former				Population Size (N)	Sample Size (n)
	No Quit Attempts		Quit Attempts		Occasional		Quit < 3 Months		Quit 3+ Months			
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI		
Total	63.52	0.58	25.71	0.52	3.26	0.21	2.41	0.18	5.10	0.26	31,801,272	40,321
Male	64.52	0.79	25.05	0.72	2.80	0.27	2.59	0.26	5.04	0.36	16,782,017	19,173
Female	62.40	0.85	26.45	0.77	3.77	0.33	2.21	0.26	5.17	0.39	15,019,256	21,148
Age (Years)												
25–44	61.95	0.76	28.05	0.71	3.26	0.28	2.30	0.24	4.45	0.32	18,448,325	22,937
45–64	65.10	1.00	23.70	0.90	3.00	0.36	2.70	0.34	5.50	0.48	10,309,965	13,222
65+	67.68	1.81	18.34	1.50	4.13	0.77	2.15	0.56	7.70	1.03	3,042,982	4,162
Race/Ethnicity												
Non-Hispanic White	64.11	0.64	24.98	0.57	3.06	0.23	2.56	0.21	5.30	0.30	25,995,472	34,591
Hispanic	62.47	3.55	26.92	3.26	3.65	1.38	2.01	1.03	4.94	1.59	1,573,496	1,357
African-Americ.	59.90	1.81	29.78	1.69	4.65	0.78	1.54	0.46	4.13	0.73	3,432,421	3,246
Asian/PI	58.28	4.85	31.43	4.57	3.80	1.88	2.54	1.55	3.95	1.92	483,188	592
Native Americ.	67.27	5.81	26.91	5.50	1.94	1.71	1.65	1.58	2.23	1.83	304,999	518
Other	.	.	.	.	.	.	.	.	.	.	11,697	17
Education (Years)												
<12	69.55	1.20	22.15	1.08	2.87	0.44	1.44	0.31	4.00	0.51	6,735,717	8,261
12	64.71	0.87	25.24	0.79	2.88	0.30	2.40	0.28	4.77	0.39	13,943,590	18,073
13–15	59.13	1.20	28.87	1.11	3.72	0.46	2.67	0.39	5.61	0.56	7,657,376	9,734
16+	56.72	1.80	27.54	1.62	4.51	0.75	3.77	0.69	7.45	0.95	3,464,589	4,253
Household Income												
<$10,000	68.95	1.36	23.14	1.24	3.32	0.53	1.28	0.33	3.31	0.53	5,260,222	6,572
$10,000-19,999	66.50	1.26	23.86	1.13	3.29	0.47	2.09	0.38	4.25	0.54	6,468,466	8,436
$20,000-29,999	63.37	1.36	26.57	1.25	2.77	0.46	2.27	0.42	5.02	0.62	5,742,370	7,332
$30,000-49,999	61.26	1.18	26.93	1.08	3.13	0.42	3.03	0.42	5.65	0.56	7,732,799	9,862
$50,000-74,999	58.17	1.74	27.90	1.59	3.77	0.67	3.17	0.62	6.99	0.90	3,658,500	4,527
$75,000+	55.49	2.70	29.02	2.46	4.22	1.09	3.53	1.00	7.74	1.45	1,550,783	1,869
Unknown	65.28	2.73	24.27	2.46	3.15	1.00	2.11	0.82	5.19	1.27	1,388,133	1,723

Table 2-2 (continued)

	Current Smoking Status											
	Daily						Former				Population	Sample
	No Quit Attempts		Quit Attempts		Occasional		Quit < 3 Months		Quit 3+ Months		Size	Size
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	(N)	(n)
States												
Alabama	67.50	4.94	24.40	4.53	1.95	1.46	1.71	1.37	4.43	2.17	554,406	580
Alaska	68.04	4.63	24.25	4.26	2.23	1.47	2.31	1.49	3.18	1.74	69,481	531
Arizona	63.45	5.03	26.97	4.63	2.77	1.72	1.88	1.42	4.92	2.26	440,379	386
Arkansas	66.13	4.61	23.85	4.15	2.22	1.44	2.89	1.63	4.90	2.10	376,141	664
California	61.68	2.20	25.67	1.98	4.00	0.89	2.25	0.67	6.41	1.11	2,779,568	2,095
Colorado	63.78	5.34	24.41	4.77	4.71	2.35	1.81	1.48	5.29	2.49	419,378	475
Connecticut	63.28	5.43	26.58	4.97	1.10	1.17	4.33	2.29	4.70	2.38	422,146	396
Delaware	66.19	5.04	25.40	4.64	2.30	1.60	1.58	1.33	4.52	2.21	92,776	329
District of Columbia	67.42	6.50	22.12	5.75	6.19	3.34	1.46	1.66	2.81	2.29	54,721	216
Florida	63.69	2.30	25.73	2.09	2.88	0.80	2.42	0.73	5.28	1.07	1,786,118	1,787
Georgia	63.16	4.76	28.85	4.47	2.95	1.67	2.52	1.55	2.52	1.55	892,435	460
Hawaii	61.70	5.55	28.14	5.14	4.16	2.28	1.45	1.37	4.55	2.38	119,260	296
Idaho	65.23	4.69	23.60	4.18	3.77	1.87	2.54	1.55	4.86	2.12	132,278	564
Illinois	62.87	2.69	26.13	2.44	3.48	1.02	2.87	0.93	4.65	1.17	1,406,702	1,526
Indiana	69.14	4.62	21.65	4.12	1.01	1.00	3.68	1.88	4.53	2.08	786,930	533
Iowa	64.62	4.94	25.50	4.50	3.21	1.82	2.37	1.57	4.31	2.10	347,097	613
Kansas	70.74	4.51	20.47	4.00	1.71	1.29	1.91	1.36	5.17	2.20	320,527	607
Kentucky	75.13	3.81	18.07	3.39	1.92	1.21	2.09	1.26	2.78	1.45	675,928	673
Louisiana	64.96	5.19	24.18	4.66	2.75	1.78	1.92	1.49	6.19	2.62	525,758	425
Maine	61.91	4.41	28.59	4.11	3.82	1.74	1.42	1.08	4.26	1.83	204,879	569
Maryland	58.29	5.15	28.55	4.72	5.24	2.33	2.68	1.69	5.23	2.33	633,135	396
Massachusetts	58.16	2.68	28.56	2.46	3.29	0.97	3.33	0.98	6.66	1.36	743,094	1,431
Michigan	60.40	2.46	29.68	2.30	2.86	0.84	2.09	0.72	4.96	1.09	1,351,737	1,944
Minnesota	59.85	5.13	27.13	4.65	4.25	2.11	2.03	1.47	6.75	2.62	564,585	523
Mississippi	61.44	5.16	29.96	4.85	2.34	1.60	2.20	1.56	4.06	2.09	338,314	615

Table 2-2 (continued)

	Current Smoking Status											
	Daily						Former				Population	Sample
	No Quit Attempts		Quit Attempts		Occasional		Quit < 3 Months		Quit 3+ Months		Size	Size
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	(N)	(n)
Missouri	64.21	4.74	24.26	4.24	3.22	1.75	3.04	1.70	5.27	2.21	757,383	605
Montana	66.76	4.99	22.45	4.42	3.81	2.03	2.15	1.54	4.82	2.27	101,771	592
Nebraska	61.05	5.13	28.90	4.77	2.54	1.65	2.05	1.49	5.46	2.39	173,790	543
Nevada	69.29	4.12	23.87	3.81	1.91	1.22	1.32	1.02	3.61	1.66	212,335	582
New Hampshire	62.56	5.34	24.18	4.73	3.83	2.12	4.41	2.27	5.02	2.41	150,153	339
New Jersey	61.40	2.70	27.51	2.48	2.97	0.94	2.31	0.83	5.81	1.30	875,804	1,365
New Mexico	60.61	5.16	26.88	4.68	4.10	2.09	2.06	1.50	6.34	2.57	180,763	440
New York	61.26	2.05	26.68	1.86	3.36	0.76	3.32	0.75	5.37	0.95	2,074,672	2,347
North Carolina	67.51	2.25	22.80	2.01	3.08	0.83	2.49	0.75	4.12	0.95	973,548	1,900
North Dakota	62.41	5.33	26.50	4.86	5.76	2.57	2.76	1.80	2.57	1.74	67,949	512
Ohio	63.98	2.34	24.95	2.11	3.43	0.89	2.25	0.72	5.39	1.10	1,574,578	2,054
Oklahoma	66.58	4.50	21.37	3.91	2.83	1.58	2.86	1.59	6.35	2.33	471,743	611
Oregon	64.47	5.31	25.55	4.84	3.35	2.00	1.59	1.39	5.04	2.43	364,440	453
Pennsylvania	62.51	2.49	26.92	2.28	3.77	0.98	2.11	0.74	4.69	1.09	1,536,773	1,836
Rhode Island	62.98	5.37	23.47	4.71	3.46	2.03	2.51	1.74	7.57	2.94	125,657	353
South Carolina	67.85	4.23	21.99	3.75	3.16	1.59	2.64	1.45	4.36	1.85	495,343	602
South Dakota	65.63	4.80	24.68	4.36	3.18	1.77	2.23	1.49	4.28	2.05	80,533	596
Tennessee	64.72	4.30	25.70	3.94	2.75	1.47	2.01	1.26	4.83	1.93	783,596	664
Texas	63.86	2.74	25.45	2.48	3.97	1.11	2.14	0.82	4.58	1.19	2,013,625	1,694
Utah	61.89	6.20	27.56	5.70	5.20	2.83	0.74	1.09	4.61	2.68	131,888	298
Vermont	58.89	5.06	30.50	4.74	3.51	1.89	2.10	1.48	5.00	2.24	86,374	385
Virginia	62.48	4.34	26.59	3.96	3.29	1.60	2.18	1.31	5.46	2.04	852,061	614
Washington	58.67	4.96	28.33	4.53	3.31	1.80	2.06	1.43	7.63	2.67	659,444	468
West Virginia	73.28	4.09	20.54	3.74	2.16	1.35	1.17	0.99	2.84	1.54	315,718	720
Wisconsin	63.19	4.74	25.39	4.27	4.26	1.98	2.26	1.46	4.90	2.12	640,276	702
Wyoming	58.80	5.61	29.45	5.20	3.79	2.18	2.04	1.61	5.92	2.69	63,279	412

Note: CI = 95% confidence interval. Values with insufficient data are not reported.

Table 2-3

1995/1996 Current Population Survey: Current Smoking Status among Self-Respondents, 25 Years and Older, Identified as Daily Smokers 1 Year Ago

	Current Smoking Status											
	Daily						Former				Population Size (N)	Sample Size (n)
	No Quit Attempts		Quit Attempts		Occasional		Quit < 3 Months		Quit 3+ Months			
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI		
Total	68.3	0.6	23.2	0.5	2.9	0.2	1.9	0.2	3.6	0.2	32,402,966	32,917
Male	68.7	0.8	22.7	0.7	2.7	0.3	2.1	0.2	3.8	0.3	17,058,593	15,358
Female	67.8	0.9	23.7	0.8	3.2	0.3	1.8	0.2	3.5	0.3	15,344,373	17,559
Age (Years)												
25–44	66.5	0.8	25.0	0.7	3.1	0.3	2.0	0.2	3.4	0.3	18,390,046	18,168
45–64	70.1	1.0	21.9	0.9	2.5	0.3	1.9	0.3	3.6	0.4	10,989,936	11,328
65+	72.8	1.8	16.5	1.5	3.8	0.8	1.9	0.6	5.0	0.9	3,022,984	3,421
Race/Ethnicity												
Non-Hispanic White	68.8	0.6	22.6	0.6	2.7	0.2	2.1	0.2	3.8	0.3	26,285,210	27,991
Hispanic	68.0	3.5	23.0	3.2	4.1	1.5	1.4	0.9	3.6	1.4	1,699,613	1,278
African-Americ.	65.3	1.9	26.7	1.7	4.3	0.8	1.2	0.4	2.4	0.6	3,432,483	2,681
Asian/PI	62.9	4.6	26.8	4.2	3.7	1.8	2.1	1.3	4.6	2.0	593,903	507
Native Americ.	68.1	5.4	23.3	4.9	3.2	2.1	2.7	1.9	2.6	1.9	391,757	460
Education (Years)												
<12	73.7	1.2	19.8	1.1	2.4	0.4	1.4	0.3	2.7	0.5	6,436,011	6,297
12	69.8	0.9	22.5	0.8	2.6	0.3	1.8	0.3	3.3	0.3	13,951,150	14,391
13–15	63.7	1.2	26.2	1.1	3.5	0.5	2.4	0.4	4.2	0.5	8,434,966	8,627
16+	63.8	1.8	24.8	1.6	3.7	0.7	2.5	0.6	5.2	0.8	3,580,839	3,602
Household Income (Dollars)												
<10,000	69.3	1.6	22.6	1.4	3.4	0.6	1.7	0.4	3.0	0.6	4,484,102	4,529
10,000-19,999	70.1	1.4	22.5	1.2	2.7	0.5	1.3	0.3	3.4	0.5	5,815,762	5,998
20,000-29,999	69.5	1.4	22.6	1.3	2.5	0.5	2.0	0.4	3.3	0.5	5,707,800	5,843
30,000-49,999	66.5	1.2	24.4	1.1	3.1	0.4	2.2	0.4	3.8	0.5	7,838,442	8,086
50,000-74,999	65.8	1.7	25.0	1.5	2.9	0.6	2.4	0.5	3.9	0.7	4,157,714	4,179
75,000 +	64.6	2.3	23.6	2.1	3.2	0.9	2.7	0.8	5.8	1.1	2,175,925	2,099
Unknown	73.2	2.1	19.2	1.9	2.9	0.8	1.5	0.6	3.1	0.8	2,223,221	2,183

Table 2-3 (continued)

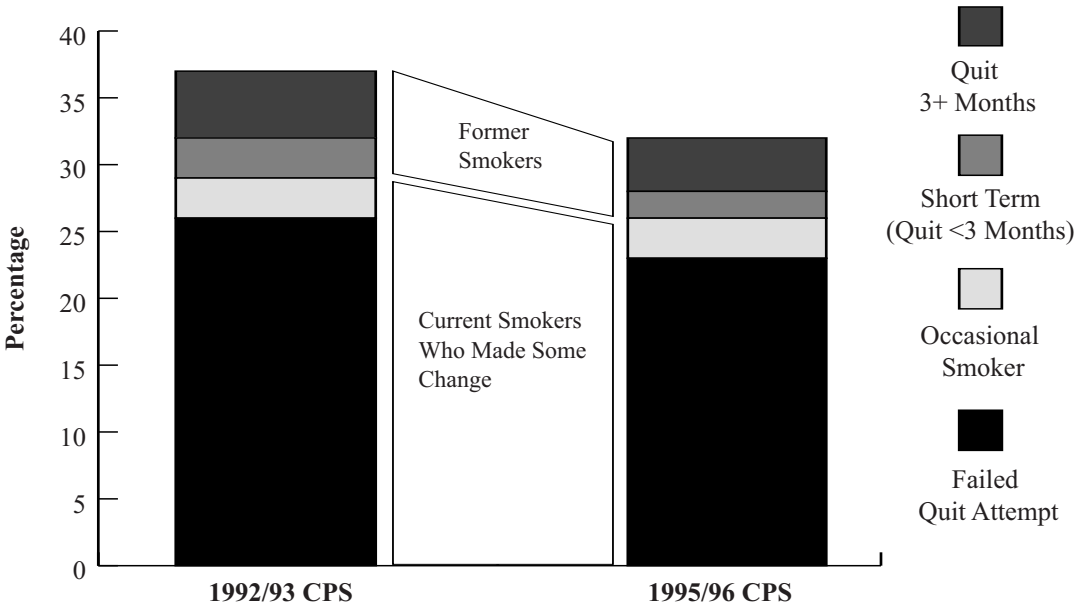
	Current Smoking Status											
	Daily						Former				Population	Sample
	No Quit Attempts		Quit Attempts		Occasional		Quit < 3 Months		Quit 3+ Months		Size	Size
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	(N)	(n)
States												
Alabama	65.3	5.0	27.5	4.7	3.5	1.9	1.5	1.3	2.2	1.5	523,282	462
Alaska	65.0	4.8	26.2	4.5	3.5	1.9	1.3	1.1	4.0	2.0	74,796	318
Arizona	65.0	4.9	22.6	4.3	2.8	1.7	4.0	2.0	5.6	2.4	487,618	486
Arkansas	73.7	4.1	19.2	3.7	1.8	1.3	1.6	1.2	3.8	1.8	376,963	517
California	64.3	2.3	24.2	2.1	4.4	1.0	2.1	0.7	4.9	1.1	2,784,977	1,705
Colorado	65.3	5.1	23.3	4.5	3.9	2.1	2.9	1.8	4.6	2.2	442,528	453
Connecticut	64.5	5.7	28.3	5.3	2.1	1.7	1.9	1.6	3.2	2.1	372,503	270
Delaware	73.2	4.7	19.4	4.2	2.7	1.7	1.8	1.4	2.9	1.8	97,745	363
District of Columbia	65.7	5.9	25.2	5.4	4.1	2.5	2.0	1.7	3.0	2.1	59,954	271
Florida	67.0	2.4	24.0	2.2	2.8	0.8	2.0	0.7	4.3	1.0	1,827,730	1,467
Georgia	68.9	4.5	23.7	4.1	2.2	1.4	2.9	1.6	2.3	1.4	868,971	518
Hawaii	66.3	5.6	22.1	4.9	4.3	2.4	2.4	1.8	4.9	2.6	127,499	236
Idaho	67.5	4.9	20.2	4.2	3.9	2.0	3.9	2.0	4.6	2.2	130,940	454
Illinois	70.2	2.6	22.1	2.4	3.0	1.0	1.6	0.7	3.0	1.0	1,493,937	1,356
Indiana	74.6	4.0	18.8	3.6	2.2	1.3	0.8	0.8	3.5	1.7	920,599	565
Iowa	70.5	4.8	21.8	4.3	2.2	1.5	1.8	1.4	3.6	1.9	350,680	459
Kansas	73.6	4.5	20.5	4.2	2.7	1.7	0.9	1.0	2.3	1.6	335,856	494
Kentucky	72.8	3.8	20.9	3.5	0.9	0.8	2.9	1.4	2.5	1.3	694,650	590
Louisiana	71.7	4.6	19.5	4.0	3.5	1.9	1.4	1.2	3.9	2.0	533,278	393
Maine	67.2	4.6	25.3	4.3	1.6	1.2	1.4	1.1	4.5	2.0	190,227	443
Maryland	63.9	5.5	25.7	5.0	4.5	2.4	2.3	1.7	3.6	2.1	559,659	332
Massachusetts	62.0	3.4	28.1	3.1	2.7	1.1	2.8	1.1	4.4	1.4	713,012	825
Michigan	63.1	2.8	28.0	2.6	3.2	1.0	1.5	0.7	4.2	1.1	1,329,879	1,389
Minnesota	64.6	5.2	26.6	4.8	4.1	2.1	2.0	1.5	2.6	1.7	539,599	478
Mississippi	69.0	4.7	23.9	4.3	2.0	1.4	2.1	1.5	3.0	1.7	343,817	403

Table 2-3 (continued)

	Current Smoking Status											
	Daily						Former				Population	Sample
	No Quit Attempts		Quit Attempts		Occasional		Quit < 3 Months		Quit 3+ Months		Size	Size
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	(N)	(n)
Missouri	70.1	4.5	22.7	4.1	1.9	1.3	1.7	1.3	3.7	1.8	773,750	503
Montana	69.4	4.6	21.8	4.1	3.0	1.7	1.9	1.4	3.8	1.9	113,892	523
Nebraska	69.0	5.0	22.8	4.6	3.2	1.9	3.0	1.9	1.9	1.5	177,818	418
Nevada	70.4	4.2	23.3	3.9	1.7	1.2	1.5	1.1	3.0	1.6	247,950	451
New Hampshire	64.2	5.2	24.4	4.7	4.0	2.1	2.6	1.7	4.8	2.3	161,335	364
New Jersey	70.0	2.9	21.6	2.6	2.0	0.9	2.5	1.0	3.8	1.2	894,347	937
New Mexico	64.9	4.9	24.5	4.4	4.1	2.0	2.3	1.5	4.2	2.1	196,482	439
New York	68.0	2.1	23.3	1.9	3.1	0.8	1.9	0.6	3.8	0.9	2,040,575	1,794
North Carolina	74.2	2.8	18.2	2.5	2.8	1.1	1.8	0.8	3.0	1.1	1,035,647	1,226
North Dakota	72.7	4.8	19.7	4.3	2.8	1.8	3.1	1.9	1.8	1.5	74,276	455
Ohio	71.2	2.5	21.1	2.2	2.2	0.8	1.9	0.7	3.5	1.0	1,606,599	1,534
Oklahoma	73.8	4.2	20.8	3.9	2.6	1.5	1.0	1.0	1.8	1.3	448,326	588
Oregon	70.2	5.1	21.3	4.5	2.9	1.9	1.4	1.3	4.2	2.2	374,521	389
Pennsylvania	68.0	2.5	23.7	2.3	2.9	0.9	1.6	0.7	3.8	1.0	1,595,350	1,572
Rhode Island	60.3	5.2	30.1	4.9	3.0	1.8	2.1	1.5	4.5	2.2	137,521	345
South Carolina	77.9	4.1	16.7	3.7	2.3	1.5	1.8	1.3	1.4	1.1	508,076	393
South Dakota	64.8	4.8	25.9	4.4	4.1	2.0	2.1	1.5	3.1	1.8	84,867	494
Tennessee	71.3	4.1	20.0	3.6	2.8	1.5	1.8	1.2	4.2	1.8	823,937	510
Texas	67.8	2.6	24.4	2.4	3.2	1.0	1.5	0.7	3.1	1.0	2,125,005	1,415
Utah	69.3	6.1	23.0	5.6	3.1	2.3	2.1	1.9	2.6	2.1	132,775	265
Vermont	67.7	4.9	23.7	4.5	2.3	1.6	2.0	1.5	4.3	2.1	84,435	404
Virginia	68.9	4.3	23.6	4.0	1.8	1.2	1.5	1.1	4.2	1.9	892,527	570
Washington	64.3	5.3	26.3	4.9	2.4	1.7	3.5	2.1	3.4	2.0	645,346	398
West Virginia	71.5	3.9	20.6	3.5	2.9	1.5	1.5	1.1	3.4	1.6	295,884	628
Wisconsin	64.2	4.8	25.1	4.3	4.5	2.1	2.4	1.5	3.7	1.9	686,410	551
Wyoming	70.7	4.8	20.0	4.2	2.6	1.7	2.0	1.5	4.8	2.3	64,619	504

Note: CI = 95% confidence interval.

Figure 2-1
1992/93 and 1995/96 CPS: Percentage of Daily Smokers 1 Year Prior to the Survey Who Reported Some Change in Their Smoking Status during that Year, Age 25+ Years



ing this period. It is disconcerting that the largest proportionate decline in the subcomponents of the cessation activity measure was for those who had been quit for 3 months or more (5.1 ± 0.3 percent in 1992/93 declining to 3.6 ± 0.2 percent in 1995/96), since that is the measure with the greatest likelihood of predicting long-term successful cessation.

The 10 states with the highest rates of any cessation activity in 1992/93 were Massachusetts, Maryland, Washington, Wyoming, Vermont, Minnesota, Michigan, New Mexico, Nebraska, and New York. Massachusetts, Maryland, Washington, Minnesota, and Michigan repeated their appearance among the top 10 states in 1995/96. The states with the lowest rates of cessation activity in 1992/93 were the District of Columbia, Alabama, North and South Carolina, Alaska, Indiana, Nevada, Kansas, West Virginia, and Kentucky. The states of Kentucky, Kansas, North and South Carolina, and Indiana were also among the bottom 10 states in 1995/96.

The 10 states with the highest rates of 3+ month successful cessation in 1992/93 were Washington, Rhode Island, Minnesota, Massachusetts, California, Oklahoma, New Mexico, Louisiana, Wyoming, and New Jersey. California, Wyoming, Rhode Island, and Massachusetts were again among the top 10 states in 1995/96. The state with the highest rate of 3+ month cessation in 1995/96 was Arizona, which implemented a tax-funded tobacco control program in 1995. States with the lowest rates of 3+ months of cessation in 1992/93 included North Carolina, Mississippi, Nevada, Alaska,

West Virginia, District of Columbia, Kentucky, North Dakota, and Georgia. Only Kentucky, Georgia, and North Dakota were in the bottom group again in 1995/96.

Extrapolation of differences in these cessation measures between states to differences in the success of tobacco control programs is problematic for several reasons. Small differences between states are often within the confidence intervals of the estimates, and so the relative ranking of states with similar measures has little legitimacy. In addition, population differences between the states in age, education, and racial/ethnic composition can confound the use of these estimates as outcome measures for tobacco control programmatic activity. However, the range of values for these measures across the states is broad relative to the confidence intervals. Therefore, states at the higher end of each measure's range are statistically different from the states at the lower end of the range, and the differences are large enough that they are unlikely to be explained by differences in population demographics alone. For example, when the prevalence estimates for the different states are standardized to the racial and ethnic distribution of the United States, there is little difference in the relative ranking among the different states (unpublished analyses). In order to control for the influence of these demographic differences across the states on the measures of cessation we are using, we will first present analyses of the measures stratified by each demographic factor and then combine these factors in a multivariate logistic regression analysis. This analysis will allow us to examine the influence of the variables on cessation and to examine whether California and Massachusetts have greater rates of cessation activity and success than the remaining states.

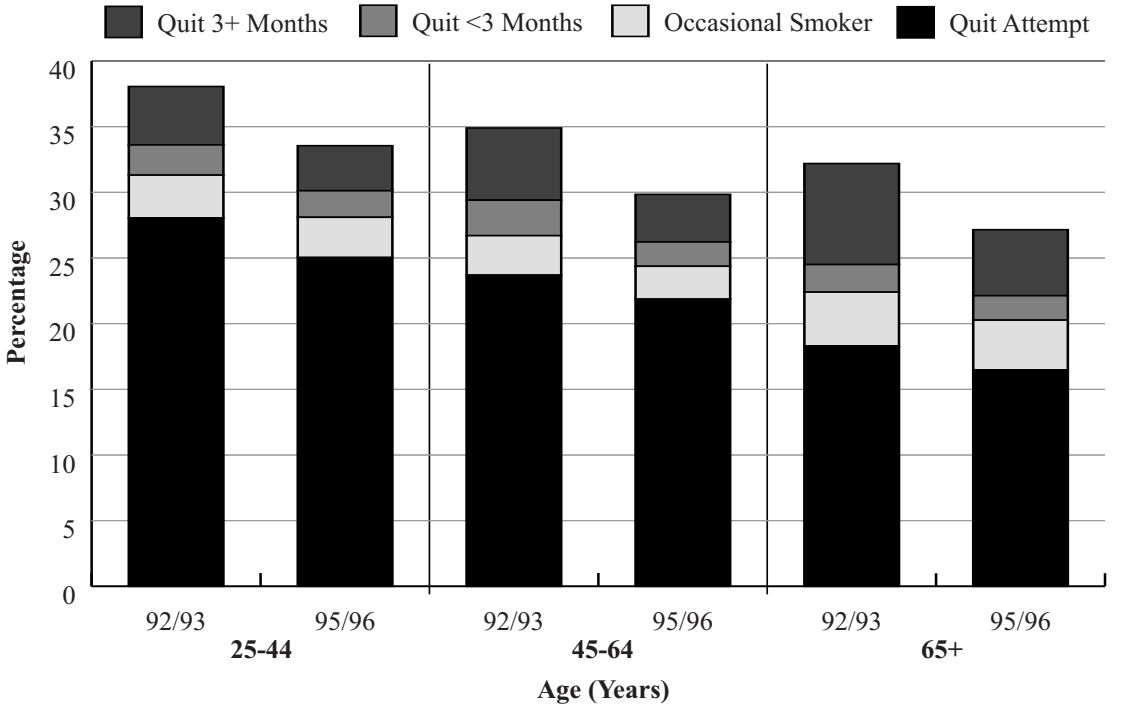
Differences in cessation activity by age, race/ethnicity, education, income, and number of cigarettes smoked per day

There are dramatic differences in cessation activity and success with age (Figure 2-2). Older smokers are much less likely to make a cessation attempt, but are much more likely to be successfully quit for 3 or more months. Both the absolute fraction of daily smokers 1 year prior to the survey who are now former smokers of 3 or more months duration and the fraction of those who have had any cessation activity who are now former smokers of 3 or more months duration are higher at older ages. Thus, older smokers appear to be less likely to attempt to change their smoking behavior; but when they do, they are substantially more likely to be successful. The decline in cessation activity between 1992/93 and 1995/96 as noted in Figure 2-1 is evident for each of the age groups.

Differences among racial and ethnic groups are less pronounced (Figure 2-3). African-Americans have significantly higher rates of cessation activity than non-Hispanic Whites, but they also have significantly lower rates of being quit for 3 or more months. Asian/Pacific Islanders also have significantly higher rates of cessation activity compared to non-Hispanic Whites, with a nonsignificant lower rate of 3+ month cessation success.

Figure 2-4 presents the cessation measures by level of educational attainment and demonstrates that both cessation activity and 3+ month cessation success are significantly higher among smokers with higher levels

Figure 2-2
1992/93 and 1995/96 CPS: Percentage of Daily Smokers 1 Year Prior to the Survey Who Report Some Change in Their Smoking Status during that Year, by Age



of educational attainment. The largest proportional differences across strata of educational attainment are for former smokers and former smokers of 3+ months' duration, where there is almost a doubling in rates from the lowest to the highest level of education. The percentage of all cessation activity that has resulted in 3+ months of successful cessation also increases with increasing level of educational attainment

A similar pattern is seen with level of income (Tables 2-2 and 2-3), where both cessation activity and 3+ month cessation success are significantly higher among smokers with higher family incomes. The percentage of all cessation activity resulting in 3+ months of successful cessation is relatively uniform across the middle strata of family income, but it is higher for the top income stratum and lower for the lowest income stratum.

Table 2-4 shows the current smoking status of individuals who reported that they were daily smokers 1 year prior to the California Tobacco Survey. It presents the change in smoking behavior that occurred over that year, both for changes in number of cigarettes reported and for becoming a former smoker. Most smokers (almost three-quarters) of more than five cigarettes per day continued to smoke the same number of cigarettes, even though many had made a quit attempt during that year. Smokers of 1-4 cigarettes per day were less consistent, with 14.2 percent increasing the amount that they smoked, 18.3 percent becoming occasional smokers, and

Figure 2-3
1992/93 and 1995/96 CPS: Percentage of Daily Smokers 1 Year Prior to the Survey Who Report Some Change in Their Smoking Status during that Year, Age 25+, by Racial or Ethnic Group

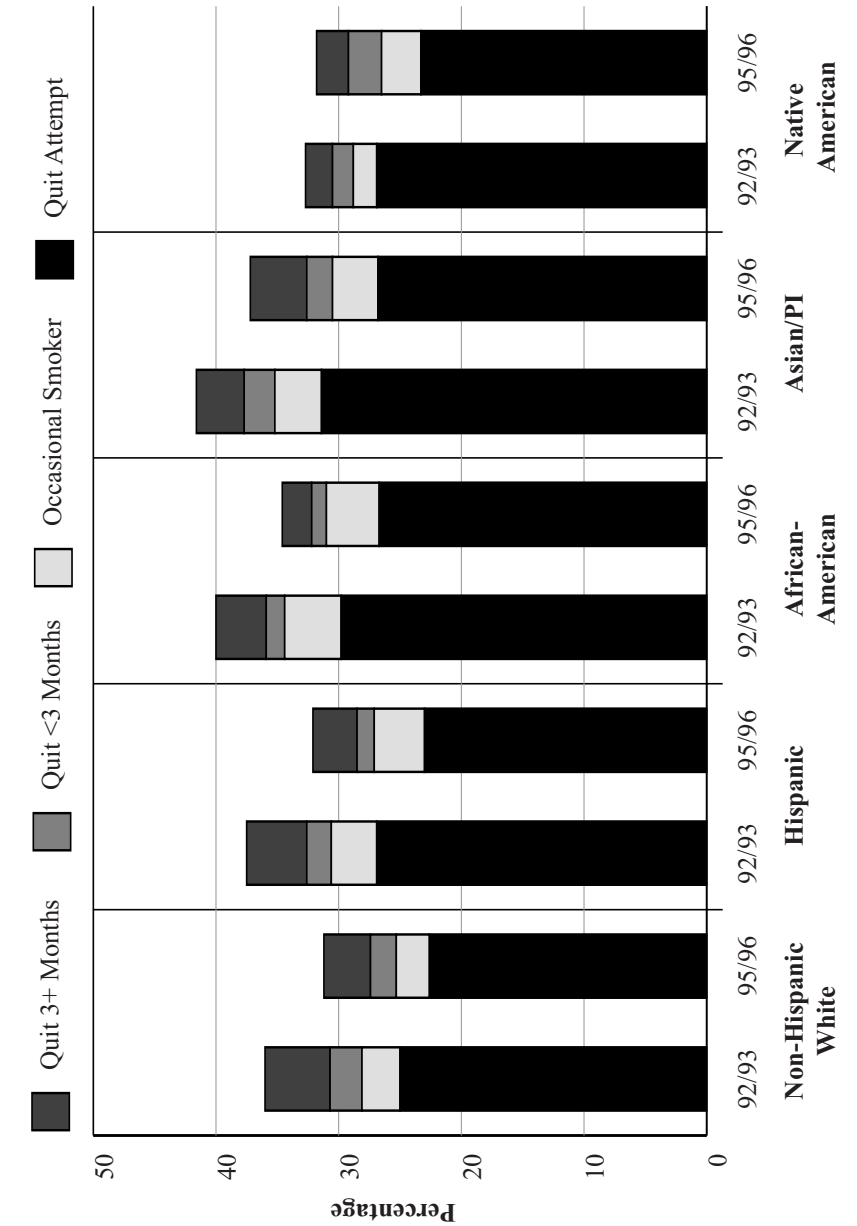


Figure 2-4
1992/93 and 1995/96 CPS: Percentage of Daily Smokers 1 Year Prior to the Survey Who Report Some Change in Their Smoking Status during that Year, Age 25+, by Level of Education

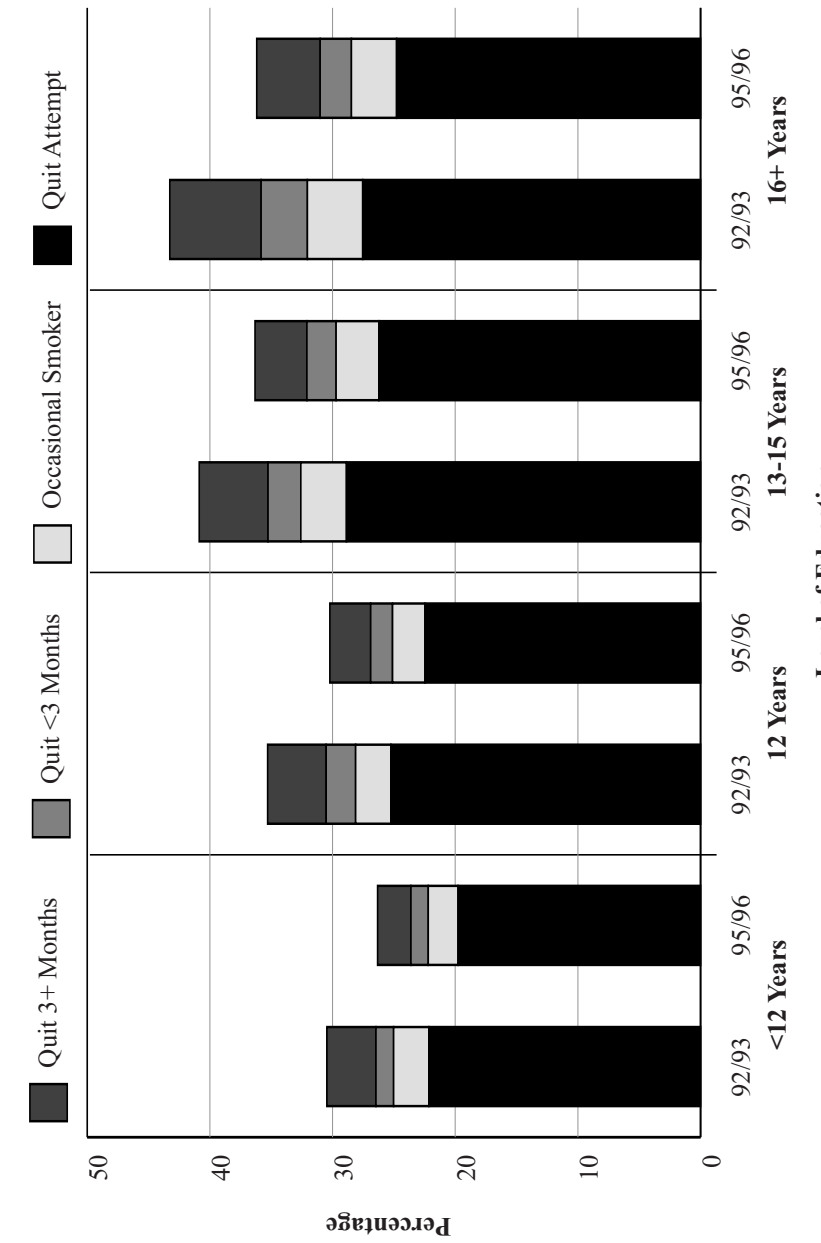


Table 2-4

California Tobacco Survey: Current Smoking Status Compared to Smoking Status 1 Year Ago for Daily Smokers 1 Year Ago, 25 Years and Older

# Smoked 1 Year Ago	Current Smoker: Cigarettes Smoked per Day										Occasional Smoker		Former Smoker: Quit Duration						Pop. Size (N)	Samp. Size (n)
	25+		15–24		5–14		1–4		Unknown				<3 Months		3+ Months		Unknown			
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI		
Overall	18.3	1.1	37.6	1.3	26.0	1.5	2.9	0.5	0.3	0.2	4.6	0.7	4.8	0.7	5.0	0.8	0.4	0.2	2,894,421	6,211
25+	69.5	2.8	13.2	1.8	3.9	1.1	0.6	0.6	0.0	0.1	1.8	0.6	5.2	1.4	5.5	1.1	0.3	0.3	703,264	1,542
15–24	2.7	0.7	74.4	1.6	10.1	1.4	0.8	0.5	0.0	0.0	3.2	0.9	4.2	0.8	4.2	0.9	0.4	0.3	1,266,356	2,835
5–14	0.5	0.4	5.6	1.3	74.1	2.8	1.8	0.7	0.1	0.2	7.0	1.6	5.0	1.3	5.6	1.6	0.4	0.3	779,441	1,560
1–4	0.5	1.1	1.1	1.0	12.6	8.1	50.7	11.0	0.4	0.7	18.3	8.2	8.3	5.9	6.8	3.5	1.3	1.6	106,769	203
Unknown	9.5	8.9	26.1	12.3	20.3	9.6	2.6	3.5	20.8	9.7	11.3	8.5	2.7	3.0	6.7	8.3	.	.	38,593	71

Note: CI = 95% confidence interval; "." = insufficient data.
Data Source: 1996 CTS

16.4 percent quitting. With the exception of this lowest number of cigarettes per day category (1-4 cigarettes per day), there was little difference in the prevalence of being a former smoker or a former smoker of 3+ months duration with increasing number of cigarettes per day. However, the prevalence of being a current occasional smoker declined significantly when those who smoked 5-14 cigarettes per day 1 year prior to the survey were compared to those who smoked 25 or more cigarettes per day, suggesting that heavy smokers are less likely to become occasional smokers as a change in smoking behavior.

MULTIVARIATE LOGISTIC MODELING OF CESSATION DATA

As described above, smoking prevalence and cessation rates vary substantially with age, race/ethnicity, and other demographic characteristics; and income and educational attainment are not evenly distributed across racial and ethnic subgroups of the population. This makes it difficult to evaluate the actual influence of these characteristics on cessation rates from stratified analyses alone. Multivariate logistic regression modeling techniques allow the effects of each characteristic to be estimated while controlling for the influence of the other characteristics in the model. The results of this approach can be expressed as a set of odds ratios which estimate the ratio of a given cessation measure—*e.g.*, 3+ month successful cessation—among individuals with different levels of a characteristic—*e.g.*, level of income—while controlling for the effects of the other characteristics—*i.e.*, gender, age, race/ethnicity, education, and number of cigarettes smoked per day. This form of analysis gives a much clearer picture of the real influence of these demographic characteristics on the smoking cessation measures. These analyses were performed on the CPS data for 1992/93 and for 1995/96, and the complete results for each of the cessation measures are presented in Appendix 1 as Tables 2-10 and 2-11. A more complete description of these methods is presented as Appendix 2.

The discussion that follows is largely confined to an examination of "Any cessation activity" (the measure labeled change in the tables, which includes those who make a cessation attempt, become occasional smokers, or are former smokers of any duration) and the measures of "Cessation of any length" and "Cessation of 3+ months."

Figure 2-5 presents the odds ratios from a multivariate logistic regression analysis of the 1992/93 CPS data for any cessation activity (quit attempt, becoming an occasional smoker, or successful quitting) in the prior year among those who were daily cigarette smokers 1 year prior to the survey and who were at least 25 years of age. Figure 2-6 presents that same analysis for the 1995/96 CPS. It is clear that the independent effects of race and ethnicity on cessation activity seen in Figure 2-3 are much less dramatic once adjustments are made for the differences in education, income, and number of cigarettes smoked per day across the different racial and ethnic groups. African-Americans have a slightly higher rate of cessation activity compared to non-Hispanic Whites in 1992/93, but not in 1995/96; whereas Hispanic smokers have minimally lower rates of cessation activity in 1995/96, but not in 1992/93.

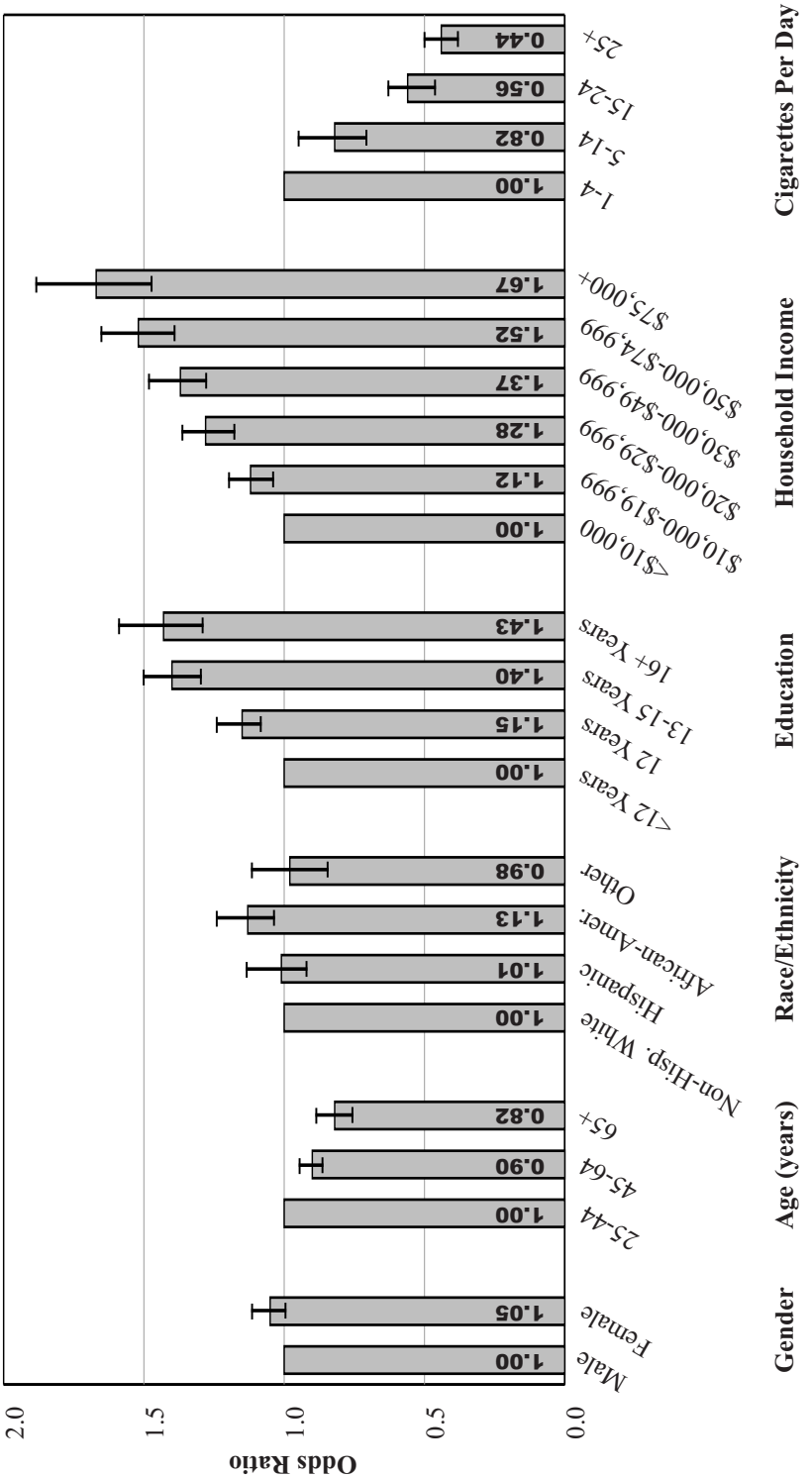
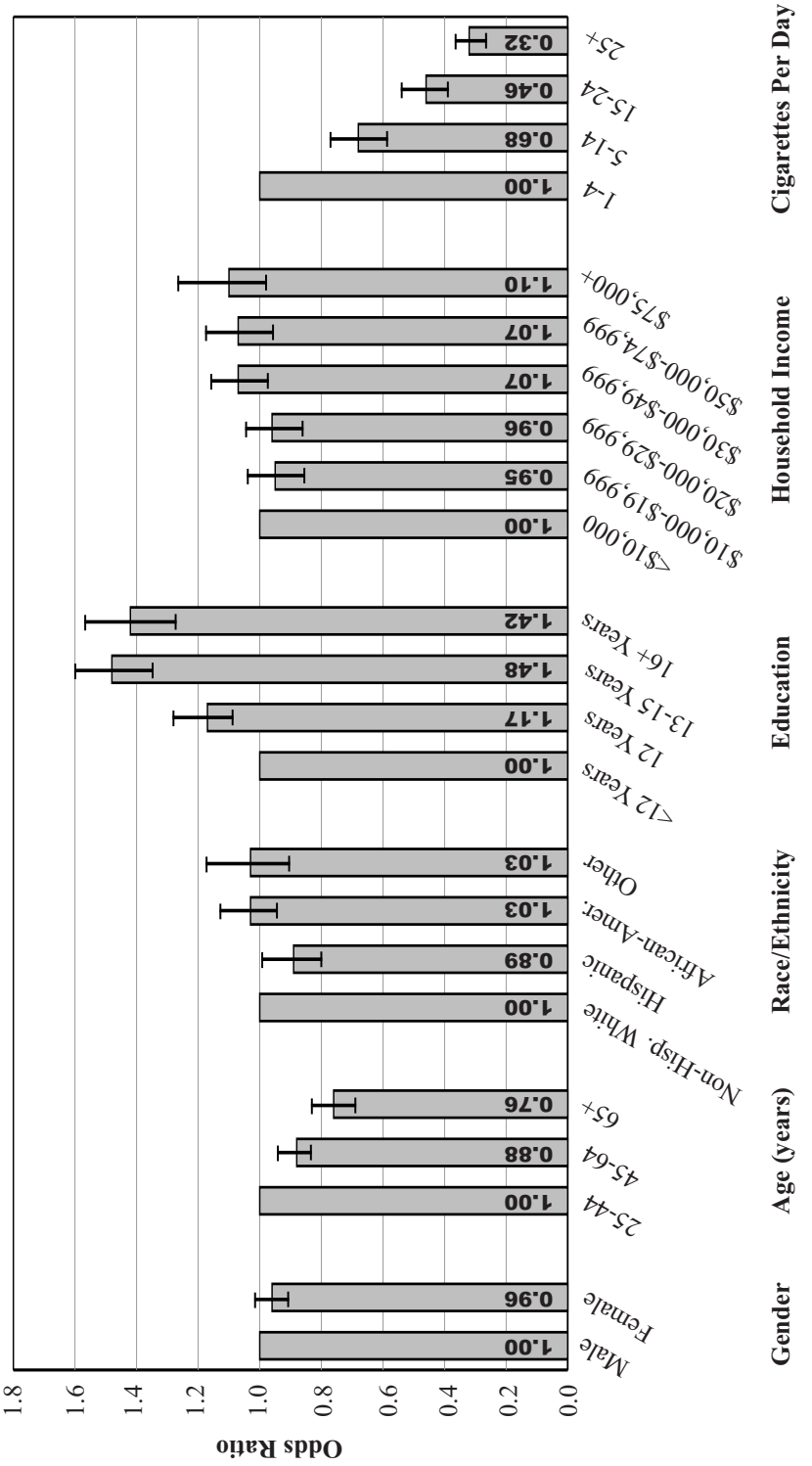


Figure 2-5
Current Population Survey 1992/93: Odds Ratios for Any Cessation Activity

Figure 2-6
Current Population Survey 1995/96: Odds Ratios for Any Cessation Activity



In contrast to the similarity of cessation activity across racial and ethnic groups, there are substantial effects of age, education, income, and cigarettes smoked per day. In both surveys, rates of any cessation activity decline with increasing age and number of cigarettes smoked per day. However, cessation activity increased with increasing level of educational attainment in both surveys. The effect of income was different between surveys. In 1992/93, there was a dramatic and consistent increase in cessation activity with increasing level of income, but in the 1995/96 survey there was no income effect. When similar multivariate logistic analyses are performed on the 1990 and 1996 California Tobacco Surveys (Tables 2-12 and 2-13 in Appendix 1), there are also no consistent effects with level of income. This suggests that there may be no continuing effect of level of income on cessation activity once age and level of education are controlled for in the analyses, but that there *was* an effect in 1992/93, possibly due to a reduction in cigarette price during that period. Philip Morris reduced the price of Marlboro cigarettes in 1993, and the other manufacturers followed suit. The effect found in the analyses of the 1992/93 CPS data may have been due to higher cessation activity among higher income groups during these years, but a more likely explanation would be a reduction in cessation activity among lower income smokers for whom price can more reasonably be argued to have an effect.

Figures 2-7 and 2-8 present multivariate logistic regression analyses of the 1992/93 and 1995/96 CPS for the measure of successful cessation (3+ month former smokers). The odds ratios for 3+ month cessation success presented in Figures 2-7 and 2-8 are a result of the cessation activity presented in Figures 2-5 and 2-6. One might expect that those factors that lead to higher rates of cessation activity might also lead to higher rates of 3+ month successful cessation because one must make a quit attempt in order to become a former smoker. This pattern is indeed present for the relationship with educational attainment, where both cessation activity and 3+ month cessation success increase with increasing level of education. However, a quite different pattern emerges when the effects of age or cigarettes smoked per day are examined.

The odds ratios for cessation activity decrease significantly with increasing age for both the 1992/93 and 1995/96 CPS (Figures 2-5 and 2-6, change measure in Tables 2-9 and 2-10). However, the odds ratios for 3+ month successful cessation increases with increasing age (Figures 2-7 and 2-8, Tables 2-10 and 2-11), even in the face of fewer attempts to quit. This suggests that the factors that drive cessation attempts may differ from the factors that determine cessation success. It also suggests that older smokers may be less likely to try to change their smoking behavior, but when they do try to quit, they are far more likely to be successful. Similar results were seen for the 1990 and 1996 CTS (Tables 2-12 and 2-13), but the results were not always statistically significant.

The pattern of cessation with increasing number of cigarettes smoked per day is also complex. There is a clear decline in cessation activity (change measure in the tables) with increasing number of cigarettes smoked per day. However, the association with cessation success is less clear (Figures

2-7 and 2-8). Those who reported smoking 1-4 cigarettes per day were significantly more likely to be successfully quit for 3+ months than were smokers who reported smoking 5-14 or 15-24 cigarettes per day. Successful cessation was less likely for those smoking 25+ cigarettes per day than for those smoking 1-4 cigarettes per day, but the difference was not statistically significant. However, once the category of 1-4 cigarettes per day is excluded, there is no trend of lower likelihood of 3+ month successful cessation with increasing number of cigarettes smoked per day across the remaining number of cigarettes per day categories.

It is possible that overreporting of the number of cigarettes smoked per day by former smokers may contribute to the absence of a progressive decline in the likelihood of successful cessation, but the absence of any suggestion of a trend would be difficult to explain by overreporting alone. Additionally, a follow-up of respondents to the 1990 California Tobacco Survey was conducted in 1992, and the rates of 3+ month cessation at the time of follow-up for those who reported smoking different numbers of cigarettes per day in 1990 are as follows: 25+ cigarettes/day, 7.25 percent; 15-24 cigarettes/day, 6.60 percent; 5-14 cigarettes/day, 10.7 percent; 1-4 cigarettes/day 23.53 percent. These rates are based on small numbers of observations and are not representative of the population, but they suggest that even when number of cigarettes smoked per day is recorded before a cessation attempt, there is little variation in rates of cessation lasting 3+ months or more among those who smoke five or more cigarettes per day. The high rates of cessation among those who smoke 1-4 cigarettes per day may reflect a substantial number of smokers in this category who are smoking this low number of cigarettes per day because they are actively attempting to change their smoking behavior.

In contrast to the CPS data, a logistic regression performed on data from a 5-year longitudinal follow-up of 13,415 current smokers from the COMMIT Study (Hymowitz *et al.*, 1997) revealed a consistent trend in declining cessation success with increasing number of cigarettes smoked per day. It is unclear whether the differences between the results of these two studies are due to differences in their data collection design (longitudinal vs. cross-sectional), differences in the calendar years in which the data were collected, or differences in the outcome measures recorded. These data taken together suggest that smokers of 25 or more cigarettes per day are less likely to attempt to quit. It is less certain whether those who have made an attempt to quit are less likely to be successful if they are heavy smokers.

Cessation in states with large tobacco control programs (California and Massachusetts) compared to the rest of the United States

Recent evidence has demonstrated a slowing of the rate of decline in cigarette consumption and smoking prevalence for both the nation and for California. Analyses of these trends have raised questions about the recent effectiveness of the California Tobacco Control Campaign (Pierce *et al.*, 1998a & b), with the suggestion that reductions in funding have dramatically reduced the effectiveness of tobacco control effort during the 1993-1996 period. Cessation is one measure of the effectiveness of tobacco control programs; and various cessation measures for California and Massachusetts—two states with large,

Figure 2-7
Current Population Survey 1992/93: Odds Ratios for Successful Cessation of 3+ Months Duration

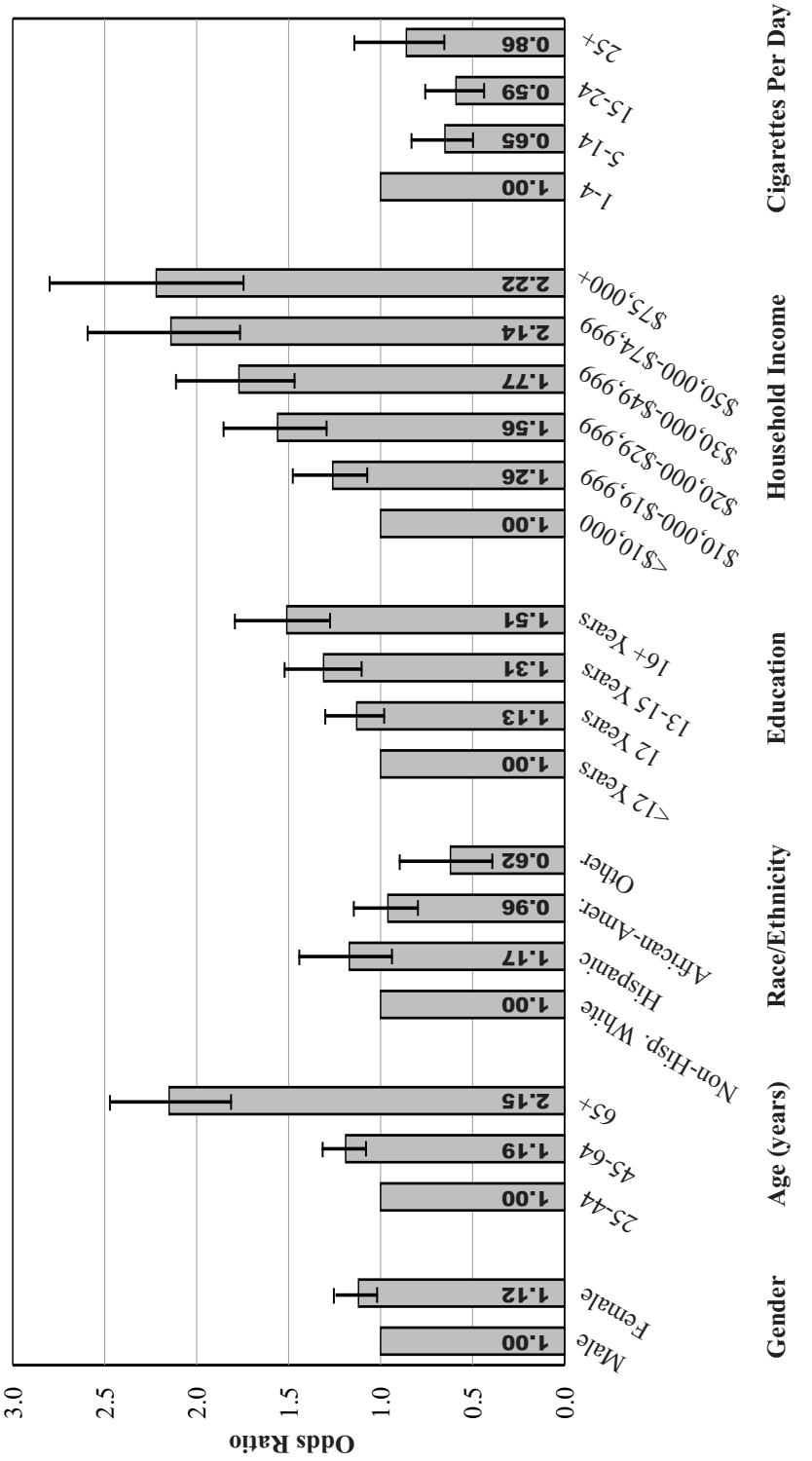
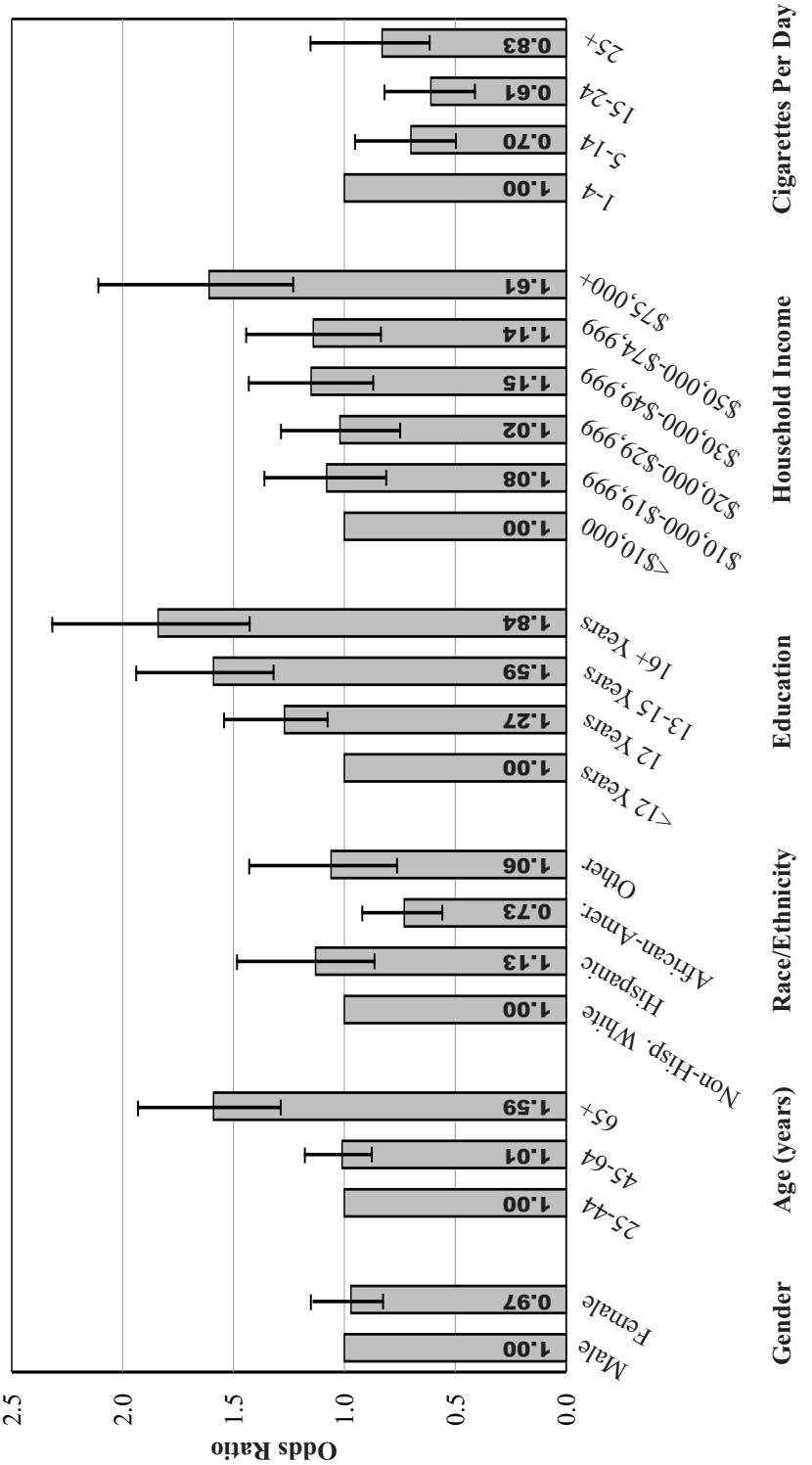


Figure 2-8
Current Population Survey 1995/96: Odds Ratios for Successful Cessation of 3+ Months Duration



well-funded tobacco control programs—can be compared to the remaining 48 states using the two sets of CPS survey data. Because smoking prevalence and cessation are influenced by differences between states in demographic characteristics and number of cigarettes smoked per day, it is difficult to directly compare population prevalence measures of current smoking or of cessation as an evaluation of the differences in the effectiveness of various states' tobacco control efforts. We examine measures of cessation among adults as one direct measure of the success of these tobacco control efforts using multivariate logistic regression analyses to control for demographic differences and differences in number of cigarettes smoked per day. We compare measures of cessation among California and Massachusetts adults with those of the remaining states.

To control for differences between California and the remaining states in demographic composition and numbers of cigarettes smoked per day, multivariate logistic regression modeling of the cessation measures was conducted for each of the surveys and then for the combined survey data set, with survey year and geographic location (California, Massachusetts, or other states) as variables in the analysis. The odds ratios for these analyses are presented in Table 2-5, and the complete results of the analysis are presented in Table 2-14.

The results demonstrate a clear time trend across the two surveys. There was a significant decline in the prevalence of any cessation activity and of 3+ month cessation success between the 1992/93 and 1995/96 surveys, with no significant change in the likelihood of becoming an occasional smoker.

Both California and Massachusetts had statistically significantly higher cessation activity (the change measure in the tables) compared to other states. Massachusetts had an increase in cessation attempts, and California had an increase in likelihood of becoming an occasional smoker. Both Massachusetts and California also had increases in the likelihood of a current daily smoker becoming a former smoker in the last year, compared to other states. The likelihood of achieving 3+ months of cessation was also significantly higher in California—and higher with borderline significance ($p = 0.051$) for Massachusetts—when compared to the remaining states.

These analyses demonstrate that cessation activity declined in Massachusetts, California, and the rest of the states between 1992/93 and 1995/96. However, California and Massachusetts had higher rates of successful cessation and cessation activity when compared to the remaining states. The higher rates of cessation activity and cessation success in California and Massachusetts provides evidence for a substantial impact of the tobacco control programs on cessation in these two states.

CESSATION IN CALIFORNIA

Michael Johnson and Jacqueline Major

In 1988, California passed Proposition 99, which increased the taxes on cigarettes by 25 cents per pack, and a part of that tax increase was used to fund a tobacco control program. As part of that program, detailed surveys of smoking behavior were conducted in 1990 and 1996, with more limited surveys conducted in 1992 and 1993.

Table 2-5

Odds Ratios* and 95% Confidence Intervals for Measures of Cessation in California and Massachusetts Compared to the Remaining States

	Cessation Activity[1]		Cessation Attempt[2]		Occasional[3]		Former (any length)		Former, 3+ Months	
Variable	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI
Survey Year										
1992/3	1.00		1.00		1.00		1.00		1.00	
1995/6	0.80	(0.78 -0.83)	0.80	(0.77 -0.82)	0.94	(0.86 -1.03)	0.73	(0.68 -0.77)	0.70	(0.65 -0.76)
Region										
Rest of USA	1.00		1.00		1.00		1.00		1.00	
California	1.06	(1.00 -1.12)	1.04	(0.98 -1.10)	1.30	(1.13 -1.49)	1.20	(1.09 -1.33)	1.32	(1.17 -1.49)
Massachusetts	1.28	(1.15 -1.42)	1.30	(1.17 -1.45)	1.00	(0.74 -1.34)	1.31	(1.09 -1.56)	1.24	(1.00 -1.55)

[1]Cessation Activity: Includes those who have made a quit attempt, have become occasional smokers, or have become former smokers.

[2]Cessation Attempt: Includes those who have made a quit attempt or have become former smokers. Occasional smokers are excluded from both the numerator and denominator.

[3]Occasional: Includes those who reduced from smoking everyday, to smoking some days.

**Also adjusted for gender, age, race/ethnicity, education, household income, and number of cigarettes per day.*

Differences between the CPS for California and CTS Data

When the results of the 1996 California Tobacco Surveys are compared to the 1995/96 CPS data for the state of California, some differences in the cessation measures are evident. The CPS data estimate that a higher fraction of those who were daily smokers 1 year prior to the survey had not made an attempt to quit (64.3 ± 2.4 percent, Table 2-3; compared to 53.6 ± 1.4 percent, Table 2-16), and the fraction who were former smokers of less than 3 months duration was lower in the CPS (2.2 ± 0.7 percent) than in the CTS (4.8 ± 0.7 percent). The rates for occasional smoking and for cessation of 3+ months' duration are essentially identical. It is unclear whether the differences between these two surveys in frequency of these cessation measures relate to the survey designs, the populations sampled, or the timing of the surveys.

Distribution of the Cessation Measures in the CTS Data

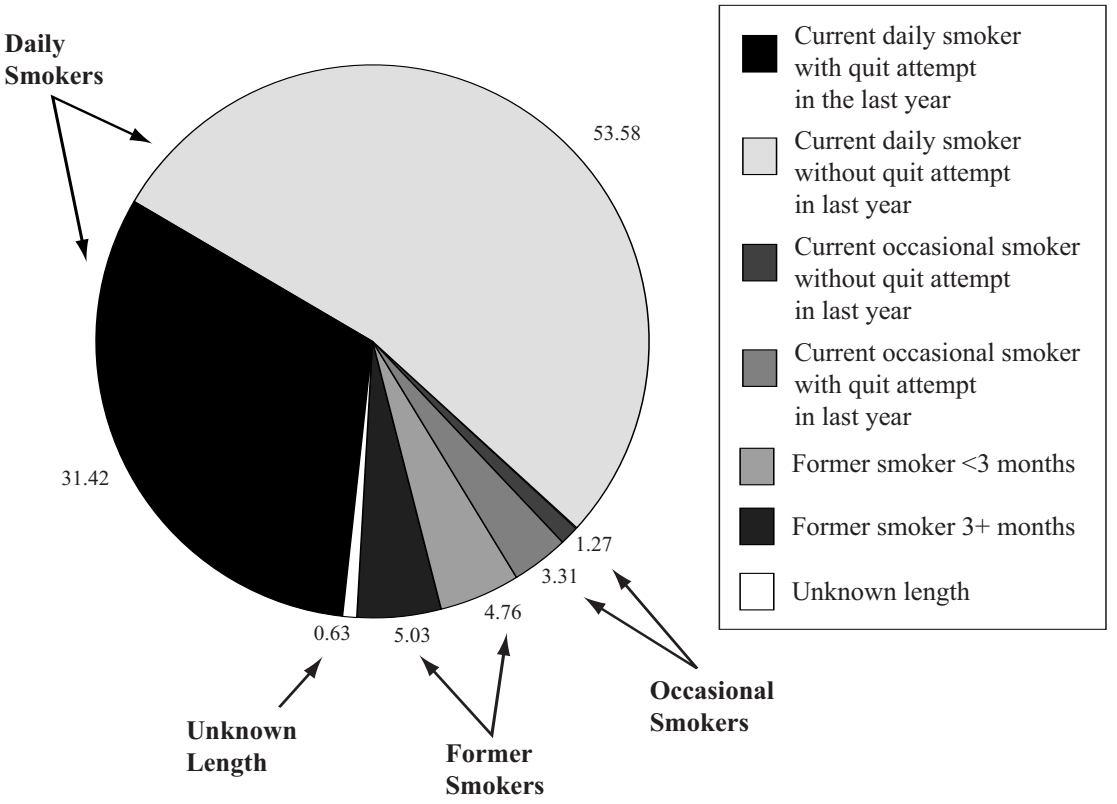
Figure 2-9 and Table 2-6 present the current smoking status among those age 25 and older who were daily smokers 1 year prior to the survey for the 1996 California Tobacco Survey. Because this survey asked occasional smokers about cessation attempts in the last year, it is possible to demonstrate that nearly 75 percent of those smokers who reported shifting from daily smoking to occasional smoking also made a quit attempt in the previous year. This suggests that many of these former daily smokers who are current occasional smokers are either in process of cessation or in the process of relapsing from a cessation attempt.

Incorporating the cessation attempt information for occasional smokers into the cessation attempt measure allows estimation of the frequency of cessation attempts for all those who were daily cigarette smokers 1 year prior to the survey, including those who had become occasional smokers. Using the 1996 CTS data, approximately 45 percent of those who were daily smokers 1 year prior to the survey made cessation attempts and almost 10 percent were successfully quit at the time of the survey.

Change in Cessation between 1990 and 1996

Cessation measures for the California surveys were calculated using the same approach that was utilized for the CPS data, as presented in the first section of this chapter. Table 2-6 presents the measures of cessation for the 1990 and 1996 CTS. There is a small and not statistically significant decline in the fraction of former daily smokers who have been quit for 3 or more months—consistent with that seen in the CPS. However, there is little suggestion from these data of a substantial decline in rates of cessation success or cessation attempts in California between 1990 and 1996. There is a small increase in the prevalence of occasional smoking between these two surveys, but this difference is probably due to a change in the definition of current smoking used in the CTS. Current smokers of at least 100 lifetime cigarettes were defined by the question “Do you smoke everyday, some days or not at all?” in the 1996 CTS and in the 1990 survey by the question “Do you smoke cigarettes now?” followed by “Do you smoke everyday or some days?” for positive answers to the first query. Tables 2-15 and 2-16 present the cessation measures for California by demographic characteristics for the 1990 and 1996 CTS.

Figure 2-9
California Tobacco Survey 1996: Current Smoking Status among Those who were Daily Cigarette Smokers 12 Months Ago, Ages 25 and Older



Multivariate logistic regression analyses were also performed on the 1990 and 1996 CTS in order to examine the influence of demographic characteristics and number of cigarettes smoked per day on the measures of change, and they are presented as Tables 2-12 and 2-13. In general, the results of these analyses were similar to those found when the analyses were performed on the CPS data. There was an increased likelihood of cessation activity (the change variable in the table) and cessation success with increasing levels of education in 1990, but the effect of education was markedly reduced or eliminated in the 1996 data. A decreasing likelihood of cessation activity, but greater likelihood of cessation success, was evident with increasing age in both surveys, although the effect was not statistically significant in the 1996 survey. There was also a decline in cessation activity with little falloff in cessation success for increasing number of cigarettes smoked per day in both surveys.

In 1990, there was a higher likelihood of cessation activity among African-American and Hispanic smokers when compared to Non-Hispanic Whites, and Hispanic smokers had a significantly higher likelihood of successful cessation and of being successful for 3 or more months. By 1996, the

Table 2-6

Current Smoking Status among Self-Respondents, Age 25 and Older, Identified as Daily Smokers 1 Year Ago by the 1990 and 1996 California Tobacco Surveys

	Daily				Occasional				Former					
	Quit Attempts		Without Quit Attempts		Quit Attempts		Without Quit Attempts		Quit <3 Months		Quit 3+ Months		Quit Unknown Duration		Population Size	Sample Size
Year	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	(N)	(n)
1990	32.67	1.72	53.20	1.72	2.64	0.51	0.84	0.32	4.15	0.68	5.56	0.73	0.95	0.50	3,419,535	7,260
1996	31.42	1.28	53.58	1.40	3.31	0.53	1.27	0.45	4.76	0.66	5.03	0.79	0.63	0.22	2,894,421	6,211

Note: CI = 95% confidence interval.

cessation activity measure for Hispanic smokers had a lower odds ratio but was still statistically significant; however, their likelihood of successful cessation was no longer statistically significantly different from those of Non-Hispanic White smokers.

Among African-Americans, the odds ratio for cessation activity (change) was statistically significantly higher when compared to Non-Hispanic White smokers for both the 1990 and 1996 CTS, but their likelihood of cessation success was significantly lower than for Non-Hispanic Whites in 1996. It is clear that there has been a decline in cessation activity and cessation success among both African-American and Hispanic smokers in California between 1990 and 1996. In 1990, both groups had increased rates of cessation activity, and Hispanic smokers had increased rates of cessation success, but by 1996 odds ratios for cessation activity among Hispanic smokers had fallen, and the likelihood of cessation success was significantly lower among African-Americans when compared to non-Hispanic Whites. These analyses control for differences in education and income as well as for number of cigarettes smoked per day among the different racial and ethnic groups. When the effects of poverty and low educational attainment are added to the effects of race and ethnicity, the picture of cessation for these groups becomes even more bleak. The magnitude of the change in California and the absence of similar changes in the CPS data suggest that the California Tobacco Control program may have preferentially reached African-American and Hispanic smokers in the early years of the program, but the effect appears to have largely disappeared by 1996.

SMOKING BEHAVIOR IN MASSACHUSETTS: 1993 TO 1997

Lois Biener

A 25-cent per pack tax on cigarettes was implemented in January of 1993 in Massachusetts. A mass media campaign was launched in October of that year, but most of the other interventions associated with the Massachusetts Tobacco Control Program were not fully operational until well into 1994. Evaluation activities have consisted primarily of population-based surveys conducted by the Center for Survey Research at the University of Massachusetts and an independent evaluation based at Abt Associates, which assembles program information from a management information system, tobacco consumption information based on tax data, and other relevant information that becomes available from a variety of sources (such as the Behavioral Risk Factor Survey, the tracking research conducted by a market research organization, and independent research projects). Assembling data from all of these sources, including the population-based surveys, Abt publishes an annual report each fiscal year describing the impact of the Massachusetts Tobacco Control Program. The most recent report covers fiscal year (FY) 1997 and includes data from July 1996 through June of 1997 (Hamilton, 1998). That report summarizes the data relevant to adult smoking behavior in Massachusetts as follows:

- Cigarette consumption in Massachusetts has fallen by 31 percent since 1992, compared with a drop of 8 percent in the rest of the United States.

- Smoking prevalence among adults is declining slowly (from 22.6 percent in 1993 to 20.6 percent in FY 97), but the difference is not statistically significant.
- The number of cigarettes smoked per day by adult smokers has declined significantly from 20 cigarettes per day in 1993 to 16 per day in FY 97.
- The rate of cessation and cessation attempts among past-year smokers has risen from 1993 to FY 97, but not significantly.
- Significantly more smokers are considering quitting in the next 30 days.

The analyses presented in this paper were undertaken shortly after data for the calendar year 1997 became available for analysis, and they cover the same variables summarized above (with the exception of tax data on consumption). Whenever possible, analyses have been designed to correspond with those being produced from the CPS and include demographic breakdowns to determine whether changes in any particular population group are apparent. The CPS analyses usually focus on daily smokers rather than both daily and occasional smokers. Because the Massachusetts surveys did not question recent quitters on their previous smoking patterns, we cannot distinguish between those quitters who were occasional smokers prior to quitting in the past year and those who were daily smokers prior to quitting.

Cross-sectional Surveys of Adults

The baseline Massachusetts Tobacco Survey was a probability sample of Massachusetts housing units that used random-digit-dial techniques to contact subjects by telephone. Initial brief interviews were carried out with an adult household informant in 11,463 households. The informant provided information about the other residents of the household—the age, gender, ethnic and racial background of all residents, and the smoking status of each adult resident. Based on the household enumeration, a representative sample of adults was selected for extended interview. The adult sampling design oversampled smokers and minority-group members. Adult interviews were conducted in English, Spanish, and Portuguese. Interviewing was conducted between October 1993 and March 1994, with 70 percent of the interviews completed by January 31, 1994. The response rate was 78 percent for the household interviews and 78 percent and 75 percent for the eligible adults and teens, respectively.

Follow-up cross-sectional data are available for adults from the Massachusetts Adult Tobacco Survey (MATS), which is an ongoing monthly Random Digit Dial survey. Beginning in March 1995, MATS samples approximately 225 adults per month. Like the baseline survey, MATS includes a screening interview and an extended interview, with one adult selected for extended interview from among adults living in the household. The annual samples for MATS are about half the size of the baseline, and the MATS sample design does not oversample smokers or minority group members. Consequently, data on changes among smokers tend to have lower statistical power. Detailed information about the methodology of these surveys has been published elsewhere (Biener *et al.*, 1994; Biener and Roman, 1996).

Estimates of smoking prevalence are derived from the household screener, who provides information on smoking prevalence for many more adults than are interviewed personally. Although much of the information is based on proxy report, these reports of current smoking status have been determined to correspond with self-report more than 90 percent of the time (Biener *et al.*, 1994; Gilpin *et al.*, 1994).

Progress toward smoking cessation

When considering whether progress has been made toward smoking cessation in Massachusetts, we examined several different self-report indicators from the cross-sectional surveys—changes in smoking prevalence over time, changes in rates of successful quitting among those who were smoking during the prior year, and changes in rates of attempting to quit among the same group. Next we examined changes in smoking patterns of current daily smokers—the number of cigarettes being smoked each day, the proportion who waited more than 30 minutes after waking to light their first cigarette, and the proportion who report intending to quit in the next 30 days. In addition to examining overall statewide estimates, we examined these variables for men and women separately and for different age, education, ethnic, and income groups.

RESULTS

Smoking Prevalence

Smoking prevalence as estimated by the screening instruments has declined by about 2 percentage points from 1993 to 1997. The drop is somewhat greater among men (23.6 to 20.9 percent) than among women (21.8 to 20.4 percent). Consistent declines from year to year can be seen among those in the 25- to 44-year-old age group, the largest segment of the adult population—overall drop, 26.3 to 22.7 percent; men, 27.2 to 24.8 percent; and women, 25.3 to 20.8 percent. The largest declines can be seen among the least-educated groups, those with less than 12 years of education—overall drop, 30.5 to 24.6 percent; men, 34.1 to 29.8 percent; and women, 26.7 to 20.5 percent. None of these changes, however, reach statistical significance.

Estimates of smoking prevalence derived from the extended interview are very similar to those derived from the screener. Although estimates diverged a bit during 1995 and 1996, the overall trends are quite consistent for all smokers (*i.e.*, both daily and occasional smokers). The prevalence of daily smoking dropped by almost 4 percentage points between 1993 and 1995/96, but increased again in 1997.

We see very minor declines in smoking prevalence. The drop in the poorly educated group, if reliable, may be a result of the price increase or the media campaign.

Cessation Rates

Cessation rates were computed as the proportion of past-year smokers who reported having quit smoking regularly in the year prior to being interviewed. Both daily and occasional smokers are included because the MATS did not query quitters about their smoking levels prior to quitting. A quitter is defined as a person who reported having smoked 100 cigarettes in his/her lifetime, currently smokes "not at all," and quit smoking regularly less than 1 year ago. We are unable to distinguish between quitters who were abstinent for more than or less than 3 months in 1993 due to difficulties with the dating function on our computer assisted telephone inter-

viewing program. Therefore, all estimates are for those who reported being nonsmokers on the day of the interview. The overall cessation rate increased by 2.8 percentage points between 1993 and 1997 (from 8.1 ± 2.6 percent to 10.9 ± 4.8 percent). The largest increase in cessation rates was among the 25- to 44-year-old age group (from 4.1 ± 2.1 percent to 10.0 ± 6.0 percent), although the group shows a curvilinear rather than a linear trend over time. These rates are presented by demographic subgroups in Table 2-17.

Quit Attempts Another indicator of cessation activity is the attempt to quit. The variable under examination is the proportion of past-year smokers who report having quit smoking for at least 24 hours during the past year. This includes those who reported being abstinent at the time of the interview (*i.e.*, those who succeeded in quitting). The overall rate is about the same in 1997 as it was in 1993, although it rose by 5 percentage points in the intervening years. Women show a generally increasing rate of quit attempts. Again the 25- to 44-year-old age group shows the greatest improvement in quit attempts. These rates are presented by demographic subgroups in Table 2-18.

Intentions to Quit All current smokers were asked whether they were planning to quit smoking within the next 30 days. The proportion of all smokers who answered "yes" increased from 1993 (28.6 ± 5.2 percent) to 1997 (33.3 ± 6.6 percent). The proportion of daily smokers who reported planning to quit in the next 20 days also increased from 23.8 ± 4.9 percent to 29.3 ± 6.6 percent. These rates are presented by demographic subgroups in Tables 2-18 and 2-19.

These data from the Massachusetts surveys are consistent with the data from the CPS, which show higher cessation rates for Massachusetts when compared to other states.

SUMMARY Cessation is one of the principal goals of tobacco control programs, both nationally and for individual states. Cessation is a process of individual change where many individuals are interested in quitting, a large number attempt to change their behavior, and a relatively small number are successful in quitting over the long term.

A cessation attempt is clearly a necessary step on the path to successful cessation, but rates of cessation attempts are not necessarily good predictors of rates of cessation success. Cessation attempts are substantially lower among older smokers and among smokers of higher numbers of cigarettes per day, but the likelihood of successful cessation lasting 3 or more months is higher among older smokers and changes little between smokers of 5-14 cigarettes per day and smokers of 25+ cigarettes per day. In contrast, both cessation attempts and cessation success are increased with higher levels of educational attainment. Many of the differences among racial and ethnic groups in cessation are diminished when differences in education, income, and number of cigarettes smoked per day are controlled for in the analysis. However, African-Americans appear to have lower rates of successful cessation lasting 3 or more months, even when these factors are considered.

Between 1993 and 1996, rates of cessation activity declined in the United States, as did rates of 3+ month successful cessation. These changes are consistent with the observation that per-capita consumption of cigarettes has remained constant for the nation over this period.

Two states, Massachusetts and California, have conducted large tobacco control programs, each with the goal of increasing adult cessation. When cessation measures for these states are compared to those for the remaining 48 states—controlling for differences among the states in age, race/ethnicity, education, income, and number of cigarettes smoked per day—California and Massachusetts have higher rates of both cessation activity and successful cessation. These analyses support an effect of these tobacco control programs in creating successful adult cessation.

Appendix 1

Tables 2-7 through 2-20

Footnotes to Tables 2-10 through 2-14:

1. *Cessation Activity*: Includes those who have made a quit attempt, have become occasional smokers, or have become former smokers.
2. *Cessation Attempt*: Includes those who have made a quit attempt or have become former smokers. Occasional smokers are excluded from both the numerator and denominator.
3. *Occasional*: Includes those who reduced from smoking everyday to smoking some days.

Table 2-7
1992/1993 Current Population Survey: Cigarette Prevalence among All Adults, 18 Years and Older

	Smoking Status								Population	Sample
	Daily		Occasional		Former		Never		Size	Size
Nation	%	± CI	%	± CI	%	± CI	%	± CI	(N)	(n)
Total	19.61	0.18	4.23	0.09	22.49	0.19	53.67	0.22	185,341,585	275,895
Male Total	21.86	0.27	4.61	0.14	26.99	0.29	46.54	0.32	88,350,523	127,377
Female Total	17.57	0.24	3.89	0.12	18.39	0.24	60.16	0.30	96,991,062	148,518
Age (Years)										
18–24	17.59	0.46	4.96	0.26	6.09	0.29	71.35	0.55	25,314,984	33,537
25–44	22.98	0.28	5.15	0.15	17.07	0.25	54.79	0.34	81,699,173	119,901
45–64	21.09	0.36	3.62	0.16	31.66	0.41	43.63	0.44	48,177,432	73,698
65+	9.82	0.33	2.10	0.16	36.27	0.53	51.82	0.55	30,149,997	48,759
Race/Ethnicity										
Non-Hispanic White	20.75	0.21	3.73	0.10	25.31	0.22	50.21	0.26	141,799,567	222,163
Hispanic	12.04	0.67	6.17	0.50	13.30	0.70	68.49	0.96	16,240,415	18,067
African-Amer.	19.40	0.54	6.17	0.33	13.68	0.47	60.75	0.66	20,574,151	24,492
Asian/PI	11.09	0.83	3.59	0.49	11.28	0.84	74.05	1.16	5,397,590	8,259
Native Amer.	31.64	2.71	7.28	1.52	15.76	2.13	45.32	2.91	1,117,516	2,586
Other	9.94	4.01	4.52	2.78	15.92	4.90	69.62	6.16	212,346	328
Education (Years)										
<12	24.61	0.45	4.58	0.22	21.37	0.43	49.44	0.53	33,519,656	48,611
12	24.19	0.32	4.44	0.15	21.93	0.31	49.44	0.37	67,364,829	101,699
13–15	18.19	0.34	4.40	0.18	21.88	0.37	55.53	0.44	46,824,878	69,259
16+	8.73	0.28	3.33	0.18	25.24	0.43	62.69	0.48	37,632,222	56,326
Household Income (Dollars)										
<10,000	26.38	0.55	5.42	0.28	15.99	0.45	52.21	0.62	24,210,219	35,730
10,000-19,999	22.84	0.44	4.69	0.22	21.12	0.43	51.36	0.53	33,448,107	50,259
20,000-29,999	21.61	0.46	4.23	0.22	22.35	0.46	51.81	0.56	29,875,514	45,054
30,000-49,999	18.99	0.36	4.05	0.18	23.29	0.39	53.67	0.46	44,519,871	66,724
50,000-74,999	14.93	0.42	3.74	0.22	25.41	0.52	55.92	0.59	26,511,902	38,987
75,000 +	10.32	0.45	3.08	0.26	28.03	0.67	58.57	0.74	16,667,077	24,205
Unknown	17.17	0.72	3.88	0.37	22.64	0.80	56.31	0.95	10,108,895	14,936
States										
Utah	13.64	1.32	3.26	0.68	16.95	1.44	66.14	1.82	1,179,841	2,952
California	14.40	0.51	4.54	0.30	20.88	0.59	60.17	0.71	22,249,501	20,809
District of Columbia	15.89	1.62	7.34	1.15	18.27	1.71	58.51	2.18	437,103	2,209
N. Jersey	16.57	0.72	3.81	0.37	23.40	0.82	56.23	0.96	5,824,375	11,313
N. York	17.36	0.56	4.16	0.30	22.20	0.62	56.28	0.74	13,380,928	18,356
N. Dakota	17.43	1.47	4.75	0.83	23.16	1.64	54.66	1.93	443,503	3,805
Massachusetts	17.74	0.76	3.67	0.37	28.33	0.90	50.26	1.00	4,486,537	10,528
Arizona	17.91	1.43	4.46	0.77	24.06	1.60	53.56	1.86	2,793,746	2,786
Maryland	17.99	1.51	5.60	0.91	23.88	1.68	52.53	1.97	3,621,008	2,616
Hawaii	18.38	1.53	3.79	0.76	20.62	1.60	57.21	1.96	808,387	2,535

Table 2-7 (continued)

States	Smoking Status: Daily %	± CI	Occasional %	± CI	Former %	± CI	Never %	± CI	Population Size (N)	Sample Size (n)
Texas	18.39	0.80	5.06	0.45	20.01	0.82	56.53	1.02	12,556,301	12,459
Nebraska	18.59	1.45	3.38	0.67	21.10	1.52	56.93	1.84	1,131,857	4,024
Connecticut	18.63	1.65	3.68	0.80	23.92	1.81	53.78	2.11	2,427,232	2,755
N. Mexico	18.72	1.50	5.27	0.86	23.82	1.64	52.19	1.92	1,108,244	3,052
Rhode Island	18.75	1.62	4.45	0.85	27.92	1.86	48.89	2.07	736,986	2,468
Pennsylvania	19.03	0.76	4.31	0.39	23.35	0.82	53.30	0.96	8,898,952	12,950
Colorado	19.33	1.61	4.83	0.87	25.56	1.78	50.28	2.04	2,528,960	3,253
Oregon	19.42	1.60	3.51	0.75	26.99	1.80	50.08	2.03	2,216,870	3,127
Montana	19.59	1.58	3.94	0.77	24.85	1.72	51.61	1.99	588,805	3,780
Iowa	19.65	1.53	3.85	0.74	22.01	1.59	54.49	1.91	2,041,504	3,990
Illinois	19.65	0.81	4.82	0.44	22.02	0.85	53.51	1.02	8,402,459	10,849
Idaho	19.95	1.49	3.66	0.70	23.02	1.57	53.37	1.86	747,016	3,545
Delaware	19.95	1.64	3.34	0.74	24.01	1.75	52.70	2.05	509,081	2,236
Washington	19.96	1.52	4.17	0.76	27.85	1.71	48.01	1.91	3,731,411	3,014
Florida	20.07	0.72	3.82	0.34	24.39	0.77	51.71	0.90	10,226,811	12,270
Georgia	20.21	1.53	4.11	0.76	19.85	1.52	55.83	1.89	4,855,056	3,124
Minnesota	20.46	1.59	4.65	0.83	24.00	1.69	50.89	1.98	3,214,673	3,333
S. Dakota	20.62	1.50	4.90	0.80	21.86	1.53	52.63	1.85	486,703	4,058
N. Hampshire	20.67	1.73	4.02	0.84	29.73	1.95	45.58	2.13	816,350	2,244
Wisconsin	20.79	1.51	5.36	0.84	25.20	1.62	48.66	1.86	3,606,127	4,405
Virginia	20.86	1.41	4.61	0.73	23.09	1.47	51.44	1.74	4,598,847	3,917
Kansas	20.90	1.54	3.33	0.68	23.08	1.60	52.70	1.89	1,783,399	3,695
Wyoming	21.05	1.84	3.77	0.86	23.69	1.92	51.49	2.26	328,343	2,489
Mississippi	21.20	1.67	4.26	0.83	17.29	1.55	57.25	2.02	1,845,081	4,097
Louisiana	21.34	1.70	4.03	0.81	21.04	1.69	53.59	2.06	2,950,556	2,825
S. Carolina	21.98	1.48	3.73	0.68	20.28	1.44	54.01	1.79	2,576,960	3,818
Vermont	22.15	1.74	4.11	0.83	28.93	1.90	44.80	2.08	424,902	2,240
Ohio	22.19	0.81	3.77	0.37	22.31	0.81	51.73	0.98	8,005,894	12,426
Alabama	22.24	1.69	3.50	0.75	21.04	1.66	53.22	2.03	3,027,336	3,765
N. Carolina	22.88	0.80	4.05	0.38	21.34	0.78	51.73	0.95	4,997,190	11,850
Michigan	22.99	0.85	4.21	0.41	23.68	0.86	49.11	1.01	6,807,057	11,688
Missouri	23.07	1.69	3.17	0.70	22.78	1.69	50.98	2.01	3,727,394	3,354
Oklahoma	23.21	1.65	3.54	0.72	21.70	1.61	51.55	1.96	2,282,823	3,536
Alaska	23.24	1.62	4.38	0.78	24.69	1.65	47.69	1.92	379,350	3,459
Indiana	23.79	1.68	4.02	0.78	20.48	1.59	51.71	1.97	4,100,287	3,307
Nevada	23.83	1.59	4.53	0.77	23.17	1.57	48.46	1.86	991,796	3,003
Tennesee	24.21	1.60	4.32	0.76	20.05	1.50	51.41	1.87	3,694,775	3,784
Maine	24.55	1.67	3.96	0.76	27.00	1.73	44.49	1.93	909,532	2,917
Arkansas	24.98	1.77	3.75	0.78	20.67	1.65	50.60	2.04	1,738,687	3,658
West Virginia	26.81	1.77	3.44	0.73	20.55	1.62	49.20	2.00	1,369,311	3,719
Kentucky	29.16	1.79	2.82	0.65	21.01	1.61	47.01	1.97	2,745,738	3,503

Note: CI = 95% confidence interval.

Table 2-8
1995/1996 Current Population Survey: Cigarette Prevalence among All Adults, 18 Years and Older

	Smoking Status								Population	Sample
	Daily		Occasional		Former		Never		Size	Size
Nation	%	± CI	%	± CI	%	± CI	%	± CI	(N)	(n)
Total	19.05	0.18	4.04	0.09	21.76	0.19	55.16	0.23	191,073,943	233,741
Male Total	21.19	0.28	4.47	0.14	25.80	0.30	48.54	0.34	91,207,802	107,527
Female Total	17.09	0.24	3.64	0.12	18.07	0.25	61.20	0.32	99,866,141	126,214
Age (Years)										
18–24	18.07	0.50	5.31	0.29	5.95	0.31	70.68	0.59	24,553,115	26,448
25–44	21.97	0.29	4.89	0.15	15.57	0.26	57.58	0.35	82,861,971	99,671
45–64	20.66	0.36	3.38	0.16	30.12	0.41	45.83	0.45	52,233,863	66,149
>64	9.43	0.34	1.89	0.16	36.55	0.56	52.13	0.58	31,424,993	41,473
Race/Ethnicity										
Non-Hispanic White	20.46	0.22	3.59	0.10	24.63	0.23	51.32	0.27	143,857,651	185,654
Hispanic	11.43	0.66	6.02	0.50	12.80	0.70	69.75	0.96	17,862,544	17,130
African-Amer.	17.61	0.54	5.43	0.32	13.63	0.48	63.34	0.68	21,553,073	21,322
Asian/PI	10.81	0.80	3.16	0.45	10.88	0.80	75.15	1.11	6,443,983	7,307
Native Amer.	30.98	2.60	7.39	1.47	16.51	2.09	45.12	2.80	1,356,691	2,328
Education (Years)										
<12	23.87	0.48	4.28	0.23	20.78	0.46	51.06	0.57	32,521,554	38,561
12	24.19	0.34	4.11	0.16	21.49	0.33	50.21	0.40	65,924,580	81,861
13–15	18.23	0.35	4.44	0.19	21.51	0.37	55.82	0.45	50,560,922	61,512
16+	8.24	0.27	3.25	0.18	23.24	0.42	65.27	0.47	42,066,887	51,807
Household Income (Dollars)										
<10,000	24.97	0.62	5.62	0.33	15.59	0.52	53.81	0.71	20,702,223	25,171
10,000-19,999	22.99	0.51	4.37	0.25	20.84	0.49	51.81	0.61	28,512,812	35,227
20,000-29,999	22.21	0.50	4.33	0.25	21.65	0.50	51.80	0.61	28,393,827	35,079
30,000-49,999	19.79	0.39	3.93	0.19	22.10	0.41	54.18	0.49	43,128,189	53,811
50,000-74,999	15.59	0.43	3.49	0.22	23.26	0.50	57.66	0.59	29,582,858	36,172
75,000+	10.22	0.40	3.29	0.24	25.67	0.58	60.82	0.65	23,940,952	28,067
Unknown	16.47	0.59	3.32	0.28	22.03	0.65	58.17	0.78	16,813,081	20,214
States										
Utah	12.03	1.25	3.02	0.66	14.73	1.36	70.23	1.76	1,275,888	3,162
California	13.54	0.53	4.39	0.32	20.65	0.62	61.43	0.75	22,521,022	17,647
District of Columbia	15.32	1.54	6.93	1.08	18.72	1.66	59.03	2.10	414,451	2,275
Connecticut	16.02	1.54	3.79	0.80	25.15	1.83	55.04	2.10	2,405,332	2,325
N. Jersey	16.55	0.84	3.95	0.44	22.30	0.94	57.20	1.11	5,873,687	7,795
N. York	16.87	0.61	4.00	0.32	20.63	0.66	58.50	0.80	13,404,633	15,075
Maryland	17.11	1.50	3.97	0.78	23.84	1.69	55.08	1.98	3,713,252	2,631
Massachusetts	17.13	0.94	3.54	0.46	26.84	1.10	52.49	1.24	4,511,380	6,503
Nebraska	17.39	1.46	4.08	0.76	18.98	1.51	59.55	1.89	1,162,549	3,273
Hawaii	17.86	1.61	3.90	0.81	20.21	1.69	58.03	2.07	830,154	2,149

Table 2-8 (continued)

States	Smoking Status: Daily %	± CI	Occasional %	± CI	Former %	± CI	Never %	± CI	Population Size (N)	Sample Size (n)
Colorado	18.10	1.50	4.45	0.80	23.57	1.65	53.88	1.94	2,732,339	3,219
Texas	18.14	0.77	5.18	0.44	18.73	0.78	57.94	0.99	13,293,119	10,585
Oregon	18.20	1.53	4.32	0.81	24.76	1.71	52.72	1.98	2,361,048	2,801
Arizona	18.32	1.44	4.48	0.77	23.14	1.57	54.06	1.85	3,053,062	3,289
Florida	18.49	0.74	3.75	0.36	23.78	0.81	53.98	0.94	10,721,274	10,714
Minnesota	18.53	1.52	4.33	0.80	23.70	1.67	53.45	1.95	3,329,386	3,300
N. Mexico	18.69	1.46	5.26	0.84	22.07	1.55	53.99	1.87	1,192,081	3,130
S. Dakota	18.69	1.46	4.04	0.74	23.33	1.59	53.94	1.87	504,763	3,382
Washington	18.95	1.58	4.33	0.82	24.52	1.74	52.20	2.02	3,991,919	2,890
Idaho	18.99	1.48	3.33	0.68	22.21	1.57	55.47	1.87	824,393	3,290
Georgia	19.04	1.39	3.75	0.67	18.81	1.38	58.40	1.74	5,229,881	3,942
N. Dakota	19.08	1.57	4.66	0.84	22.06	1.65	54.20	1.99	447,176	3,218
Alabama	19.20	1.52	4.01	0.76	19.57	1.53	57.21	1.91	3,114,758	3,173
Illinois	19.56	0.86	4.11	0.43	21.21	0.89	55.12	1.08	8,571,555	9,553
Mississippi	19.73	1.55	3.50	0.72	17.86	1.49	58.91	1.92	1,896,081	2,893
Iowa	19.85	1.56	3.55	0.72	21.11	1.59	55.48	1.94	2,063,388	3,116
Montana	20.07	1.53	3.86	0.73	27.45	1.70	48.61	1.91	633,417	3,391
Pennsylvania	20.14	0.83	3.94	0.40	24.53	0.89	51.40	1.04	8,919,897	10,924
Rhode Island	20.20	1.68	3.57	0.77	26.34	1.84	49.89	2.09	720,021	2,322
Wisconsin	20.28	1.57	4.76	0.83	23.23	1.65	51.72	1.95	3,690,849	3,499
N. Hampshire	20.43	1.72	3.24	0.76	29.40	1.95	46.93	2.13	848,541	2,357
Delaware	21.16	1.67	3.67	0.77	23.00	1.72	52.17	2.04	528,094	2,302
Alaska	21.16	1.63	4.14	0.79	23.05	1.68	51.64	1.99	395,832	2,252
Louisiana	21.37	1.56	4.45	0.78	18.57	1.48	55.60	1.89	3,079,727	2,842
Virginia	21.41	1.50	3.54	0.67	22.95	1.53	52.09	1.82	4,817,098	3,634
Michigan	21.46	0.93	4.21	0.45	22.55	0.95	51.78	1.13	6,872,437	8,896
Vermont	21.48	1.72	3.41	0.76	27.35	1.87	47.75	2.09	430,119	2,445
S. Carolina	21.83	1.60	3.32	0.69	17.94	1.48	56.92	1.91	2,690,982	2,534
Oklahoma	21.94	1.58	3.59	0.71	20.15	1.53	54.33	1.90	2,330,200	3,591
Ohio	22.11	0.91	3.96	0.43	22.28	0.91	51.65	1.09	8,117,837	9,516
Wyoming	22.12	1.72	2.94	0.70	22.13	1.72	52.81	2.07	340,426	3,162
Kansas	22.12	1.66	3.75	0.76	20.64	1.62	53.49	2.00	1,798,120	3,064
N. Carolina	22.63	1.07	3.58	0.48	19.90	1.02	53.89	1.28	5,286,952	7,715
Missouri	22.70	1.64	3.27	0.70	23.06	1.65	50.97	1.96	3,866,274	2,890
Maine	22.78	1.69	2.96	0.68	27.68	1.80	46.58	2.01	928,793	2,692
Arkansas	22.95	1.62	3.62	0.72	19.74	1.54	53.68	1.92	1,827,297	3,129
Tennesse	23.69	1.59	3.52	0.69	22.50	1.56	50.29	1.87	3,916,392	2,889
Nevada	23.96	1.65	4.13	0.77	21.76	1.59	50.15	1.93	1,154,576	2,455
W. Virginia	24.62	1.56	3.20	0.64	22.78	1.52	49.39	1.81	1,396,823	3,736
Indiana	25.17	1.67	3.75	0.73	20.39	1.55	50.69	1.92	4,210,920	3,096
Kentucky	26.92	1.69	2.76	0.62	21.66	1.57	48.66	1.90	2,833,747	3,078

Note: CI = 95% confidence interval.

Table 2-9
1995/1996 Current Population Survey: Prevalence of Former Cigarette Smokers among All Adults, 18 Years and Older

	Former Smoker			
	%	±	CI	Quit Ratio
Total	21.76		0.19	0.49
by State				
Massachusetts	26.84		1.10	0.56
Connecticut	25.15		1.83	0.56
New Hampshire	29.40		1.95	0.55
California	20.65		0.62	0.54
Montana	27.45		1.70	0.53
Maryland	23.84		1.69	0.53
Rhode Island	26.34		1.84	0.53
Oregon	24.76		1.71	0.52
Vermont	27.35		1.87	0.52
New Jersey	22.30		0.94	0.52
Maine	27.68		1.80	0.52
Florida	23.78		0.81	0.52
Washington	24.52		1.74	0.51
Colorado	23.57		1.65	0.51
Minnesota	23.70		1.67	0.51
South Dakota	23.33		1.59	0.51
Pennsylvania	24.53		0.89	0.50
Arizona	23.14		1.57	0.50
Idaho	22.21		1.57	0.50
New York	20.63		0.66	0.50
Utah	14.73		1.36	0.49
North Dakota	22.06		1.65	0.48
Hawaii	20.21		1.69	0.48
Wisconsin	23.23		1.65	0.48
Delaware	23.00		1.72	0.48
New Mexico	22.07		1.55	0.48
Virginia	22.95		1.53	0.48
Alaska	23.05		1.68	0.48
Iowa	21.11		1.59	0.47
Illinois	21.21		0.89	0.47
Missouri	23.06		1.65	0.47
Nebraska	18.98		1.51	0.47
Wyoming	22.13		1.72	0.47
Michigan	22.55		0.95	0.47
Ohio	22.28		0.91	0.46

Table 2-9 (continued)

	Former Smoker			
	%	±	CI	Quit Ratio
Alabama	19.57		1.53	0.46
District of Columbia	18.72		1.66	0.46
Tennessee	22.50		1.56	0.45
Georgia	18.81		1.38	0.45
West Virginia	22.78		1.52	0.45
Texas	18.73		0.78	0.45
Kansas	20.64		1.62	0.44
Oklahoma	20.15		1.53	0.44
Nevada	21.76		1.59	0.44
Mississippi	17.86		1.49	0.43
North Carolina	19.90		1.02	0.43
Arkansas	19.74		1.54	0.43
Kentucky	21.66		1.57	0.42
Louisiana	18.57		1.48	0.42
South Carolina	17.94		1.48	0.42
Indiana	20.39		1.55	0.41

Note: CI = 95% confidence interval.

Table 2-10

1992/1993 Current Population Survey: Multivariate Logistic Regression Models of Cessation Measures for Adults who were Daily Smokers 1 Year prior to the Survey, Ages 25 and Older

	Cessation Activity[1]		Cessation Attempt[2]		Occasional[3]		Former (any length)		Former, 3+ Months	
Variable	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Gender										
Male	1.00		1.00		1.00		1.00		1.00	
Female	1.05	(1.01-1.10)	1.04	(0.99-1.09)	1.21	(1.07-1.36)	1.05	(0.97-1.14)	1.12	(1.02-1.23)
Age (Years)										
25–44	1.00		1.00		1.00		1.00		1.00	
45–64	0.90	(0.85-0.94)	0.89	(0.85-0.94)	0.95	(0.83-1.08)	1.19	(1.10-1.30)	1.19	(1.08-1.32)
65+	0.82	(0.76-0.89)	0.79	(0.73-0.86)	1.21	(1.00-1.47)	1.82	(1.60-2.06)	2.15	(1.86-2.49)
Race/Ethnicity										
Non-Hispanic White	1.00		1.00		1.00		1.00		1.00	
Hispanic	1.01	(0.91-1.12)	1.01	(0.91-1.12)	1.04	(0.80-1.36)	1.09	(0.90-1.31)	1.17	(0.94-1.46)
African-American	1.13	(1.05-1.21)	1.10	(1.03-1.19)	1.29	(1.08-1.53)	0.89	(0.77-1.03)	0.96	(0.81-1.14)
Other	0.98	(0.85-1.12)	0.99	(0.86-1.13)	0.89	(0.61-1.29)	0.67	(0.50-0.89)	0.62	(0.43-0.90)
Education (Years)										
< 12	1.00		1.00		1.00		1.00		1.00	
12	1.15	(1.08-1.22)	1.15	(1.08-1.23)	1.09	(0.92-1.30)	1.24	(1.10-1.40)	1.13	(0.99-1.30)
13–15	1.40	(1.31-1.50)	1.38	(1.29-1.48)	1.44	(1.19-1.74)	1.41	(1.24-1.60)	1.31	(1.12-1.52)
16+ Years	1.43	(1.32-1.56)	1.40	(1.28-1.52)	1.65	(1.32-2.06)	1.72	(1.49-2.00)	1.51	(1.27-1.80)
Household Income (Dollars)										
<10,000	1.00		1.00		1.00		1.00		1.00	
10,000-19,999	1.12	(1.05-1.21)	1.13	(1.05-1.22)	1.01	(0.83-1.23)	1.33	(1.15-1.55)	1.26	(1.05-1.50)
20,000-29,999	1.28	(1.19-1.38)	1.31	(1.22-1.41)	0.88	(0.72-1.09)	1.57	(1.35-1.83)	1.56	(1.31-1.86)
30,000-49,999	1.37	(1.28-1.47)	1.40	(1.30-1.50)	1.03	(0.85-1.25)	1.85	(1.60-2.13)	1.77	(1.49-2.10)
50,000-74,999	1.52	(1.39-1.65)	1.54	(1.41-1.67)	1.19	(0.95-1.50)	2.11	(1.79-2.47)	2.14	(1.77-2.59)
75,000+	1.67	(1.49-1.87)	1.69	(1.51-1.89)	1.25	(0.94-1.67)	2.16	(1.78-2.62)	2.22	(1.77-2.80)
Cigarettes smoked per day										
1–4	1.00		1.00		1.00		1.00		1.00	
5–14	0.82	(0.72-0.94)	0.87	(0.76-1.01)	0.61	(0.47-0.80)	0.66	(0.53-0.82)	0.65	(0.50-0.85)
15–24	0.56	(0.49-0.64)	0.60	(0.52-0.69)	0.38	(0.29-0.49)	0.58	(0.47-0.72)	0.59	(0.46-0.76)
25+	0.44	(0.38-0.50)	0.48	(0.42-0.56)	0.24	(0.18-0.32)	0.84	(0.67-1.05)	0.86	(0.66-1.11)

[1–3] See footnotes at beginning of table section for explanation.

Table 2-11

1995/1996 Current Population Survey: Multivariate Logistic Regression Models of Cessation Measures for Adults who were Daily Smokers 1 Year prior to the Survey, Ages 25 and Older

	Cessation Activity[1]		Cessation Attempt[2]		Occasional[3]		Former (any length)		Former, 3+ Months	
Variable	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Gender										
Male	1.00		1.00		1.00		1.00		1.00	
Female	0.96	(0.92-1.01)	0.96	(0.91-1.01)	1.01	(0.89-1.16)	0.93	(0.84-1.03)	0.97	(0.86-1.09)
Age (Years)										
25–44	1.00		1.00		1.00		1.00		1.00	
45–64	0.88	(0.83-0.93)	0.88	(0.84-0.93)	0.86	(0.74-1.01)	0.97	(0.87-1.08)	1.01	(0.89-1.15)
65+	0.76	(0.70-0.84)	0.74	(0.67-0.81)	1.14	(0.91-1.44)	1.40	(1.19-1.66)	1.59	(1.31-1.94)
Race/Ethnicity										
Non-Hispanic White	1.00		1.00		1.00		1.00		1.00	
Hispanic	0.89	(0.80-1.00)	0.88	(0.79-1.00)	1.03	(0.78-1.37)	0.96	(0.76-1.22)	1.13	(0.86-1.49)
African-American	1.03	(0.95-1.12)	1.00	(0.92-1.09)	1.30	(1.06-1.58)	0.67	(0.55-0.82)	0.73	(0.57-0.92)
Other	1.03	(0.90-1.18)	1.03	(0.90-1.19)	1.01	(0.70-1.45)	1.07	(0.82-1.40)	1.06	(0.76-1.48)
Education (Years)										
< 12	1.00		1.00		1.00		1.00		1.00	
12	1.17	(1.09-1.26)	1.16	(1.08-1.25)	1.22	(0.99-1.50)	1.25	(1.07-1.45)	1.27	(1.06-1.54)
13–15	1.48	(1.37-1.60)	1.45	(1.34-1.58)	1.55	(1.25-1.94)	1.58	(1.34-1.86)	1.59	(1.31-1.95)
16+	1.42	(1.29-1.57)	1.39	(1.26-1.54)	1.56	(1.20-2.04)	1.77	(1.46-2.14)	1.84	(1.46-2.32)
Household Income (Dollars)										
<10,000	1.00		1.00		1.00		1.00		1.00	
10,000-19,999	0.95	(0.88-1.04)	0.97	(0.89-1.06)	0.83	(0.66-1.04)	0.93	(0.77-1.12)	1.08	(0.87-1.35)
20,000-29,999	0.96	(0.88-1.05)	0.98	(0.89-1.07)	0.79	(0.63-1.01)	1.03	(0.86-1.24)	1.02	(0.81-1.28)
30,000-49,999	1.07	(0.98-1.16)	1.08	(0.99-1.18)	0.97	(0.77-1.20)	1.13	(0.95-1.34)	1.15	(0.93-1.42)
50,000-74,999	1.07	(0.97-1.17)	1.08	(0.98-1.20)	0.88	(0.68-1.14)	1.15	(0.95-1.40)	1.14	(0.90-1.45)
75,000+	1.10	(0.98-1.24)	1.12	(0.99-1.26)	0.98	(0.72-1.34)	1.48	(1.19-1.84)	1.61	(1.24-2.10)
Cigarettes smoked per day										
1–4	1.00		1.00		1.00		1.00		1.00	
5–14	0.68	(0.59-0.79)	0.80	(0.68-0.93)	0.38	(0.29-0.48)	0.81	(0.60-1.08)	0.70	(0.50-0.98)
15–24	0.46	(0.39-0.53)	0.55	(0.47-0.64)	0.20	(0.15-0.25)	0.66	(0.50-0.88)	0.61	(0.44-0.85)
25+	0.32	(0.28-0.37)	0.39	(0.34-0.46)	0.12	(0.09-0.16)	0.90	(0.67-1.21)	0.83	(0.59-1.16)

[1–3] See footnotes at beginning of table section for explanation.

Table 2-12

1990 California Tobacco Survey: Logistic Regression Models of Cessation for Daily Smokers 12 Months Ago, Ages 25 and Older

Variable	Cessation Activity[1] OR	95% CI	Cessation Attempt[2] OR	95% CI	Occasional[3] OR	95% CI	Former (any length) OR	95% CI	Former 3+ Months OR	95% CI
Gender										
Male	1.00									
Female	1.00	(0.90-1.11)	1.00	(0.90-1.11)	0.86	(0.64-1.15)	1.23	(1.04-1.45)	1.41	(1.13-1.76)
Age (Years)										
25-44	1.00									
45–64	0.75	(0.67-0.85)	0.75	(0.67-0.85)	0.95	(0.69-1.31)	1.21	(1.01-1.45)	1.47	(1.16-1.86)
65+	0.74	(0.62-0.90)	0.76	(0.63-0.91)	0.73	(0.40-1.31)	1.40	(1.04-1.88)	1.70	(1.18-2.45)
Race/Ethnicity										
Non-Hispanic White	1.00									
Hispanic	1.60	(1.35-1.90)	1.55	(1.30-1.84)	2.02	(1.35-3.01)	1.69	(1.31-2.20)	1.54	(1.09-2.17)
African-American	2.05	(1.66-2.54)	1.89	(1.52-2.35)	2.99	(2.00-4.46)	1.19	(0.86-1.65)	1.33	(0.89-2.00)
Other	1.07	(0.87-1.32)	1.09	(0.88-1.35)	0.78	(0.40-1.55)	0.72	(0.49-1.07)	0.77	(0.47-1.29)
Education (Years)										
<12	1.00									
12	1.10	(0.95-1.27)	1.10	(0.95-1.27)	1.08	(0.72-1.63)	1.28	(0.99-1.66)	1.44	(1.03-2.01)
13–15	1.34	(1.14-1.57)	1.32	(1.12-1.55)	1.50	(0.97-2.34)	1.64	(1.24-2.15)	1.68	(1.17-2.40)
16+	1.26	(1.04-1.51)	1.26	(1.05-1.53)	1.06	(0.61-1.85)	1.91	(1.41-2.59)	1.66	(1.11-2.49)
Household Income (Dollars)										
<10,000	1.00									
10,001-20,000	1.32	(1.09-1.60)	1.32	(1.08-1.61)	1.20	(0.74-1.96)	1.48	(1.03-2.13)	1.03	(0.67-1.59)
20,001-30,000	1.22	(1.01-1.48)	1.25	(1.02-1.52)	0.75	(0.44-1.27)	1.69	(1.19-2.42)	1.27	(0.83-1.92)
30,001-50,000	1.30	(1.08-1.57)	1.31	(1.08-1.58)	1.08	(0.67-1.76)	1.76	(1.24-2.48)	1.11	(0.74-1.68)
50,001-75,000	1.38	(1.12-1.70)	1.39	(1.13-1.72)	1.02	(0.57-1.80)	2.12	(1.46-3.06)	1.29	(0.83-2.02)
75,000+	1.16	(0.92-1.46)	1.13	(0.89-1.43)	1.44	(0.78-2.66)	2.35	(1.58-3.49)	1.85	(1.16-2.95)
Cigarettes Smokd per Day										
1–4	1.00									
5–14	0.75	(0.55-1.02)	0.78	(0.57-1.08)	0.63	(0.39-1.01)	0.52	(0.36-0.75)	0.49	(0.31-0.77)
15–24	0.41	(0.30-0.55)	0.46	(0.34-0.62)	0.22	(0.13-0.37)	0.38	(0.26-0.55)	0.34	(0.22-0.54)
25 +	0.39	(0.28-0.53)	0.44	(0.32-0.60)	0.13	(0.07-0.25)	0.46	(0.31-0.67)	0.52	(0.32-0.83)

[1–3] See footnotes at beginning of table section for explanation.

Table 2-13

1996 California Tobacco Survey: Logistic Regression Models of Cessation for Daily Smokers 12 Months Ago, Ages 25 and Older

Variable	Cessation Activity[1] OR	95% CI	Cessation Attempt[2] OR	95% CI	Occasional[3] OR	95% CI	Former (any length) OR	95% CI	Former 3+ Months OR	95% CI
Gender										
Male	1.00									
Female	0.96	(0.86-1.07)	0.94	(0.83-1.05)	1.26	(0.97-1.65)	1.23	(1.03-1.48)	1.17	(0.91-1.49)
Age (Years)										
25–44	1.00									
45–64	0.65	(0.58-0.73)	0.65	(0.58-0.74)	0.83	(0.61-1.11)	0.78	(0.64-0.95)	0.97	(0.75-1.27)
65+	0.63	(0.51-0.77)	0.62	(0.50-0.77)	0.88	(0.52-1.51)	1.25	(0.92-1.70)	1.43	(0.96-2.15)
Race/Ethnicity										
Non-Hispanic White	1.00									
Hispanic	1.22	(1.04-1.46)	1.18	(0.99-1.40)	1.68	(1.16-2.43)	1.12	(0.86-1.48)	1.15	(0.79-1.66)
African-American	1.29	(1.04-1.60)	1.24	(0.99-1.55)	1.54	(1.00-2.35)	0.47	(0.30-0.75)	0.66	(0.38-1.15)
Other	0.93	(0.77-1.12)	0.95	(0.79-1.15)	0.69	(0.41-1.17)	0.72	(0.52-1.00)	0.73	(0.47-1.15)
Education (Years)										
<12	1.00									
12	0.73	(0.62-0.85)	0.71	(0.61-0.84)	1.08	(0.71-1.65)	0.76	(0.58-1.00)	0.80	(0.55-1.15)
13–15	0.95	(0.80-1.11)	0.89	(0.75-1.05)	1.96	(1.31-2.95)	1.04	(0.79-1.36)	1.04	(0.72-1.50)
16+	1.16	(0.95-1.40)	1.11	(0.91-1.35)	1.65	(1.02-2.67)	1.40	(1.03-1.88)	1.39	(0.93-2.08)
Household Income (Dollars)										
<10,000	1.00									
10,001-20,000	1.18	(0.96-1.44)	1.20	(0.98-1.48)	0.87	(0.54-1.39)	1.23	(0.86-1.77)	0.98	(0.60-1.61)
20,001-30,000	0.96	(0.79-1.17)	1.00	(0.81-1.22)	0.67	(0.41-1.09)	1.22	(0.85-1.74)	1.21	(0.76-1.93)
30,001-50,000	1.05	(0.87-1.27)	1.07	(0.88-1.30)	0.89	(0.57-1.38)	1.44	(1.03-2.01)	1.24	(0.79-1.93)
50,001-75,000	1.10	(0.89-1.35)	1.11	(0.90-1.38)	0.94	(0.59-1.51)	1.26	(0.87-1.82)	1.45	(0.90-2.32)
75,000+	1.08	(0.86-1.35)	1.12	(0.89-1.41)	0.72	(0.41-1.26)	1.87	(1.29-2.71)	1.60	(0.98-2.62)
Cigarettes Smoked per Day										
1–4	1.00									
5–14	0.77	(0.56-1.06)	0.99	(0.71-1.39)	0.34	(0.22-0.51)	0.64	(0.42-0.98)	0.88	(0.49-1.60)
15–24	0.48	(0.35-0.66)	0.65	(0.46-0.90)	0.17	(0.11-0.26)	0.50	(0.33-0.77)	0.62	(0.34-1.13)
25 +	0.40	(0.29-0.55)	0.54	(0.38-0.77)	0.11	(0.06-0.20)	0.67	(0.43-1.04)	0.83	(0.45-1.54)

[1–3] See footnotes at beginning of table section for explanation.

Table 2-14

Current Population Survey: Odds Ratios and 95% Confidence Intervals for Measures of Cessation in California and Massachusetts Compared to the Remaining States

	Cessation Activity[1]		Cessation Attempt[2]		Occasional[3]		Former (any length)		Former 3+ Months	
Variable	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Survey Year										
1992/3	1.00		1.00		1.00		1.00		1.00	
1995/6	0.80	(0.78-0.83)	0.80	(0.77-0.82)	0.94	(0.86-1.03)	0.73	(0.68-0.77)	0.70	(0.65-0.76)
Region										
Rest of USA	1.00		1.00		1.00		1.00		1.00	
California	1.06	(1.00-1.12)	1.04	(0.98-1.10)	1.30	(1.13-1.49)	1.20	(1.09-1.33)	1.32	(1.17-1.49)
Massachusetts	1.28	(1.15-1.42)	1.30	(1.17-1.45)	1.00	(0.74-1.34)	1.31	(1.09-1.56)	1.24	(1.00-1.55)
Gender										
Male	1.00		1.00		1.00		1.00		1.00	
Female	1.01	(0.98-1.05)	1.00	(0.97-1.04)	1.13	(1.03-1.23)	1.01	(0.95-1.07)	1.06	(0.98-1.14)
Age (Years)										
25–44	1.00		1.00		1.00		1.00		1.00	
45–64	0.89	(0.86-0.92)	0.89	(0.86-0.92)	0.91	(0.82-1.00)	1.10	(1.03-1.17)	1.12	(1.03-1.21)
65+	0.80	(0.75-0.85)	0.77	(0.72-0.82)	1.17	(1.01-1.36)	1.63	(1.48-1.81)	1.91	(1.70-2.14)
Race/Ethnicity										
Non-Hispanic White	1.00		1.00		1.00		1.00		1.00	
Hispanic	0.95	(0.88-1.03)	0.95	(0.88-1.03)	0.98	(0.81-1.20)	1.01	(0.87-1.17)	1.10	(0.93-1.31)
African-American	1.09	(1.03-1.15)	1.06	(1.00-1.12)	1.29	(1.13-1.47)	0.80	(0.71-0.90)	0.87	(0.76-1.00)
Other	1.00	(0.90-1.10)	1.01	(0.91-1.12)	0.90	(0.69-1.17)	0.81	(0.67-0.99)	0.76	(0.59-0.97)
Education (Years)										
< 12	1.00		1.00		1.00		1.00		1.00	
12	1.16	(1.11-1.21)	1.16	(1.10-1.21)	1.14	(1.00-1.31)	1.24	(1.13-1.36)	1.18	(1.05-1.32)
13–15	1.43	(1.36-1.51)	1.41	(1.34-1.49)	1.47	(1.27-1.70)	1.46	(1.32-1.61)	1.38	(1.23-1.56)
16+	1.43	(1.34-1.52)	1.40	(1.31-1.49)	1.60	(1.35-1.90)	1.73	(1.54-1.95)	1.62	(1.40-1.86)

Table 2-14 (continued)

Variable	Cessation Activity[1] OR	95% CI	Cessation Attempt[2] OR	95% CI	Occasional[3] OR	95% CI	Former (any length) OR	95% CI	Former 3+ Months OR	95% CI
Household Income (Dollars)										
<10,000	1.00		1.00		1.00		1.00		1.00	
10,000-19,999	1.05	(0.99-1.11)	1.07	(1.01-1.13)	0.93	(0.80-1.08)	1.16	(1.03-1.30)	1.18	(1.03-1.36)
20,000-29,999	1.14	(1.07-1.20)	1.16	(1.10-1.23)	0.84	(0.72-0.98)	1.34	(1.19-1.50)	1.33	(1.16-1.53)
30,000-49,999	1.24	(1.17-1.31)	1.26	(1.19-1.33)	1.00	(0.86-1.16)	1.53	(1.37-1.71)	1.50	(1.31-1.71)
50,000-74,999	1.30	(1.22-1.39)	1.32	(1.24-1.41)	1.04	(0.88-1.23)	1.66	(1.47-1.88)	1.68	(1.45-1.95)
75,000+	1.38	(1.27-1.49)	1.40	(1.29-1.52)	1.10	(0.89-1.36)	1.85	(1.60-2.14)	1.95	(1.64-2.32)
Cigarettes smoked per day										
1–4	1.00		1.00		1.00		1.00		1.00	
5–14	0.76	(0.68-0.84)	0.84	(0.75-0.93)	0.48	(0.40-0.57)	0.71	(0.60-0.85)	0.67	(0.55-0.83)
15–24	0.51	(0.46-0.56)	0.58	(0.52-0.64)	0.28	(0.23-0.33)	0.61	(0.52-0.73)	0.60	(0.49-0.74)
25+	0.38	(0.34-0.42)	0.44	(0.40-0.49)	0.17	(0.14-0.21)	0.87	(0.73-1.04)	0.86	(0.70-1.06)

[1–3] See footnotes at beginning of table section for explanation.
Note: Model also adjusted for gender, race/ethnicity, education, household income, and daily cigarette consumption.

Table 2-15

1990 California Tobacco Survey: Cessation of Adult Daily Smokers 12 Months Ago, Ages 25 and Older

	Daily Smoker				Occasional Smoker				Former Smoker							
	Quit Attempts		Without Quit Attempts		Quit Attempts		Without Quit Attempts		Quit <3 Months		Quit 3+ Months		Unknown Duration		Population Size (N)	Sample Size (n)
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI		
Total	32.7	1.7	53.2	1.7	2.6	0.5	0.8	0.3	4.2	0.7	5.6	0.7	0.9	0.5	3,419,535	7,260
Age (Years)																
25–44	36.3	2.4	49.8	2.3	2.9	0.6	0.9	0.5	4.6	1.0	4.6	0.8	1.1	0.9	1,988,278	4,127
45–64	28.0	2.4	57.6	3.0	2.5	1.0	0.8	0.6	3.6	1.1	6.9	1.8	0.5	0.5	1,091,469	2,383
65+	26.5	4.7	58.9	5.0	1.8	0.9	0.7	1.1	3.3	1.5	7.2	2.8	1.7	0.9	339,788	750
Race/Ethnicity																
Non-Hispanic White	30.4	1.8	56.9	1.8	1.8	0.3	0.4	0.2	4.1	0.8	5.6	0.8	0.9	0.7	2,423,696	5,879
Hispanic	37.2	5.9	41.9	7.1	4.7	2.3	2.8	1.8	5.6	2.2	5.9	3.2	1.8	1.6	472,194	632
African-American	41.1	8.6	39.9	8.1	8.2	4.0	1.6	1.9	3.5	2.0	5.7	4.7	0.1	0.1	258,685	373
Asian/PI	37.4	9.6	49.4	10.0	1.5	1.0	0.2	0.4	4.5	3.0	6.0	3.3	1.0	1.4	170,449	235
Native American	37.4	10.1	57.0	9.9	2.1	1.8	0.4	0.8	0.7	1.0	2.3	2.8	0.2	0.4	79,916	121
Other	.	.	.	.	.	.	.	.	.	.	.	.	.	.	14,595	20
Education (Years)																
<12	31.0	4.4	56.1	5.4	2.8	1.5	1.2	0.9	3.0	1.4	4.0	1.7	2.0	2.1	852,503	933
12	32.9	2.5	54.4	2.3	2.4	0.8	0.6	0.4	3.4	0.9	5.6	1.4	0.6	0.4	1,264,846	2,664
13–15	34.6	2.7	49.4	2.7	3.0	0.8	1.1	0.7	4.9	1.4	6.5	1.5	0.5	0.2	824,213	2,389
16+	31.6	3.4	51.5	3.4	2.4	1.1	0.4	0.4	7.0	1.8	6.5	2.0	0.6	0.4	477,973	1,274
Household Income (Dollars)																
≤10,000	33.3	5.1	54.4	5.2	3.8	2.8	0.6	0.7	1.3	0.6	4.7	3.1	1.8	1.5	386,961	634
10,001-20,000	34.5	4.7	51.7	5.2	2.8	1.6	1.8	1.5	3.9	1.7	4.8	1.8	0.6	0.5	487,674	938
20,001-30,000	33.8	3.6	53.6	3.7	1.9	0.9	0.6	0.6	4.0	1.5	5.8	2.4	0.2	0.2	558,699	1,193
30,001-50,000	33.3	2.7	51.1	3.3	3.0	1.4	0.4	0.3	5.0	1.4	5.1	1.1	2.1	2.1	798,429	1,841
50,001-75,000	33.0	5.5	51.6	4.9	2.2	1.0	0.5	0.5	6.3	2.6	6.0	2.6	0.3	0.3	462,432	1,103
75,000+	26.4	3.7	55.9	4.6	3.0	1.3	0.6	0.6	5.5	2.4	8.4	3.4	0.2	0.3	294,790	721
Unknown	31.1	5.1	57.1	6.2	1.9	1.3	1.7	1.4	2.4	1.3	5.3	2.0	0.6	0.4	430,550	830

Table 2-15 (continued)

	Daily Smoker				Occasional Smoker				Former Smoker							
	Quit Attempts		Without Quit Attempts		Quit Attempts		Without Quit Attempts		Quit <3 Months		Quit 3+ Months		Unknown Duration		Population Size (N)	Sample Size (n)
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI		
Male Total	32.9	2.1	53.4	2.4	2.7	0.9	0.9	0.5	4.2	1.0	4.6	0.6	1.3	0.9	1,872,737	3,535
Age (Years)																
25–44	36.5	2.9	50.0	3.2	2.7	1.0	0.9	0.7	4.6	1.3	3.7	1.0	1.5	1.5	1,137,256	2,110
45–64	26.5	3.4	58.8	4.6	3.2	1.9	0.9	0.9	3.5	1.3	6.3	2.3	0.7	0.9	571,016	1,126
65+	29.8	7.5	58.5	7.0	0.7	0.9	.	.	4.1	2.7	5.1	2.9	1.8	1.3	164,465	299
Race/Ethnicity																
Non-Hispanic White	30.7	2.0	57.5	2.2	1.4	0.4	0.3	0.2	4.1	1.1	4.8	0.9	1.3	1.3	1,269,736	2,771
Hispanic	38.3	6.6	40.7	7.5	5.7	3.3	3.8	2.7	4.7	2.7	4.7	2.2	2.2	2.3	308,363	379
African-American	41.1	12.4	39.9	11.3	10.1	7.6	0.4	0.6	5.0	3.6	3.5	3.8	.	.	130,061	173
Asian/PI	34.0	12.5	52.5	14.0	1.3	1.3	0.3	0.6	5.9	4.4	4.9	3.5	1.1	1.4	115,393	148
Native American	.	.	.	.	1.5	2.2	.	.	0.6	1.2	1.4	2.8	.	.	39,317	53
Other	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9,867	11
Education (Years)																
<12	32.4	6.1	52.5	7.7	3.5	2.1	1.9	1.6	3.5	2.2	2.9	1.4	3.3	3.6	505,692	487
12	33.9	3.7	54.9	3.7	2.5	1.5	0.2	0.2	3.4	1.2	4.5	1.3	0.7	0.6	617,688	1,160
13–15	33.4	3.3	52.3	3.7	2.4	1.4	1.0	1.0	5.1	2.0	5.3	1.7	0.4	0.4	451,212	1,148
16+	30.9	3.9	53.9	4.0	2.0	0.9	0.2	0.3	5.9	2.9	6.6	3.0	0.5	0.4	298,145	740
Household Income (Dollars)																
≤10,000	34.4	9.2	53.6	9.9	4.4	3.6	0.8	1.0	0.9	0.7	3.7	3.5	2.3	2.9	174,363	245
10,001-20,000	36.9	5.7	47.3	6.9	3.1	3.1	2.2	2.7	5.5	3.2	4.2	2.5	0.8	0.8	250,518	430
20,001-30,000	33.3	4.5	56.8	4.2	1.2	0.9	0.4	0.4	4.2	1.9	4.0	2.0	0.1	0.1	299,922	566
30,001-50,000	33.7	3.8	50.2	4.6	3.4	2.3	0.5	0.5	4.4	1.5	4.6	1.6	3.3	3.5	480,032	978
50,001-75,000	33.1	6.5	53.1	5.8	1.9	1.4	0.5	0.6	5.6	3.9	5.6	4.0	0.2	0.3	255,706	551
75,000+	24.4	4.8	60.0	6.0	2.6	1.5	0.2	0.4	5.4	3.7	7.3	3.6	0.1	0.2	177,145	382
Unknown	31.6	7.2	57.7	8.0	2.4	1.9	1.8	2.2	2.6	1.9	3.3	2.1	0.6	0.7	235,051	383

Table 2-15 (continued)

	Daily Smoker				Occasional Smoker				Former Smoker							
	Quit Attempts		Without Quit Attempts		Quit Attempts		Without Quit Attempts		Quit <3 Months		Quit 3+ Months		Unknown Duration		Population Size (N)	Sample Size (n)
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI		
Female Total	32.4	2.8	52.9	2.7	2.6	0.6	0.8	0.4	4.0	0.8	6.7	1.3	0.5	0.3	1,546,798	3,725
Age (Years)																
25–44	35.9	3.3	49.5	3.1	3.1	0.9	0.8	0.5	4.5	1.4	5.8	1.5	0.5	0.4	851,022	2,017
45–64	29.7	4.1	56.3	3.9	1.7	1.0	0.7	0.7	3.8	1.4	7.5	3.2	0.2	0.2	520,453	1,257
65+	23.3	5.6	59.3	6.7	2.8	1.7	1.3	2.1	2.6	1.7	9.1	4.3	1.5	1.2	175,323	451
Race/Ethnicity																
Non-Hispanic White	30.1	2.5	56.1	2.6	2.2	0.6	0.6	0.4	4.1	0.9	6.5	1.2	0.5	0.2	1,153,960	3,108
Hispanic	35.2	9.7	44.2	10.9	3.0	2.1	1.0	1.6	7.2	4.2	8.3	7.9	1.1	2.0	163,831	253
African-American	41.0	10.9	39.8	11.4	6.3	4.6	2.7	3.8	2.0	2.1	8.0	8.6	0.1	0.3	128,624	200
Asian/PI	44.6	14.9	43.0	16.0	1.7	2.0	.	.	1.8	1.8	8.1	7.0	0.8	1.5	55,056	87
Native American	.	.	.	.	2.6	2.8	0.7	1.5	0.9	1.7	3.2	3.8	0.4	0.7	40,599	68
Other	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4,728	9
Education (Years)																
<12	29.0	6.6	61.3	7.2	1.8	1.7	0.2	0.3	2.1	1.7	5.5	3.7	0.2	0.3	346,811	446
12	32.1	4.0	54.0	3.6	2.2	0.8	1.0	0.8	3.4	1.3	6.8	2.1	0.5	0.5	647,158	1,504
13–15	36.1	4.0	45.8	3.7	3.8	1.3	1.1	1.0	4.5	1.4	8.0	2.5	0.7	0.4	373,001	1,241
16+	32.7	5.2	47.5	5.8	3.0	2.2	0.7	1.0	8.9	3.2	6.3	2.7	0.8	0.9	179,828	534
Household Income (Dollars)																
≤10,000	32.5	6.7	55.0	6.4	3.4	2.7	0.5	1.0	1.6	1.0	5.6	4.9	1.4	1.7	212,598	389
10,001-20,000	32.1	6.0	56.3	6.4	2.4	1.3	1.2	1.6	2.2	1.2	5.4	3.0	0.4	0.4	237,156	508
20,001-30,000	34.5	6.2	49.9	6.1	2.6	1.6	0.9	1.1	3.8	1.9	7.9	4.6	0.4	0.4	258,777	627
30,001-50,000	32.8	3.9	52.5	4.4	2.5	1.1	0.4	0.3	5.9	2.2	5.9	2.7	0.2	0.3	318,397	863
50,001-75,000	33.0	7.0	49.8	6.6	2.7	1.7	0.4	0.8	7.1	3.1	6.5	3.0	0.4	0.7	206,726	552
75,000+	29.3	5.9	49.6	6.9	3.7	2.2	1.2	1.4	5.7	3.7	10.0	5.4	0.4	0.5	117,645	339
Unknown	30.6	5.8	56.3	7.8	1.3	1.0	1.5	1.9	2.1	1.3	7.6	3.9	0.6	0.5	195,499	447

Note: CI = 95% confidence interval; "." = insufficient data.

Table 2-16
1996 California Tobacco Survey: Cessation of Adult Daily Smokers 12 Months Ago, Ages 25 and Older

	Daily Smoker				Occasional Smoker				Former Smoker							
	Quit Attempts		Without Quit Attempts		Quit Attempts		Without Quit Attempts		Quit <3 Months		Quit 3+ Months		Unknown Duration		Population Size (N)	Sample Size (n)
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI		
Total	31.4	1.3	53.6	1.4	3.3	0.5	1.3	0.4	4.8	0.7	5.0	0.8	0.6	0.2	2,894,421	6,211
Age (Years)																
25–44	35.9	2.0	48.6	2.1	3.5	0.7	1.6	0.7	5.2	0.9	4.8	0.9	0.5	0.2	1,636,213	3,438
45–64	26.6	1.9	60.3	2.1	2.9	0.8	0.8	0.5	3.8	0.8	4.8	1.3	0.7	0.4	979,379	2,190
65+	22.3	3.9	59.3	4.2	3.5	1.6	0.7	0.7	5.8	2.9	7.3	2.9	1.1	1.1	278,833	583
Race/Ethnicity																
Non-Hispanic White	29.1	1.5	56.4	1.5	2.7	0.5	0.8	0.3	5.1	1.0	5.4	0.9	0.5	0.2	1,941,696	4,661
Hispanic	35.6	4.5	44.6	4.6	5.7	2.1	2.7	1.7	5.8	2.1	4.9	1.9	0.7	0.7	439,750	648
African-American	40.8	6.6	44.9	6.6	4.7	2.9	3.5	3.9	1.7	1.3	3.1	2.1	1.2	1.1	218,593	379
Asian/PI	33.1	6.1	54.7	8.0	2.4	1.8	0.8	1.1	3.5	2.1	4.3	3.1	1.2	1.8	166,128	300
Native American	33.3	7.9	54.6	8.5	2.7	1.9	0.5	0.7	3.3	2.2	4.8	3.4	0.8	1.6	128,263	223
Other	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0
Education (Years)																
<12	33.9	3.4	50.9	4.1	2.8	1.1	1.7	1.2	4.8	1.6	4.7	1.7	1.1	0.7	660,951	695
12	28.7	2.1	59.1	2.5	2.8	0.9	0.9	0.4	3.7	0.9	4.1	0.9	0.7	0.4	937,289	2,295
13–15	31.5	2.0	52.8	2.4	3.9	0.9	1.7	1.2	5.0	1.5	5.0	1.2	0.2	0.2	811,862	2,033
16+	33.0	3.4	48.0	4.0	4.1	1.3	0.7	0.5	6.3	1.8	7.3	1.9	0.5	0.4	484,320	1,188
Household Income (Dollars)																
≤10,000	32.6	4.4	53.8	4.3	3.2	1.6	2.7	2.3	3.3	1.5	4.1	1.6	0.3	0.5	370,131	621
10,001-20,000	34.8	3.9	50.8	4.2	3.6	1.4	0.7	0.8	5.1	2.0	4.5	1.5	0.5	0.5	397,523	784
20,001-30,000	31.5	4.2	54.9	3.7	3.2	1.2	0.6	0.5	4.0	1.4	4.9	1.5	1.0	0.9	444,746	949
30,001-50,000	30.5	2.8	54.1	2.7	3.2	0.9	1.2	0.8	5.4	1.5	5.1	1.8	0.4	0.5	633,126	1,431
50,001-75,000	33.1	3.4	51.9	4.5	3.4	1.3	1.6	0.9	3.6	1.5	6.0	1.9	0.5	0.4	437,041	1,024
75,000+	28.6	3.4	53.2	5.3	2.9	1.1	0.6	0.5	7.1	2.6	7.0	2.3	0.5	0.5	330,695	840
Unknown	27.7	4.3	57.2	4.7	3.8	1.6	1.5	1.7	5.1	2.2	3.3	1.7	1.5	1.0	281,158	562

Table 2-16 (continued)

	Daily Smoker				Occasional Smoker				Former Smoker							
	Quit Attempts		Without Quit Attempts		Quit Attempts		Without Quit Attempts		Quit <3 Months		Quit 3+ Months		Unknown Duration		Population Size	Sample Size
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	(N)	(n)
Male Total	32.6	1.7	53.3	2.1	3.2	0.7	0.9	0.5	4.4	0.7	4.9	0.9	0.7	0.3	1,599,132	3,104
Age (Years)																
25–44	37.5	2.6	48.5	2.9	3.3	0.9	1.2	0.6	4.8	1.0	4.2	1.0	0.6	0.4	938,719	1,808
45–64	27.3	2.8	59.9	3.4	3.3	1.4	0.5	0.6	3.4	1.2	4.9	1.5	0.6	0.4	533,228	1,060
65+	18.8	4.5	61.3	5.8	1.8	2.0	0.5	1.1	6.0	3.7	9.8	4.6	1.9	2.4	127,184	236
Race/Ethnicity																
Non-Hispanic White	30.3	2.0	56.3	2.2	2.3	0.7	0.5	0.3	4.6	1.0	5.3	1.0	0.7	0.4	1,005,234	2,191
Hispanic	36.2	5.0	44.4	5.7	6.0	2.7	2.4	2.2	5.4	2.4	4.9	2.1	0.7	0.9	303,944	412
African-American	40.3	9.3	47.8	8.6	5.1	3.7	1.8	2.4	1.0	1.5	2.3	2.1	1.6	1.9	105,338	172
Asian/PI	37.8	7.7	52.9	8.4	2.3	2.0	.	.	3.7	2.4	3.3	2.6	.	.	115,588	211
Native American	29.3	9.5	58.7	10.6	2.5	2.5	0.5	1.0	3.5	3.4	5.5	5.3	.	.	69,026	118
Other	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0
Education (Years)																
<12	31.7	4.3	50.9	5.6	3.4	1.7	1.9	1.7	5.7	2.2	4.9	1.9	1.5	1.1	389,244	377
12	31.2	2.8	58.9	3.3	2.7	1.2	0.6	0.5	2.8	0.9	3.2	1.0	0.5	0.4	487,227	1,070
13–15	35.2	3.1	51.4	3.7	3.3	1.4	0.6	0.6	4.3	1.6	4.9	1.5	0.2	0.3	436,514	997
16+	32.2	3.8	50.1	4.8	3.5	1.9	0.6	0.7	5.5	1.8	7.5	2.4	0.6	0.5	286,144	660
Household Income (Dollars)																
≤10,000	33.4	6.7	53.8	7.2	3.2	2.7	1.3	1.6	3.8	2.4	4.1	2.4	0.4	0.9	180,241	255
10,001-20,000	37.6	6.1	49.6	5.9	3.5	2.4	0.8	1.2	4.0	2.8	3.8	2.2	0.7	0.8	205,949	355
20,001-30,000	31.0	5.2	54.9	5.4	3.0	1.6	0.7	0.9	4.1	2.1	5.2	2.0	1.2	1.5	242,397	453
30,001-50,000	31.5	3.5	54.7	4.0	3.3	1.4	0.5	0.5	5.1	2.2	4.6	1.9	0.3	0.4	348,127	716
50,001-75,000	36.2	4.0	50.9	4.3	2.4	1.5	1.7	1.4	2.3	1.1	5.8	2.2	0.6	0.6	257,188	561
75,000+	30.6	4.8	52.9	6.1	2.6	1.6	0.2	0.3	6.7	2.2	6.5	2.6	0.5	0.6	202,225	479
Unknown	26.8	5.9	56.5	6.6	4.5	2.8	2.0	2.7	5.1	3.1	3.8	2.6	1.3	1.4	163,004	285

Table 2-16 (continued)

	Daily Smoker				Occasional Smoker				Former Smoker							
	Quit Attempts		Without Quit Attempts		Quit Attempts		Without Quit Attempts		Quit <3 Months		Quit 3+ Months		Unknown Duration		Population Size	Sample Size
	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	%	± CI	(N)	(n)
Female Total	30.0	2.1	53.9	2.3	3.5	0.7	1.7	0.7	5.2	1.3	5.2	1.0	0.6	0.3	1,295,293	3,107
Age (Years)																
25–44	33.7	2.9	48.6	3.1	3.8	1.0	2.2	1.3	5.7	1.7	5.6	1.3	0.4	0.3	697,492	1,630
45–64	25.8	3.0	60.8	2.9	2.5	1.0	1.2	0.8	4.3	1.3	4.7	1.7	0.8	0.8	446,151	1,130
65+	25.2	6.1	57.6	7.1	4.8	2.6	0.9	1.0	5.6	3.6	5.3	2.8	0.6	0.8	151,649	347
Race/Ethnicity																
Non-Hispanic White	27.9	2.1	56.6	2.1	3.2	0.6	1.1	0.5	5.6	1.7	5.4	1.1	0.2	0.2	936,454	2,470
Hispanic	34.3	7.6	45.1	7.6	5.0	3.1	3.2	2.8	6.6	4.1	5.0	4.0	0.8	1.1	135,805	236
African-American	41.3	9.0	42.2	9.3	4.4	3.8	5.0	7.3	2.4	1.8	3.9	2.9	0.9	1.3	113,255	207
Asian/PI	22.4	12.9	58.7	18.0	2.7	3.9	2.5	3.7	3.0	3.6	6.6	7.4	4.0	6.0	50,540	89
Native American	38.0	13.2	49.8	15.2	3.0	2.6	0.5	1.1	3.1	3.1	3.9	4.1	1.7	3.4	59,237	105
Other	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0
Education (Years)																
<12	37.2	6.4	50.9	6.2	2.1	1.6	1.5	1.5	3.5	2.4	4.3	2.5	0.5	0.7	271,706	318
12	26.1	2.4	59.2	3.4	2.8	1.1	1.2	0.6	4.7	1.6	5.0	1.3	0.9	0.8	450,062	1,225
13 - 15	27.1	2.7	54.3	3.4	4.5	1.3	2.9	2.3	5.7	2.3	5.2	1.7	0.2	0.3	375,347	1,036
16+	34.3	5.8	45.0	5.6	4.9	1.8	0.8	0.8	7.6	3.8	7.1	2.7	0.4	0.7	198,177	528
Household Income (Dollars)																
≤10,000	31.8	5.3	53.7	5.9	3.2	1.9	4.1	4.4	2.9	1.5	4.1	2.3	0.3	0.5	189,890	366
10,001-20,000	31.8	5.6	52.0	5.8	3.6	1.8	0.6	0.9	6.3	3.2	5.3	2.3	0.4	0.7	191,575	429
20,001-30,000	32.0	5.1	54.9	4.3	3.4	2.1	0.5	0.5	3.8	1.7	4.6	2.1	0.8	1.1	202,350	496
30,001-50,000	29.4	4.4	53.2	4.6	3.2	1.3	2.2	1.8	5.8	2.5	5.7	2.9	0.5	0.9	285,000	715
50,001-75,000	28.5	6.9	53.2	8.0	4.8	1.9	1.6	1.2	5.4	3.3	6.2	2.9	0.3	0.5	179,853	463
75,000+	25.4	4.9	53.8	7.8	3.3	1.8	1.3	1.3	7.9	5.3	7.8	3.8	0.5	1.1	128,471	361
Unknown	28.9	5.8	58.3	6.6	2.8	2.0	0.8	0.7	5.0	3.1	2.6	1.8	1.6	1.6	118,154	277

Note: CI = 95% confidence interval; "." = insufficient data.

Table 2-17
Percentage of Former Smokers among those who Reported Smoking in the Last Year in Massachusetts

OVERALL	MTS* 1993		MATS** 1995, 1996		MATS** 1997	
	%***	N‡	%	N	%	N
Total	8.1 ±2.6	1784	10.2 ±3.9	1253	10.9 ±4.8	782
Gender						
Male	7.0 ±3.8	858	8.6 ±5.1	578	10.7 ±7.0	363
Female	9.0 ±3.7	926	11.6 ±6.0	675	10.9 ±6.8	419
Age (Years)						
18 - 24	7.5 ±7.8	255	2.5 ±1.9	156	4.7 ±3.9	98
25 - 44	4.1 ±2.1	977	13.0 ±6.5	678	10.0 ±6.0	409
45 - 64	17.9 ±8.5	402	9.8 ±7.6	308	16.7 ±11.1	209
65+	7.6 ±9.0	108	12.5 ±12.4	108	1.9 ±2.4	64
Ethnicity						
Non-Hispanic White	8.2 ±2.9	1346	11.8 ±4.8	1010	11.1 ±5.2	646
African-American	7.7 ±5.4	145	8.1 ±8.1	85	—	42
Hispanic	0 ±1.3	131	3.6 ±2.7	81	6.7 ±8.4	52
Asian/PI	—	26	0 ±2.2	11	—	4
Other	5.9 ±12.1	61	0 ±2.4	15	10.0 ±10.7	17
Education (Years)						
<12	6.8 ±5.9	288	11.7 ±10.9	193	8.7 ±6.5	113
12	8.0 ±4.2	693	5.2 ±3.6	493	15.4 ±9.1	323
13 - 15	7.8 ±5.1	460	10.4 ±8.2	344	8.3 ±7.0	209
16+	10.3 ±6.6	299	19.2 ±11.7	206	5.3 ±8.1	130
Income Level (Dollars)						
<10,000	4.2 ±5.2	221	10.6 ±9.6	154	—	70
10,000-19,000	10.4 ±9.3	238	6.9 ±9.8	152	2.3 ±1.9	113
20,000-29,000	6.0 ±5.5	311	6.1 ±5.6	230	4.9 ±6.4	129
30,000-49,000	11.5 ±6.7	417	7.9 ±7.2	324	11.2 ±9.8	203
50,000-75,000	8.2 ±5.8	237	21.5 ±14.9	142	—	102
75,000+	7.8 ±11.6	91	—	90	1.6 ±2.1	67

Table 2-17 (continued)

MALE	MTS* 1993		MATS** 1995, 1996		MATS** 1997	
	%***	N‡	%	N	%	N
Total Men	7	858	8.6	578	10.7	363
Age (Years)						
18 - 24	12.3	115	2.4	74	2.6	42
25 - 44	3.4	472	9.9	312	7.8	196
45 - 64	14	212	10.7	149	17.2	104
65+	10	51	15.2	43	10	21
Ethnicity						
Non-Hispanic White	7.3	628	11.3	452	11.2	296
African-American	7.4	69	13.3	34	0	19
Hispanic	0	63	0	38	0	22
Asian/PI	20	19	0	10	0	2
Other	0	34	0	9	11.1	11
Education (Years)						
<12	7.1	154	12.3	101	3.6	57
12	7	327	4.8	222	15.5	149
13 - 15	3.3	211	6	149	5.2	85
16+	14.7	146	17.3	99	10.6	68
Income Level (Dollars)						
<10,000	6.5	91	4	48	0	25
10,000-19,000	6.4	98	2.7	56	2.3	39
20,000-29,000	1.2	150	8	102	2.8	51
30,000-49,000	9.6	214	3.1	176	14.1	113
50,000-75,000	8.1	125	26.1	69	24.2	49
75,000+	13.2	54	9.6	55	2.4	46

Table 2-17 (continued)

FEMALE	MTS* 1993		MATS** 1995, 1996		MATS** 1997	
	%***	N‡	%	N	%	N
Total Women	9	926	11.6	675	10.9	419
Age (Years)						
18 - 24	4.4	140	1.3	82	4.3	56
25 - 44	4.8	505	15.7	366	12.3	213
45 - 64	21.1	190	9	159	16.1	105
65+	5.6	57	10.3	65	2.3	43
Ethnicity						
Non-Hispanic White	9	718	12.4	558	11	350
African-American	8.3	76	9.1	51	33.3	23
Hispanic	0	68	5.3	43	12.5	30
Asian/PI	14.3	7	0	1	0	2
Other	20	27	0	6	0	6
Education (Years)						
<12	6.3	134	11.1	92	15.8	56
12	9	366	5.1	271	15.2	174
13 - 15	12.3	249	14.2	195	10.5	124
16+	7.8	153	20.7	107	0	62
Income Level (Dollars)						
<10,000	4	130	13.3	106	33.3	45
10,000-19,000	13	140	10.6	96	2.2	74
20,000-29,000	8.8	161	3.8	128	6.7	78
30,000-49,000	14.1	203	11.9	148	8.5	90
50,000-75,000	8.3	112	14	73	20.3	53
75,000+	2	37	27.3	35	0	21

** MTS - Massachusetts Tobacco Survey.*
*** MATS - Massachusetts Adult Tobacco Survey.*
**** All % reported are weighted.*
‡ All N's reported are unweighted.

Table 2-18
Quit Attempts among those who Reported Smoking in the Last Year in Massachusetts

OVERALL	MTS* 1993		MATS** 1995, 1996		MATS 1997	
	%***	N‡	%	N	%	N
Total	47.5 ±5.0	1747	52.9 ±6.0	1245	48.2 ±7.5	776
Gender						
Male	48.6 ±7.5	839	54.4 ±8.6	574	45.6 ±10.2	360
Female	46.4 ±7.1	908	51.4 ±8.5	671	51.0 ±10.5	416
Age (Years)						
18 - 24	37.7 ±11.8	251	—	153	—	98
25 - 44	46.2 ±7.2	959	59.7 ±7.8	673	56.7 ±9.9	404
45 - 64	59.3 ±9.5	395	50.8 ±12.1	308	39.1 ±12.9	209
65+	—	104	—	108	—	64
Ethnicity						
Non-Hispanic White	47.6 ±5.4	1325	50.9 ±6.7	1004	47.5 ±8.0	643
African-American	—	140	—	85	—	41
Hispanic	—	128	—	80	—	51
Asian/PI	—	24	—	11	—	4
Other	—	61	—	14	—	17
Education (Years)						
<12	53.4 ±14.2	282	58.9 ±15.1	192	—	113
12	44.6 ±7.6	685	47.4 ±10.8	491	47.7 ±11.8	322
13 - 15	43.2 ±9.8	449	50.5 ±11.8	341	50.2 ±14.2	206
16+	56.8 ±11.1	289	62.0 ±12.7	204	—	128
Income Level (Dollars)						
<10,000	25.3 ±11.9	220	58.8 ±15.4	153	—	70
10,000-19,000	52.7 ±13.1	235	36.1 ±16.7	149	—	113
20,000-29,000	44.0 ±12.6	306	55.8 ±13.0	228	—	128
30,000-49,000	53.6 ±9.4	413	52.2 ±11.6	323	43.5 ±14.2	202
50,000-75,000	49.2 ±12.6	236	—	142	—	101
75,000+	—	84	—	90	—	67

Table 2-18 (continued)

MALE	MTS* 1993		MATS** 1995, 1996		MATS 1997	
	%***	N‡	%	N	%	N
Total Men	48.6	839	54.4	574	45.6	360
Age (Years)						
18 - 24	38.5	112	47.2	73	57.9	42
25 - 44	46.6	465	60.7	309	46.9	193
45 - 64	65.7	206	54.9	149	41.4	104
65+	32.3	50	36.4	43	30	21
Ethnicity						
Non-Hispanic White	49.1	619	51.6	450	44.7	295
African-American	55	66	46.7	34	81.8	18
Hispanic	35.3	62	38.9	37	50	21
Asian/PI	22.2	17	88.2	10	0	2
Other	54.5	34	90	8	12.5	11
Education (Years)						
<12	60.3	149	63.2	101	32.1	57
12	44.7	324	53.4	220	47.9	148
13 - 15	38.2	204	40	147	35.5	83
16+	68.1	143	72.1	99	57.6	68
Income Level (Dollars)						
<10,000	17.4	91	44	47	50	25
10,000-19,000	54.5	96	25	55	31	39
20,000-29,000	50	147	64.4	101	27.8	51
30,000-49,000	51.2	211	58.3	175	38	113
50,000-75,000	48.2	124	50	69	62.3	48
75,000+	60.9	52	58.9	55	48.2	46

Table 2-18 (continued)

FEMALE	MTS* 1993		MATS** 1995, 1996		MATS 1997	
	%***	N‡	%	N	%	N
Total Women	46.4	908	51.4	671	51	416
Age (Years)						
18 - 24	36.4	139	34.2	80	32.6	56
25 - 44	45.6	494	58.7	364	65.9	211
45 - 64	54.9	189	47.2	159	35.5	105
65+	48.6	54	46.2	65	38.1	43
Ethnicity						
Non-Hispanic White	46.2	706	50.3	554	50	348
African-American	58.3	74	68.2	51	66.7	23
Hispanic	60	66	50	43	62.5	30
Asian/PI	16.7	7	0	1	100	2
Other	66.7	27	14.3	6	100	6
Education (Years)						
<12	46	133	53.7	91	50	56
12	44.3	361	41.4	271	48	174
13 - 15	47.4	245	60.8	194	60.9	123
16+	48.4	146	52.3	105	38.4	60
Income Level (Dollars)						
<10,000	32.7	129	65	106	55.6	45
10,000-19,000	52.2	139	42.6	94	42.2	74
20,000-29,000	40.9	159	46.8	127	27.3	77
30,000-49,000	56.3	202	47.2	148	48.4	89
50,000-75,000	50.5	112	58.9	73	62.3	53
75,000+	45.8	32	59.3	35	42.5	21

** MTS - Massachusetts Tobacco Survey.*
*** MATS - Massachusetts Adult Tobacco Survey.*
**** All % reported are weighted.*
‡ All N's reported are unweighted.

Table 2-19
Smokers Planning to Quit in the Next 30 Days in Massachusetts

OVERALL	MTS* 1993		MATS** 1995, 1996		MATS 1997	
	%***	N‡	%	N	%	N
Total	28.6 ±5.2	1564	30.7 ±5.9	1107	33.3 ±6.6	684
Gender						
Male	31.8 ±7.2	763	34.6 ±9.4	505	36.5 ±10.1	317
Female	25.6 ±6.7	801	26.8 ±7.7	602	30.5 ±9.4	367
Age (Years)						
18 - 24	18.2 ±9.2	232	25.0 ±14.0	140	13.6 ±9.0	89
25 - 44	27.8 ±6.2	874	32.1 ±9.1	599	36.2 ±9.9	362
45 - 64	34.0 ±11.1	328	31.0 ±11.5	271	39.8 ±14.0	182
65+	—	94	—	94	—	51
Ethnicity						
Non-Hispanic White	28.6 ±5.7	1181	26.7 ±6.2	891	32.1 ±7.0	564
African-American	25.0 ±12.1	122	—	73	—	37
Hispanic	—	119	—	72	—	45
Asian/PI	7.7 ±10.2	21	—	10	—	4
Other	18.8 ±13.2	58	—	14	—	17
Education (Years)						
<12	—	254	29.4 ±14.1	168	—	98
12	23.3 ±6.8	611	32.9 ±10.1	441	30.9 ±11.1	272
13 - 15	29.6 ±9.6	404	26.8 ±10.0	306	31.1 ±12.8	190
16+	30.3 ±10.9	258	27.3 ±12.3	179	39.1 ±13.7	119
Income Level (Dollars)						
<10,000	—	198	—	136	17.6 ±12.3	58
10,000-19,000	22.2 ±13.7	220	—	138	—	100
20,000-29,000	31.1 ±12.5	280	24.5 ±12.4	207	—	116
30,000-49,000	32.7 ±9.4	360	38.4 ±12.3	286	32.3 ±13.4	179
50,000-75,000	29.0 ±12.2	210	—	127	—	85
75,000+	9.9 ±9.1	77	—	74	—	66

Table 2-19 (continued)

MALE	MTS* 1993		MATS** 1995, 1996		MATS 1997	
	%***	N‡	%	N	%	N
Total Men	31.8	763	34.6	505	36.5	317
Age (Years)						
18 - 24	25.8	106	17.5	67	18.9	41
25 - 44	30	431	43	274	32.1	171
45 - 64	38.4	176	37.9	126	49.5	89
65+	42.9	43	28.6	38	33.3	16
Ethnicity						
Non-Hispanic White	32.4	553	31.7	393	34.8	259
African-American	23.5	58	25	26	72.7	17
Hispanic	66.7	62	52.8	37	71.4	18
Asian/PI	14.3	17	88.2	9	0	2
Other	16.7	33	10.5	8	0	10
Education (Years)						
<12	41.9	135	37	83	38.5	49
12	24.3	295	38.2	200	34.2	127
13 - 15	35.9	183	30.2	132	22.4	77
16+	38.5	131	32.9	85	51.3	61
Income Level (Dollars)						
<10,000	47.6	80	25.7	42	20	23
10,000-19,000	25	95	41.7	52	29.3	34
20,000-29,000	24.4	142	26.4	86	61.8	45
30,000-49,000	37.4	185	48.8	157	28	100
50,000-75,000	32.9	111	44.6	60	40	41
75,000+	9.3	44	27.7	44	29.1	43

Table 2-19 (continued)

FEMALE	MTS* 1993		MATS** 1995, 1996		MATS 1997	
	%***	N‡	%	N	%	N
Total Women	25.6	801	26.8	602	30.5	367
Age (Years)						
18 - 24	12.8	126	37.3	73	8.9	48
25 - 44	25.3	443	21.1	325	40.3	191
45 - 64	30.4	152	26	145	26	93
65+	57.6	51	42.9	56	22	35
Ethnicity						
Non-Hispanic White	25.3	628	22.9	498	29.7	305
African-American	27.3	64	55	47	75	20
Hispanic	61.5	57	55.6	35	42.9	27
Asian/PI	0	4	0	1	0	2
Other	25	25	16.7	6	0	7
Education (Years)						
<12	39	119	22.4	85	20	49
12	22.3	316	27.9	241	26.9	145
13 - 15	23.5	221	22.6	174	37.5	113
16+	24.3	127	23	94	28.1	58
Income Level (Dollars)						
<10,000	14.9	118	38.5	94	18.2	35
10,000-19,000	20	125	25.9	86	29.5	66
20,000-29,000	36	138	22.7	121	12.2	71
30,000-49,000	26.2	175	28.7	129	36	79
50,000-75,000	24.7	99	16.3	67	34.5	44
75,000+	10.4	33	21.2	30	26.1	23

** MTS - Massachusetts Tobacco Survey.*
*** MATS - Massachusetts Adult Tobacco Survey.*
**** All % reported are weighted.*
‡ All N's reported are unweighted.

Table 2-20
Daily Smokers Planning to Quit in the Next 30 Days in Massachusetts

OVERALL	MTS* 1993		MATS** 1995, 1996		MATS 1997	
	%***	N‡	%	N	%	N
Total	23.8 ±4.9	1307	27.3 ±6.3	916	29.3 ±7.0	586
Gender						
Male	28.4 ±7.1	636	32.9 ±9.9	418	35.5 ±10.7	274
Female	19.1 ±6.0	671	22.2 ±8.3	498	23.0 ±9.5	312
Age (Years)						
18 - 24	10.4 ±6.2	194	—	103	11.4 ±8.3	70
25 - 44	24.5 ±6.5	718	29.3 ±9.1	501	29.6 ±10.3	306
45 - 64	27.0 ±10.8	285	24.9 ±11.7	231	37.7 ±14.4	163
65+	—	84	—	78	—	47
Ethnicity						
Non-Hispanic White	23.7 ±4.4	1000	23.1 ±6.6	751	27.6 ±7.4	486
African-American	24.0 ±12.7	98	—	54	—	30
Hispanic	—	96	—	54	—	39
Asian/PI	7.7 ±8.2	16	—	7	—	2
Other	14.3 ±13.2	50	—	10	—	13
Education (Years)						
<12	30.3 ±15.3	227	32.6 ±14.9	147	—	91
12	20.9 ±7.1	530	26.6 ±9.7	374	25.1 ±10.5	242
13 - 15	25.7 ±10.2	333	26.5 ±11.2	261	26.3 ±13.1	155
16+	23.8 ±11.5	186	18.4 ±12.0	123	38.2 ±16.9	93
Income Level						
<10,000	—	173	31.7 ±17.3	116	17.6 ±12.3	55
10,000-19,000	21.5 ±14.5	195	—	108	—	88
20,000-29,000	23.0 ±10.9	234	22.6 ±14.1	173	—	98
30,000-49,000	30.2 ±10.3	305	32.5 ±13.0	243	29.5 ±14.1	149
50,000-75,000	23.8 ±13.3	173	—	105	—	74
75,000+	11.9 ±13.0	55	—	57	—	56

Table 2-20 (continued)

MALE	MTS* 1993		MATS** 1995, 1996		MATS 1997	
	%***	N‡	%	N	%	N
Total Men	28.4	636	32.9	418	35.5	274
Age (Years)						
18 - 24	16	90	16.3	50	15.2	32
25 - 44	29.3	350	41.4	224	29.9	146
45 - 64	29.2	148	32	110	49.5	80
65+	44.4	42	33.3	34	33.3	16
Ethnicity						
Non-Hispanic White	29.9	468	30.8	334	33.5	227
African-American	18.8	46	25	21	77.8	13
Hispanic	44.4	49	80	26	71.4	16
Asian/PI	14.3	12	33.3	6	0	0
Other	16.7	29	10.5	6	0	7
Education (Years)						
<12	33.3	120	47.5	71	41.7	46
12	22.3	255	30.1	169	30.3	113
13 - 15	33.6	149	32.4	114	20	66
16+	37.2	96	28.6	60	59.3	46
Income Level (Dollars)						
<10,000	42.4	71	42.9	35	20	22
10,000-19,000	23.8	85	30.8	39	38.7	29
20,000-29,000	18.8	119	27.4	72	57.1	37
30,000-49,000	36.2	157	38.5	131	27.4	87
50,000-75,000	25.9	88	41.2	50	40.9	36
75,000+	15	30	34	33	24.3	36

Table 2-20 (continued)

FEMALE	MTS* 1993		MATS** 1995, 1996		MATS 1997	
	%***	N‡	%	N	%	N
Total Women	19.1	671	22.2	498	23	312
Age (Years)						
18 - 24	8	104	38.8	53	7.9	38
25 - 44	18.8	368	19.1	277	28.9	160
45 - 64	25.5	137	19.4	121	21.1	83
65+	39.1	42	24	44	23.1	31
Ethnicity						
Non-Hispanic White	18	532	17	417	22	259
African-American	33.3	52	53.8	33	75	17
Hispanic	70	47	56.3	28	33.3	23
Asian/PI	0	4	0	1	0	2
Other	33.3	21	0	4	0	6
Education (Years)						
<12	27.7	107	19.6	76	20	45
12	19.4	275	23.6	205	18.7	129
13 - 15	17	184	19.5	147	30.6	89
16+	17.1	90	6.1	63	18.8	47
Income Level (Dollars)						
<10,000	12.2	102	26.2	81	18.2	33
10,000-19,000	20	110	24.4	69	28.6	59
20,000-29,000	26.9	115	17.7	101	14.3	61
30,000-49,000	20.7	148	27.4	112	31.5	62
50,000-75,000	22.4	85	15	55	14.6	38
75,000+	10	25	5.3	24	17.5	20

** MTS - Massachusetts Tobacco Survey.*
*** MATS - Massachusetts Adult Tobacco Survey.*
**** All % reported are weighted.*
‡ All N's reported are unweighted.

Appendix 2

CPS Summary of Methods Used in Logistic Regression Models for Cessation Monograph

1. BASIC CESSATION MODELS

Population

The analysis includes self-respondents from the CPS 1992/93 and 1995/96 surveys who are 25 years of age or older. These respondents must have a valid current smoking status (daily, occasional, or former) and must have been daily smokers one year ago. In other words, respondents who did not answer whether they had smoked at least 100 cigarettes (Question 32*), whether they currently smoke (Question 35), and whether they smoked daily 12 months ago (Question 61) are excluded from the analysis. Additionally, respondents are excluded from the analysis if they are

- current daily smokers with unknown quit attempts (Questions 44 and 45),
- current occasional and former smokers who have not been daily smokers for at least 6 months (Questions 39 and 55), or
- current former smokers with unknown lengths of quit time (Question 59).

Any respondents who neglected to answer questions that are used as covariates are also excluded from the analysis.

Additionally, each analysis is stratified by region—the nation, California, and the nation minus California (N–CA). Below is a summary of the number of respondents used for the analyses by region.

Region	Population	1992/93	1995/96
Nation	Respondents to Tobacco Supplement	333,909	289,704
	Self-respondents, age 25+	205,621	170,313
	Daily smokers of 1 yr (Used in analysis)	38,283	30,609
Calif	Respondents to Tobacco Supplement	25,834	23,019
	Self-respondents, age 25+	14,767	12,266
	Daily smokers of 1 yr (Used in analysis)	1,972	1,584
N–CA	Respondents to Tobacco Supplement	308,075	266,685
	Self-respondents, age 25+	190,854	158,047
	Daily smokers of 1 yr (Used in analysis)	36,311	29,025

* All question numbers refer to the 1992/93 Current Population Survey.

Outcomes Five different cessation outcomes are modeled:

Cessation Activity	Those daily smokers of 1 year ago who have either tried to quit (current daily smokers with quit attempts in the past year), have become occasional smokers, or have quit altogether (current former smokers).
Cessation Attempts	Those daily smokers of 1 year ago, save current occasional smokers, who have tried to quit or who have quit. Current occasional smokers have been excluded from the analysis of this outcome because their attempts to quit are not monitored.
Occasional	Those daily smokers of 1 year ago who have become occasional smokers.
Former	Those daily smokers of 1 year ago who have quit smoking, regardless of the length of this current quit effort.
Former >3 months	Those daily smokers of 1 year ago who quit smoking at least 3 months prior to the survey.

Weighting for Confidence Interval Calculation To estimate the standard errors for the odds ratios obtained from the logistic regression analysis, the weight of each survey respondent has been recalculated, so the sum of the new weights is the original sample size. This reweighting is obtained by dividing each respondent's original weight by the sum of all the original weights ($wt/\sum wt$ = each respondent's contribution), this quotient is then multiplied by the total sample size.

Covariates The following covariates are used to model the cessation outcomes:

Gender	Male or Female
Age	Each respondent is classified into one of three age categories: 25 – 44 45 – 64 65 +
Race	Race and ethnicity are classified into five categories—White, Hispanic, African-American, Native American, and Other. Each respondent has specified his race and presence of Hispanic ethnicity. If the respondent has indicated Hispanic ethnicity, he is classified as Hispanic; otherwise, his race response is used. For the 1992/93 survey, the category "Other" includes Asian/PI, Native American, and Other; however, for the 1995/96 survey, this category only includes Asian/PI and Native American, since the CPS reclassified respondents into one of the other race categories if they chose a race of "Other."

Education — Respondents are classified into one of four education categories:

<12	Years
12	Years (with or without a diploma)
13-15	Years
16+	Years

Income — Respondents are classified by their household income into one of six categories:

<$10,000
$10,000 – $19,999
$20,000 – $29,999
$30,000 – $49,999
$50,000 – $74,999
$75,000 +

Cigarettes smoked per day — Respondents are grouped differently according to their current smoking status. Current occasional and former smokers are classified into categories according to the number of cigarettes smoked per day when they were last daily smokers—presumably 12 months prior to the survey (Questions 41 and 57). Current daily smokers, however, are classified according to the number of cigarettes they are currently smoking (Question 36). The categories are

1 – 4	cigarettes per day
5 – 14	cigarettes per day
15 – 24	cigarettes per day
25+	cigarettes per day

2. CESSATION BY DOCTOR'S ADVICE

This analysis subsets the population described in #1 by deleting from that population those respondents who have unknown information regarding doctor's advice. Additionally, since information about doctor's advice is only obtained from current smokers, former smokers have been deleted from this analysis.

Population

Population used in analysis: Current smokers who were daily smokers one year ago.

Region	1992/93	1995/96
Nation	35,013	28,801
Calif	1,752	1,467
N–CA	33,261	27,334

Outcomes Since only current smokers are used in the analysis, only three cessation outcomes are modeled—change, attempts, and occasional.

Covariates Only one covariate, doctor's advice, is added to those already listed in #1. Each respondent is characterized by one of the following classifications:

- Saw a doctor and received advice
- Saw a doctor but didn't receive advice
- Didn't see a doctor

Questions 47 and 49 are used to characterize respondents.

3. CESSATION BY DOCTOR'S ADVICE FOR THOSE WHO SAW A DOCTOR WITHIN THE LAST YEAR

The population described in #2 has been further subset such that those current smokers who were daily smokers 1 year ago have been subset to those who also saw a doctor within the last year.

Population Population used in analysis: Those current smokers who were daily smokers 1 year ago and saw a doctor within the last year.

Region	1992/93	1995/96
Nation	25,155	21,147
Calif	1,275	1,029
N–CA	23,880	20,118

Outcomes The same cessation outcomes listed in #2 are used—change, attempt, and occasional.

Covariates Since all the respondents used in this analysis have seen a doctor in the past year, the covariates listed in #2 have been modified to only include

- Received doctor's advice
- Didn't receive doctor's advice

4. WHO SAW A DOCTOR IN THE PAST YEAR

Population This analysis uses a subset of the population described in #1. Those respondents whose visits to a doctor within the past year are unknown (Question 47) have been excluded from this analysis. This population is slightly different than the population described in #2 because the population used in that analysis also excluded respondents with missing information regarding doctor's advice.

Population used in analysis: Daily smokers of 1 year ago with known doctors' visits.

Region	1992/93	1995/96
Nation	35,411	28,829
Calif	1,800	1,467
N–CA	33,611	27,362

Outcomes The outcome visit to a doctor in the last year is modeled. Question 47 is used to indicate doctor's visit.

Covariates The same covariates that are used in the basic cessation models (described in #1) are used in these models.

5. RECEIVED DOCTOR'S ADVICE

Population The population modeled in this analysis is the same population described in #3 (Cessation by Doctor's Advice for those Who Saw a Doctor).

Outcomes The outcome modeled is "receipt of doctor's advice."

Covariates The same covariates used in the basic cessation models (#1) are used in this analysis.

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