California Tobacco Facts and Figures 2015

25 Years of Tobacco Control in California

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California Department of Public Health
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California CTCP Tobacco Control Program

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Introduction

Purpose

This document provides tables, graphs, and information about tobacco use in California as a quick reference for individuals or groups working to eliminate tobacco use. The Appendix provides tables listing prevalence rates for those graphs that do not display specific rates.

Data Sources

Several data sources are in this document. Each data source is based on a different survey or surveillance tool, and therefore may report slightly different rates. However, the rate differences are not statistically significant and represent the State of California to the best of our knowledge.

Methodology Changes

Some of the graphs display data breaks in 1996 and in 2012. These breaks were inserted to account for changes in survey questions or methodology. In 1996, the Behavioral Risk Factor Surveillance System (BRFSS) changed the methodology of smoking behavior to include occasional smokers, rather than only individuals who considered themselves smokers versus non-smokers. In 2012, the survey methodology of the BRFSS changed significantly to be more representative of the general population. Several changes were implemented: 1) the survey became dual-frame, with both cell and landline random-digit dial components, 2) residents of college housing were eligible to complete the BRFSS, and 3) raking or iterative proportional fitting was used to calculate the survey weights. The Centers for Disease Control and Prevention (CDC) recommends not conducting analyses where estimates from 1984 – 2011 are compared with analyses using the new methodology, beginning in 2012. This includes analyses examining trends and changes over time.

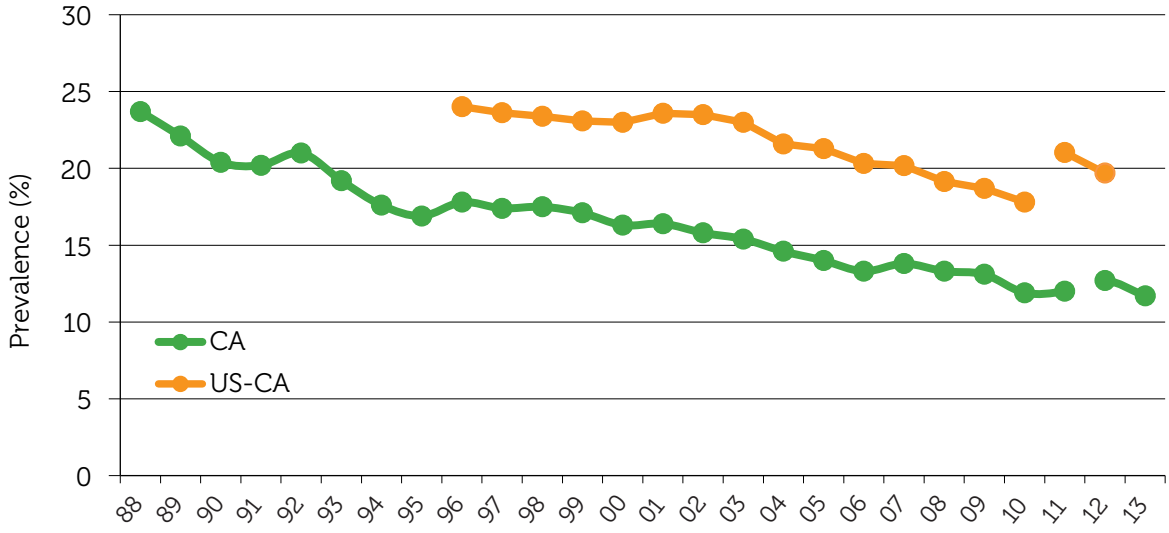
California Tobacco Facts and Figures 2015

Section 1.
California's Smoking Prevalence

Subsection 1A.
Adult Smoking Rates – Historical Trends

California's longitudinal trend in adult smoking reflects remarkable progress in decreasing smoking rates. Smoking rates declined from 23.7% in 1988, to 11.7% in 2013, reflecting a 51% decline since the California Tobacco Control Program began. (Figure 1A.1).

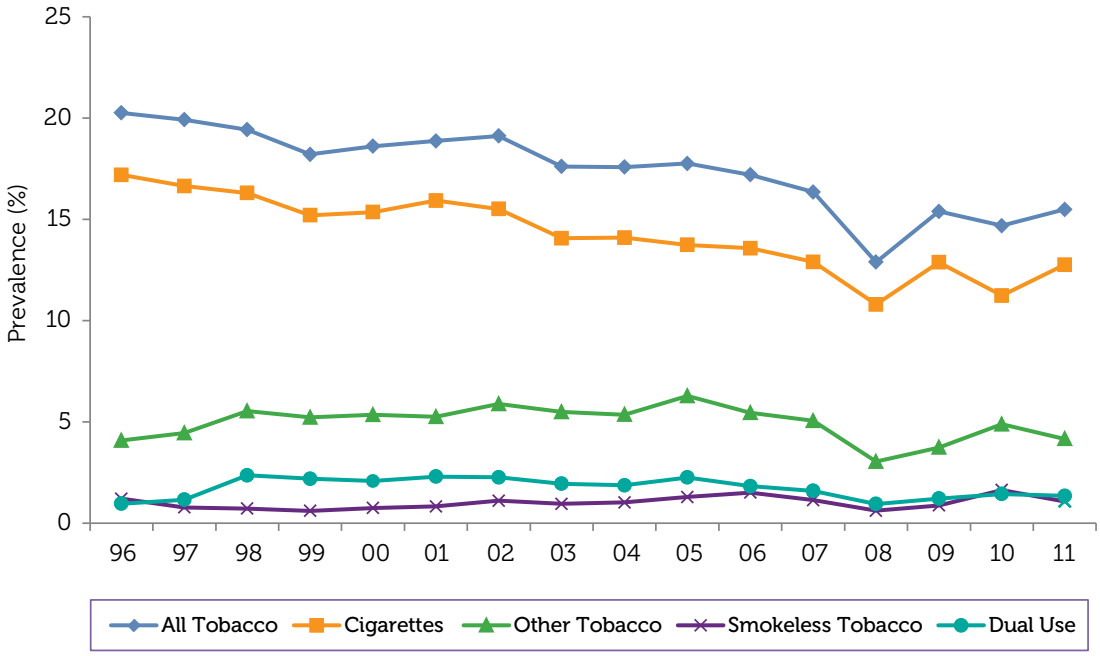
Figure 1A.1 **Adult cigarette smoking prevalence within California (CA) and the rest of the United States (US-CA), 1988-2013**



Source: Behavioral Risk Factor Surveillance System (BRFSS) 1988-2013.
The data are weighted to the 2000 California population from 1988 to 2011, weighted to 2010 California population since 2012. The U.S. estimate in this chart does not include California adults.
Note: an adjustment was made to address the change of smoking definition in 1996 that included more occasional smokers. The weighting methodology changed in 2011 for the rest of U.S., but changed in 2012 for CA.

Most tobacco users in California smoke cigarettes; less than 5% use other tobacco products (i.e., smokeless tobacco, snuff, little cigars, cigars, pipe tobacco), and less than 2% using more than one tobacco product (Figure 1A.2). Electronic nicotine delivery devices (ENDDs, commonly known as electronic cigarettes) are not included in these estimates.

Figure 1A.2 **California adult tobacco use trends, 1996-2011**



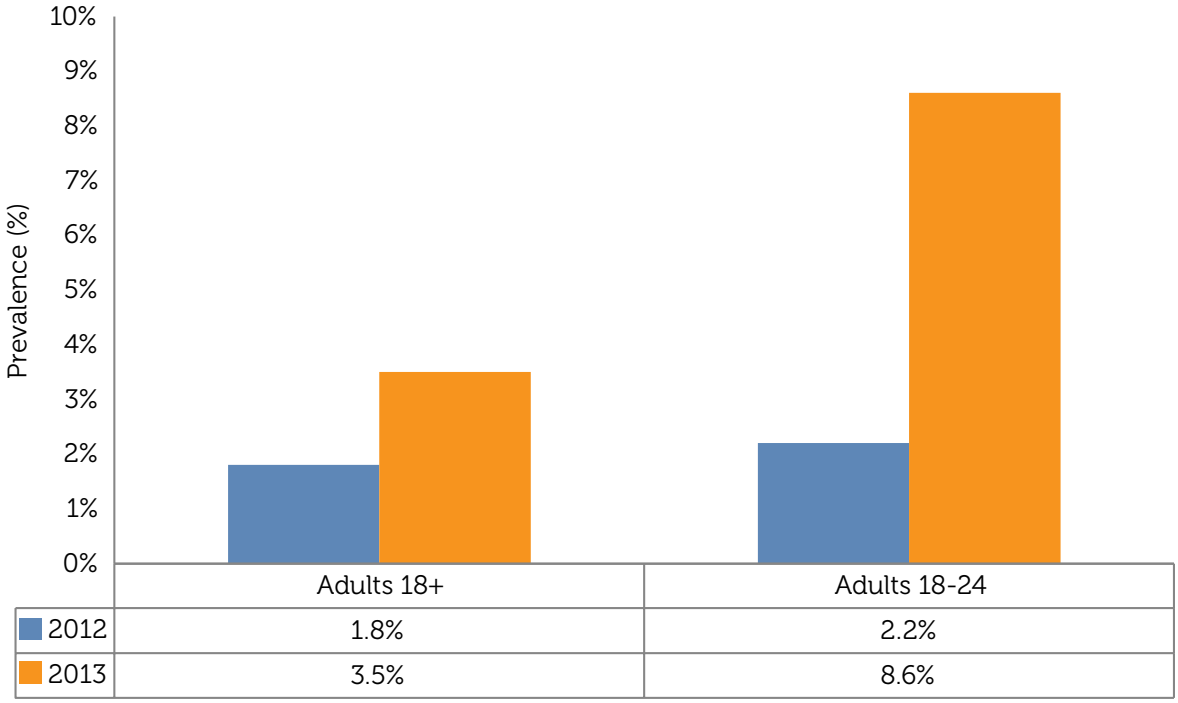
Source: Behavioral Risk Factor Surveillance System/California Adult Tobacco Survey (BRFSS/CATS 1996-2011) weighted to 2000 California Population.
Notes: Current tobacco use is defined as: 1) All tobacco (cigarettes, cigars, little cigars, cigarillos, pipe, chew, snuff, and snus); 2) Other Tobacco (cigars, little cigars, cigarillos, pipe, chew, snuff, and snus); 3) Smokeless Tobacco (chew, snuff, snus); 4) Dual Use (cigarette users who also use another tobacco product). Electronic cigarette use is not included.

This graph depicts trends in California adult tobacco use and suggests that the decline in California's tobacco use rates has stalled in the last few years. A loss in momentum means that tobacco use rate may increase in the future which could have serious implications for reversing the substantial progress made in California to reduce tobacco-related diseases and the associated

health care cost savings that accrued as a result of the decline in smoking. Nonetheless, rates within California remain consistently lower than rates in the rest of the United States.

Figure 1A.3 represents current electronic cigarette use in California adults in 2012-2013. The overall use of electronic cigarettes by adults nearly doubled in one year and nearly quadrupled for young adults between the ages of 18-24.

Figure 1A.3 **California e-cigarette use, 2012-2013**

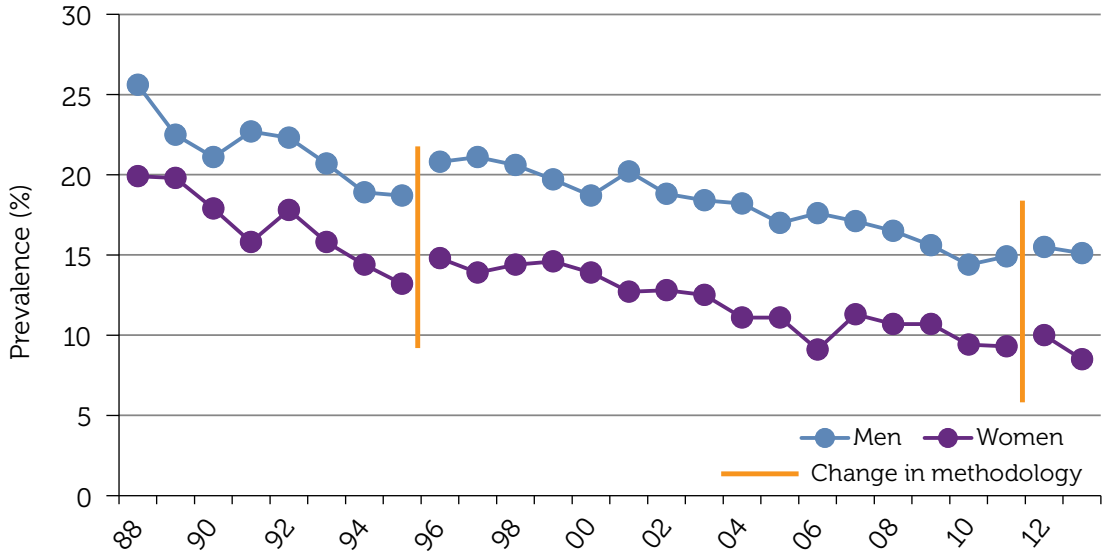


Source: Behavioral Risk Factor Surveillance System/California Adult Tobacco Survey (BRFSS/CATS 2012-13) weighted to 2010 California Population.

Trends by Gender

In 1988, there was little difference in smoking rates between women and men and smoking rates at that time were remarkably high by today's standard. However, rates between women and men had started to diverge by the late 1980s. By 1995, smoking rates were 5 to 6 percentage points lower in women than men, and this difference has remained consistent. Recently, the overall smoking rates for both men and women have leveled off. In 2013, the smoking rate for men was 15.1% and for women it was 8.5%. Currently, an estimated 2.3 million men and 1.5 million women are cigarette smokers in California.

Figure 1A.4 **Adult cigarette smoking prevalence by gender within California, 1988-2013**



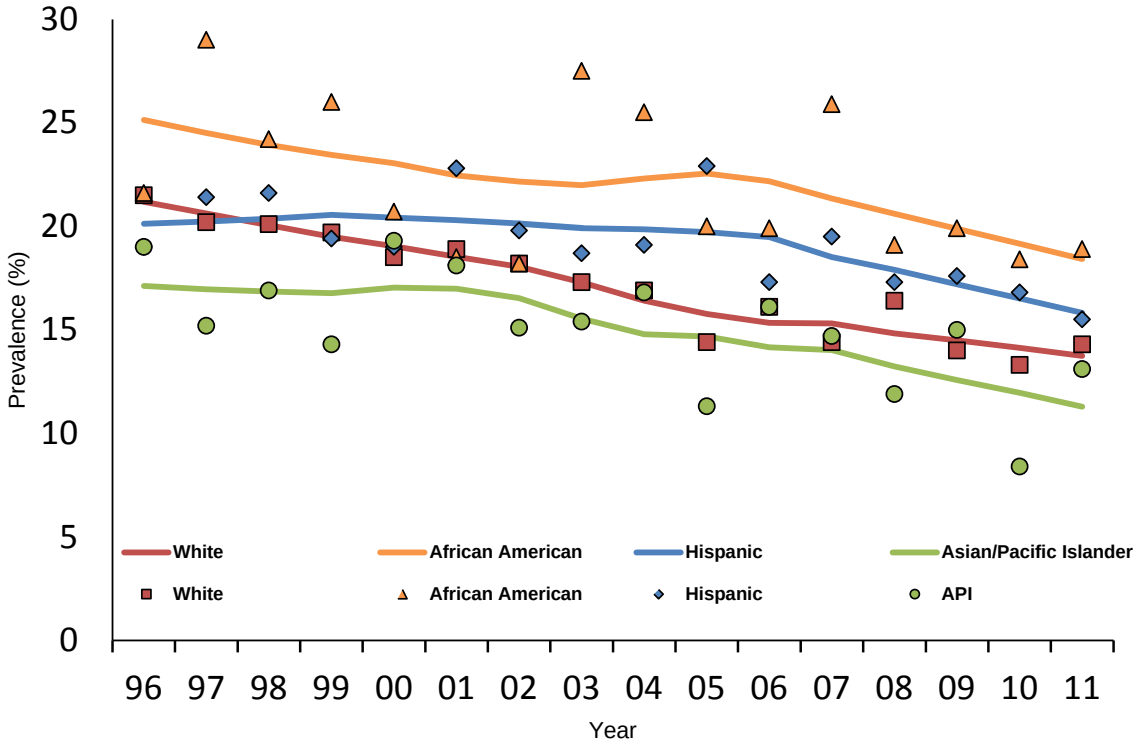
Source: Behavioral Risk Factor Surveillance System (BRFSS) 1984-2013.
The data are weighted to the 2000 California population from 1984 to 2011, weighted to 2010 California population in 2012.
Note: an adjustment was made to address the change of smoking definition in 1996 that included more occasional smokers. The weighting methodology changed in 2012 for CA.

Smoking Rates by Race/Ethnicity and Gender

Examining the last 15 years, smoking rates declined steadily in all racial/ethnic groups for both men and women. However, smoking rates declined faster in some groups than others.

African Americans smoke more than other race/ethnic groups, with few differences between men and women. Gender differences in smoking rates are substantial within the Asian/Pacific Islander and Hispanic populations in California.

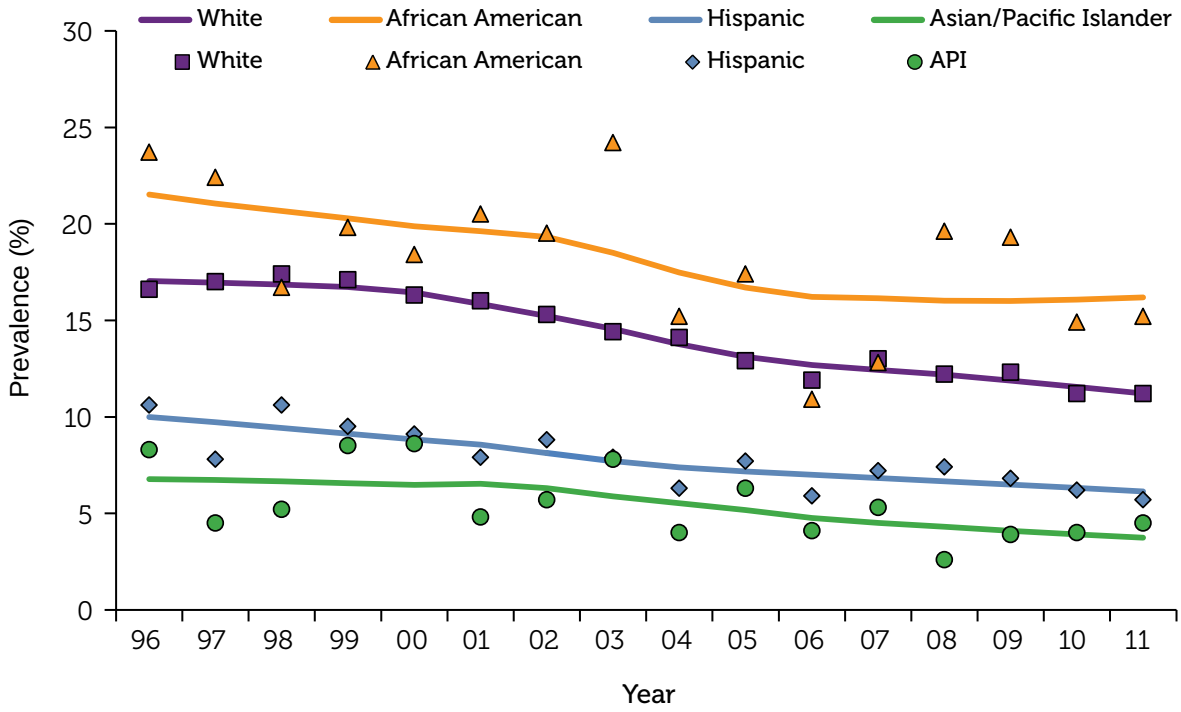
Figure 1A.5 **Smoking prevalence among California men by race/ethnicity, 1996-2011**



Men	1996	2011	% Decline
White	21.5%	14.3%	33.5
African American	21.6%	18.9%	12.5
Hispanic	19.0%	15.5%	18.4
Asian/PI	19.0%	13.1%	31.1

Source: Behavioral Risk Factor Surveillance System/California Adult Tobacco Survey (BRFSS/CATS) 1996-2011. The data are weighted to the 2000 California population. Note: The smooth lines are based on a model to smooth out the data. The National Health Interview Survey was not conducted in 1996. The rates were averaged for 1995 and 1997 to estimate the 1996 rates.

Figure 1A.6 **Smoking prevalence among California women by race/ethnicity, 1996-2011**



Women	1996	2011	% Decline
White	16.6%	11.2%	32.5
African American	23.7%	15.2%	35.9
Hispanic	10.6%	5.7%	46.2
Asian/PI	8.3%	4.5%	45.8

Source: Behavioral Risk Factor Surveillance System/California Adult Tobacco Survey (BRFSS/CATS) 1996-2011. The data are weighted to the 2000 California population.
Note: The smooth lines are based on a model to smooth out the data. The National Health Interview Survey was not collected in 1996. The rates were averaged for 1995 and 1997 to estimate the 1996 rates.

There has been a steady decline in smoking prevalence since monitoring began in 1984. While momentum has slowed in the last few years, continued tracking is needed to determine whether this is a temporary trend. There are racial/ethnic subgroups with exceptionally low prevalence, specifically Hispanic and Asian/Pacific Islander women. Other gender and racial/ethnic groups have comparatively high prevalence, particularly African American men and women.

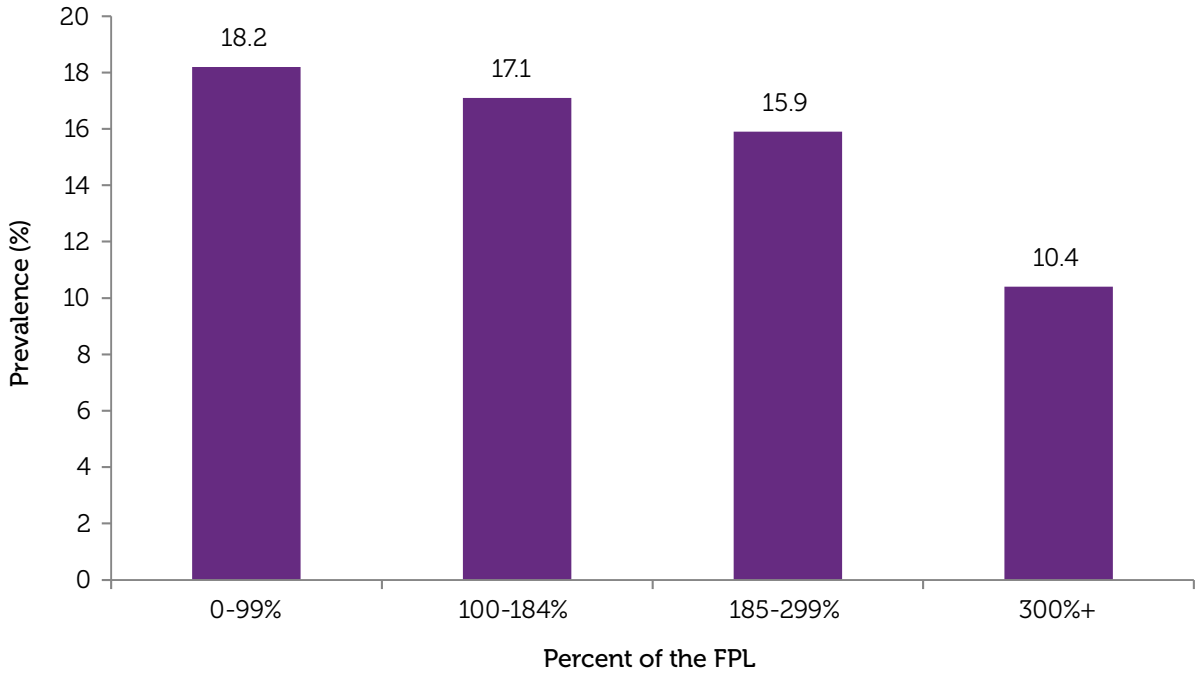
Subsection 1B.
Adult Smoking Rates – Yearly Snapshot

The overall adult cigarette smoking rate for California in 2013 was 11.7% (BRFSS, 2013). The high school (9th to 12th grade) smoking rate was 10.5%, or 297,000 children (California Student Tobacco Survey, 2011-2012). California has one of the lowest smoking rates in the nation, second only to Utah. However, California is the state with the highest number of smokers because it is by far the most populous state in the nation. A closer look shows successes and signs for concern.

Smoking Rates by Income and Education

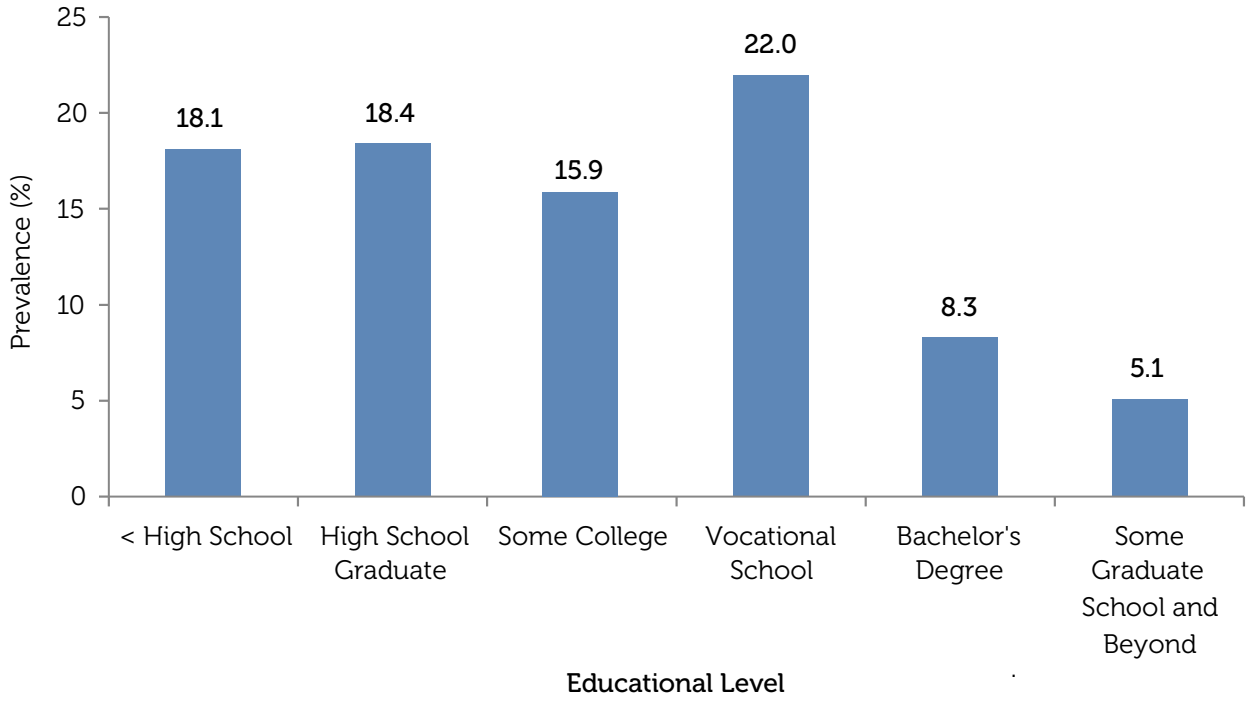
In California, smoking rates decrease with higher levels of income, with the highest rates observed for the poorest individuals (Figure 1B.1). Smoking rates also decline with greater levels of education (Figure 1B.2). Together, these two risk factors – lower income and lower education level – illustrate the need for policy and systems approaches to address disparities in cigarette smoking rates.

Figure 1B.1 **California adult cigarette smoking prevalence by percent of the federal poverty level (FPL) by income, 2011-2012**



Source: California Health Interview Survey (CHIS), 2012 (restricted to respondents 18 years of age and older).

Figure 1B.2 **California adult cigarette smoking prevalence by educational level, 2011-2012**

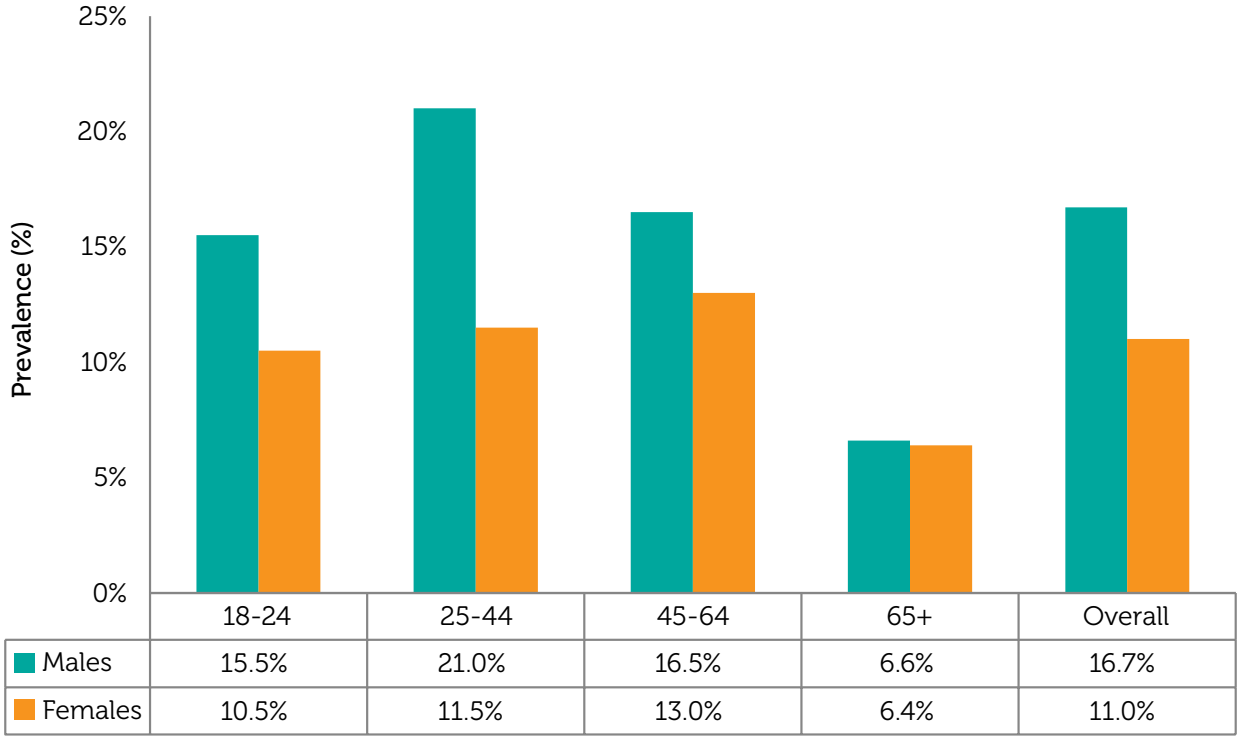


Source: California Health Interview Survey (CHIS), 2012 (restricted to respondents 18 years of age and older).

Smoking Rates by Age and Gender

Smoking rates are consistently higher in men than women across all ages; this difference is highest in younger adults. Rates by gender are nearly identical beyond age 65, at 6.4% in women and 6.6% in men.

Figure 1B.3 **California adult cigarette smoking prevalence by age and gender, 2011-2012**



	18-24	25-44	45-64	65+	Overall
Males	15.5%	21.0%	16.5%	6.6%	16.7%
Females	10.5%	11.5%	13.0%	6.4%	11.0%

Source: California Health Interview Survey (CHIS), 2012.

Subsection 1C. Geographic Patterns in Adult Smoking Prevalence

According to 2011-2012 CHIS data, California's adult smoking prevalence varies by population density, with higher rates predominantly in rural counties, and lower rates generally found in urban counties.

The northern and western California counties, including Butte and Shasta, had some of the highest rates in the state, at 15.1% as did the rural counties of the south central portion of the state, including Fresno and Imperial, at 16.9% (see table 1C.1).

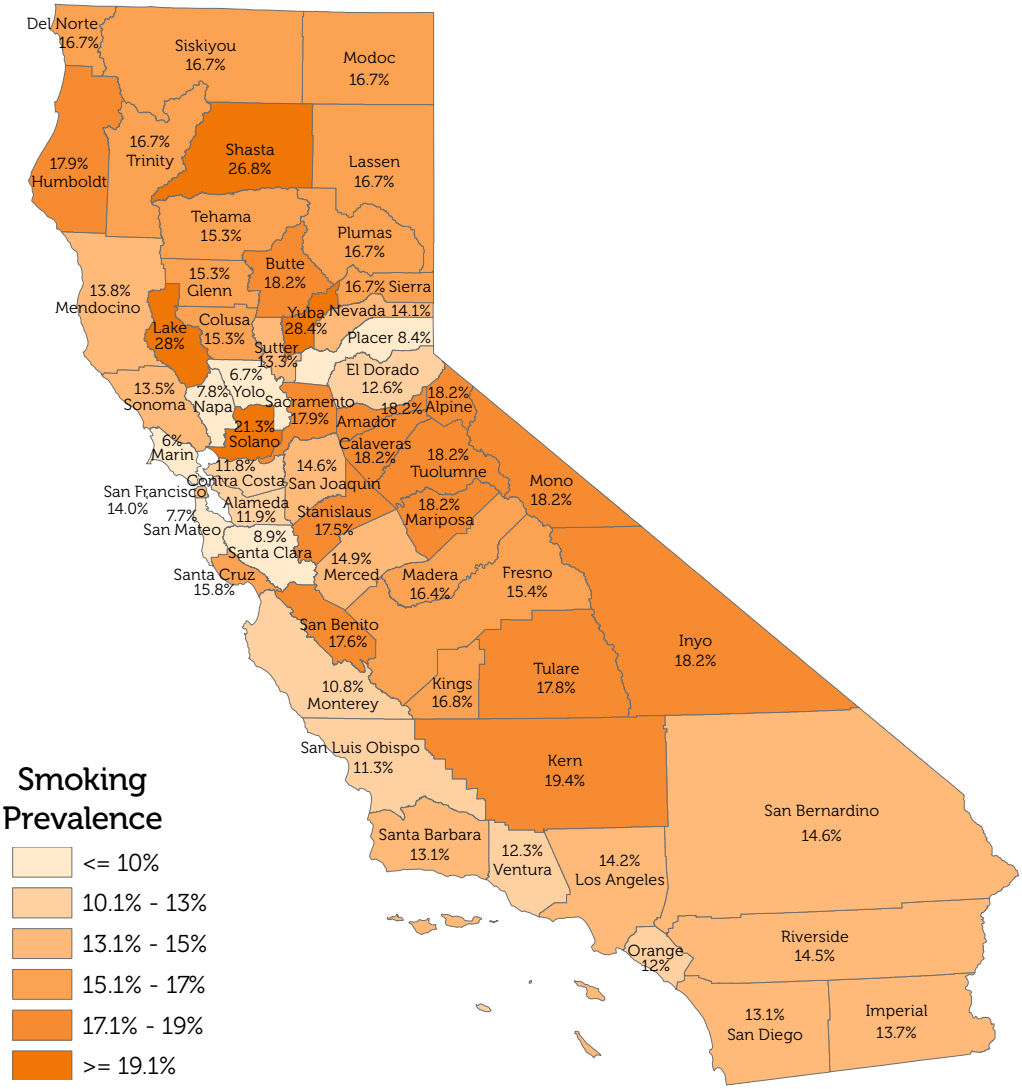
Table 1C.1 **Adult cigarette smoking by geographic region (CHIS 2011-2012)**

Counties in region	Current Smoker % (95% C.I.)	Estimated Number of Smokers	Population Size
All	13.8 (13.2-14.3)	3,823,000	27,796,000
1-Los Angeles	14.2 (13.0-15.4)	1,049,000	7,402,000
2-San Diego	13.1 (11.3-15.0)	305,000	2,321,000
3-Orange	12.0 (9.8-14.2)	277,000	2,305,000
4-Santa Clara	8.9 (6.7-11.1)	121,000	1,362,000
5-San Bernardino	14.6 (12.0-17.2)	210,000	1,441,000
6-Riverside	14.5 (12.0-17.1)	231,000	1,589,000
7-Alameda	11.9 (9.1-14.7)	138,000	1,158,000
8-Contra Costa, Marin, San Francisco, San Mateo, Solano	12.2 (10.3-14.0)	310,000	2,547,000
9-Central Valley and Inland Empire Counties: Fresno, Imperial, Kern, Kings, Madera, Merced, Tulare	16.9 (14.5-19.2)	337,000	1,997,000
10-Northern and Western California Counties: Butte, Shasta, Humboldt, Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra, Mendocino, Lake, Tehama, Glenn, Colusa, Sutter, Nevada, Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine, Sonoma, Napa, Placer, El Dorado	15.1 (13.5-16.6)	286,000	1,900,000
11-Central California Counties: Sacramento, San Joaquin, Stanislaus, Yolo, Yuba	16.5 (13.9-19.1)	349,000	2,117,000
12-Central Coast Counties: Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, Ventura	12.6 (10.5-14.7)	209,000	1,658,000

Source: 2012 California Health Interview Survey (CHIS) and U.S. Census Bureau provided estimated smoking rates and estimated population size. ZIP Code® Tabulation Areas (ZCTAs™), http://www.census.gov/geo/ZCTA/zcta.html.

In contrast to the rural regions of the state, many of the counties containing major urban areas have smoking rates below the statewide average of 13.8%; the lowest smoking rate was observed for Marin County, with an estimated adult population prevalence of 6.0%. Important exceptions are San Francisco and Sacramento counties, with smoking rates of 14.0% and 17.9%, respectively (Figure 1C. 1). These two counties represent 1.7 million adults, or 6.2% of the adult population in California; elevated smoking rates in these areas therefore significantly impact the statewide prevalence of smoking.

Figure 1C.1 **California Adult Smoking Prevalence, 2011-2012**



Source: California Health Interview Survey, 2011-2012.

Estimates by Urban versus Suburban versus Rural Population Density

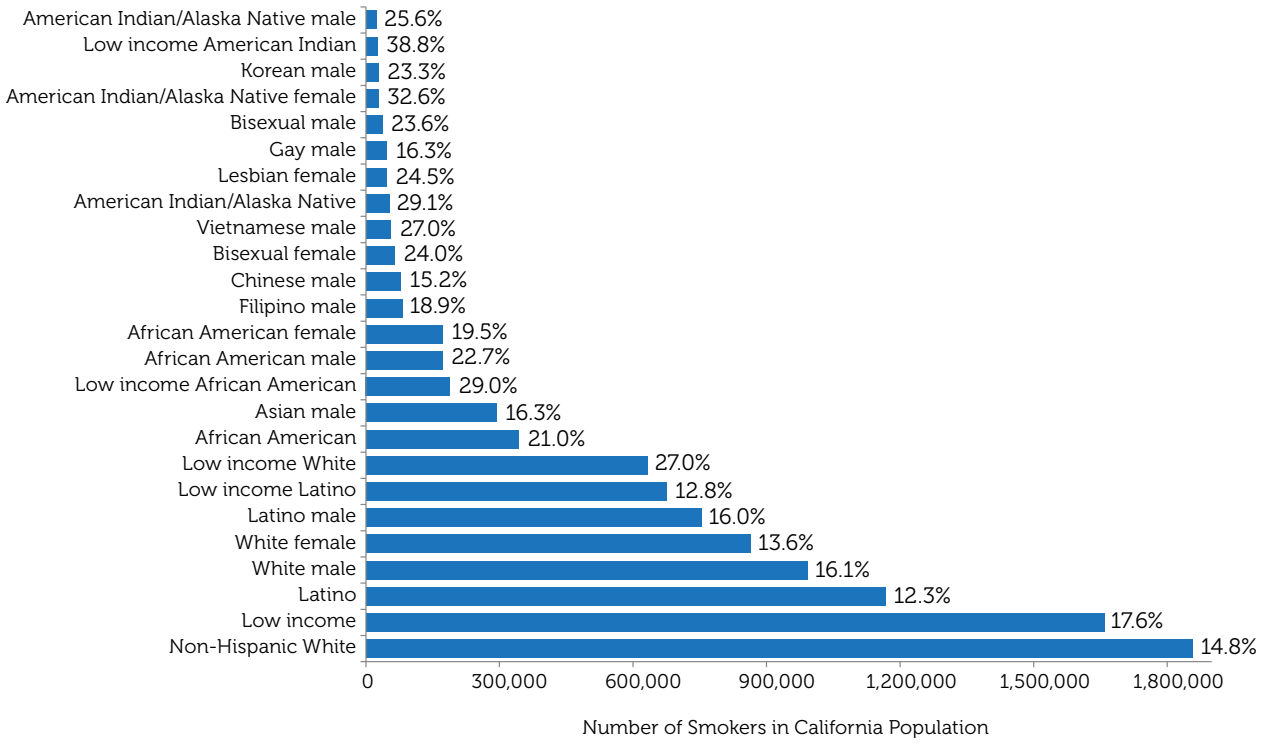
Smoking rates are highest in rural areas (approximately 16% smoking prevalence among persons living in a census tract with fewer than 100 persons per square mile) and lowest in suburban areas (10.1% smoking prevalence). The rate in urban areas approximates the statewide average.

Non-Hispanic Whites living in rural and urban regions tend to smoke more compared to those living in suburban regions. Conversely, smoking prevalence among Hispanics does not vary by population density, with consistent rates of approximately 10.5% found in rural, suburban and urban areas.

The greatest difference in the smoking rates between rural, urban and suburban categories was between young adults ages 25 to 30 years. In contrast, there is little difference for those over age 65. Initiation rates remain highest among rural young adults compared with young adults in more urban areas. This difference is more specific to the Non-Hispanic White population than the Hispanic population with higher prevalence rates among the most rural and most urban areas.

Subsection 1D.
Smoking Prevalence Among Diverse Population Groups

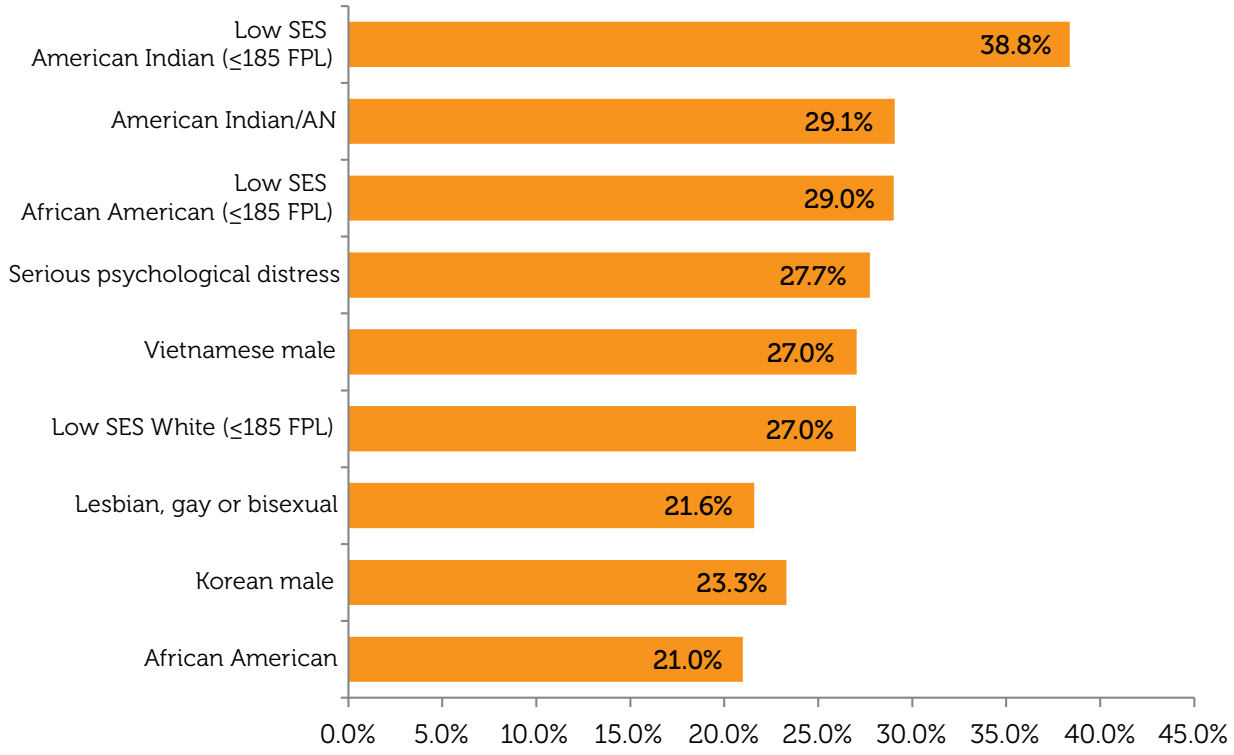
Figure 1D.1 **Smoking prevalence and population size of various smoker demographic groups in California (2011-2012 CHIS)**



Source: California Health Interview Survey, 2011-2012. Data restricted to adults aged 18 years and older. Low SES is defined as ≤185 Federal Poverty Limit.

Figure 1D.1 shows the number of smokers and prevalence rates for a variety of California population groups. The figure illustrates that non-Hispanic whites make up the largest number of California smokers, although the smoking prevalence of this group stands at 14.8%. Conversely, while low socioeconomic status (SES) American Indians/Alaska Natives make up a small number of California smokers, their smoking prevalence rate is extremely high at 38.8%.

Figure 1D.2 **Highest smoking prevalence rates among California population subgroups**



Note: Respondents were asked their current smoking status and data were restricted to adults (18+ years old). Low income is defined as 185% below the Federal Poverty Limit. Sexual Orientation estimates were computed using the Online CHIS Query. Data Source: California Health Interview Survey (2011-2012 CHIS) SAS dataset. *Psychological distress is defined as reporting of psychological distress in the past 12 months.

Figure 1D.2 shows several groups in California with higher-than-average smoking prevalence rates. As noted, low-SES American Indians exhibit a smoking rate of nearly 40%, and Low-SES African Americans and all American Indians/Alaska Natives in California have a nearly 30% smoking prevalence rate. Other groups with extremely high smoking rates include those who report serious psychological distress; Vietnamese males; low-SES whites; lesbians, gays, and bisexuals; Korean males; and African Americans.

Figure 1D.3 **Who are the smokers in California?**

	Percent of Smokers	Population percent	Number of smokers	Population size
Sexual Orientation				
Heterosexual	94.4%	95.8%	3.5M	23.9M
Homosexual or bisexual	5.3%	3.6%	195K	903K
Not sexual, celibate, or other	0.3%	0.6%	12K	158K
Rurality				
Urban	44.9%	43.4%	1.8M	13.4M
*2nd City	28.0%	26.8%	1.1M	8.3M
Suburban	15.4%	19.4%	607K	6.0M
Town and rural	11.6%	10.5%	456K	3.2M
Own or rent				
Own home	42.7%	58.7%	1.6M	16.2M
Rent home	52.2%	37.3%	2.0M	10.2M
Have other arrangement	5.1%	3.9%	192K	1.1M
Psychological distress				
Likely in last year	15.9%	7.9%	608K	2.2M
Not likely in last year	84.1%	92.1%	3.2M	25.5M
Insurance status				
Currently insured	73.50%	83.10%	2.9M	25.7M
Not currently insured	26.5%	16.9%	1.0M	5.2M

Source: California Health Interview Survey, 2011-2012. Data restricted to adults aged 18 years and older.

Figure 1D.3 provides examples of population groups that disproportionately smoke in California. Those groups who smoke disproportionately relative to their representation in California are highlighted in red text.

*2nd City is defined as regions that are less densely populated than urban areas, and are often concentrated within larger towns and smaller cities. The 2nd City classification includes satellite cities near larger population centers. For more information on 2nd City, refer to http://www.claritas.com/MyBestSegments/Default.jsp?ID=7030&menuOption=learnmore&pageName=Nielsen%2BUrbanization&segSystem=PRIZM

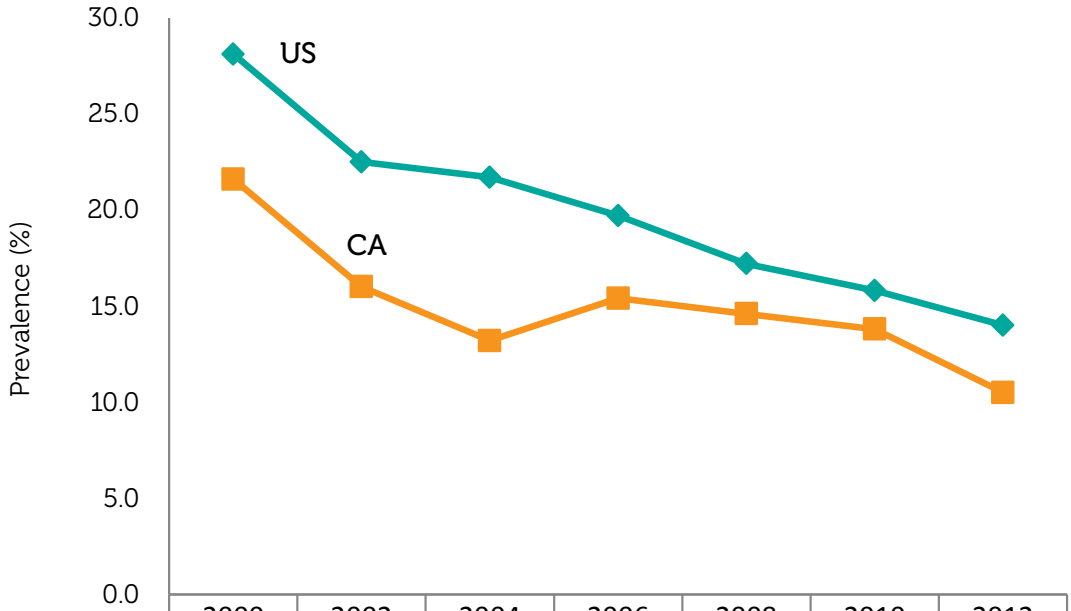
Subsection 1E.
High School Smoking Prevalence

Nationally, 86.9% of all adult cigarette smokers begin smoking by the age of 18 (Surgeon General's Report, 2014). In California, 63% of smokers start by the age of 18, and 97% start by age 26 (BRFS-CATS, 1984 -2013). Reducing the initiation rate within young adults could be a highly effective and efficient method of reducing long-term smoking rates in the state (United States Department of Health and Human Services, 2012).

California monitors smoking rates among high school students using the California Student Tobacco Survey (CSTS). The 2012 survey showed the percentage of California high school students who reported smoking a cigarette within the previous 30 days was 10.5% (CSTS, 2012). This represents 297,000 California high school students.

Figure 1E.1 summarizes smoking prevalence rates obtained by the CSTS from 2002 to 2012. In 2002, the percentage of high school students in California who said they had smoked within the last 30 days was 16.0%. Rates fluctuated between 13.0% and 16.0% for surveys performed from 2002 through 2010 before dropping to 10.5% in 2012 (Figure 1E.1). The decline from 2010 to 2012 coincides with the passage of the federal Family Smoking Prevention and Control Act (2009) and the Food and Drug Administration (FDA) ban on marketing of flavored cigarettes. Rate estimates for the United States follow a similar overall pattern of decline during the past decade, although smoking rates for the United States are consistently higher than those observed in California for comparable survey periods (Figure 1E.1). There was no evidence of differences in high school rates by gender in California. As youth get older, they have higher smoking rates (Figure 1E.2).

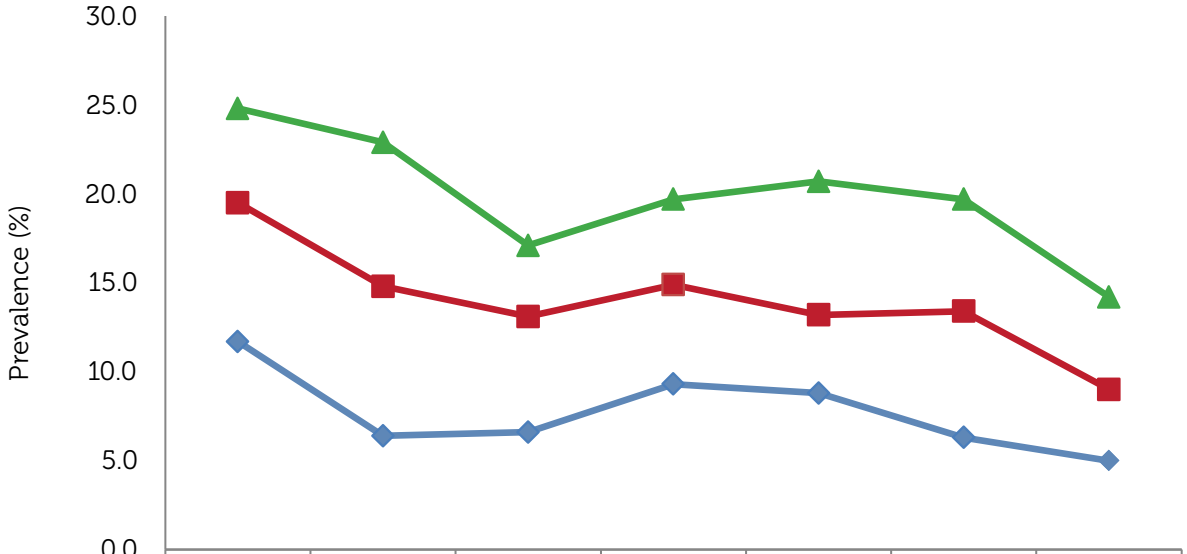
Figure 1E.1 **Smoking prevalence for California and United States high school (9th-12th grades) students, 2000-2012**



	2000	2002	2004	2006	2008	2010	2012
9th-12th Grade (US)	28.1	22.5	21.7	19.7	17.2	15.8	14.0
9th-12th Grade (CA)	21.6	16.0	13.2	15.4	14.6	13.8	10.5

Source: Respondents were asked to report past 30 day cigarette smoking behavior. The 2000 California data are from the National Youth Tobacco Survey (NYTS) collected by the American Legacy Foundation, which used passive parental consent. The other year data are from the California Student Tobacco Survey (CSTS). The United States data are from the NYTS collected by the American Legacy Foundation and the Centers for Disease Control and Prevention (CDC).

Figure 1E.2 **Smoking prevalence for California students, 2000-2012**



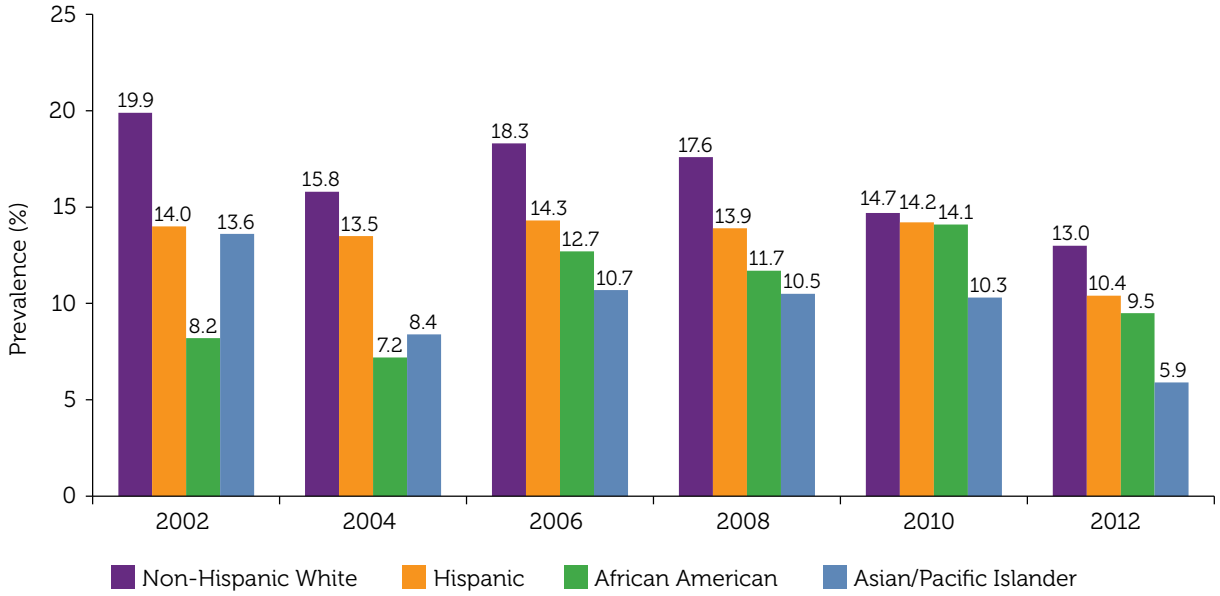
	2000	2002	2004	2006	2008	2010	2012
8th Grade	11.7	6.4	6.6	9.3	8.8	6.3	5.0
10th Grade	19.5	14.8	13.1	14.9	13.2	13.4	9.0
12th Grade	24.8	22.9	17.1	19.7	20.7	19.7	14.2

Source: Respondents were asked to report past 30 day cigarette smoking behavior. The 2000 California data are from the National Youth Tobacco Survey (NYTS) collected by the American Legacy Foundation, which used passive parental consent. The other year data are from the California Student Tobacco Survey (CSTS). The United States data are from the NYTS collected by the American Legacy Foundation and the Centers for Disease Control and Prevention (CDC).

High School Smoking Prevalence by Ethnicity

The prevalence of smoking among high school age youth in California is declining consistently and is lower than for the rest of the United States. Overall, the smoking prevalence for high school students declined 51% from 2000 to 2012. However, there are substantial differences in high school smoking prevalence rates when examined by race or ethnicity (figure 1E.3). While rates declined substantially for non-Hispanic Whites, Hispanics, and Asian/Pacific Islanders, the rate for African-Americans increased by 15.9% over this same time period.

Figure 1E.3 **Smoking prevalence of high school students (9th-12th grades) in California by ethnicity, 2002-2012**



	2002	2012	% Decline
Non-Hispanic White	19.9%	13.0%	**34.7**
Hispanic	14.0%	10.4%	**25.7**
African American	8.2%	9.5%	-15.9
Asian/Pacific Islander	13.6%	5.9%	**56.6**

Source: Respondents were asked to report past 30 day cigarette smoking behavior on the California Student Tobacco Survey (CSTS).

High School Smoking Prevalence by Region of State.

Unlike adults in California, youth in rural areas smoke less than those in urban areas in California. Youth smoking rates are highly variable across the state. The counties with the highest observed smoking prevalence among high school students in 2011-2012 were San Diego (13.1%), San Bernardino (13.0%), the Central Valley (12.0%), the Bay Area (10.4%) and Sacramento (10.3%). In 2012, the predominantly rural northern/mountain region counties had a youth smoking prevalence rate of 10.0%.

References:

CDC, (2012a) *Preventing Tobacco Use Among Youth and Young Adults*. Available at http://www.cdc.gov/tobacco/data_statistics/sgr/2012/index.htm. Accessed September 7, 2013.

U.S. Department of Health and Human Services. (2012) *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Available at http://www.cdc.gov/tobacco.

CDC. (2012b). *Current Tobacco Use Among Middle and High School Students in the United States*, 2011. 61 (31), 581-585.

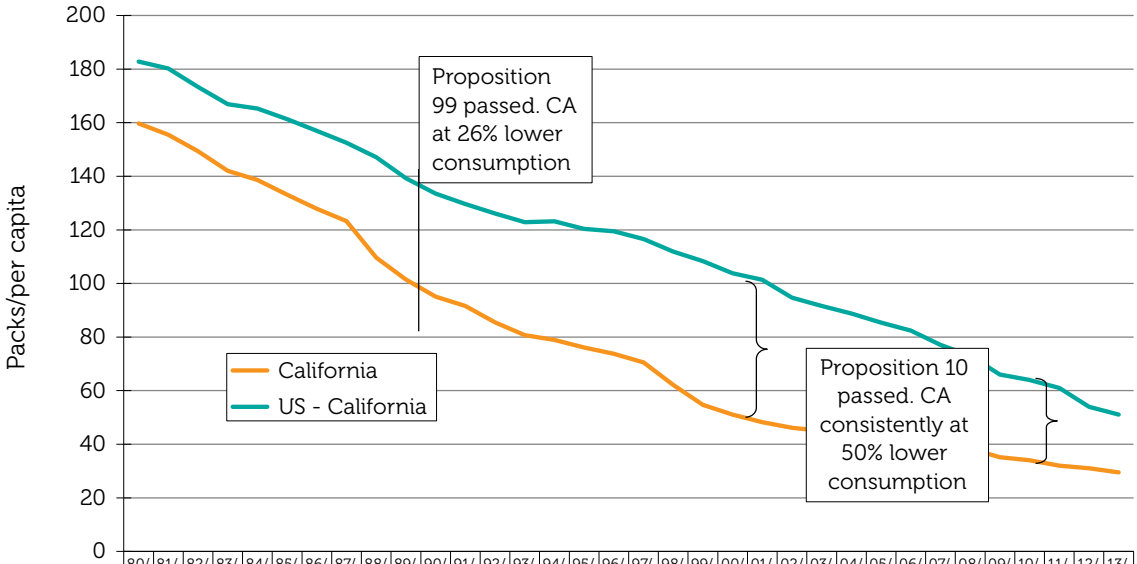
California Student Tobacco Survey (CSTS), 2001-2002 through 2011-2012.

Section 2. Tobacco Consumption

When the California Tobacco Control Program (CTCP) began in 1989, California per capita cigarette sales were 26.1% lower than for the rest of the United States (108.8 versus 147.2 packs per year) as shown in Figure 2A.1. From fiscal year 1989 to about 2000, sales declined considerably faster in California and taxable sales were half those of the rest of the nation by the year 2002 (48 versus 101 packs per capita per year). Starting around 2002, there was a slowing in the rate of decline in taxable sales in California that does not appear to have occurred in the rest of the nation. This may be attributed to retailer licensing policy and tax stamps in California.

In 2002, California was the first state to pass a law requiring an upgraded high tech tax stamp on cigarette packs, making compliance with the tax much easier to monitor. The high tech cigarette tax stamp worked in concert with provisions of the Cigarette and Tobacco Licensing Act of 2003 to reduce tobacco tax evasion. Nonetheless, per capita cigarette consumption declined considerably during this period, and California continued to have per capita taxable sales that were about half those of the rest of the nation.

Figure 2A.1 **Per capita cigarette consumption in California and the rest of the United States, 1980 to 2013**



	80/81	81/82	82/83	83/84	84/85	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
California	160	156	149	142	139	133	128	123	110	102	95	92	86	81	79	76	74	71	62	55	51	48	46	45	45	44	41	41	38	35	34	32	31	30
US - California	183	180	173	167	165	161	157	153	147	139	134	130	126	123	123	120	120	117	112	108	104	101	95	92	89	85	82	77	73	66	64	61	54	51

Source: The Tax Burden on Tobacco, 2013, and US Census (population).

	Years	% Decline CA	% Decline Rest of United States
Pre Proposition 99	**1980/81-1988/89**	31.3	19.7
Proposition 99	**1989/90-1999/00**	46.1	22.3
Proposition 99/10	**2000/01-2013/14**	42.2	50.9

While per capita cigarette consumption dropped steadily in California prior to the passage of Proposition 99, the decline accelerated significantly afterwards, especially relative to the rest of the United States. Consumption continued to decline after the passage of Proposition 10 in 1998, but slowed relative to the period of time immediately following Proposition 99's passage.

References:

Orzechowski W & Walker RC. (2013)
The Tax Burden on Tobacco: Historical Compilation 2013. Orzechowski & Walker, Arlington, Virginia.

Section 3. Secondhand Smoke

Secondhand smoke is a human carcinogen and has long term risks to persons exposed to it (CDC, 2006; CDC, 2007). Acute effects of secondhand smoke are serious and include increased frequency and severity of asthma attacks, the initiation of asthma, respiratory symptoms such as coughing and shortness of breath, and respiratory infections such as bronchitis and pneumonia (Department of Health and Human Services, 2007; CDC, 2007). Children are especially vulnerable to these health effects, with those living in lower income households significantly more exposed to secondhand smoke.

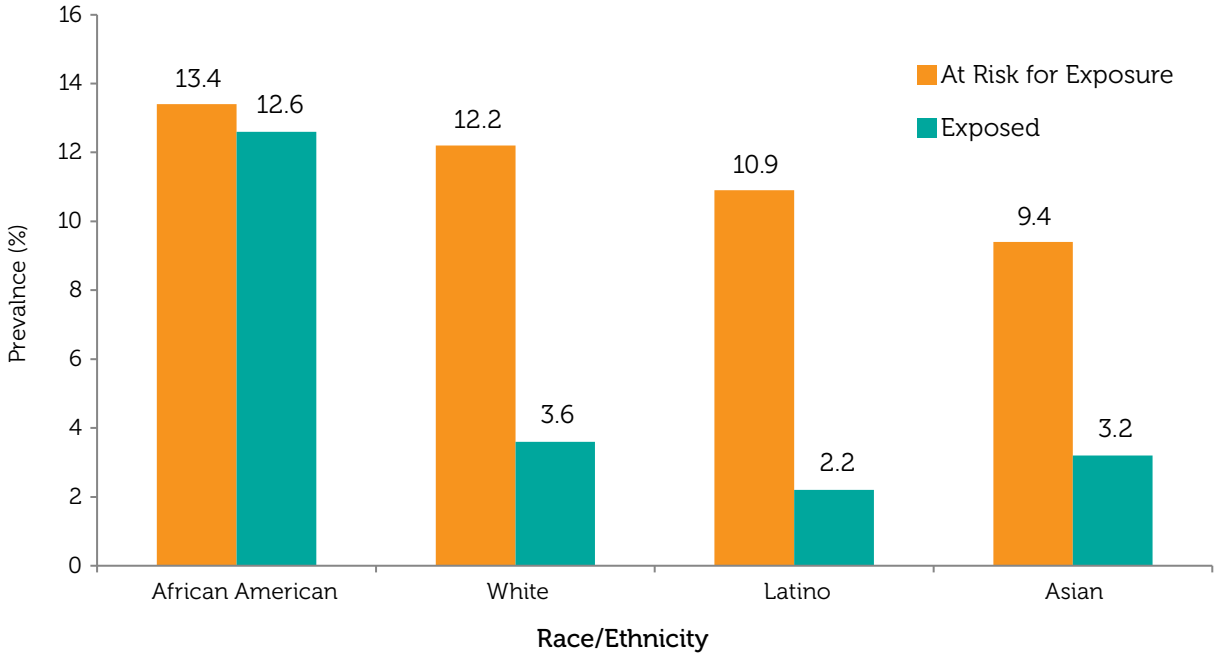
Public health interventions to encourage home smoking bans are critical to reduce exposure of children to secondhand smoke and related health risks. Home smoking bans also reinforce societal norms against smoking, increasing the likelihood that smokers in the household will attempt to quit and ultimately quit successfully (Mills et al., 2009; Messer et al., 2008). This in turn should decrease the likelihood that children in these households become smokers. It has been shown that even if smokers smoke outside the house, their children are still exposed to substantial levels of secondhand as well as thirdhand smoke from re-emitted tobacco (Al-Delaimy et al., 2001 Matt et al., 2011, Escoffery et al., 2013).

Subsection 3A. Children's Home Exposure

Holtby, et al. (2011) reported that more than 200,000 children in California live in homes where smoking is allowed inside (Holtby et al., 2011). Approximately 742,000 children are at risk of exposure by living in homes with a person who is a smoker (Holtby, et al., 2011). A detailed summary of home exposure risk broken down by race/ethnicity is provided in Figure 3A.1. The percentage of children living in homes where smoking is permitted is defined as "exposed" in the figures, and children living in homes with an

adult or teenager who smokes is defined as "at risk of exposure." Among racial categories, African American children are the most likely to live with an adult or teenager who smokes (at risk of exposure), followed by Whites, Hispanics, and Asian American/ Pacific Islanders. However, unlike other racial groups, African American children are more than three times as likely as any other racial/ethnic category to live in a home where smoking is permitted (Exposed) (Figure 3A.1).

Figure 3A.1. **Racial and Ethnic Differences in Children's Secondhand Smoke Exposure in the Home, (2005-2009)**



Reprinted with permission from the UCLA Center for Health Policy Research.
Data Source: 2005, 2007 and 2009 California Health Interview Survey (CHIS).

References:

The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. – Atlanta, GA.: U.S. Dept. of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006

CDC. (2007, June 14). *Secondhand Smoke*. Retrieved July 14, 2013, from Center for Disease Control and Prevention: http://www.cdc.gov/datastatistics/archive/second-hand-smoke.html

Department of Health and Human Services. (2007, January 4). *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General, U.S. Department of Health and Human Services*. Retrieved July 14, 2013, from Surgeon General: http://www.surgeongeneral.gov/library/reports/secondhand-smoke/factsheet1.html

Holtby, S., Zahnd, E., Grant, D., & Park, R. (2011). Children's Exposure to Secondhand Smoke: Nearly One Million Affected in California. *UCLA Center for Health Policy Research.*

Messer K, Mills AL, White MM, Pierce JP, 2008. The effect of smoke-free homes on smoking behavior in the U.S. *Am. J. Prev. Med*. 35:210-216.

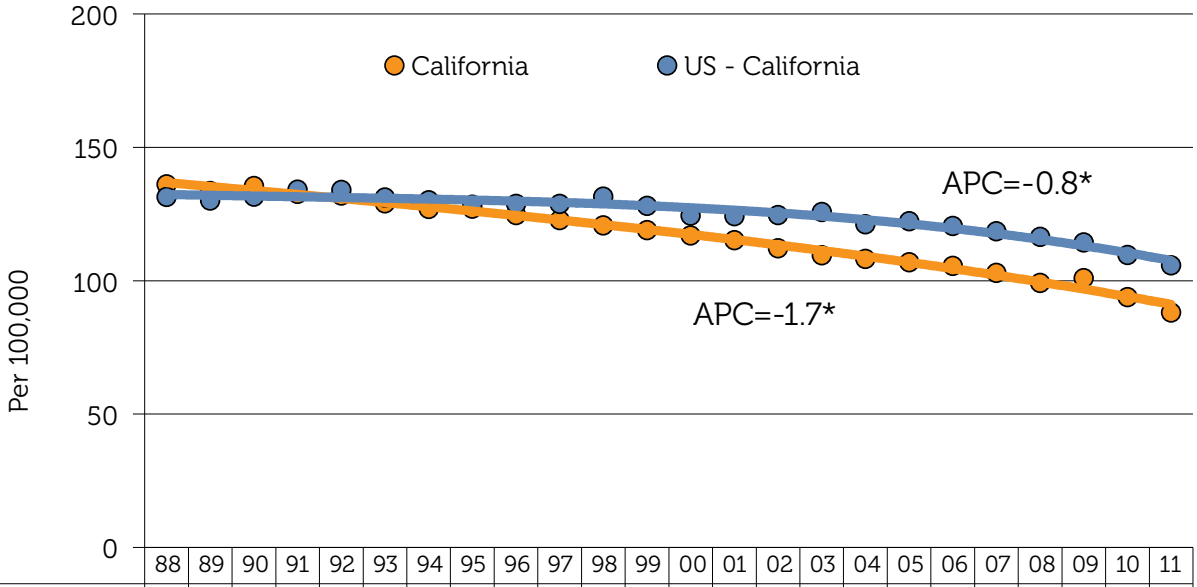
Mills AL, Messer K, Gilpin EA, Pierce JP, 2009. The effect of smoke-free homes on adult smoking behavior: a review. *Nicotine Tob. Res*. 11:1131-1141.

Al-Delaimy WK, Crane J, Woodward A. Exposure of children to environmental tobacco smoke in the home: effect of avoidance strategies as measured by hair nicotine levels. *Archives of Environmental Health* 2001; 56:117-22.

Section 4.
Cancer Incidence and Mortality Rates

Since its creation, the California Tobacco Control Program has worked to reduce smoking rates. Long-term program success is measured by monitoring lung and bronchus cancer rates as 80% to 90% of lung cancer deaths are attributable to smoking (USDHHS, 2004). The annual percent change (APC) in lung and bronchus cancer incidence has remained consistently better in California compared to the rest of the United States (Figure 4A.1). More specifically, California has reduced lung and bronchus cancers twice as fast as the rest of the United States.

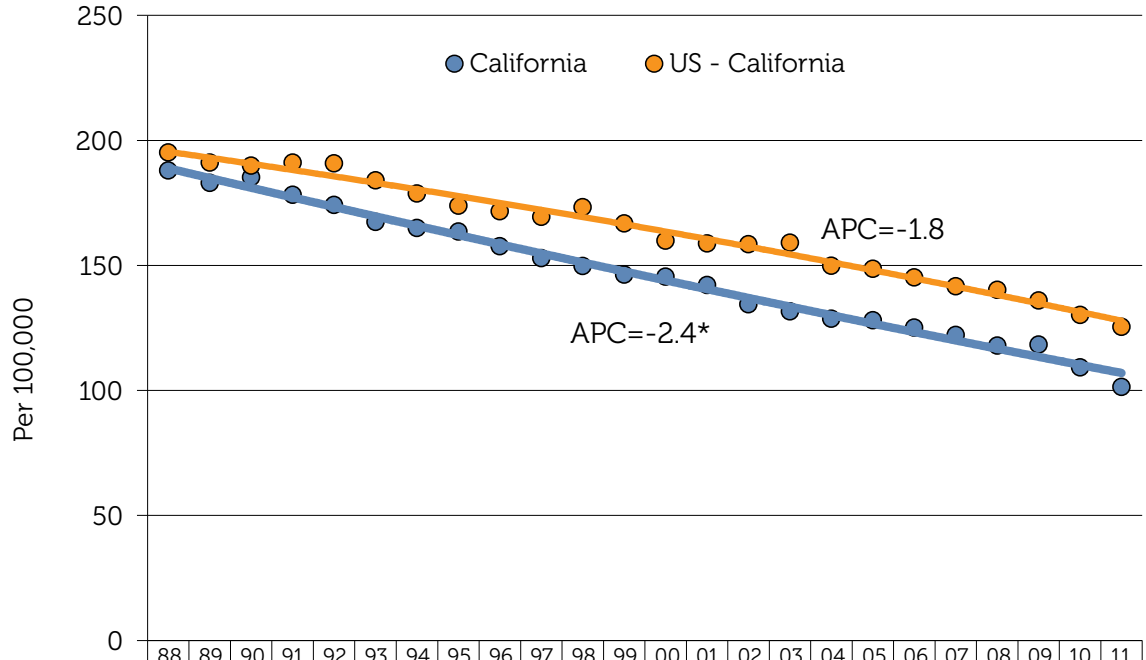
Figure 4A.1 **Lung and bronchus cancer incidence in California and U.S. minus California, 1988-2011**



	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11
California	136	134	136	133	132	129	127	127	125	123	121	119	117	115	112	110	108	107	106	103	99	101	94	88
US - California	132	130	132	134	134	131	130	129	129	129	132	128	125	124	125	126	121	122	121	119	117	115	110	106

Source: California Cancer Registry. Rates are per 100,000 and age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) standard. Percent changes were calculated using 2 years for each end point; APCs were calculated using non-weighted least squares method. *The APC is significantly different from zero ($p<0.05$).

Figure 4A.2 **Lung and bronchus cancer incidence among men in California and U.S. minus California, 1988-2011**

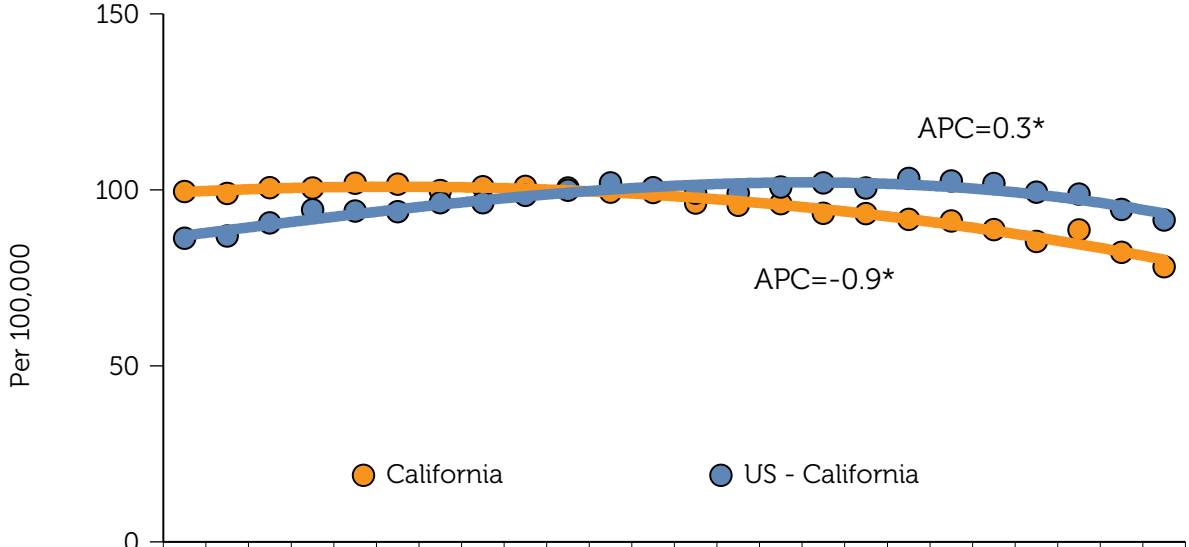


	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11
California	188	183	185	178	174	168	165	164	158	153	150	146	146	142	135	132	129	128	125	122	118	118	109	102
US - California	195	191	190	191	191	184	179	174	172	170	173	167	160	159	159	159	150	149	145	142	140	136	130	126

Source: California Cancer Registry. Rates are per 100,000 and age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) standard. Percent changes were calculated using 2 years for each end point; APCs were calculated using non-weighted least squares method. *The APC is significantly different from zero ($p<0.05$).

California has a similar story for lung and bronchus cancer incidence broken down by males and females. Males in California have reduced their cancer rates about one-third faster than the rest of the United States. California women are reducing their rates by about 1% every year while the rest of the United States is still increasing their smoking-related cancer incidence rate.

Figure 4A.3 **Lung and bronchus cancer incidence among women in California and U.S. minus California, 1988-2011**

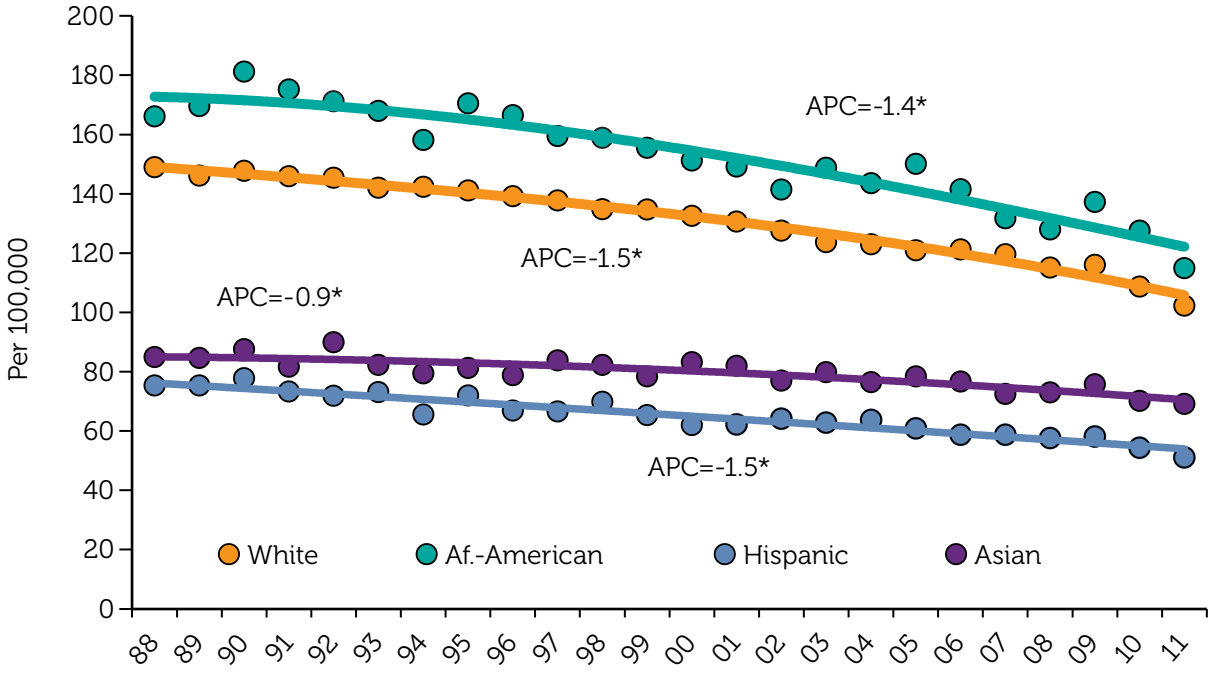


	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11
California	100	99	101	101	102	102	100	101	101	101	99	99	96	96	96	93	93	92	91	89	85	89	82	78
US - California	86	87	91	94	94	94	96	96	98	100	102	101	99	99	101	102	101	103	103	102	99	99	94	91

Source: California Cancer Registry. Rates are per 100,000 and age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) standard. Percent changes were calculated using two years for each end point; APCs were calculated using non-weighted least squares method. *The APC is significantly different from zero ($p<0.05$).

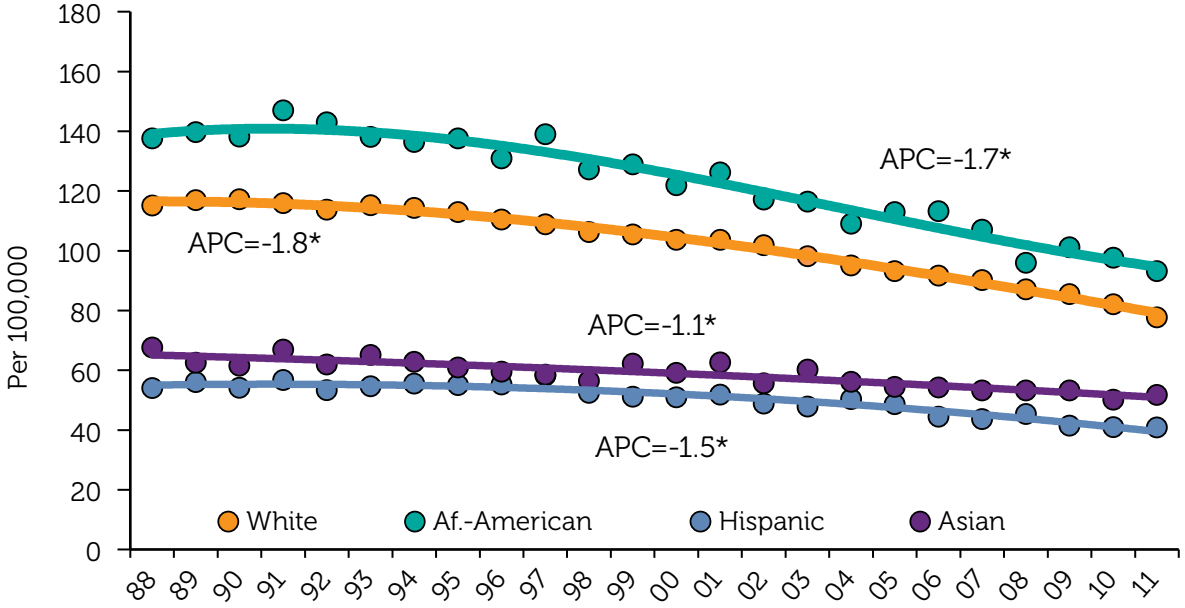
Reductions in lung and bronchus cancer incidence and mortality have occurred across all races/ethnicities. However, both cancer incidence and mortality rates remain highest for Whites and African-Americans. Figures 4A.4 and 4A.5 display the reductions for each race/ethnicity and the annual percent change for each.

Figure 4A.4 **Lung and bronchus cancer incidence by race/ethnicity in California, 1988-2011**



Source: California Cancer Registry. Rates are per 100,000 and age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) standard. Percent changes were calculated using two years for each end point; APCs were calculated using non-weighted least squares method. *The APC is significantly different from zero (p<0.05).

Figure 4A.5 **Lung and bronchus cancer mortality by race/ethnicity in California, 1988-2011**



Source: California Cancer Registry. Rates are per 100,000 and age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) standard. Percent changes were calculated using two years for each end point; APCs were calculated using non-weighted least squares method. *The APC is significantly different from zero (p<0.05).

References:

The Health Consequences of Smoking: A Report of the Surgeon General. Atlanta, GA: United States Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.

Section 5. Tobacco Industry Spending vs. Tobacco Control Funding

Subsection 5A. Tobacco Industry Expenditures

The tobacco industry has consistently outspent tobacco control efforts since the California Department of Public Health, California Tobacco Control Program (CDPH/CTCP) was established in 1989. Industry efforts have included lobbying state and local legislators; funding community programs and scholarships; and relying on California's renowned entertainment industry. This makes it difficult to maintain a social norm in which tobacco is less desirable, less acceptable, and less accessible.

From 2010 to 2013, CDPH/CTCP expenditures declined by 18.7% in real dollars, to $1.72 per capita. Since its inception, state expenditures for CDPH/CTCP have been well below the $12.12 per capita currently recommended by CDC for funding an effective statewide tobacco control program (CDPH, 2009), with current funding equaling less than 1/6 of the CDC recommended level.

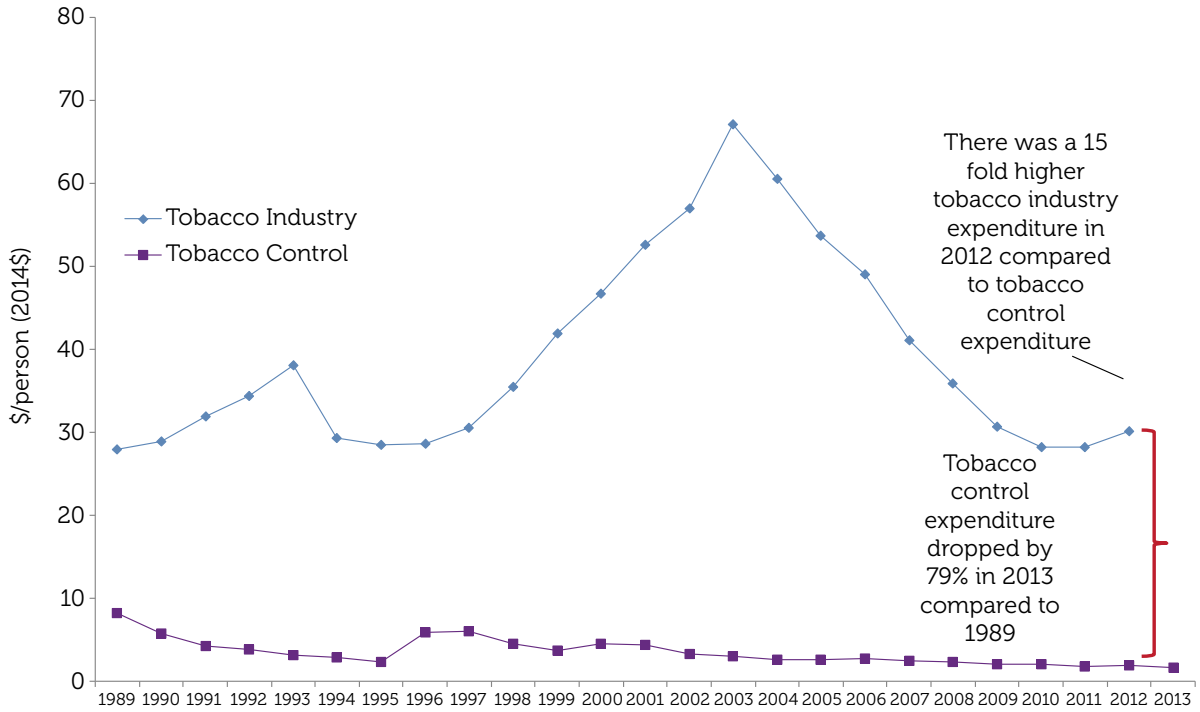
California Tobacco Control Program Budget Expenditures

The total budget in fiscal year 1989-1990 allotted to the CDPH/CTCP was $95.2 million ($8.31 per capita in 2014 dollars). This budget dropped to $54.8 million from 1989 to 2010, a period during which the adult population expanded from 21.9 to 27.0 million people. In per capita terms, expenditures by CDPH/CTCP in 2010 equaled $1.72 per person, a decline from 1989 in real dollar per capita expenditures of nearly 79%.

Tobacco Industry Advertising Expenditures

The total expenditure by the tobacco industry on cigarette advertising and promotional expenditures in 1989 was over $3.6 billion ($27.99 per person in 2014 dollars). Industry expenditures peaked at $15.1 billion in 2003 ($67.12 per person in 2014 dollars). Industry expenditures on cigarette advertising and promotion have steadily declined since 2003. In 2012, the last year that data are available, industry expenditure was $30.12 per person, similar to levels spent per capita in 1989 but still dramatically higher than tobacco control expenditures in the state (more than 15 times higher) (Figure 5A.1).

Figure 5A.1 **Cigarette Promotional Expenditure vs. California Tobacco Control Program Budget.**



Sources: Federal Trade Commission Cigarette Report (2013) for tobacco industry marketing expenditures; California Department of Public Health, Tobacco Control Program for CTCP expenditures. Monies shown are adjusted to 2014 dollars.
Note: California tobacco industry expenditures calculated as a proportion of U.S. expenditures based on cigarette pack consumption. Both tobacco control and tobacco industry expenditures have been standardized to the U.S. 2014 dollar, based on the Consumer Price Index (CPI). Tobacco control expenditures are Health Education Account actual expenditures and represent a combination of media campaign, competitive grant, local lead agencies (LLA), tobacco settlement fund, and California Department of Education totals. Tobacco industry expenditures obtained from the Federal Trade Commission Cigarette Report for 2011 (published May 2013) available at http://www.ftc.gov/reports/federal-trade-commission-cigarette-report-2011 California population estimates are provided by the CA Department of Finance, Demographic Research Unit at http://www.dof.ca.gov/research/demographic/reports/estimates/e-7/documents/E-7_Report_1900-July_2013w.xls.

Tobacco Industry Lobbying Expenditures

The tobacco industry decrease in expenditures on marketing (Figure 5A.1) coincides with an increase in lobbying expenditures, for example to support opposition to California Proposition 29. The tobacco control programs are partially funded through Proposition 99, a voter-approved initiative to increase the state cigarette tax by $0.25 per pack which was passed in 1988. The 2012 California Proposition 29 ballot initiative sought to raise the per-pack tax on cigarettes by $1 for a total California state excise tax of $1.87 per pack. Revenues from this excise tax were to be applied to cancer research and to increased efforts to reduce tobacco use and prevent childhood addiction (Law Offices of Olson, Hagel, and Fishburn LLP, 2009).

Despite polling showing 2:1 support for the initiative in the months prior to voting, the initiative was narrowly defeated after a massive industry supported advertising campaign. Tobacco companies contributed $46.3 million to the opposition campaign compared to a total expenditure of $12.7 million by supporters (MapLight, 2012).

Similarly, the tobacco industry contributed $66.6 million to campaign committees opposing the 2006 California Proposition 86 initiative to increase the excise tax on cigarettes (99.99% of all dollars spent by campaign committees to defeat the initiative) (Hong, Barnes, and Glantz, 2007). The tobacco industry also provides direct contributions to state legislators and lobbyists. In 2006, contributions to state legislators and lobbyists totaled $2.3 million (Hong, Barnes, and Glantz, 2007). As of 2010, the number had increased to $2.8 million (Glantz, 2013; Center for Tobacco Policy & Organizing, 2013).

References:

California State Department of Public Health, California Tobacco Control Program. 2009. *California Tobacco Control Update 2009: 20 Years Of Tobacco Control In California*. 2009.

The Center for Tobacco Policy & Organizing. 2013. *Tobacco Money & Politics 2013-2014*. Retrieved December 16, 2013, from American Lung Association in California: http://center4tobaccopolicy.org/tobacco-policy/tobacco-money/

Federal Trade Commission (FTC). 2012. *Cigarette Report for 2009 and 2010*. Washington DC: Federal Trade Commission. Available at: www.ftc.gov/os/2012/09/120921cigarettereport.pdf (accessed 8-4-2013).

Glantz, S. 2013. Personal Communication.

Hong MK, Barnes R, & Glantz S. 2007. *Tobacco Control in California 2003-2007: Missed Opportunities*. Available at http://escholarship.org/uc/item/7ck056qf (accessed 8-19-2013).

Law Offices of Olson, Hagel, and Fishburn LLP. (2009, Dec 07). *Prop 29: California Cancer Research Act*. Retrieved July 25, 2013, from State of California Department of Justice Office of the Attorney General: http://ag.ca.gov/cms_attachments/initiatives/pdfs/i895_initiative_09-0097.pdf

MapLight. (2012, August 8). *Prop. 29: Cigarette Tax*. Retrieved July 25, 2013, from Voter's Edge California: http://votersedge.org/california/ballot-measures/2012/june/prop-29/funding

Orzechowski W & Walker RC. 2013. *The Tax Burden on Tobacco. Historical Compilation*. Vol. 47, 2012. Arlington, VA: Orzechowski & Walker.

U.S. Department of Health and Human Services. 2000. *Healthy People 2010: Understanding and Improving Health and Objectives for Improving Health*. 2nd Edition. Washington, DC: U.S. Government Printing Office; 2000.

Wakefield M & Chaloupka F. 2000. Effectiveness of comprehensive tobacco control programs in reducing teenage smoking in the USA. *Tob Control* 9:177-186.

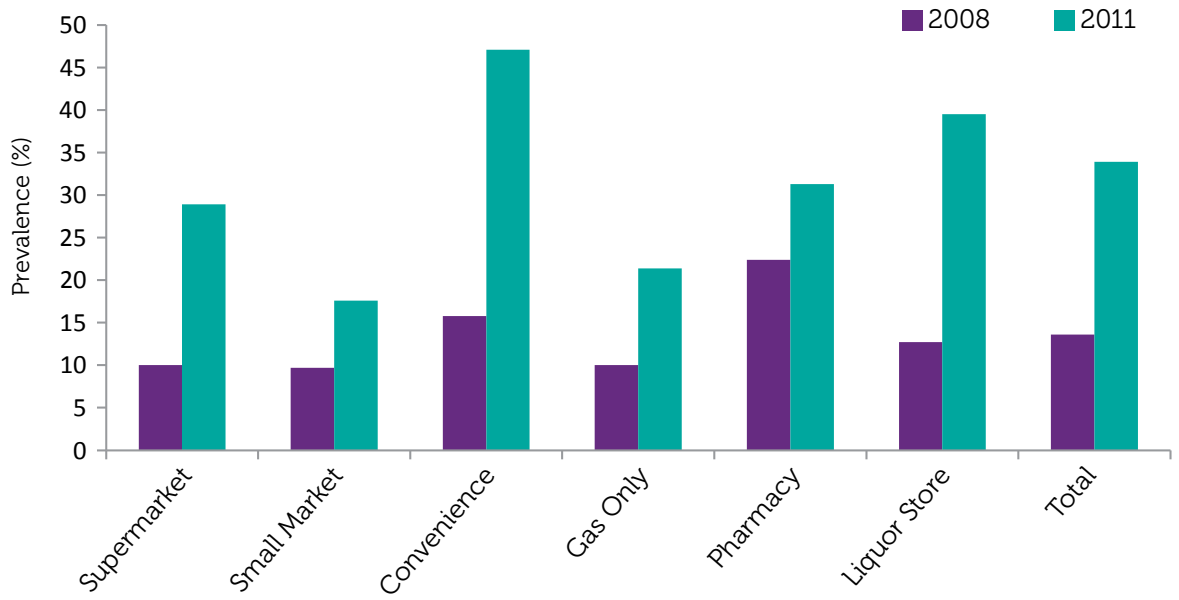
Subsection 5B.
The California Tobacco Advertising Study, Tobacco Retail Marketing

Cigarette companies spend more of their marketing dollars on in-store marketing than any other industry (Feighery, Schleicher, & Haladjian, 2009). Because tobacco industry in-store marketing materials are visible to everyone, they remain a point of contact between non-smokers, including children, and are a factor in smoking initiation.

To track tobacco industry retail marketing behaviors, the California Tobacco Advertising Study (CTAS) surveys in-store marketing activities on a semi-annual basis since 2000. The CTAS field survey instrument (Feighery and Schleicher, 2008) included questions on the number and location of printed advertisement materials within stores that sell tobacco products. The average number of visible cigarette marketing materials below 3 feet increased from 13.6% in 2008 to 33.9% in 2011 (Figure 5B.1). The percentage of stores displaying tobacco product advertisements near candy displays has increased from 0.7% in 2008 to 9.2% in 2011. (Figure 5B.2).

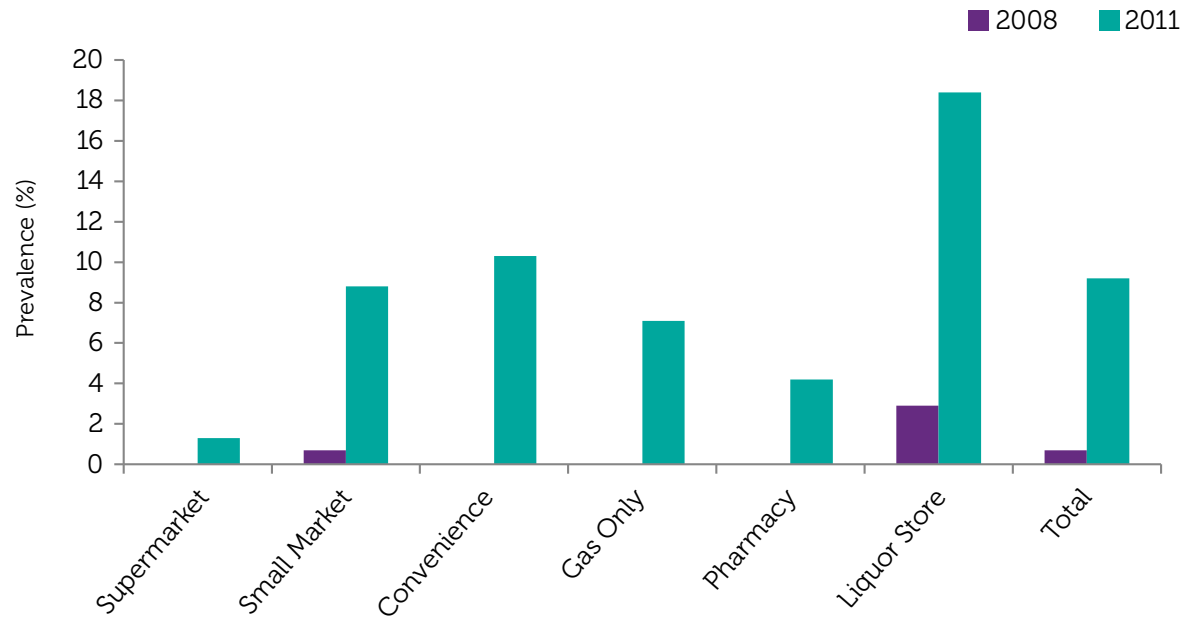
CTAS data show that stores located in neighborhoods with an above average proportion of African Americans contained more marketing materials than neighborhoods where the proportion of African Americans was below the state average (Feighery, Schleicher, & Haladjian, 2009). Similar relationships were not found in neighborhoods with greater proportions of Asian/Pacific Islanders, Hispanics or non-Hispanic Whites, suggesting that cigarette companies tailor their marketing strategies in retail outlets over time to target specific populations.

Figure 5B.1 **Tobacco advertisements below 3 feet by store type, 2008 – 2011.**



Source: California Tobacco Advertising Survey (CTAS), 2011.

Figure 5B.2 **Tobacco advertisements near candy by store type, 2008-2011**



Source: California Tobacco Advertising Survey (CTAS), 2011.

References:

Feighery E, Schleicher N, & Haladjian H. (2009). *Tobacco Marketing in California Retail Outlets, 2000-2005: How the Retail Environment has Changed Over Time and How Community Characteristics Shape It*. Oakland: Public Health Institute.

Feighery E, Schleicher N. *Final Summary Report: Tobacco Marketing and Pricing in California Retail Outlets in 2008 and How it Has Changed Over Time*. Oakland, CA: Public Health Institute; 2008.

Roeseler A, Feighery, E., & Cruz, T. B. (2010) Tobacco Marketing in California and Implications for the Future. *Tobacco Control*. 2010 April; 19(Suppl_1): i21–i29.

Subsection 5C.
Tobacco Sales to Minors

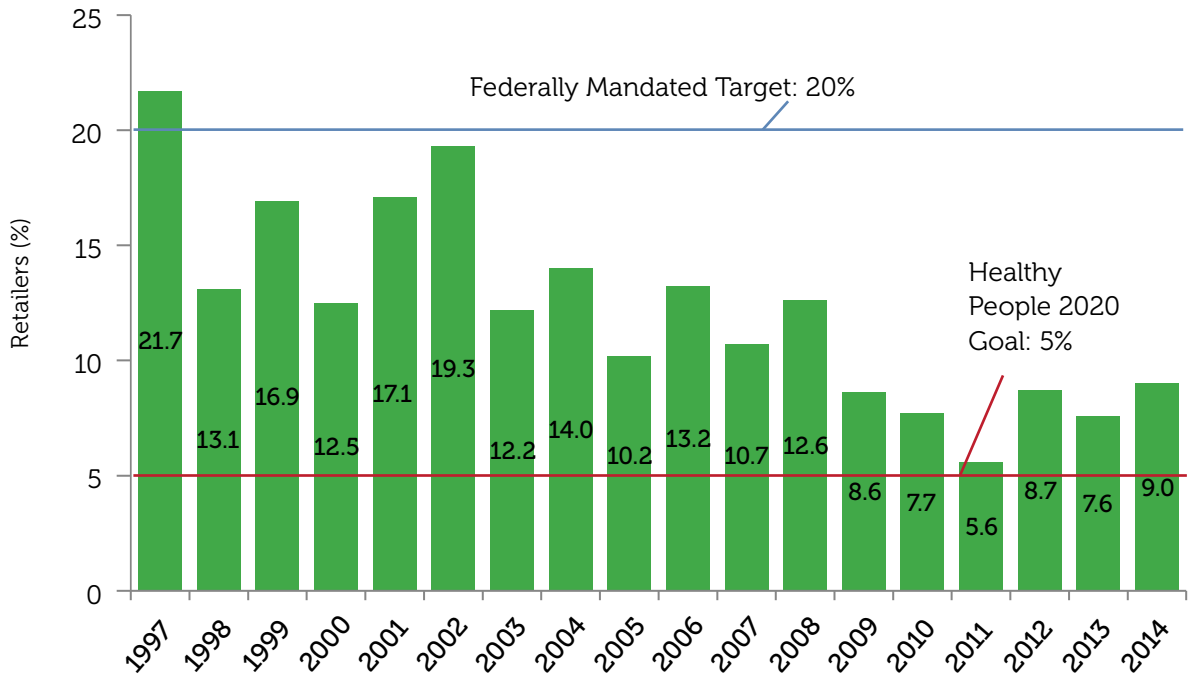
Although California prohibits selling tobacco to youth ages 18 and under, statewide data show that more than 5% of retailers still sell tobacco to minors. The vast majority of adult smokers began smoking while they were minors, and preventing minors from purchasing cigarettes is important in reducing the overall number of adult smokers (USDHHS, 2012).

California tracks compliance of tobacco retailers with the federally mandated Synar Amendment using the Youth Tobacco Purchase Survey (YTPS). The YTPS is a random sample survey of retail outlets that sell tobacco products and is performed by underage inspectors who attempt to purchase cigarettes in unannounced compliance checks of the retail outlets in the random sample.

Longitudinal trends in sales to minors

In 1997, the first year of monitoring youth tobacco sales in California, 21.7% of retailers in the survey sold cigarettes to minors, just above the federally mandated target of 20%. While 21.7% is above the 20% federal target, it equaled half the compliance rate observed in the nation as a whole that year (SAMHSA, 2012). In 1998, the rate dropped below the target of 20% and it has remained below 20% ever since (Figure 5C.1). The lowest rate of sales to minors was observed in 2011, at 5.6% of tobacco retailers surveyed. However, there was a large uptick to 8.7% in 2012. A similar pattern of historic low levels in 2011 and higher levels in 2012 was observed nationally (SAMHSA, 2012). Data for the state of California show the noncompliance rate continuing to slightly increase to 9.0% in 2014.

Figure 5C.1 **Percent of retailers selling tobacco to youth, 1997-2014**



Source: Youth Tobacco Purchase Survey (YTPS), 1997-2014.

Compliance by store type

Figure 5C.2 shows the percentage of sales in various store types in 2014. Convenience stores with gas stations had a noncompliance rate of 10.4%, above the statewide average of 9.0%, as did a broad category of "Other" stores including gas stations not connected to convenience stores, gift shops, and discount stores.

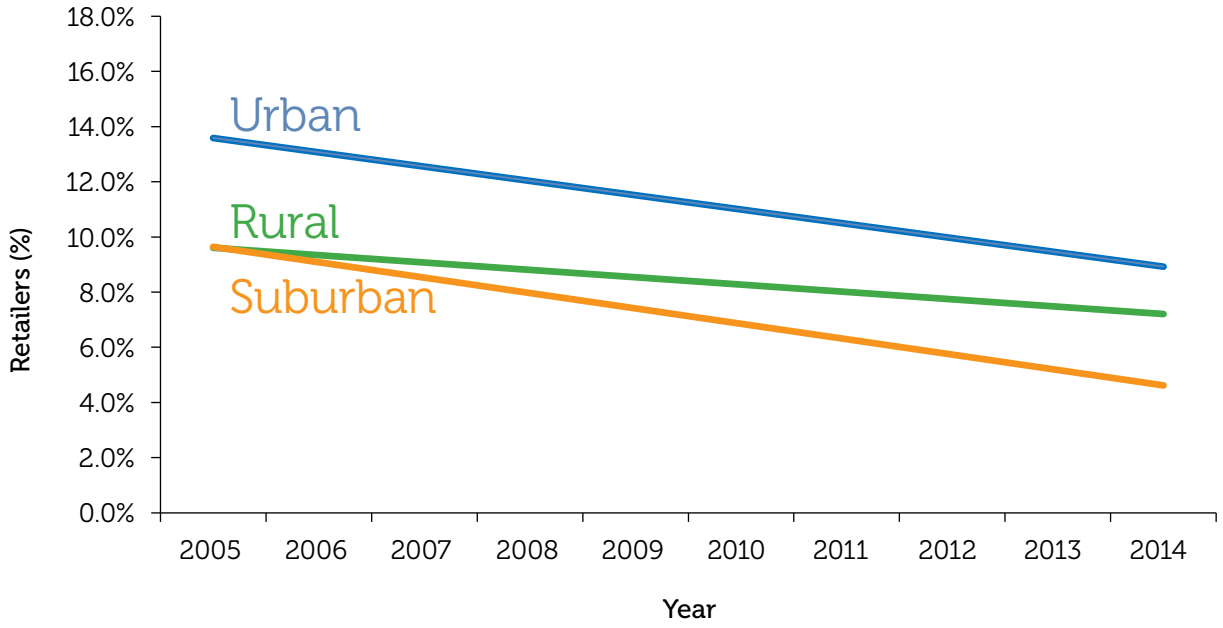
Figure 5C.2 **Percent of retailers selling tobacco to youth by store type, 2014**

Source: Youth Tobacco Purchase Survey (YTPS), 2014.
*Other includes gas stations without convenience stores, gift and discount stores, and others.
Sales rates are standardized to an equal distribution of youth's gender and age.

Compliance by rurality

Sales rates vary depending on geography (Figure 5C.3). Historically, urban areas have had higher rates of selling to minors than suburban and rural areas. However, since 2003 there has been a trend of reduced sales to minors by urban retail outlets. As of the most recent surveys, compliance levels by urban retailers have approached the levels historically seen among suburban and rural retailers (Figure 5C.3). There is similar evidence of improving rates of compliance among suburban retailers (Figure 5C.3). As of 2014, percentages in urban, suburban, and rural areas were 11.5%, 6.5% and 8.1%, respectively.

Figure 5C.3 **Percent of retailers selling tobacco to youth by urban, suburban and rural, 2005-2014**

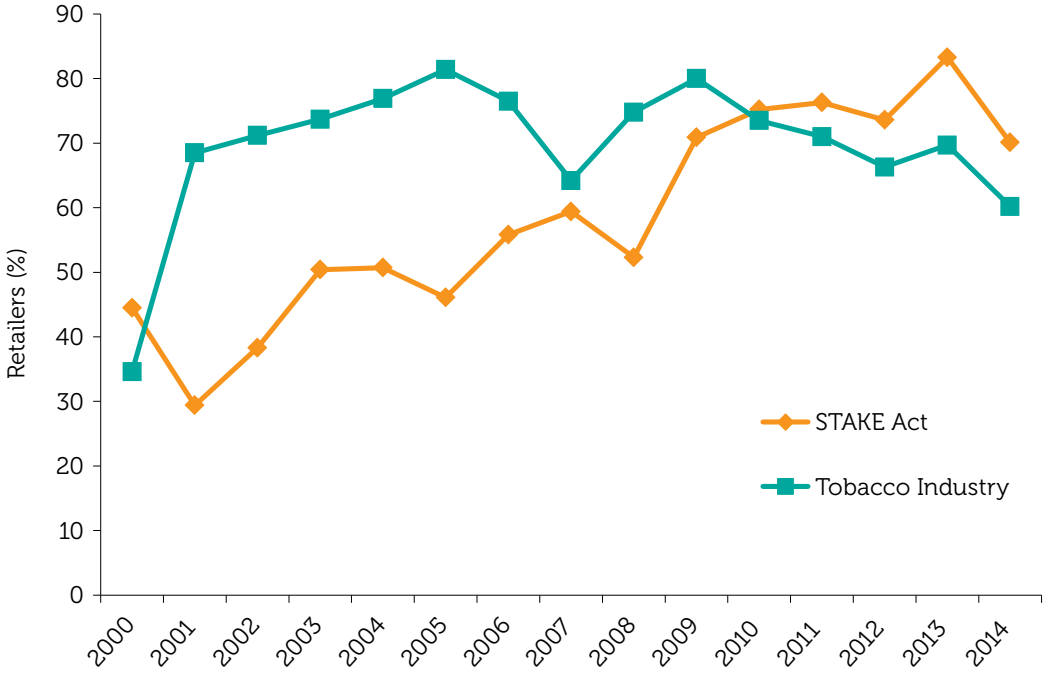


Source: Youth Tobacco Purchase Survey (YTPS), 2005-2014.
Urban area is defined as 5,000 people and above / per zip code. Rural area is defined as 500 people and under/ per zip code. All other areas are classified as Suburban.

STAKE Act Signage Compliance

The YTPS also assesses in-store compliance with the signage component of the California Stop Tobacco Access to Kids Enforcement (STAKE) Act (California B&P Code Section 22952[a]). STAKE, enacted in 1994, requires that any retailer selling cigarettes or other tobacco products post a clearly visible sign at each cash register where tobacco products are sold indicating that tobacco sales are limited to those who are 18 and older. Compliance is achieved by posting signage with formatting suggested by the state (STAKE Act signs). Tobacco industry signage may compromise public health and law enforcement goals, in addition to violating article 5.3 of the Framework Convention on Tobacco Control (Apollonio and Malone, 2010). Usage of STAKE Act signage increased steadily since 2001, and now exceeds usage of tobacco industry signage (Figure 5C.4).

Figure 5C.4 **Proportion of retailers displaying tobacco industry age-of-sale warning signs and STAKE Act age-of-sale warning signs, 2000-2014**



Source: Youth Tobacco Purchase Survey (YTPS), 2000-2014.
The definition of a STAKE Act sign changed in 2006 to include non-California Department of Public Health signs that still met the legal requirements.

References:

Apollonio DE, Malone RE. The "We Card" program: tobacco industry "youth smoking prevention" as industry self-preservation. *Am J Public Health*. 2010 Jul;100(7):1188-201.

SAMHSA, 2012. Substance Abuse and Mental Health Services Administration *FY 2012 Annual Synar Reports: Tobacco Sales to Youth*. http://www.samhsa.gov/prevention/synar.aspx. Accessed September 11, 2013.

U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012.

Section 6. Smoking Cessation

Quitting smoking is the ultimate goal to prevent or minimize adverse health effects. It is also a successful measure of a tobacco control program, policy, or intervention. California has the second lowest smoking rate in the nation; even so, 3.8 million Californians still smoke, greater than the entire state populations of 21 states in the United States.

Quitting smoking successfully is a major challenge for smokers. Although in 2008 only 6.4% of smokers made a quit attempt of 6 or more months, almost 75% of California smokers say they would like to stop smoking (California Department of Public Health, CDPH, 2008).

Collectively, there has been a steady increase in the use of cessation treatment and/or nicotine replacement therapy. However, in California, approximately 75% of those making a quit attempt still used no assistance (California Department of Public Health, CDPH, 2008). As shown in Figure 6A.1, using data from a representative sample of smokers in California in 2011, 68.4% of smokers used any method except for the "cold turkey" (no assistance) method to quit in the past 12 months, while 31.6% used the "cold turkey" method alone (CSC, 2011, Unpublished). Many of those individuals may have tried other methods and made several attempts before finally quitting without any assistance.

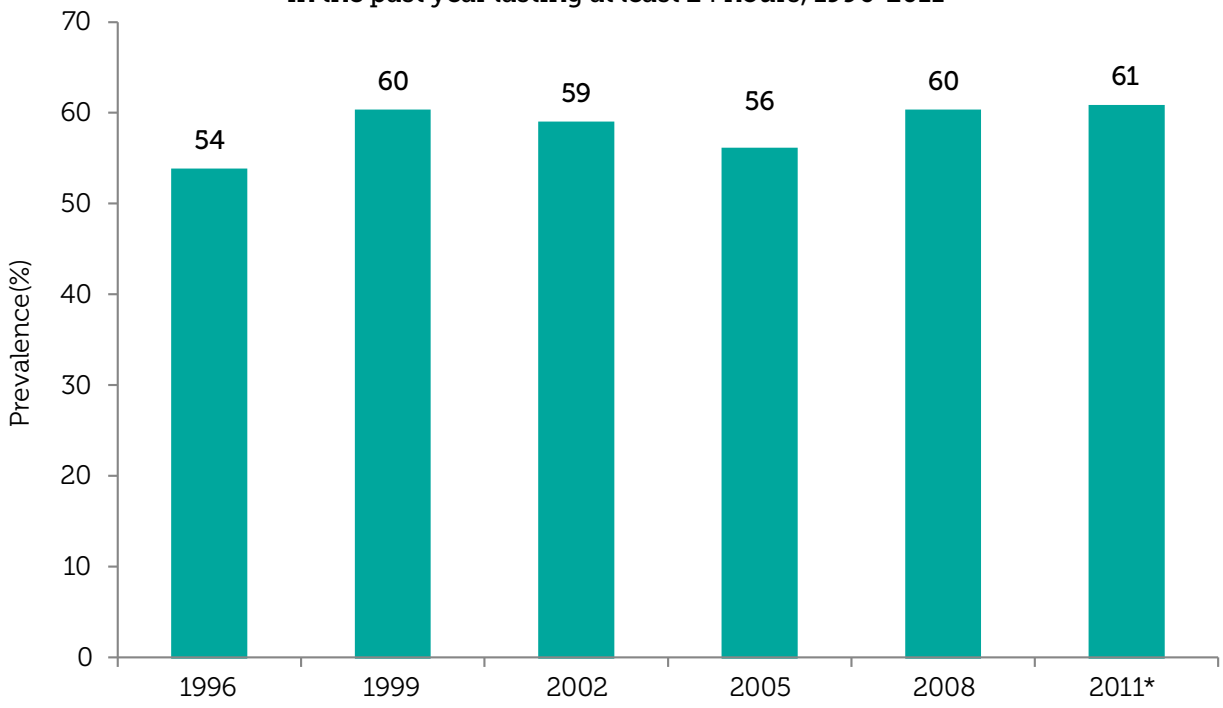
Past studies found that ex-smokers recalled an average of 4.7 life-time quit attempts to achieve successful cessation (Borland, et al., 2012). In California in 2011, 60.7% reported stopping smoking for one day or longer in the past 12 months. This percentage is higher among current non-daily smokers (72.2%) than current daily smokers (55.9%). As shown in Figure 6A.2, there has been a consistent percentage of smokers who make quit attempts but this has not increased substantially over the years.

Figure 6A.1 **Methods to help quitting in the past 12 months**

Method	%
Quit cold turkey	31.6
Exercised more	26.8
Switched to light cigs	15.6
Tried to quit with a friend	13.8
Stopped hanging out with friends who smoke	11.2
Switched to smokeless tobacco	10.5
Called a telephone helpline	8.2
Used herbal remedies	6.7
Used acupuncture/hypnosis	2.8

Source: California Smokers Cohort (CSC) Study (Unpublished), 2011.

Figure 6A.2 **Percentage of smokers who made a quit attempt in the past year lasting at least 24 hours, 1996-2011**



Source: 1996-2008 data from the California Tobacco Surveys 2008.
*Data for the year 2011 is from the California Smokers Cohort (CSC) Study (Unpublished).

In California, smoking cessation rates have been assessed in comparison to other states. California has consistently done well in terms of smoking cessation rates among smokers relative to the rest of the nation.

California Smokers' Helpline

The California Smokers' Helpline is a free statewide telephone-based tobacco cessation program. Clinical trials consistently demonstrate that Helpline counseling approximately doubles the odds of successful long term quitting (Zhu. et al., 1996, 2012). Now open 7 days and 84 hours a week, the Helpline provides services to about 40,000 participants annually in English, Spanish, Mandarin, Cantonese, Korean, and Vietnamese. Most callers are smokers or other tobacco users who want help to quit, but some, including 2.7% of callers on the English line, 9.3% of those on the Spanish line, and 35.3% on the Asian lines, are friends or family members calling on behalf of the smoker.

References

Tang H, Abramsohn E, Park H-Y, Cowling DW, Al-Delaimy. 2010. Using a cessation-related outcome index to assess California's cessation progress at the population level. *Tobacco Control,* 19(Suppl 1): i56-i61.

Zhu SH, Stretch V, Balabanis M, et al. 1996. Telephone counseling for smoking cessation: Effects of single-session and multiple-session intervention. *Journal of Consulting and Clinical Psychology, 64*, 202-211.

Zhu SH, Anderson CM, Tedeschi G, et al. 2002. Evidence of real-world effectiveness of a telephone quitline for smokers. *New England Journal of Medicine, 347,* 1087-1093.

Zhu SH, Cummins SE, Anderson CM, Tedeschi GJ. 2003. Telephone-based cessation intervention for pregnant smokers: results of a large randomized trial. *Presented at the 12th World Conference on Tobacco or Health*. Helsinki.

Zhu SH, Cummins SE, Wong S, Gamst, et al. 2012. The effects of a multi-lingual quitline for Asian smokers: a randomized trial. *Journal of the National Cancer Institute, 104*, 299-310. doi: 10.1093/jnci/djr530.

Zhu SH, Nguyen QB, Cummins SE, et al. 2006. Non-Smokers seeking help for smokers: a preliminary study. *Tobacco Control*, 15, 107-113. Doi: 10.1136/tc/2005.012401.

Appendix

Table 1A.1 **Adult cigarette smoking prevalence within California (CA) and the rest of the United States (US-CA), 1988-2013**

YEAR	88	89	90	91	92	93	94	95	96	97	98	99	00
CA	23.7	22.1	20.4	20.2	21.0	19.2	17.6	16.9	17.8	17.4	17.5	17.1	16.3
US-CA									24.0	23.6	23.4	23.1	23.0
YEAR	**01**	**02**	03	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**12**	**13**
CA	16.4	15.8	15.4	14.6	14.0	13.3	13.8	13.3	13.1	11.9	12.0	12.7	11.7
US-CA	23.6	23.5	23.0	21.6	21.3	20.3	20.2	19.1	18.7	17.1	21.0	19.7	

Table 1A.2 **California adult tobacco use trends (percent prevalence), 1996-2011**

Year	96	97	98	99	00	01	02	03
All Tobacco	20.3	19.9	19.4	18.2	18.6	18.9	19.1	17.6
Cigarettes	17.2	16.6	16.3	15.2	15.4	15.9	15.5	14.1
Other Tobacco	4.09	4.45	5.53	5.22	5.35	5.26	5.89	5.49
Smokeless	1.21	0.78	0.72	0.61	0.75	0.83	1.11	0.95
Dual Use	0.97	1.16	2.36	2.20	2.08	2.30	2.26	1.95
Year	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
All Tobacco	17.6	17.8	17.2	16.4	12.9	15.4	14.7	15.5
Cigarettes	14.1	13.7	13.6	12.9	10.8	12.9	11.2	12.8
Other Tobacco	5.36	6.28	5.45	5.06	3.04	3.74	4.89	4.16
Smokeless	1.03	1.30	1.51	1.14	0.62	0.88	1.64	1.08
Dual Use	1.87	2.26	1.83	1.60	0.95	1.22	1.44	1.35

Table 1A.4 **California adult smoking prevalence by gender, 1988-2013**

Year	88	89	90	91	92	93	94	95	96	97	98	99	00
Men	25.6	22.5	21.1	22.7	22.3	20.7	18.9	18.7	20.8	21.1	20.6	19.7	18.7
Women	19.9	19.8	17.9	15.8	17.8	15.8	14.4	13.2	14.8	13.9	14.4	14.6	13.9
Year	01	02	03	04	05	06	07	08	09	10	11	12	13
Men	20.2	18.8	18.4	18	17.0	17.6	17.1	16.5	15.6	14.4	14.9	15.5	15.1
Women	12.7	12.8	12.5	11	11.1	9.1	11.3	10.7	10.7	9.4	9.3	10.0	8.5

Table 1A.5 **Smoking prevalence among California men by race/ethnicity, 1996-2011**

Year	96	97	98	99	00	01	02	03
White	21.5	20.2	20.1	19.7	18.5	18.9	18.2	17.3
African American	21.6	29	24.2	26	20.7	18.5	18.2	27.5
Hispanic	19	21.4	21.6	19.4	19	22.8	19.8	18.7
Asian/Pacific Islander	19	15.2	16.9	14.3	19.3	18.1	15.1	15.4
Year	04	05	06	07	08	09	10	11
White	16.9	14.4	16.1	14.4	16.4	14	13.3	14.3
African American	25.5	20	19.9	25.9	19.1	19.9	18.4	18.9
Hispanic	19.1	22.9	17.3	19.5	17.3	17.6	16.8	15.5
Asian/Pacific Islander	16.8	11.3	16.1	14.7	11.9	15	8.4	13.1

Table 1A.6 **Smoking prevalence among California women by race/ethnicity, 1996-2011**

Year	96	97	98	99	00	01	02	03
White	16.6	17	17.4	17.1	16.3	16	15.3	14.4
African American	23.7	22.4	16.7	19.8	18.4	20.5	19.5	24.2
Hispanic	10.6	7.8	10.6	9.5	9.1	7.9	8.8	7.9
Asian/Pacific Islander	8.3	4.5	5.2	8.5	8.6	4.8	5.7	7.8
Year	04	05	06	07	08	09	10	11
White	14.1	12.9	11.9	13	12.2	12.3	11.2	11.2
African American	15.2	17.4	10.9	12.8	19.6	19.3	14.9	15.2
Hispanic	6.3	7.7	5.9	7.2	7.4	6.8	6.2	5.7
Asian/Pacific Islander	4	6.3	4.1	5.3	2.6	3.9	4	4.5

Table 4.4 **Lung and bronchus cancer incidence among race/ethnicities in California, 1988-2011**

YEAR	88	89	90	91	92	93	94	95	96	97	98	99
White	149.0	146.1	147.8	145.9	145.4	142.1	142.4	141.1	139.2	137.8	134.8	134.7
African American	166.1	169.6	181.2	175.2	171.2	168.0	158.2	170.5	166.5	159.5	158.9	155.5
Hispanic	75.4	75.4	77.8	73.3	71.9	73.1	65.6	72.0	66.9	66.6	69.9	65.4
Asian	85.0	84.7	87.6	81.7	90.0	82.3	79.4	81.3	78.8	83.8	82.3	78.4
YEAR	00	01	02	03	04	05	06	07	08	09	10	11
White	132.6	130.6	127.6	123.7	123.0	121.0	121.3	119.6	115.1	116.1	108.7	102.3
African American	151.2	149.2	141.5	148.8	143.6	150.1	141.6	131.8	128.0	137.3	127.6	114.9
Hispanic	62.0	62.2	64.2	62.8	63.7	60.9	58.7	58.7	57.6	58.1	54.4	51.1
Asian	83.2	82.0	77.0	79.9	76.5	78.4	76.7	72.5	73.0	75.8	70.2	69.2

Table 4.5 **Lung and bronchus cancer mortality among race/ethnicities in California, 1988-2011**

YEAR	88	89	90	91	92	93	94	95	96	97	98	99
White	115.2	117.0	117.3	116.0	113.8	115.3	114.4	113.0	110.5	108.9	106.3	105.5
African American	137.7	139.8	138.3	147.0	143.0	138.2	136.5	137.7	131.0	139.1	127.3	129.0
Hispanic	54.1	56.1	54.2	56.8	53.4	54.7	55.6	55.1	55.3	58.3	52.5	51.2
Asian	67.7	62.6	61.6	67.0	62.0	65.2	62.9	61.0	59.6	58.6	56.5	62.3
YEAR	00	01	02	03	04	05	06	07	08	09	10	11
White	103.7	103.7	101.9	98.2	95.1	93.2	91.7	90.2	87.1	85.5	82.1	77.8
African American	122.0	126.3	117.2	116.5	109.1	113.0	113.3	107.1	96.0	101.2	97.7	93.2
Hispanic	51.0	51.9	48.9	47.9	50.4	48.7	44.5	43.7	45.4	41.5	41.0	40.9
Asian	59.2	62.7	55.7	60.3	56.2	54.5	54.3	53.3	53.3	53.3	50.2	51.8

Table 5C.1 **Percent of Retailers Selling Tobacco to Youth, 1997-2014**

Year	97	98	99	00	01	02	03	04	05
Illegal Sales Rate	21.7	13.1	16.9	12.5	17.1	19.3	12.2	14.0	10.2
C.I.	17.9-25.5	10.0-16.2	13.4-20.4	10.0-15.0	14.2-20.0	16.1-22.5	8.9-15.5	11.5-16.5	8.0-12.4
Year	06	07	08	09	10	11	12	13	14
Illegal Sales Rate	13.2	10.7	12.6	8.6	7.7	5.6	8.7	7.6	9.0
C.I.	10.6-15.8	8.5-12.9	10.2-15.0	6.2-11.0	5.8-9.6	4.0-7.2	6.6-10.8	5.7-9.5	7.0-11.1