

# California Tobacco Facts and Figures 2016

Over 25 Years of Tobacco Control in California

California Department of Public Health  
California Tobacco Control Program  
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# Background

The California Department of Public Health (CDPH), California Tobacco Control Program (CTCP) was established in 1989, after California voters passed the Tobacco Tax and Health Protection Act (California Proposition 99) in November of 1988. As the longest running comprehensive tobacco control program in the nation, CTCP seeks to change tobacco use norms in the larger physical and social environment and to create an environment in which tobacco use becomes less desirable, less acceptable, and less accessible.<sup>1</sup> Declines in cigarette consumption and smoking prevalence in California are attributed to the success of the media campaign and state and community interventions.<sup>2</sup>

# Purpose

California Tobacco Facts and Figures 2016 serves as a quick reference on the current status of tobacco use in California and progress over time.

# Data Sources

Several data sources are used in the report. Each data source is based on a different survey or surveillance tool, and therefore may report slightly different rates. However, these differences are not statistically significant and represent the most accurate and complete picture of California to the best of our knowledge. Some of the major data sources used include:

- *California Behavioral Risk Factor Survey*

The California Behavioral Risk Factor Survey, also known as the California Behavioral Risk Factor Surveillance System (BRFSS), is an annual random-dial telephone health survey assessing a variety of public health topics. The California Adult Tobacco Survey (CATS), which was incorporated into the third track of the BRFSS, assesses adult tobacco usage in California.

Some of the figures using BRFSS data display data breaks in 1996 and 2012. These breaks were inserted to account for changes in survey questions or methodology. The Centers for Disease Control and Prevention (CDC) does not recommend comparing data from before or after each data break. These changes are described in detail elsewhere.<sup>3</sup> Previously reported 2014 BRFSS data were updated due to revisions to the sample weights.

- *California Cancer Registry*

The California Cancer Registry (CCR) is a statewide population-based cancer surveillance system. The State of California mandates that all cancer diagnosed in California to be reported to the CCR since 1988. The CCR monitors the incidence and mortality of cancer among Californians from patient's medical records.

- *California Health Interview Survey*

The California Health Interview Survey (CHIS) is an annual random-dial telephone health survey. Due to the sample design, CHIS is able to provide statewide estimates for California's overall non-institutionalized population and provide county-level estimates for medium- and large-sized counties and groups of small-sized counties based on population.<sup>4</sup> AskCHIS is a free online query system that allows analysis for most variables in the CHIS datasets.

- *California Healthy Kids Survey*

The California Healthy Kids Survey (CHKS) is an anonymous, large-scale survey funded by the California Department of Education Tobacco-Use Prevention Education program. The survey is administered to a randomly-selected representative sample of California students in grades 5, 7, 9, and 11. CHKS provides various indicators, including the health and overall well-being of students.

- *California Smokers' Helpline*

The California Smokers' Helpline (Helpline) is a free statewide telephone-based tobacco cessation program. The Helpline offers telephone counseling and self-help materials in English, Spanish, Mandarin, Cantonese, Korean, and Vietnamese. The Helpline also collects data from participants for population research.

- *California Student Tobacco Survey*

The California Student Tobacco Survey (CSTS) is a large-scale, in-school survey of tobacco use among California middle (grades 6–8) and high school (grades 9–12) students. The purpose of the survey is to assess behavior and attitudes regarding tobacco usage. CSTS is typically conducted every two to three years.

- *California Tobacco Advertising Survey*

The California Tobacco Advertising Survey (CTAS) is designed to assess retail availability, promotion and placement of tobacco products and marketing materials for tobacco products. The survey also assesses the availability and promotion of flavored tobacco products as well as electronic smoking devices.

- *Online California Adult Tobacco Survey*

The online California Adult Tobacco Survey (Online CATS) is an online health survey aimed at assessing tobacco-related behaviors and attitudes of California adults age 18 through 64 years old. The survey also assesses awareness and attitudes toward electronic cigarettes. The first survey was conducted in 2016.

- *Youth Tobacco Purchase Survey*

The Youth Tobacco Purchase Survey (YTPS) is an annual statewide survey with the purpose of capturing the percentage of retailers who sell tobacco to youth under 18. 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 checks of the retail outlets in the random sample.

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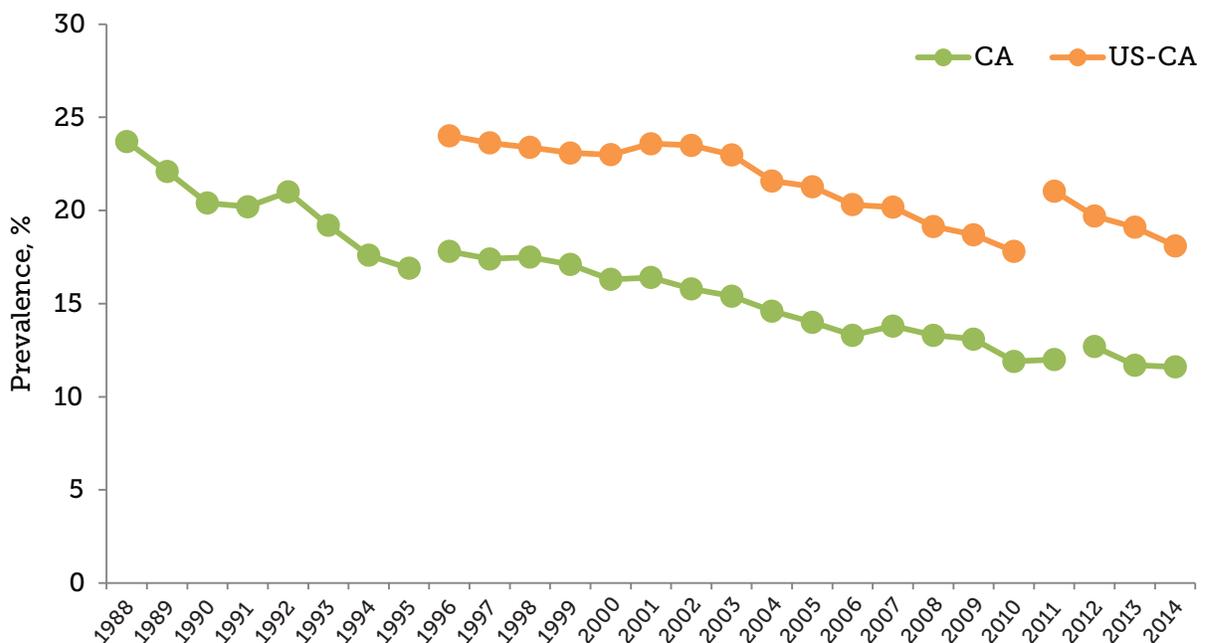
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# Section 1. Cigarette Smoking Prevalence

## Subsection 1A. Adult Smoking Rates – Historical Trends

Smoking prevalence in California has steadily declined since the comprehensive tobacco control program began in 1989. Adult smoking prevalence in California declined by 51.1% between 1988 and 2014, from 23.7% to 11.6% (Figure 1.1); this drop represents approximately 3.3 million fewer adult smokers in California. The decline in prevalence was most pronounced during the early years of CTCF. California has the second lowest adult smoking prevalence rate in the United States, second only to Utah.<sup>1</sup>

Figure 1.1. Adult cigarette smoking prevalence within California and the rest of the United States (US-CA), 1988–2014

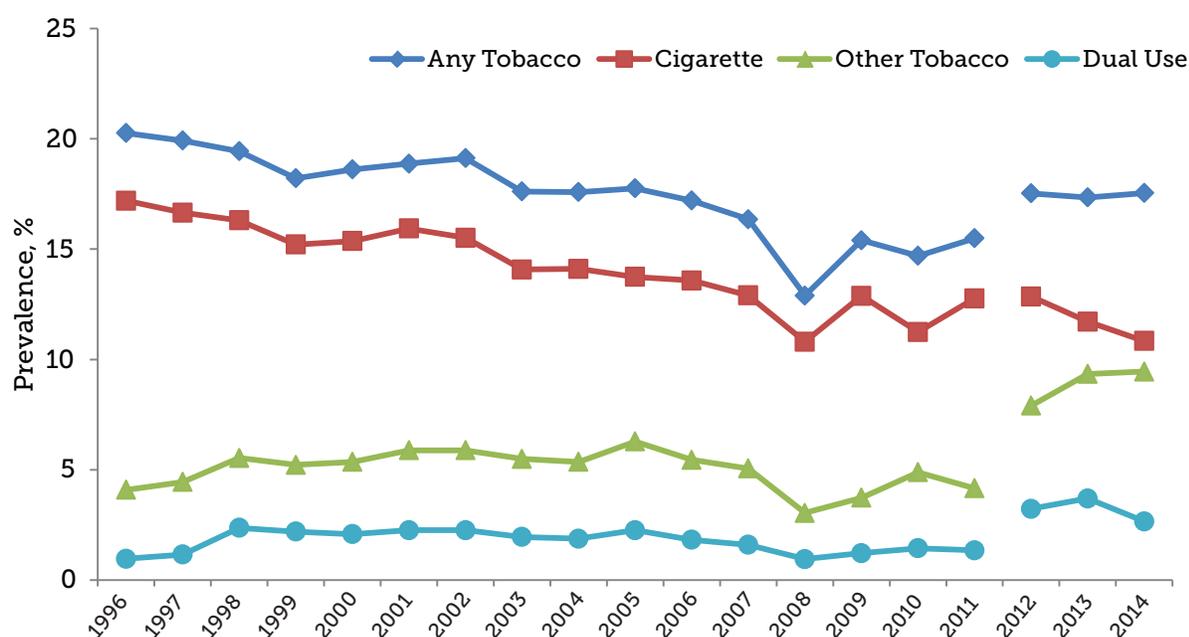


Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. An adjustment was made to address the change of smoking definition in 1996 that included more occasional smokers. The weighting methodology changed in 2012 for California but changed for the rest of the United States in 2011. Weighted to the 2000 California population from 1988–2011 and to the 2010 California population since 2012. The U.S. estimate does not include California adults. Source: Behavioral Risk Factor Surveillance System, 1988–2014.

## California Tobacco Facts and Figures 2016

A majority of adult tobacco users in California smoke cigarettes. Approximately 9.4% of California adults use other tobacco products (cigars, little cigars/cigarillos, pipe, chew, snuff, snus, hookah pipe, and e-cigarettes) and 2.7% are dual users (Figure 1.2). The trend in California adult tobacco use suggests that the decline in California's tobacco use rates have stalled in the last few years. A loss in momentum means that the 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.

**Figure 1.2. California adult tobacco use trends, 1996–2014**

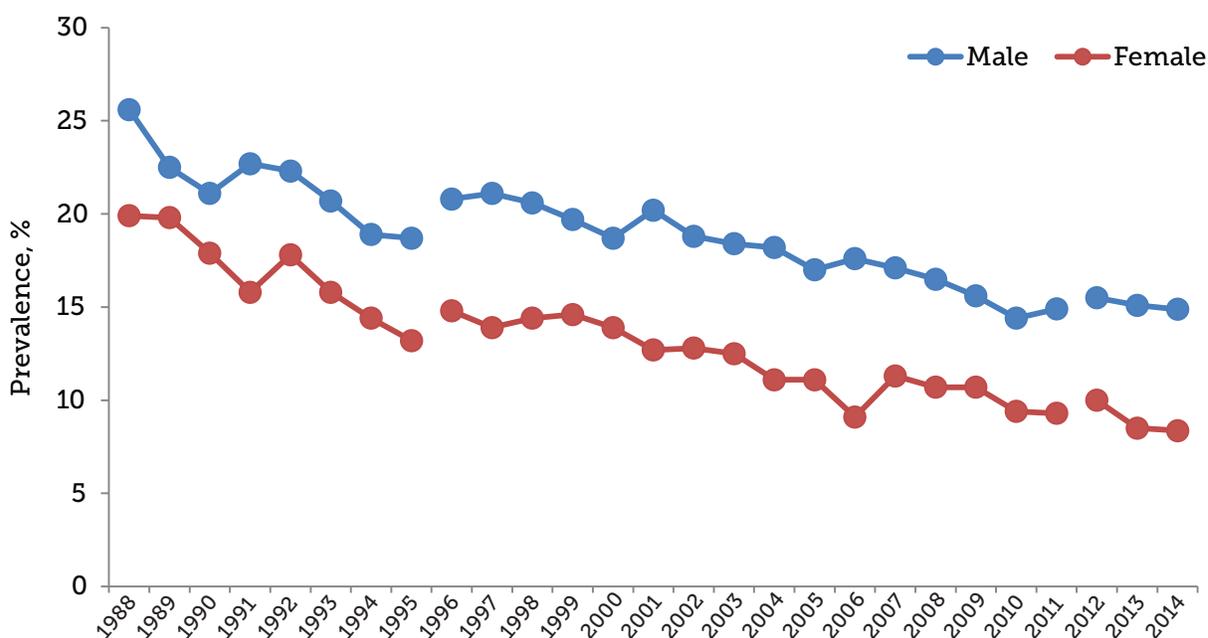


Note: Respondents aged 18+ were asked to report current cigarette, cigar/cigarillo, pipe, chew, snuff, and snus behavior. Weighted to the 2000 California population from 1988–2011 and to the 2010 California population since 2012. From 1996–2011, current tobacco use is defined as: 1) any tobacco (cigarettes, cigars, little cigars/cigarillos, pipe, chew, snuff, and snus); 2) other tobacco (cigars, little cigars/cigarillos, pipe, chew, snuff, and snus); and 3) dual use (cigarette users who also use another tobacco product). From 2012–2014, hookah pipe and electronic cigarettes were included in the tobacco definition. Source: Behavioral Risk Factor Surveillance System/California Adult Tobacco Survey, 1996–2014.

## Trends by Gender

In 1988, there was little difference in smoking rates between men and women, and the smoking rates were remarkably high by today’s standard. The rates between men and women started to diverge by the late 1980s and by 1991, smoking rates were five to six percentage points lower in women than men. Since then, this difference has remained consistent. Recently, the smoking rates for both men and women have leveled off. The smoking prevalence for men was 14.9% and for women it was 8.4% (Figure 1.3). It is estimated that 2.1 million men and 1.3 million women are smokers in California.<sup>2</sup>

Figure 1.3. Adult cigarette smoking prevalence within California by gender, 1988–2014



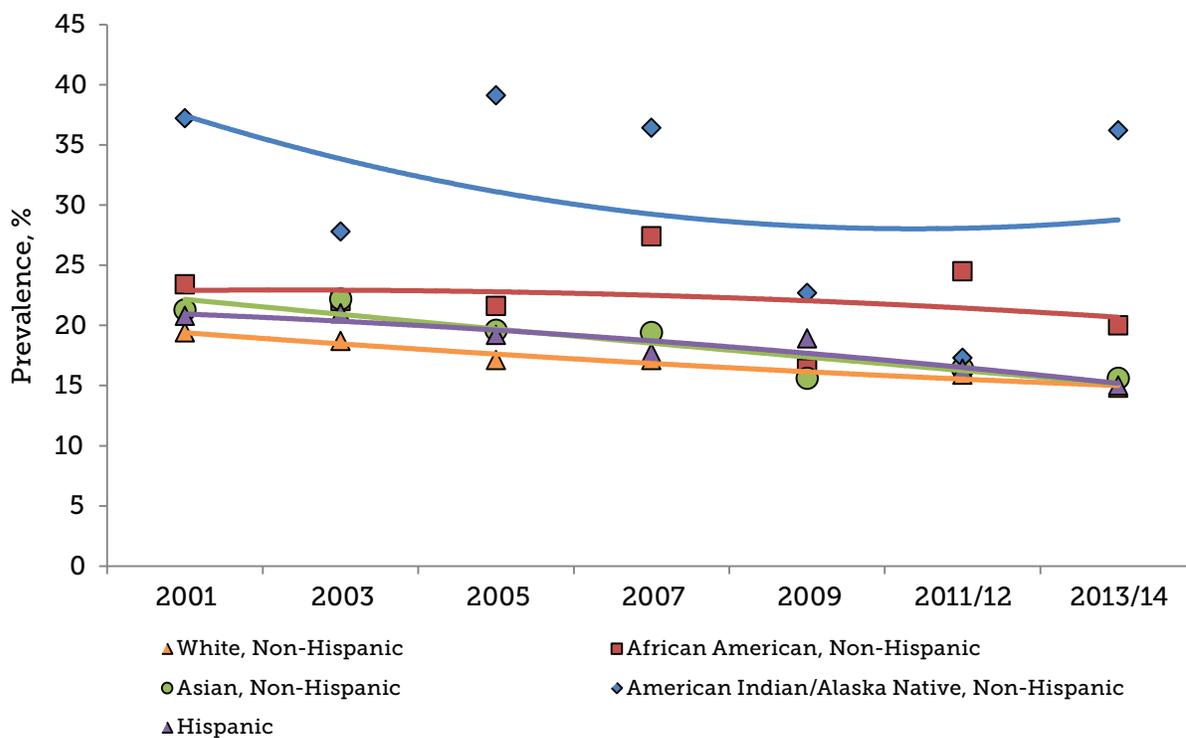
Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. An adjustment was made to address the change of smoking definition in 1996 that included more occasional smokers. The weighting methodology changed in 2012. Weighted to the 2000 California population from 1988–2011 and to the 2010 California population since 2012. Source: Behavioral Risk Factor Surveillance System, 1988–2014.

## Trends by Race/Ethnicity and Gender

Smoking prevalence declined in all racial/ethnic groups for both men and women; however, some racial/ethnic groups had a greater decline than others. African Americans and American Indian/Alaska Natives have a higher adult smoking prevalence rate compared to other racial/ethnic groups.

There are substantial differences in smoking rates by gender among California's African American population, with adult smoking prevalence for African American men and women at 20.0% and 14.7% respectively (Figure 1.4; Figure 1.5). Stark gender differences are also observed among California's Asian and Hispanic populations, with exceptionally low prevalence observed in Asian and Hispanic women. While momentum has slowed in the last few years, continued tracking is needed to determine whether this is a temporary trend.

Figure 1.4. Adult smoking prevalence among California males by race/ethnicity, 2001–2014

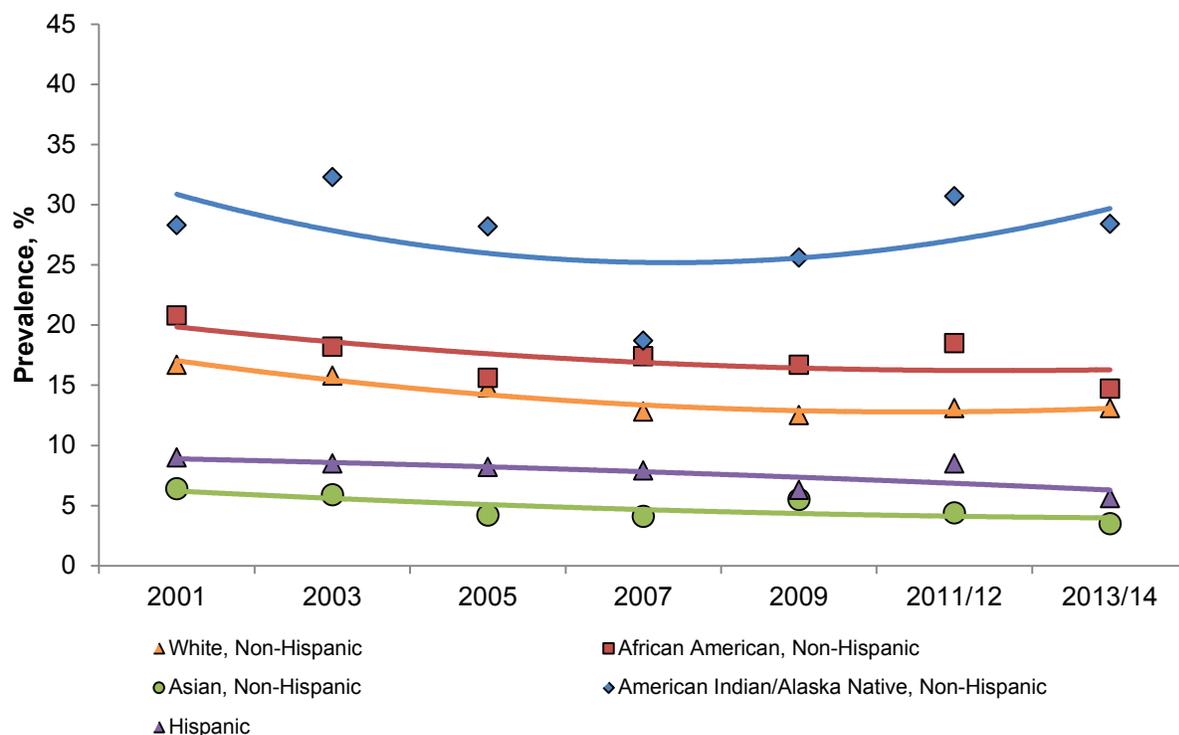


Race/Ethnicity	2001	2013/14	% Change
White, Non-Hispanic	19.4%	14.8%	-23.7%
African American, Non-Hispanic	23.4%	20.0%	-14.5%
Asian, Non-Hispanic	21.3%	15.6%	-26.8%
American Indian/Alaska Native, Non-Hispanic	37.2%	36.2%	-2.7%
Hispanic	20.8%	15.0%	-27.9%

Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. California Health Interview Survey is a continuous survey since 2011 and was a biennial survey from 2001–2009. Data for 2011 and 2012 were pooled together. Data for 2013 and 2014 were pooled together.

Source: California Health Interview Survey, 2001–2014.

Figure 1.5. Adult smoking prevalence among California females by race/ethnicity, 2001–2014



Race/Ethnicity	2001	2013/14	% Change
White, Non-Hispanic	16.7%	13.1%	-21.6%
African American, Non-Hispanic	20.8%	14.7%	-29.3%
Asian, Non-Hispanic	6.4%	3.5%	-45.3%
American Indian/Alaska Native, Non-Hispanic	28.3%	28.4%	+0.4%
Hispanic	9.0%	5.6%	-37.8%

Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. California Health Interview Survey is a continuous survey since 2011 and was a biennial survey from 2001–2009. Data for 2011 and 2012 were pooled together. Data for 2013 and 2014 were pooled together.

Source: California Health Interview Survey, 2001–2014.

## Subsection 1B.

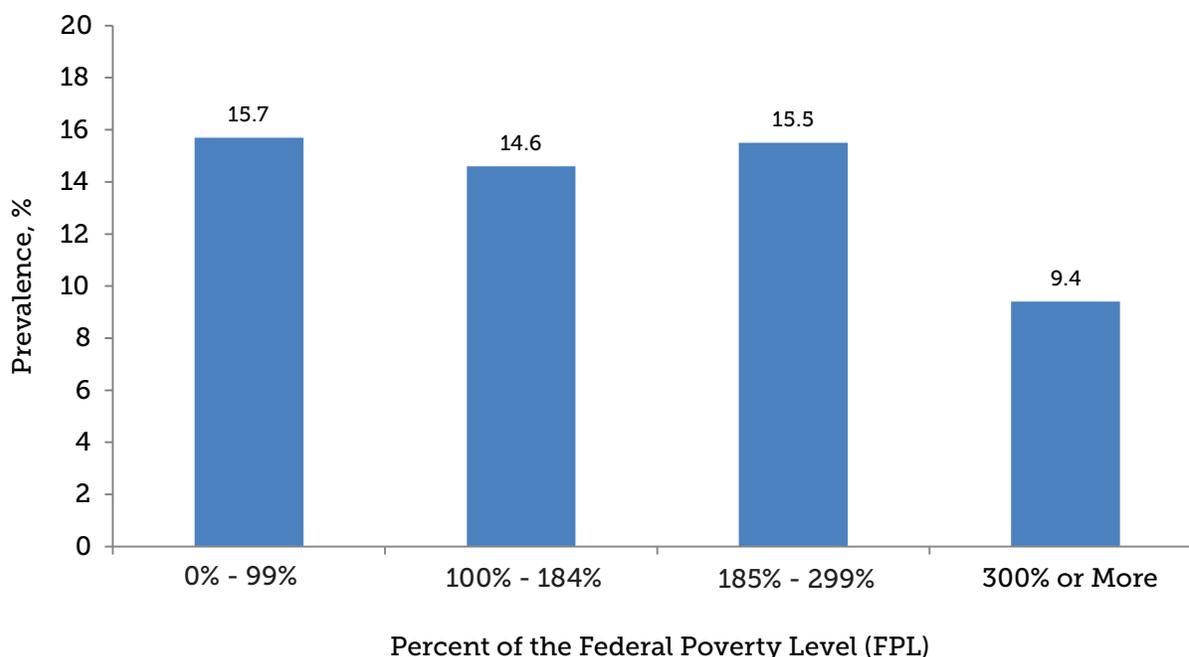
### Adult Smoking Rates – Yearly Snapshot

The overall adult cigarette smoking rate for California in 2014 was 11.6% (Figure 1.1). Despite having the second lowest adult smoking prevalence rate in the nation,<sup>1</sup> California has the highest number of smokers because it is by far the most populous state. The number of smokers in California exceeds the individual population of more than 20 states.<sup>3</sup> A closer look shows both successes and signs for concern.

### Smoking Rates by Income and Education

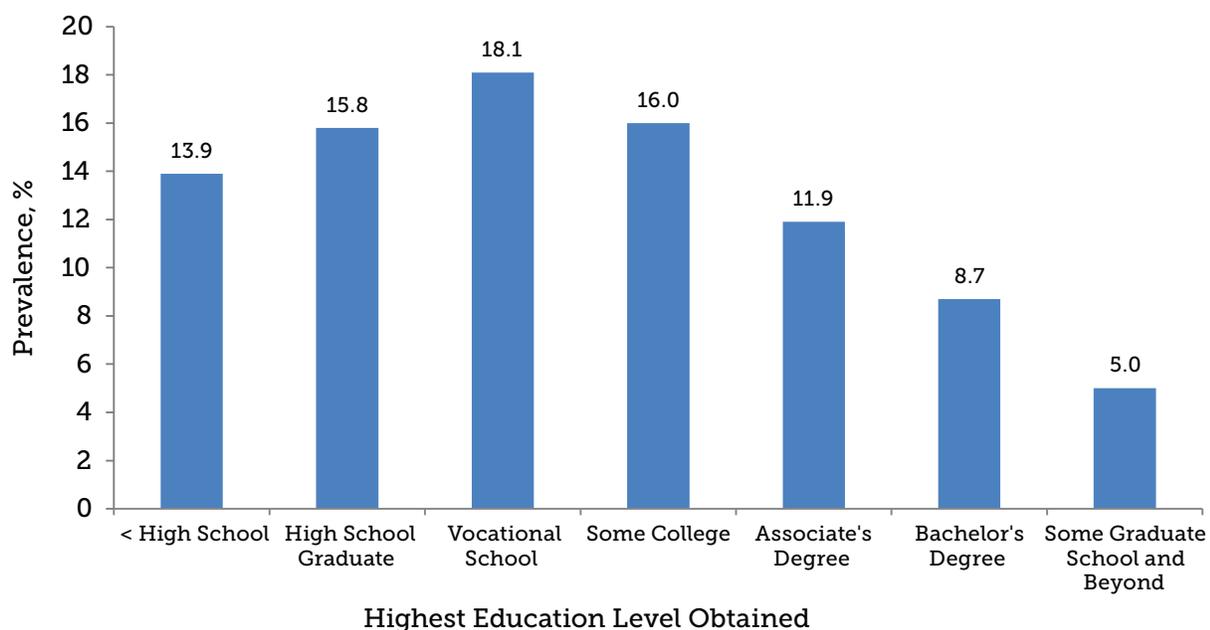
In California, smoking rates decrease with higher levels of income, with the highest smoking rates observed among the state’s poorest individuals (Figure 1.6). Smoking rates also decline with greater levels of education (Figure 1.7). Together, these two risk factors – lower income and lower education level – illustrate the need for policy and systems approaches to address disparities in cigarette smoking rates.

Figure 1.6. California adult smoking prevalence by percent of the federal poverty level (FPL), 2013–2014



Note: Respondents aged 18+ were asked to report current cigarette smoking behavior and annual household income (poverty level derived from household income). Data for 2013 and 2014 were pooled together.  
 Source: California Health Interview Survey, 2013–2014.

Figure 1.7. California adult smoking prevalence by educational level, 2013–2014

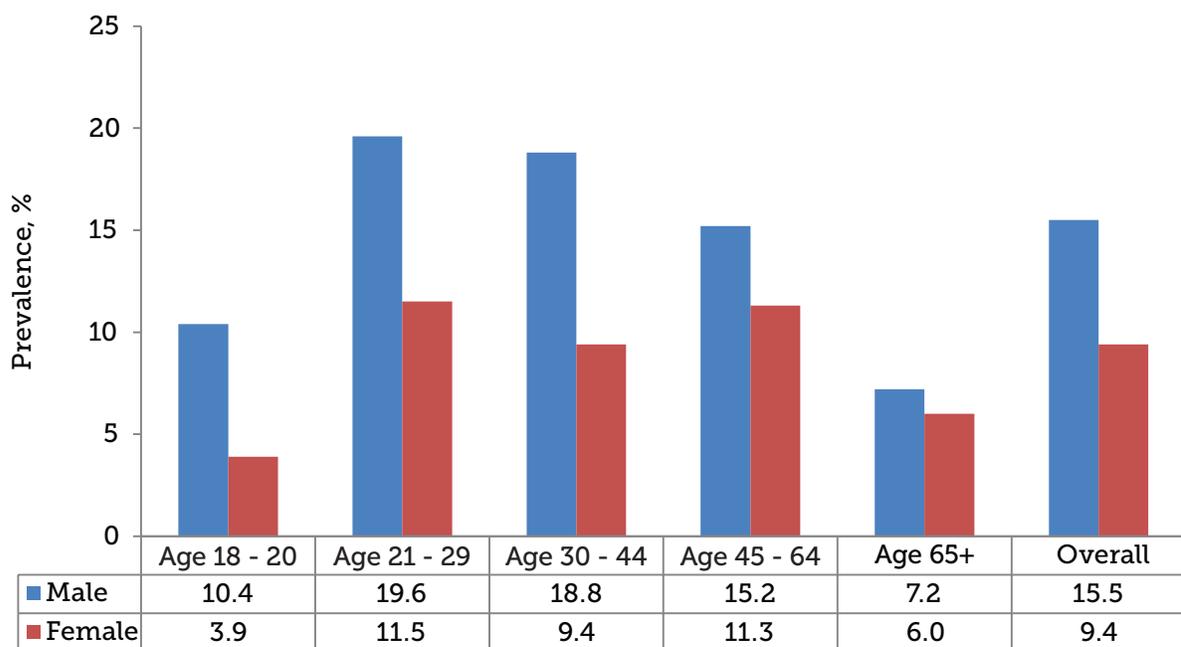


Note: Respondents aged 18+ were asked to report current cigarette smoking behavior and highest grade of education completed. Data for 2013 and 2014 were pooled together.  
 Source: California Health Interview Survey, 2013–2014.

## 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 (Figure 1.8). Rates by gender are nearly identical beyond age 65, at 7.2% in men and 6.0% in women.

Figure 1.8. California adult smoking prevalence by age and gender, 2013–2014



Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. Data for 2013 and 2014 were pooled together.

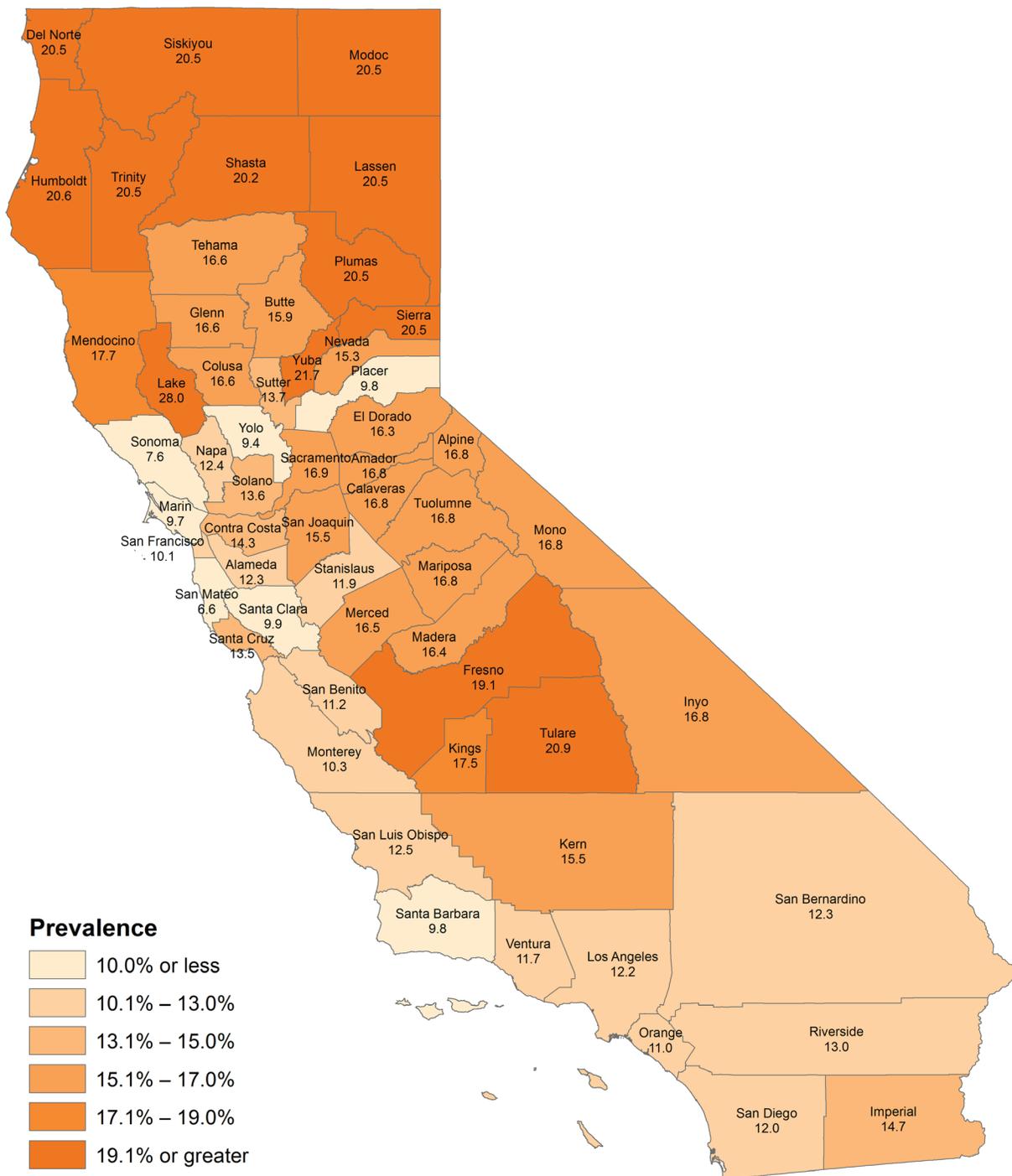
Source: California Health Interview Survey, 2013–2014.

## Subsection 1C. Geographic Patterns in Adult Smoking Prevalence

California's adult smoking prevalence varies by population density, with higher rates predominantly in rural counties, and lower rates generally found in urban counties. Figure 1.9 displays the smoking prevalence by county using three-years of data (2012 through 2014) from the California Health Interview Survey in order to provide a statistically stable prevalence for all California counties.<sup>4</sup> A table format of the data presented in Figure 1.9 is in the appendix.

The Northern and Sierra California counties had some of the highest rates in the state, with Lake County having the highest smoking prevalence at 28.0%. In contrast to the rural regions of the state, many of the counties containing urban areas have rates below the statewide average. Important exceptions are San Joaquin, Sacramento and Fresno counties, with smoking prevalence rate of 15.5%, 16.9%, and 19.1%, respectively. Out of the ten counties with the lowest smoking rates, half of the counties were in the Bay Area with San Mateo County having the lowest smoking prevalence at 6.6%.

Figure 1.9. California adult smoking prevalence by county, 2012–2014



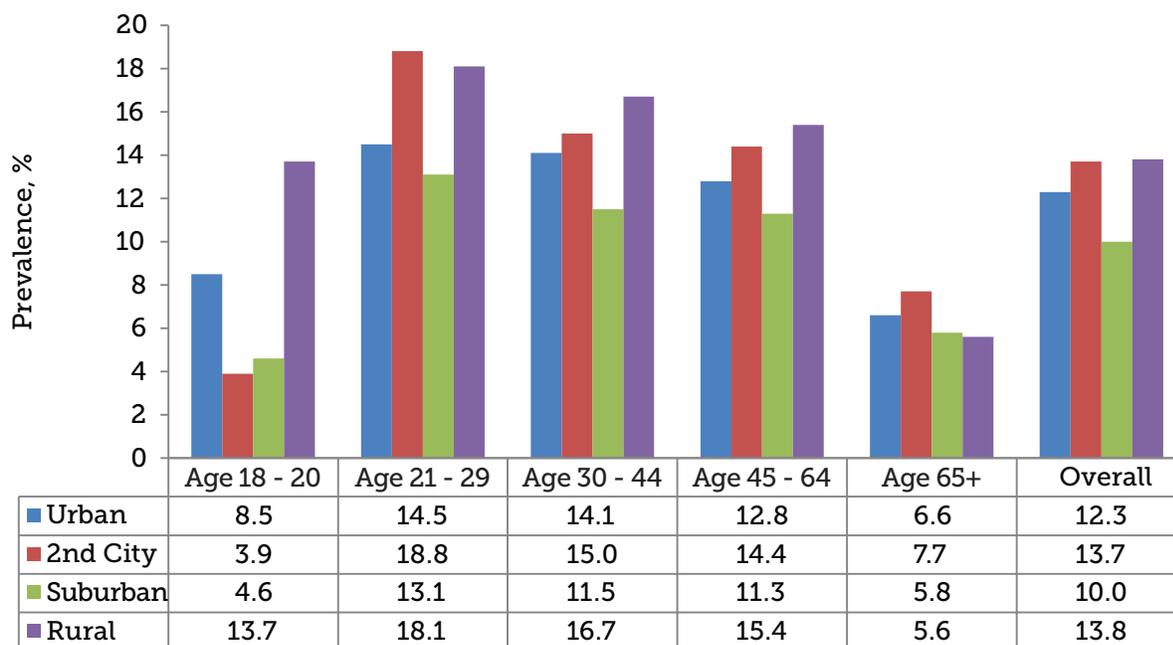
Note: Respondents aged 18+ were asked to report current cigarette smoking behavior.  
 Source: California Health Interview Survey, 2012–2014.

## Smoking Rates by Population Density

Smoking rates are highest in rural areas at 13.8% and lowest in suburban areas at 10.0% (Figure 1.10). The definition of urban, second city, suburban, and rural are from Nielsen Consumer Activation (formerly Claritas) and are provided in the chart.<sup>5</sup> The rate in urban areas approximates the statewide average.

The greatest difference in the smoking rates between rural, urban, second city, and suburban categories was between young adults ages 18 through 20 years old. 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.

Figure 1.10. California adult smoking prevalence by age and rurality, 2013–2014



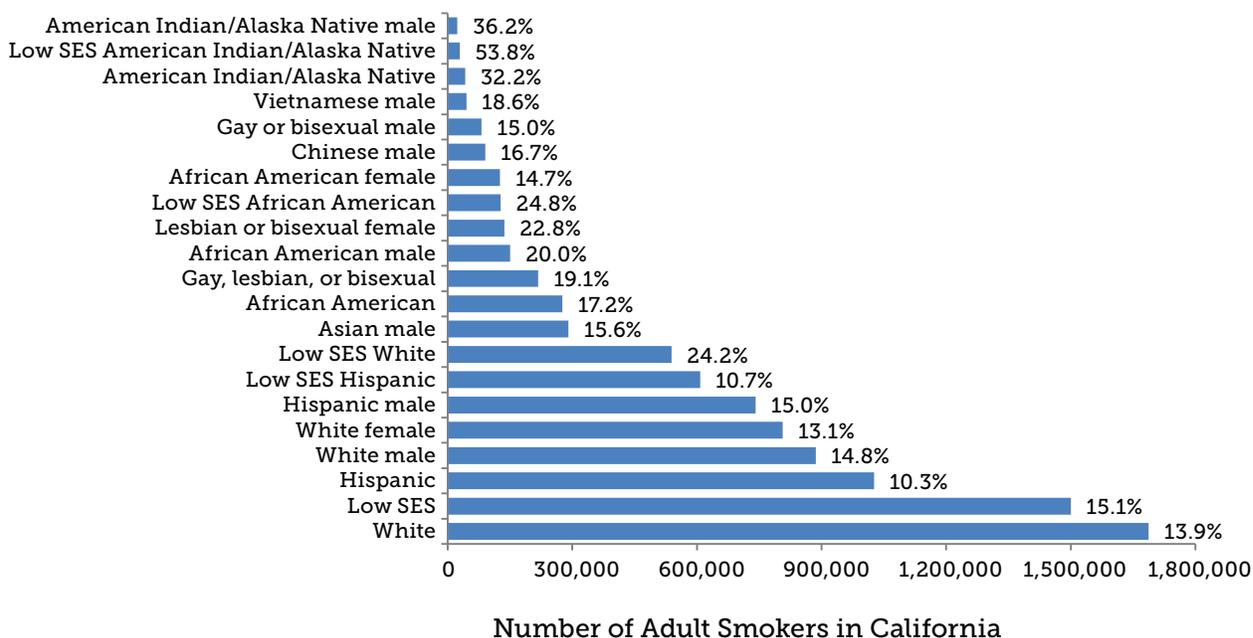
Note: Respondents aged 18+ were asked to report current cigarette smoking behavior and zip-code of place of residence. Definition of urban, second city, suburban, and rural are from Nielsen Consumer Activation (formerly Claritas): urban areas are population centers that have high population density (more than 4,150 persons per square mile) that represents the central cities of most major metropolitans, second city are population centers that have moderate population density (between 1,000 persons per square mile and 4,150 persons per square mile), suburban areas have moderate population density (between 1,000 persons per square mile and 4,150 per square mile) but are not considered population centers and are dependent on urban areas or second cities, and rural areas have low population densities (fewer than 1,000 persons per square mile). Areas are based on 2010 geoboundaries, 2010 redistricting updates, and 2013 population estimates. Data for 2013 and 2014 were pooled together.  
Source: California Health Interview Survey, 2013–2014.

## Subsection 1D.

### Smoking Prevalence Among Diverse Population Groups

Figure 1.11 shows the number of smokers and prevalence rates for a variety of California population groups. This figure illustrates that Whites make up the largest number of smokers in California, although the smoking prevalence of this group stands at 13.9%. Conversely, while American Indian/Alaska Native with low socioeconomic status (SES) make up a small number of California smokers, their smoking prevalence rate is very high at 53.8%.

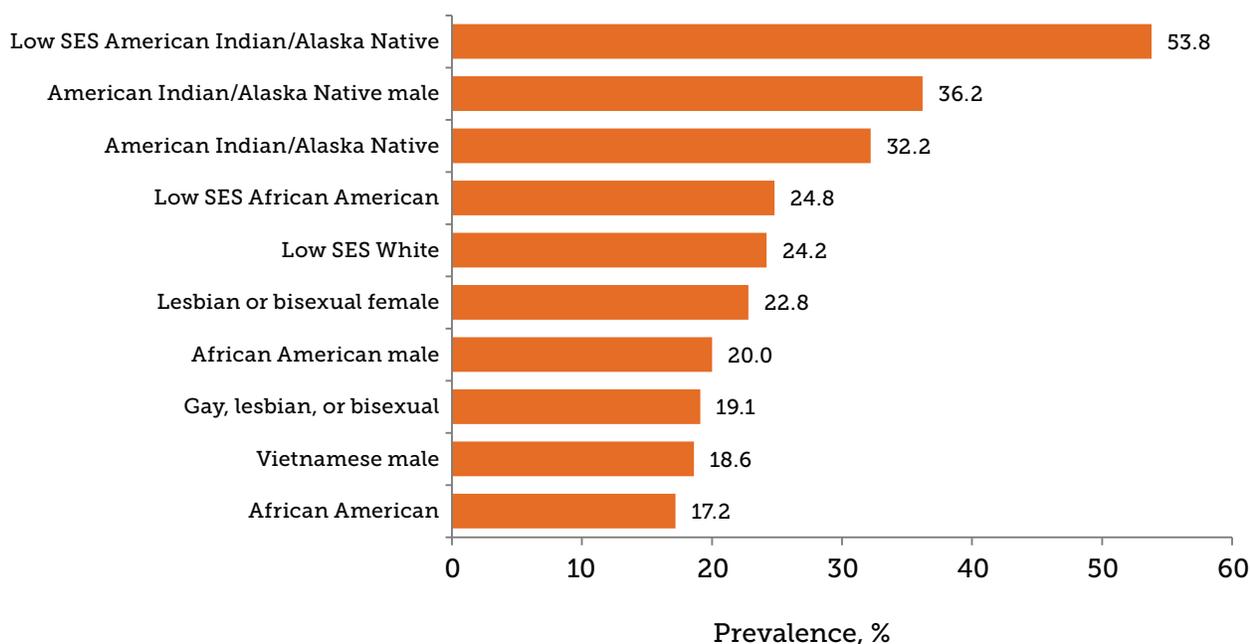
Figure 1.11. Adult smoking prevalence and population size of various smoker demographic groups in California, 2013–2014



Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. Low socioeconomic status (SES) is defined as below 185% of the federal poverty level (FPL). Unless otherwise noted, racial groups include only non-Hispanics.  
Source: California Health Interview Survey, 2013–2014.

Figure 1.12 shows several groups living in California with higher-than-average smoking prevalence rates. As noted before, low SES American Indian/Alaska Native exhibit a high smoking rate of 53.8%; the smoking rate for American Indian/Alaska Native, regardless of socioeconomic status, is at 32.2%. Other groups with extremely high smoking rates include African American male; lesbian or bisexual female; low SES White; low SES African American; and American Indian/Alaska Native male.

Figure 1.12. Highest smoking prevalence rates among California population groups, 2013–2014



Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. Low socioeconomic status (SES) is defined as below 185% of the federal poverty level (FPL). Unless otherwise noted, racial groups include only non-Hispanics.  
 Source: California Health Interview Survey, 2013–2014.

## California Tobacco Facts and Figures 2016

Table 1.1 provides examples of population groups that disproportionately smoke in California. Those groups who smoke disproportionately relative to their representation in California are in red text.

**Table 1.1. Profile of California smokers, 2014**

	Percent of Smokers (95% C.I.)	Estimated Number of Smokers	Population Percent (95% C.I.)	Population Size
<b>Sexual Orientation:</b>				
Heterosexual	89.4 (85.9 – 92.9)	2,881,000	94.9 (94.0 – 95.7)	24,191,000
Gay, lesbian, or homosexual	3.1 (1.4 – 4.9)	101,000	2.3 (1.7 – 2.8)	582,000
Bisexual	5.3 (2.9 – 7.7)	171,000	2.2 (1.7 – 2.7)	558,000
Not sexual, celibate, or other	2.2* (0.4 – 3.9)	70,000	0.7 (0.4 – 0.9)	170,000
<b>Own or Rent:</b>				
Own home	44.5 (40.7 – 48.3)	1,482,000	57.6 (57.4 – 57.8)	16,250,000
Rent home	49.7 (45.8 – 53.6)	1,656,000	38.3 (37.6 – 39.0)	10,808,000
Have other arrangement	5.8 (4.0 – 7.7)	194,000	4.1 (3.5 – 4.7)	1,163,000
<b>Psychological Distress:</b>				
Likely in last year	14.0 (10.7 – 17.4)	468,000	7.7 (7.0 – 8.4)	2,180,000
Not likely in last year	86.0 (82.6 – 89.3)	2,870,000	92.3 (91.6 – 93.0)	26,241,000
<b>Health Insurance:</b>				
Currently insured	74.3 (69.3 – 79.3)	2,486,000	85.6 (84.6 – 86.6)	24,430,000
Not currently insured	25.7 (20.7 – 30.7)	860,000	14.4 (13.4 – 15.4)	4,109,000

Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. Red text indicates those groups who smoke disproportionately relative to their representation in California.

Source: California Health Interview Survey, 2014.

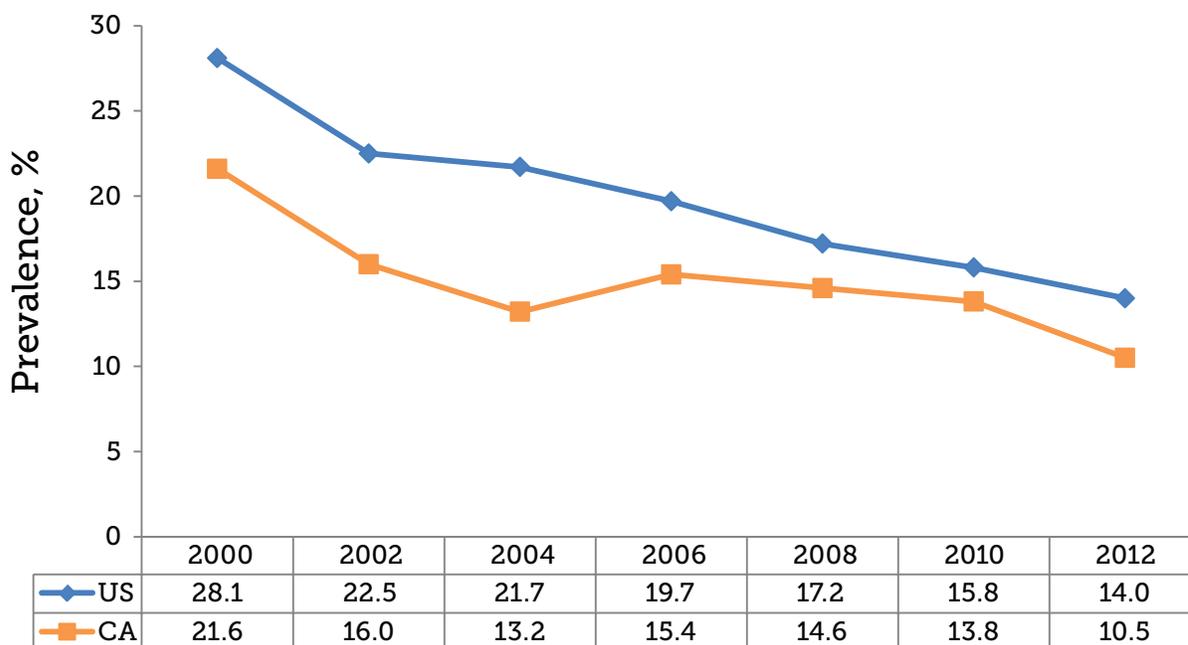
## Subsection 1E. High School Smoking Prevalence

Nationally, 86.9% of all adult cigarette smokers begin smoking by the age of 18.<sup>6</sup> In California, 67.7% of current and former smokers start by the age of 18, and 98.1% start by the age of 26 according to data from the 2014 Behavioral Risk Factor Surveillance System.<sup>7</sup> Reducing the initiation rate within young adults could be a highly effective and efficient method of reducing long-term smoking rates in the state.<sup>8</sup>

Figure 1.13 summarizes smoking prevalence rates obtained by the California Student Tobacco Survey with the latest data available being from 2012. In 2002, the percentage of high school students in California who said they had smoked cigarettes 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 1.13). The 2012 prevalence rate represents approximately 297,000 California high school students.

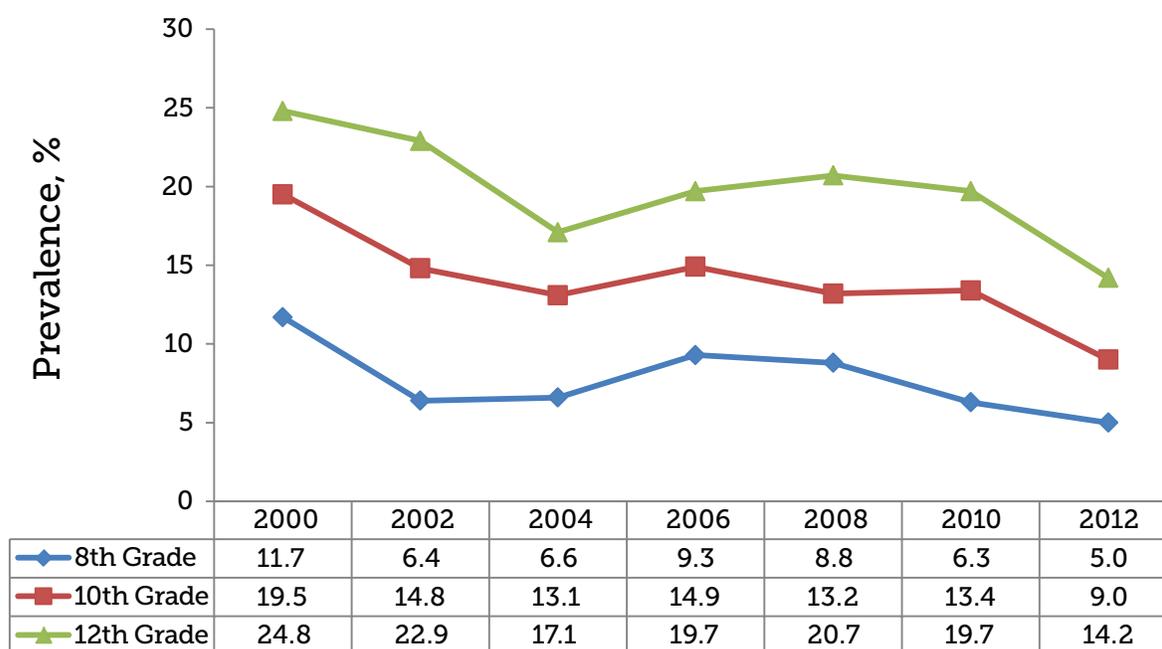
The decline from 2010 through 2012 coincides with the passage of the federal 2009 Family Smoking Prevention and Tobacco Control Act and the Food and Drug Administration ban on marketing of flavored cigarettes.<sup>9,10</sup> Rate estimates for the United States follow a similar overall pattern of decline during the past decade, although smoking rates for the United States are consistently higher than those observed in California for comparable survey periods (Figure 1.13). There was no evidence of differences in high school rates by gender in California. As youth get older, they have higher smoking rates (Figure 1.14).

Figure 1.13. Smoking prevalence for California and United States high school students (9th–12th grades), 2000–2012



Note: Respondents were asked to report past 30-day cigarette smoking behavior.  
 Source: National Youth Tobacco Survey, 2000–2012 (US data); National Youth Tobacco Survey, 2000 (CA data); California Student Tobacco Survey, 2002–2012.

Figure 1.14. Smoking prevalence for California students, 2000–2012

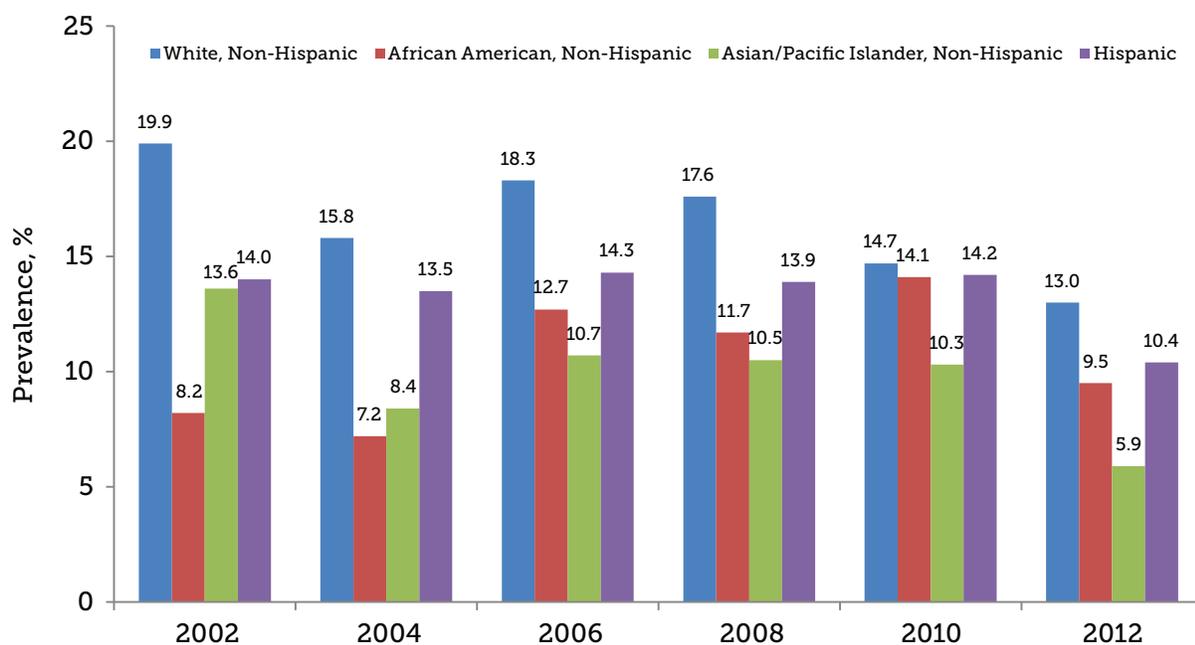


Note: Respondents were asked to report past 30-day cigarette smoking behavior.  
 Source: National Youth Tobacco Survey, 2000 (CA data); California Student Tobacco Survey, 2002–2012.

## 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 1.15). While rates declined substantially for non-Hispanic Whites, Hispanics, and non-Hispanic Asian/Pacific Islanders, the rate for non-Hispanic African Americans increased by 15.9% over this same time period.

Figure 1.15. Smoking prevalence for California high school students (9th–12th grades) by race/ethnicity, 2002–2012



Race/Ethnicity	2002	2012	% Change
White, Non-Hispanic	19.9%	13.0%	-34.7%
African American, Non-Hispanic	8.2%	9.5%	+15.9%
Asian/Pacific Islander, Non-Hispanic	13.6%	5.9%	-56.6%
Hispanic	14.0%	10.4%	-25.7%

Note: Respondents were asked to report past 30-day cigarette smoking behavior.  
Source: California Student Tobacco Survey, 2002–2012.

## 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 stark contrast to the geographic pattern of prevalence rates of the adult population, the rates were lower in the rural northern counties of the state than in the counties containing major urban areas (Figure 1.9). In 2012, the predominantly rural northern/mountain region counties had a youth smoking prevalence rate of 10.0%, well below the adult state average for that year of 13.8%.<sup>11</sup>

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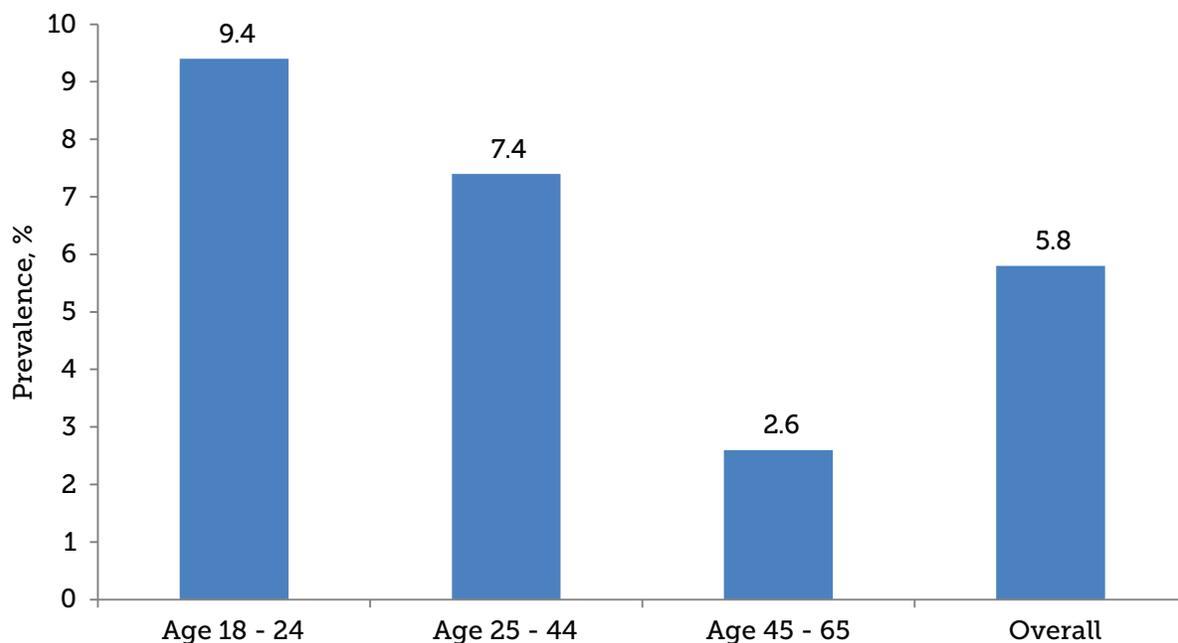
## Section 2.

# Electronic Smoking Devices and Flavored Tobacco Products

### Subsection 2A: Electronic Smoking Devices

Use of electronic smoking devices, which includes e-cigarettes, has drastically increased over the last few years.<sup>1</sup> Nationally, 3.7% of adults currently use e-cigarettes with rates similar between men and women.<sup>2</sup> In California, 9.4% of adults aged 18 through 24 currently use e-cigarettes (Figure 2.1). Current and former California cigarette smokers aged 18 through 64 make up a majority of current e-cigarette users at 66.4% and 18.9%, respectively.<sup>3</sup>

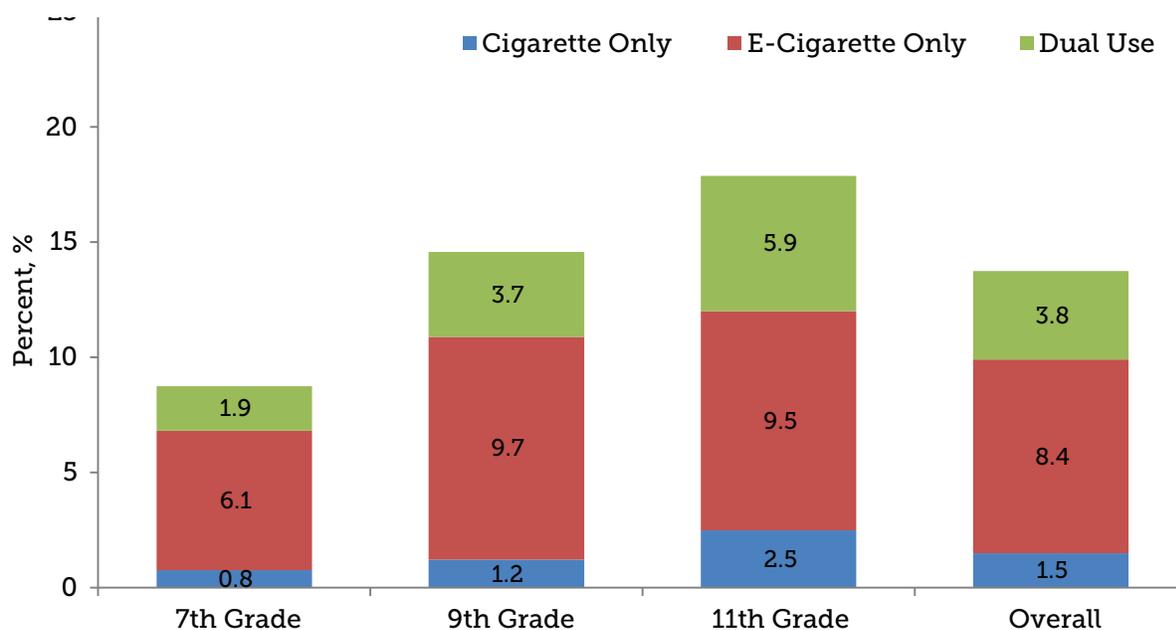
Figure 2.1. California adult e-cigarette prevalence, 2014



Note: Respondents were asked to report past 30-day electronic cigarette smoking behavior.  
Source: California Health Interview Survey, 2014.

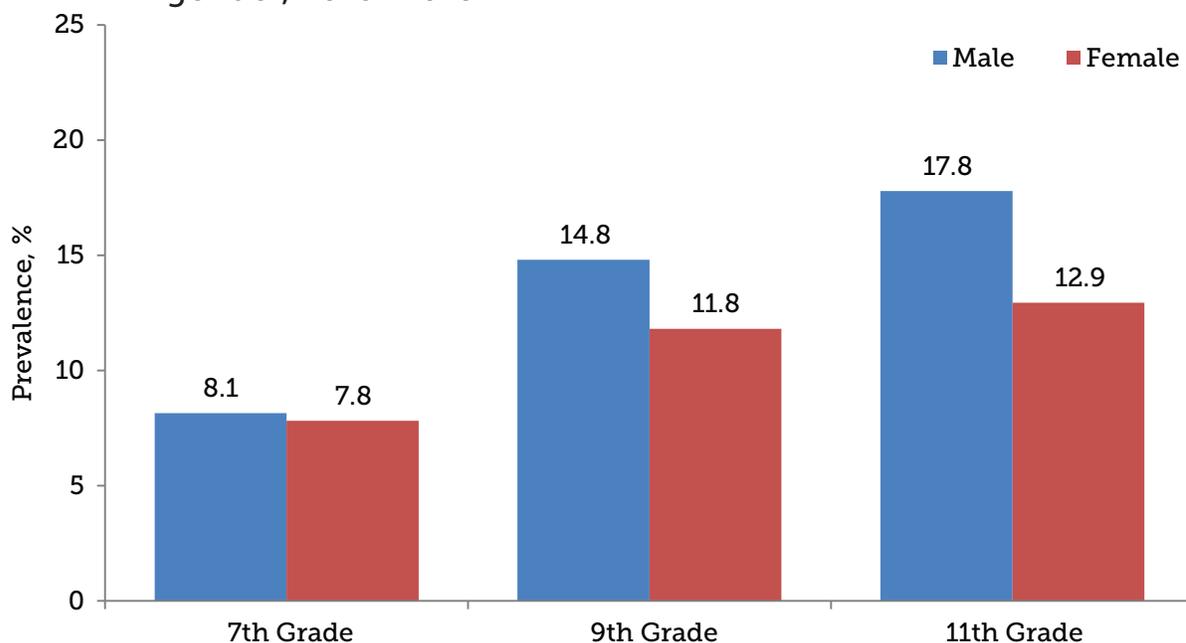
A majority of youths are gravitating towards e-cigarettes over traditional cigarettes;<sup>4,5</sup> in addition, e-cigarette usage is occurring in youths who would not have smoked cigarettes or use other tobacco products.<sup>6</sup> Adolescent e-cigarettes users are more likely to start smoking traditional cigarettes versus non e-cigarette users.<sup>7-10</sup> Currently, nationwide high school prevalence rate for e-cigarettes is at 13.4% and is the most common tobacco product used.<sup>11</sup> Figure 2.2 summarizes e-cigarette use, cigarette use, and dual use rates for California youth. Furthermore, Figure 2.3 and Figure 2.4 summarize e-cigarette usage for California youths by gender and race/ethnicity.

Figure 2.2. California youth cigarette and e-cigarette usage, 2013–2015



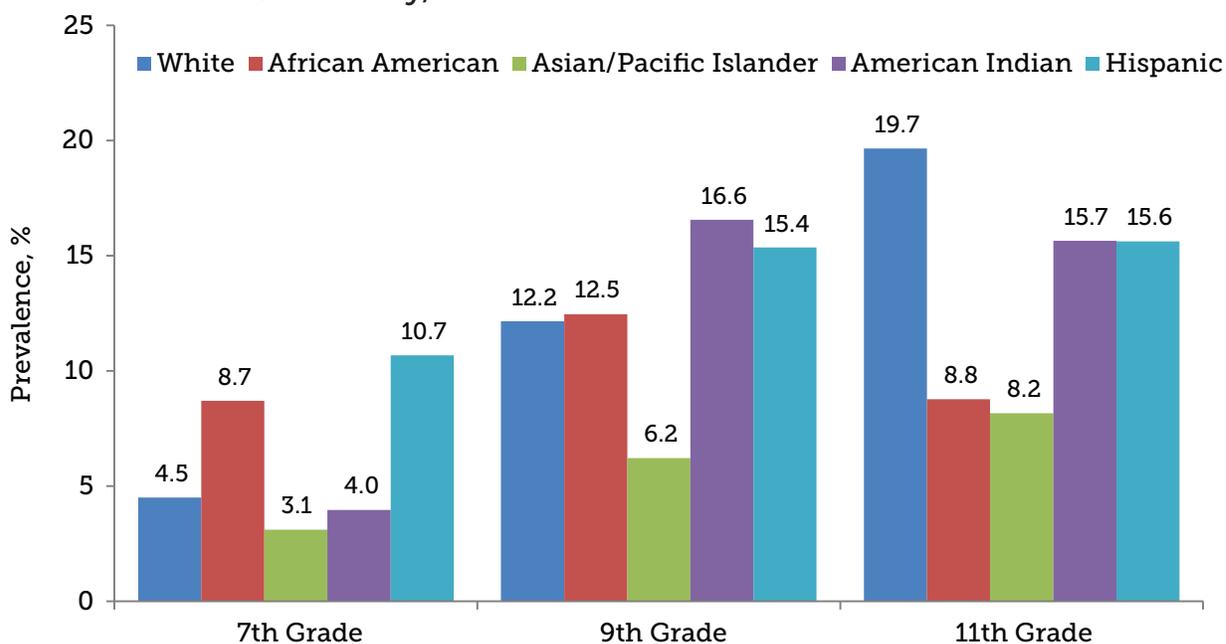
Note: Respondents were asked to report past 30-day cigarette and electronic cigarette behavior. Electronic cigarettes include other vaping devices such as e-hookah, hookah pens, or vape pens.  
 Source: California Healthy Kids Survey, 2013–2015.

Figure 2.3. California youth e-cigarette prevalence by grade level and gender, 2013–2015



Note: Respondents were asked to report past 30-day electronic cigarette behavior. Electronic cigarettes include other vaping devices such as e-hookah, hookah pens, or vape pens.  
 Source: California Healthy Kids Survey, 2013–2015.

Figure 2.4. California youth e-cigarette prevalence by grade level and race/ethnicity, 2013–2015



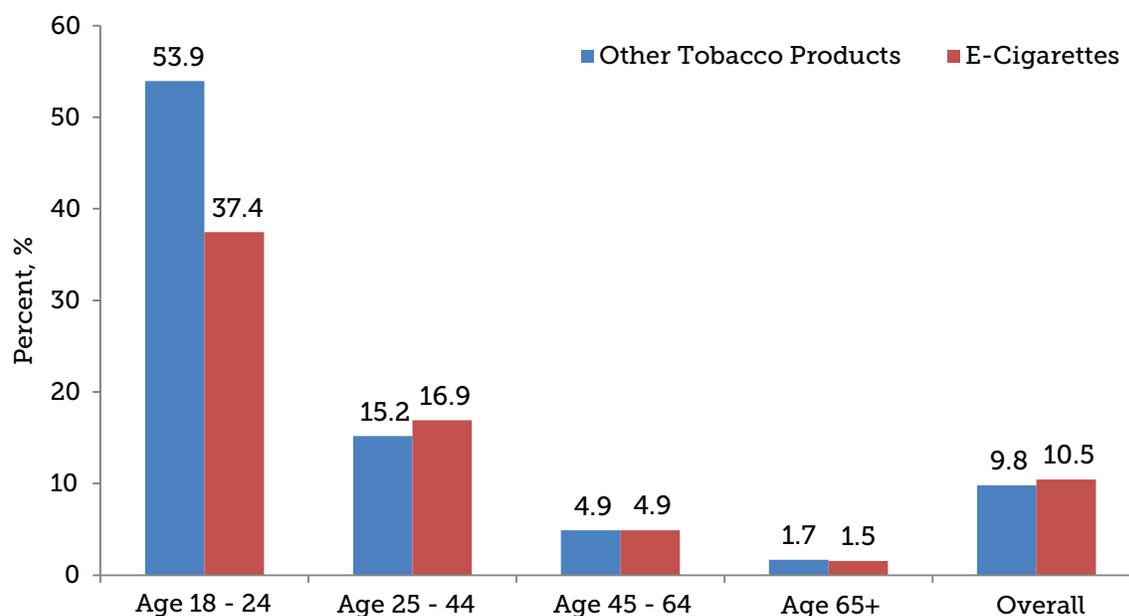
Note: Respondents were asked to report past 30-day electronic cigarette behavior. Electronic cigarettes include other vaping devices such as e-hookah, hookah pens, or vape pens.  
 Source: California Healthy Kids Survey, 2013–2015.

## Subsection 2B: Menthol Cigarettes and Other Flavored Tobacco Products

The use of menthol and flavor additives in tobacco products have long been a popular industry strategy to mask the harshness and taste of tobacco.<sup>12</sup> In 2009, through the Family Smoking Prevention and Tobacco Control Act, the Food and Drug Administration was given authority to restrict manufacturers from creating cigarettes that contained characterizing flavors other than that of tobacco and menthol.<sup>13</sup> However, other tobacco products (e.g., cigarillos, chew, snus) are still not restricted from using characterizing flavors.

Among current and former cigarette smokers, younger adults in California reported using flavored tobacco products (snus, cigars, cigarillos, little cigars, and hookah) and flavored e-cigarettes at a higher rate than older adults (Figure 2.5). Furthermore, there was statistically significant higher use of flavored tobacco products in the Hispanic population (14.7%) versus the non-Hispanic population (8.0%).<sup>14</sup>

Figure 2.5. Percent of current and former adult California smokers that reported recent use of flavored tobacco products or flavored e-cigarettes, 2013–2014



Note: Respondents were asked to report flavored tobacco use in the last six months only if they smoked more than 100 cigarettes in their lifetime. Other tobacco products include only snus, cigars, cigarillos, little cigars, and hookah. Flavor is defined as an additive that creates a distinct taste or smell, such as the taste or smell of fruit, chocolate, vanilla, or honey. Data for 2013 and 2014 were pooled together. Weighted to the 2010 California population.

Source: Behavioral Risk Factor Surveillance System, 2013–2014.

Menthol cigarettes and other flavored tobacco products are a gateway for many children and young adults to become regular smokers.<sup>13</sup> Nationally, 70% to 80% of all current middle and high school tobacco users have used at least one flavored tobacco product in the past 30 days.<sup>15,16</sup> Ambrose et al. (2015) also found that a majority of youth flavored ever-users stated that the first tobacco product they had tried was flavored.<sup>15</sup>

Approximately 25% to 30% of cigarette smokers in the United States smoke menthol cigarettes.<sup>17,18</sup> Similar rates have been found in adult California smokers, with a little over one-third (34.9%) of cigarette smokers usually smoking menthol-flavored cigarettes.<sup>19</sup> It was also observed that menthol cigarettes are disproportionately smoked by adolescents, African Americans, and individuals identifying as lesbian, gay, bisexual, and transgender.<sup>20</sup> In a survey of California adults aged 18 through 64, 55.4% of the African American population stated they usually smoke menthol over non-menthol cigarettes.<sup>3</sup> In another survey, 54.0% of current and former adult California cigarette smokers identifying as lesbian, gay, or bisexual reported using menthol cigarettes recently, a statistically significant higher rate than that of individuals identifying as straight (27.7%).<sup>21</sup>

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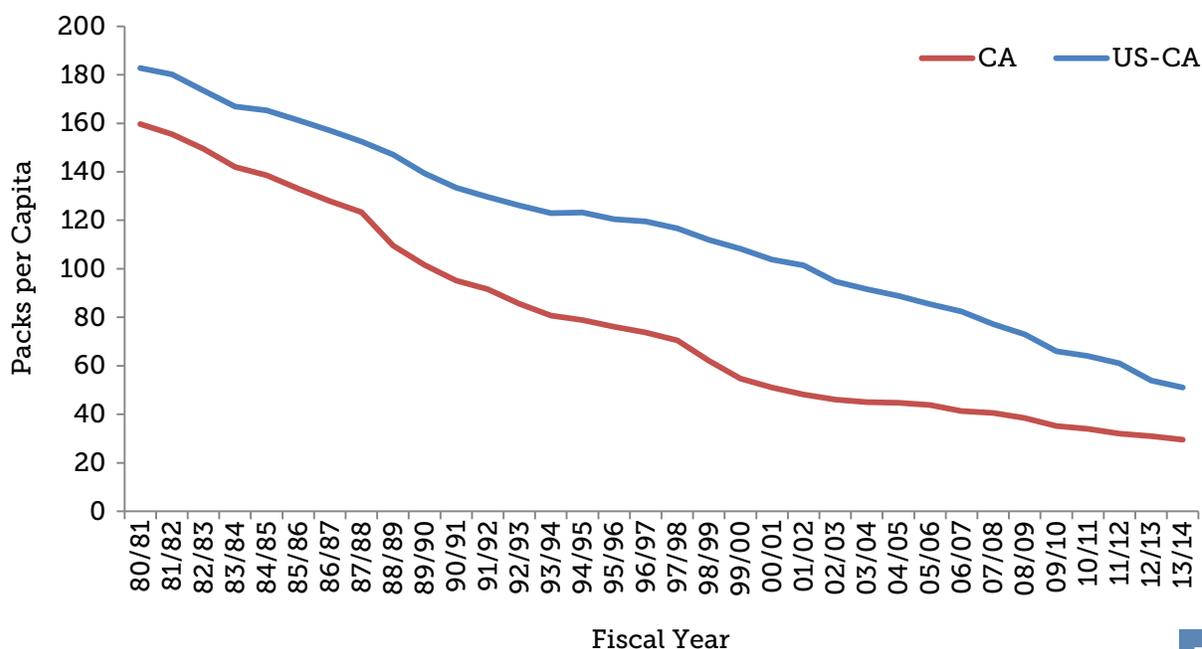


## Section 3. Tobacco Consumption

When 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 3.1.1 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 cigarette sales in California that does not appear to have occurred in the rest of the nation. This may be attributed to California's tobacco licensing law and electronic tax stamp. 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 3.1. Per capita cigarette consumption in California and the rest of the United States (US-CA), 1980–2014



Source: The Tax Burden on Tobacco: Historical Compilation 2014; U.S. Census Bureau, 1980–2014.

While per capita cigarette consumption dropped steadily in California prior to the passage of California Proposition 99, the decline accelerated significantly afterwards, especially relative to the rest of the United States. Consumption continued to decline after the passage of the Children and Families First Act (California Proposition 10) in 1998, which placed a \$0.50 per pack tax increase on tobacco products. However, the decline was slower relative to the period of time immediately following California Proposition 99's passage. Currently, California has approximately 50% lower per capita cigarette consumption than the rest of the United States.

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# Section 4. Secondhand Smoke and Aerosol Exposure

## Secondhand Smoke Exposure

Secondhand smoke is a human carcinogen and has long term risks to persons exposed to it.<sup>1</sup> 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.

Over half (52.8%) of California adults aged 18 through 64 reported being exposed to secondhand smoke recently.<sup>2</sup> Figure 4.1 details the location of the most recent secondhand smoke exposure of those recently exposed.

Figure 4.1. Location of most recent secondhand smoke exposure for California adults aged 18–64, 2016

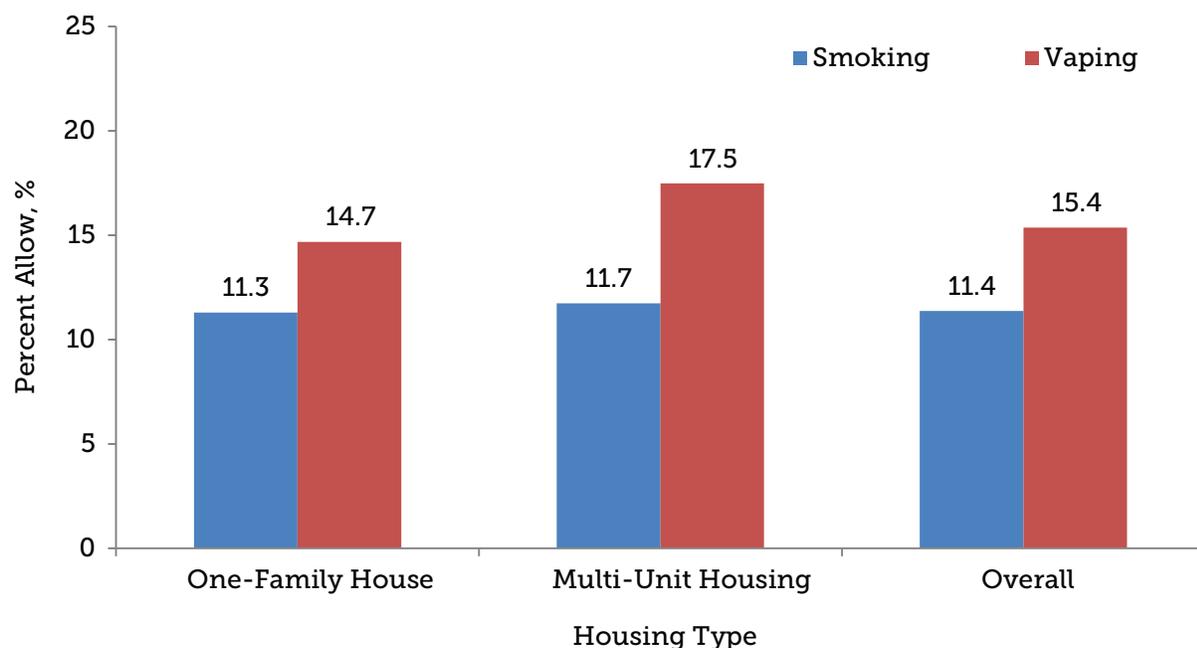


Note: Respondents were asked to report location of most recent secondhand smoke exposure if exposed to secondhand smoke in the last two weeks. Weighted to 2015 Current Population Survey California population.  
Source: Online California Adult Tobacco Survey, 2016

California was the first state to prohibit smoking in public buildings in 1995; however, the law had numerous exemptions that permitted smoking at certain workplaces.<sup>3</sup> Many of these workplace exemptions were closed as a result of new laws that went into effect on June 9, 2016. Prior to these new laws, approximately 80.5% of employed California adults reported that their workplace did not allow smoking in any work areas.<sup>2</sup>

Children are especially vulnerable to the health effects of secondhand smoke, with those living in lower income households significantly more exposed to secondhand smoke. The main place where children are exposed to secondhand smoke is at home.<sup>1,4</sup> Figure 4.2 displays the current smoking and vaping policy in households according to California adults aged 18 through 64.

Figure 4.2. Percent of California adults aged 18–64 living in a household that allow smoking or vaping inside their homes, 2016

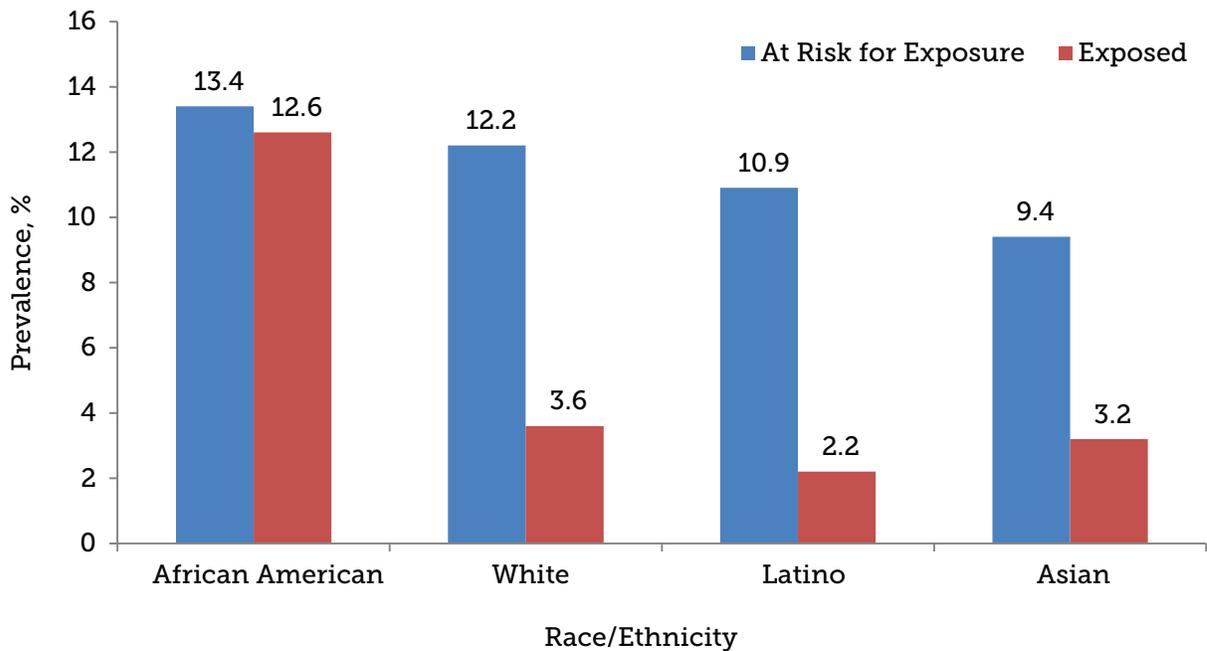


Note: Respondents were asked the type of building they lived in and smoking and vaping rules inside their homes. Other includes mobile home, boat, RV, vans, etc. Weighted to 2015 Current Population Survey California population.  
 Source: Online California Adult Tobacco Survey, 2016.

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.<sup>5,6</sup> 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 reemitted tobacco.<sup>7-9</sup>

Holtby et al. (2011) reported that more than 200,000 children in California live in homes where smoking is allowed inside and approximately 742,000 children are at risk of exposure by living in homes with a person who is a smoker.<sup>10</sup> A detailed summary of home exposure risk broken down by race/ethnicity is provided in Figure 4.3. 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. Additionally, 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.

Figure 4.3. Racial and ethnic differences in children’s secondhand smoke exposure in the home, 2005–2009



Note: Reprinted with permission from the UCLA Center for Health Policy Research.  
 Source: California Health Interview Survey, 2005–2009.

## Secondhand Aerosol Exposure

To date, only limited research is available regarding secondhand exposure to aerosol, or vapor emitted by e-cigarettes. Several studies have shown that aerosol exposure due to e-cigarettes is detrimental to indoor air quality due to increases in fine and ultrafine particulate matter that can be deposited in the lungs.<sup>11,12</sup> It has been reported that frequent low exposure to particulate matter can increase the risk of cardiovascular and respiratory diseases.<sup>13</sup> Schripp et al. (2013) found toxins associated with cigarette smoke in e-cigarette aerosol, albeit in lower levels than cigarette smoke, including formaldehyde, acetaldehyde, isoprene, and acetone.<sup>14</sup>

Similar to the rates of workplace smoking policies, 80.8% of employed California adults reported that vaping was not allowed in any work areas.<sup>2</sup> Approximately 6.1% of adult California workers reported being exposed to secondhand aerosol in the workplace.<sup>2</sup> Additionally, nearly one-fifth (19.5%) of California adults aged 18 through 64 reported being exposed to secondhand aerosol recently.<sup>2</sup>

## References

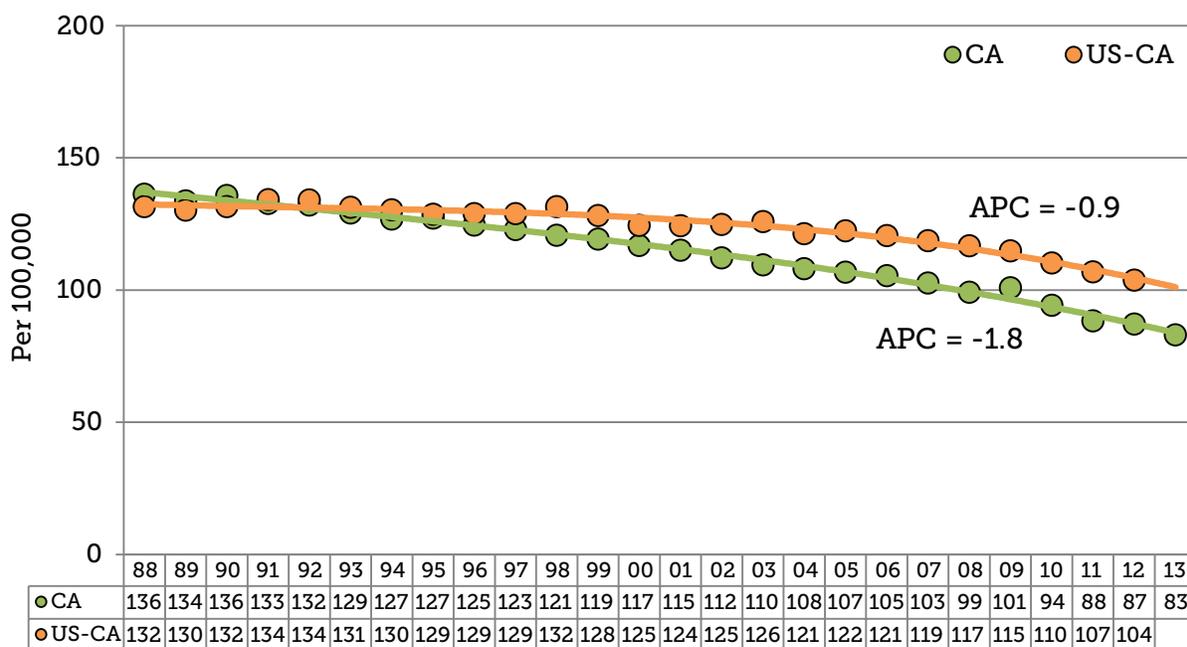
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# Section 5. Cancer Incidence and Mortality Rates

Since its creation, CTCF has worked to reduce smoking rates. In California, the CDC estimates annual smoking attributable mortality due to cigarette smoking and secondhand smoke to be 39,950 deaths for adults.<sup>1</sup> The CDC also projects 440,600 youths under age 18 in California will die from smoking.<sup>2</sup> 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.<sup>3</sup> 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 5.1). More specifically, California has reduced lung and bronchus cancers twice as fast as the rest of the United States.

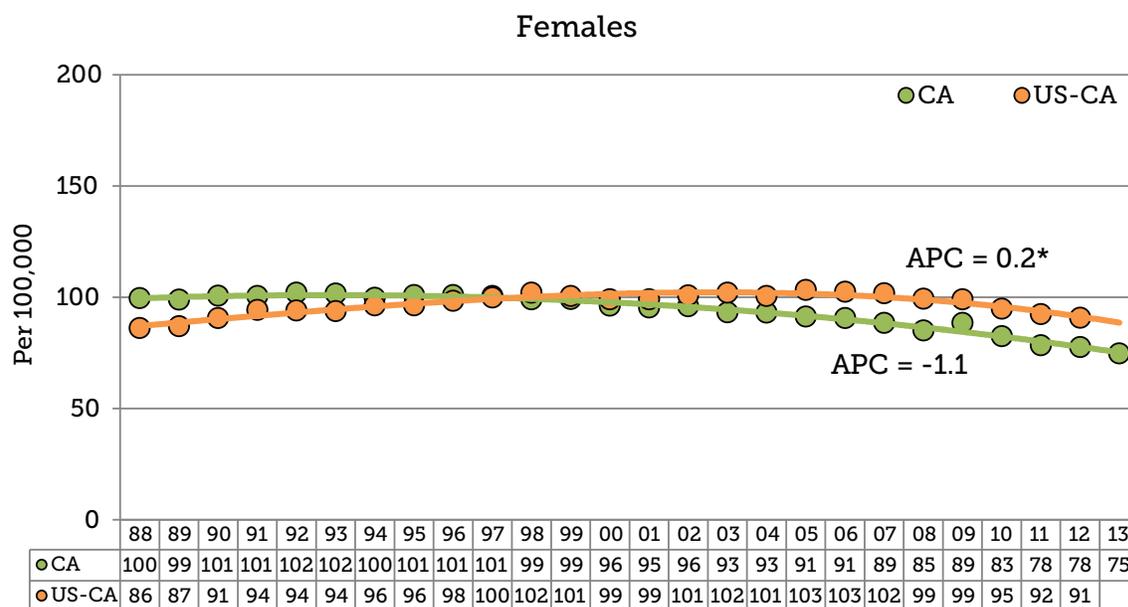
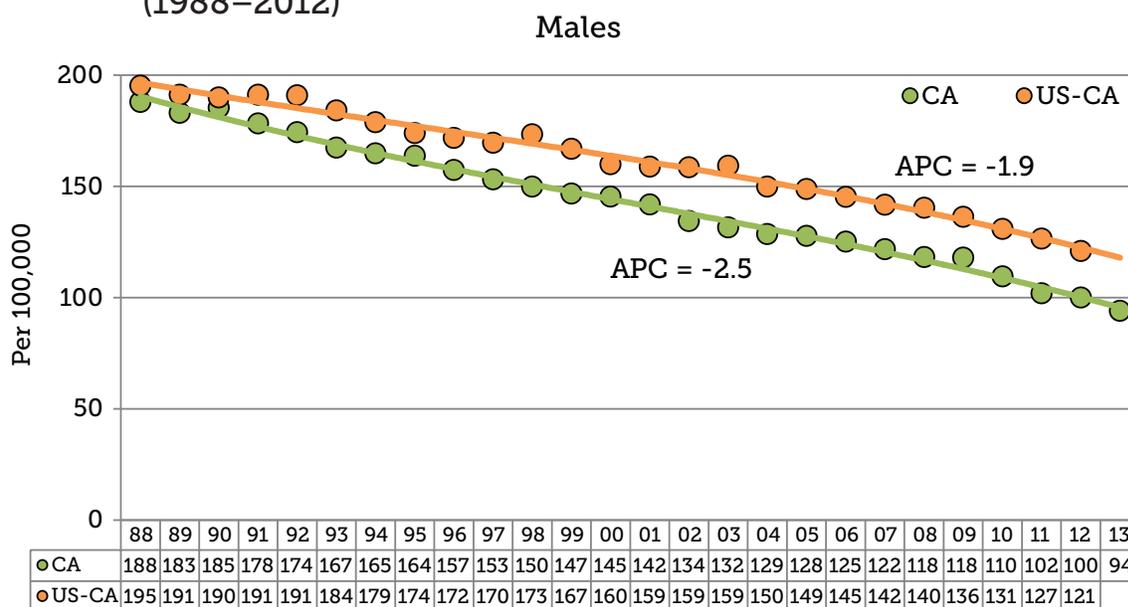
Figure 5.1. Lung and bronchus cancer incidence in California (1988–2013) and the rest of the United States (1988–2012)



Note: 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; annual percent changes (APCs) were calculated using non-weighted least squares method. \* The APC is not significantly different from zero (p<0.05).  
Source: California Cancer Registry.

California has a similar story for lung and bronchus cancer incidence broken down by males and females. Lung and bronchus cancer rates in California males have declined faster than the rest of the United States (Figure 5.2). Among women the rate of lung cancer is declining by about 1% every year in California, while among women in the rest of the United States, the incidence of smoking-related lung cancer increasing. (Figure 5.2).

Figure 5.2. Lung and bronchus cancer incidence among males and females in California (1988–2013) and the rest of the United States (1988–2012)

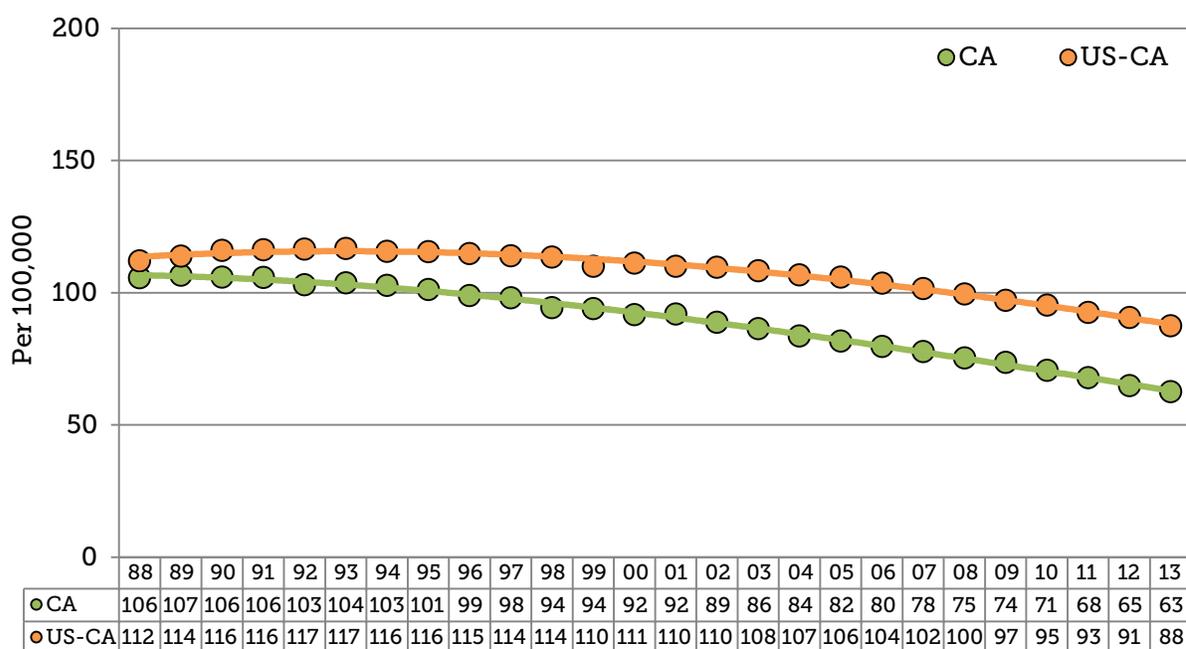


Note: Rates are per 100,000 and age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) standard. Percent changes were calculated using 2 years for each end point; annual percent changes (APCs) were calculated using non-weighted least squares method. \* The APC is not significantly different from zero ( $p < 0.05$ ).

Source: California Cancer Registry.

Lung and bronchus cancer mortality rate has continued to decrease since the mid to late 1980s (Figure 5.3). The 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. Figure 5.4 and Figure 5.5 display the reductions for each race/ethnicity and the annual percent change for each.

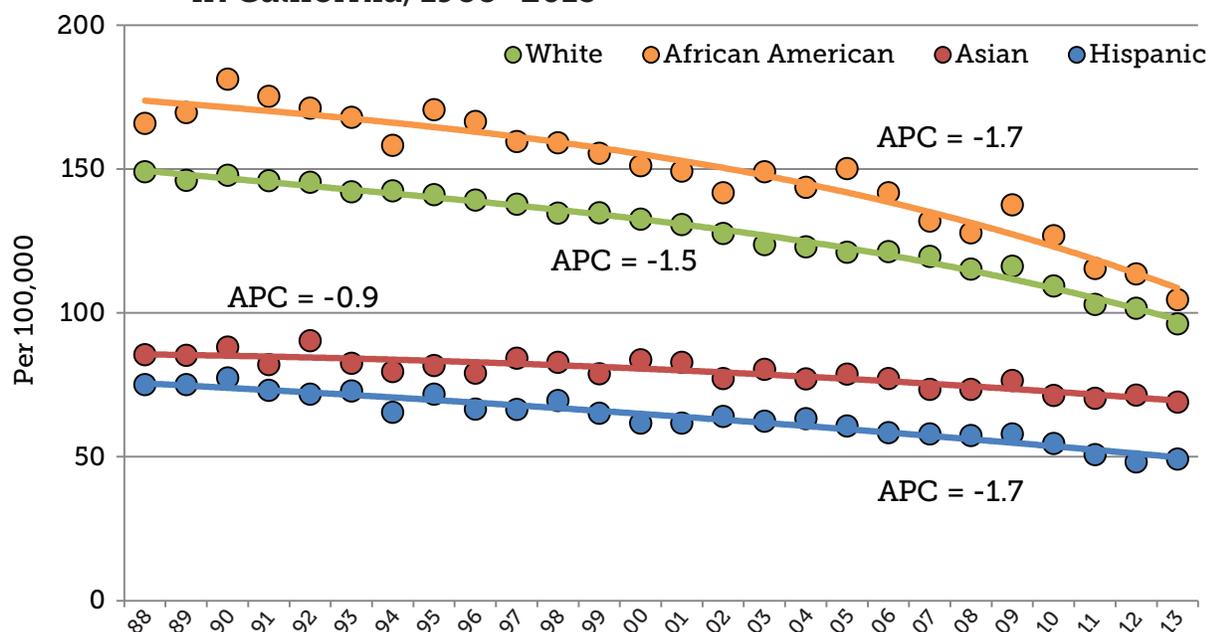
Figure 5.3. Lung and bronchus cancer mortality in California and the rest of the United States, 1988–2013



Note: Rates are per 100,000 and age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) standard.

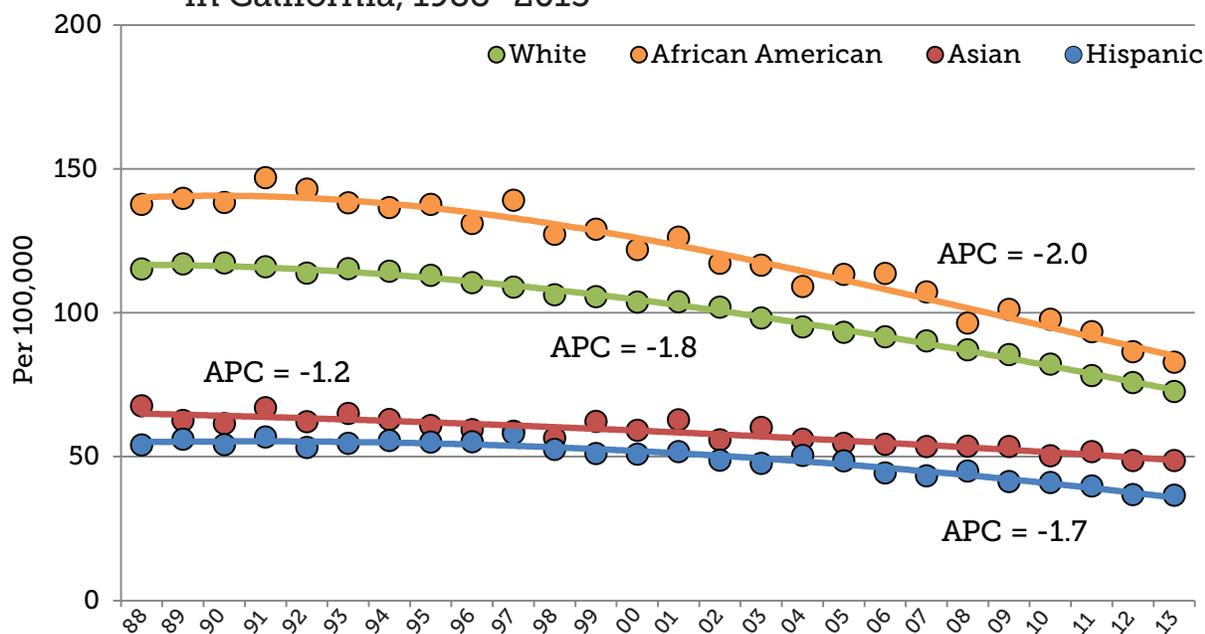
Source: California Cancer Registry.

Figure 5.4. Lung and bronchus cancer incidence by race/ethnicity in California, 1988–2013



Note: 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; annual percent changes (APCs) were calculated using non-weighted least squares method. \* The APC is not significantly different from zero ( $p < 0.05$ ). Source: California Cancer Registry.

Figure 5.5. Lung and bronchus cancer mortality by race/ethnicity in California, 1988–2013



Note: 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; annual percent changes (APCs) were calculated using non-weighted least squares method. \* The APC is not significantly different from zero ( $p < 0.05$ ). Source: California Cancer Registry.

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## Section 6. Tobacco Industry

### Subsection 6A.

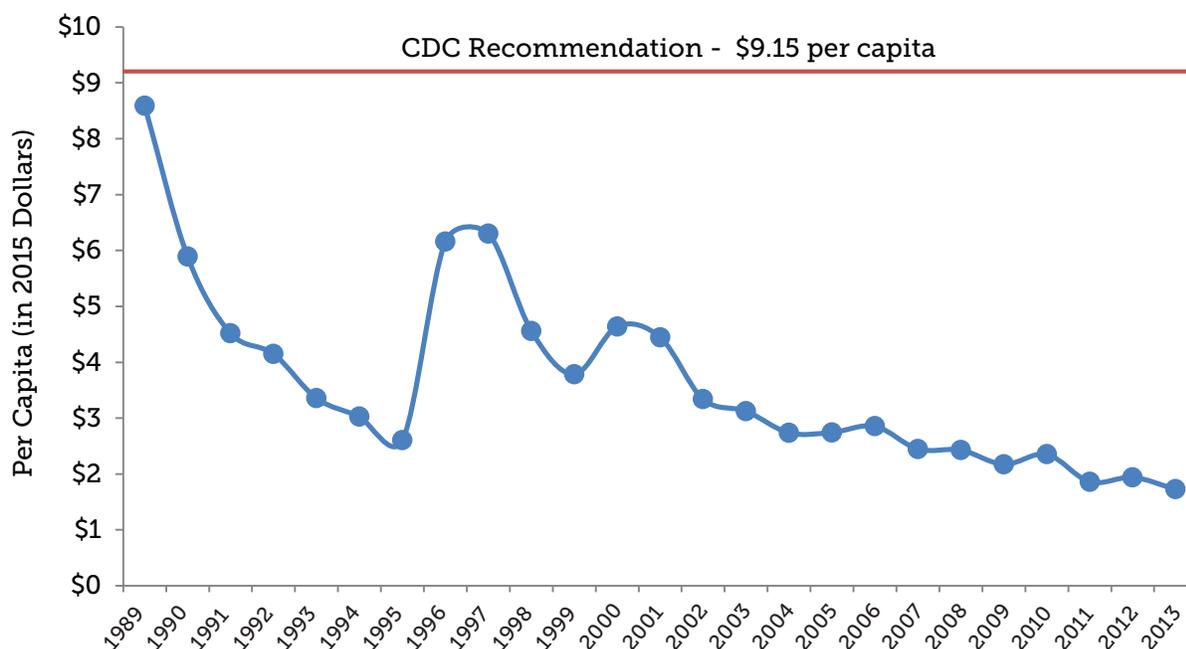
#### Tobacco Industry Expenditures vs. Tobacco Control Funding

The tobacco industry has consistently outspent tobacco control efforts since 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.

#### California Tobacco Control Expenditures

In fiscal year 1989–1990, CTCP was allotted \$95.3 million (\$6.23 per capita in 2015 dollars) and the California Department of Education (CDE) was allotted \$36.0 million (\$2.36 per capita in 2015 dollars) for tobacco control. The tobacco control budget for CTCP and CDE dropped to a combined \$65.2 million in 2013, a period during which the California adult population expanded from 21.6 million to 29.3 million. In per capita terms, expenditures by CTCP and CDE in 2013 equaled to \$1.73 per capita, a decline from 1989 in real dollar per capita expenditures of approximately 80% (Figure 6.1). Since CTCP's inception, expenditures for tobacco control have been well below the per capita recommended by CDC for funding an effective statewide tobacco control program, with current funding equaling less than one-fifth of the CDC recommendation.<sup>1,2</sup>

Figure 6.1. California tobacco control expenditure, 1989–2013



Note: Tobacco control expenditures are Health Education Account expenditures for the California Tobacco Control Program and California Department of Education, standardized to the U.S. 2015 dollar based on the Consumer Price Index. Source: California Department of Public Health for expenditures; Centers for Disease Control and Prevention, Best Practices for Comprehensive Tobacco Control Programs—2014, for CDC recommendation.

## Tobacco Industry Advertising Expenditures

In 2013, total expenditure by tobacco industry on cigarette advertising and promotional expenditure was approximately \$8.9 billion (\$28.01 per capita in 2015 dollars),<sup>3</sup> outspending California tobacco control efforts 16 to 1 on a per capita basis. The industry expenditure in 1989 was over \$3.6 billion (\$28.01 per capita in 2015 dollars), peaking in 2003 at \$15.1 billion (\$67.20 per capita in 2015 dollars).<sup>3</sup>

## Tobacco Industry Lobbying Expenditures

The tobacco industry decreases in expenditures on marketing coincides with an increase in lobbying expenditures, for example to support opposition to the California Cancer Research Act of 2012 (California Proposition 29). The California Proposition 29 ballot initiative sought to raise the per pack tax on cigarettes by \$1.00 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.<sup>4</sup> 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.<sup>5</sup> 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 by an additional \$2.60 per pack of cigarettes (99.99% of all dollars spent by campaign committees to defeat the initiative).<sup>6</sup> The tobacco industry also provides direct contributions to state legislators and lobbyists. In 2006, contributions to state legislators and lobbyists totaled \$2.3 million.<sup>6</sup> As of 2010, the tobacco industry contributions increased to \$2.8 million.<sup>7,8</sup>

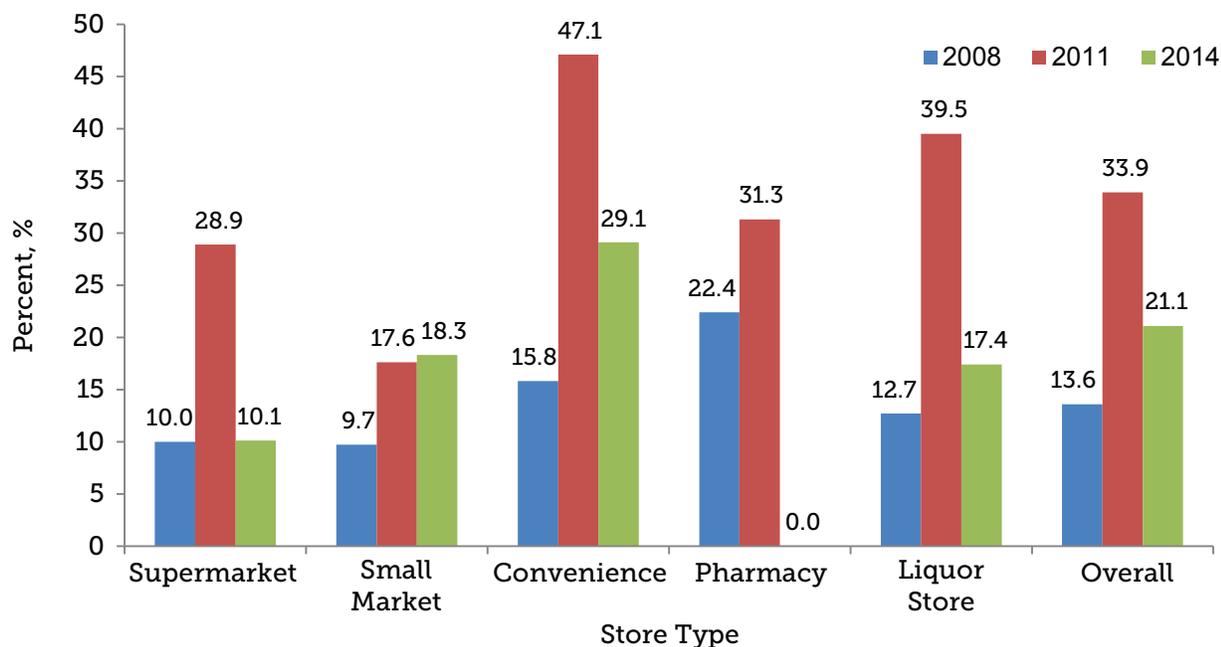
### Subsection 6B. Tobacco Marketing and Retail Availability

Cigarette companies spend more of their marketing dollars on in-store marketing than any other industry.<sup>9</sup> Because in-store marketing materials are visible to everyone, they remain a point of contact between non-smokers, including children, and the tobacco industry, and are a factor in smoking initiation.<sup>10</sup>

To track tobacco industry retail marketing behaviors, the California Tobacco Assessment Study (CTAS) surveys in-store marketing activities on a semi-annual basis since 2000. The CTAS field survey instrument included questions on the number and location of printed advertisement materials within stores that sell tobacco products.<sup>11,12</sup> The average number of visible cigarette marketing materials below three feet increased from 13.6% in 2008 to 21.1% in 2014 (Figure 6.2).

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.<sup>9</sup> 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 6.2. Interior tobacco advertisements below three feet by store type, 2008–2014



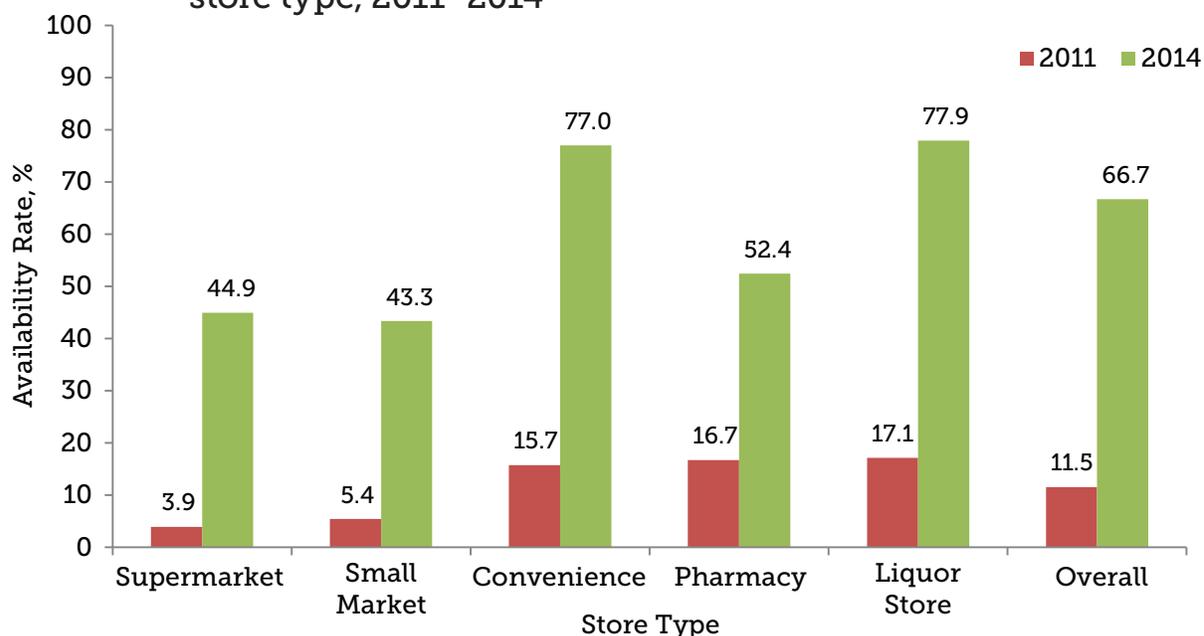
Source: California Tobacco Assessment Study, 2008–2014.

## Electronic Smoking Devices and Flavored Tobacco Marketing and Retail Availability

There has been an increase in marketing expenditures for electronic smoking devices (ESDs) over the last five years,<sup>13</sup> with advertising expenditure estimated to be \$115 million in 2014.<sup>14</sup> ESDs are the second most widely advertised product on store exteriors in California.<sup>12</sup> According to CTAS, the retail availability of ESDs among California tobacco retailers dramatically increased from 11.5% in 2011 to 66.7% in 2014 (Figure 6.3). Schleicher et al. (2015) also found that the retail availability of ESDs was greater in neighborhoods with a large proportion of youths and that more stores displayed ESDs near kid-friendly items (e.g., candy, gum, mints, toys, soda/slushie machines, ice cream).<sup>12</sup>

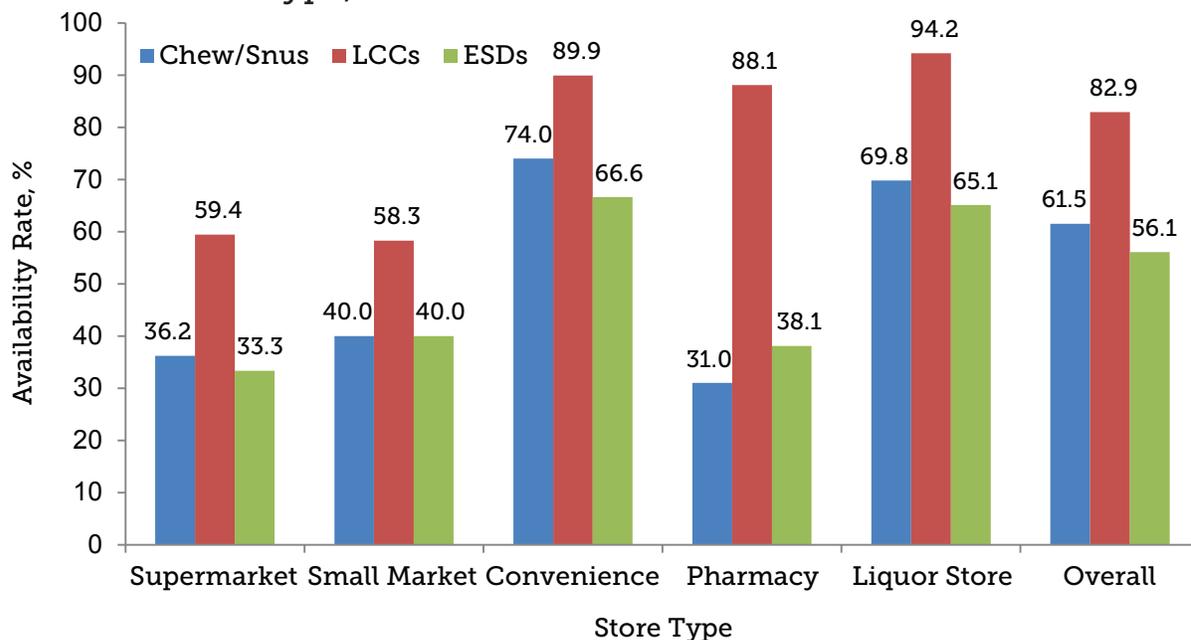
In addition to focusing on the retail availability of ESDs, the 2014 CTAS also looked at the retail availability of flavored tobacco products. Almost all tobacco retailers that were surveyed sold menthol cigarettes (97.4%) and a majority sold flavored chew/snus, flavored little cigars/cigarillos (LCCs), and flavored ESDs (Figure 6.4).<sup>12</sup>

Figure 6.3. Retail availability of electronic smoking devices by store type, 2011–2014



Note: Electronic smoking devices (ESDs) include e-cigarette (disposable cigarette lookalikes), rechargeable/refillable e-cigarettes, vape pens/tanks/MODs, e-hookah, e-liquid, and e-cigars.  
 Source: California Tobacco Assessment Study, 2011–2014.

Figure 6.4. Retail availability of flavored tobacco products by store type, 2014



Note: Flavored tobacco product refers to products that is marketed with terms that refer to menthol/mint flavors, fruit/sweet/candy flavors (e.g., cherry, vanilla, chocolate), or liquor flavors (e.g., rum, wine, brandy) for chew/snus, little cigars or cigarillos (LCCs), and electronic smoking devices (ESDs). ESDs include e-cigarette (disposable cigarette lookalikes), rechargeable/refillable e-cigarettes, vape pens/tanks/MODs, e-hookah, e-liquid, and e-cigars.  
 Source: California Tobacco Assessment Study, 2014.

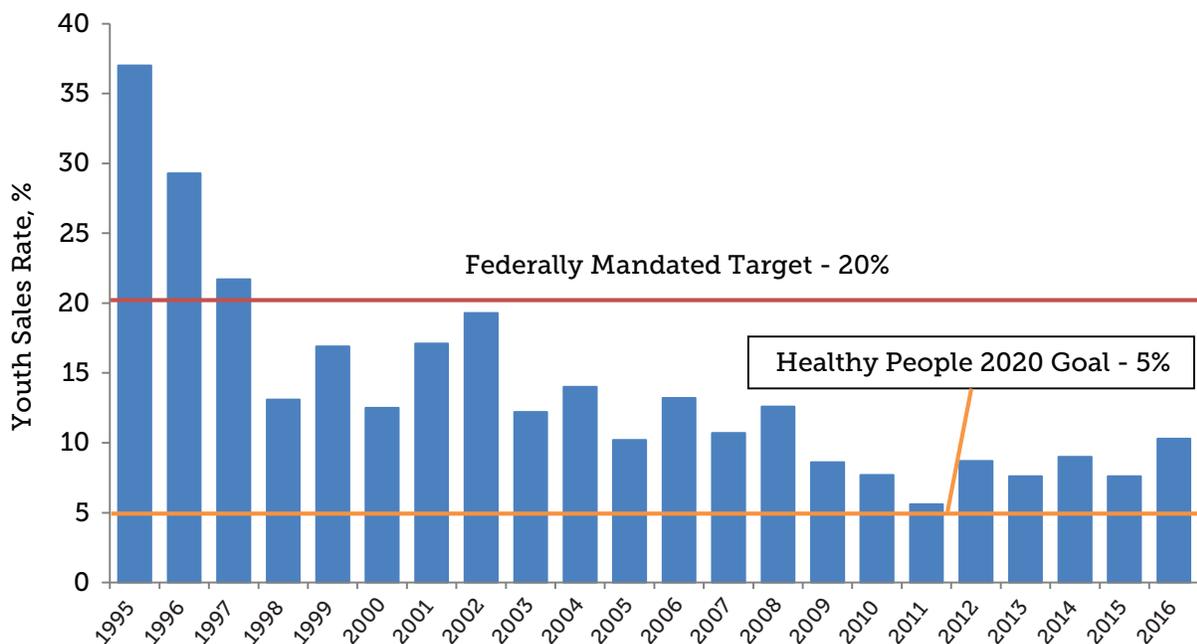
## Subsection 6C. Tobacco Sales to Minors

The majority of adult smokers report they began smoking while they were minors; preventing the sale of cigarettes to minors is important in reducing the overall number of adult smokers.<sup>15</sup> Beginning June 9, 2016, the California Business and Professions Code and California Penal Code prohibit retailers from selling tobacco products to individuals under age 21. Prior to that date, California law prohibited the selling of tobacco to youths under age 18.

### Longitudinal Trends in Sales to Minors

California tracks compliance of tobacco retailers using the Youth Tobacco Purchase Survey (YTPS) in compliance with Section 1926 (Synar Amendment) of the Alcohol, Drug Abuse, and Mental Health Administration Reorganization Act of 1992. The 2016 survey was conducted and completed prior to the effective date of the new state law that changed the minimum purchase age to 21. In 1997, 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.<sup>16</sup> In 1998, the rate dropped below the target of 20% and it has remained below 20% ever since (Figure 6.5). 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.<sup>16</sup> Data for California show the noncompliance rate at 10.3% in 2016, a non-statistically significant increase from 7.6% in 2015 (Figure 6.5).

Figure 6.5. Percent of retailers selling tobacco to youth, 1995–2016

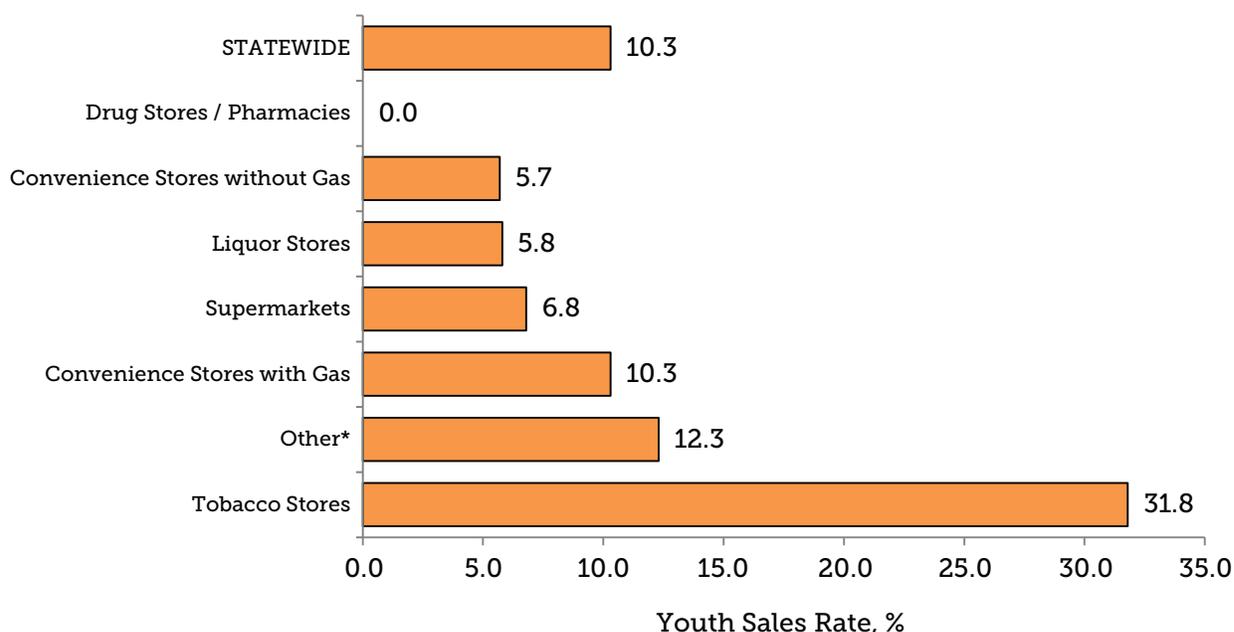


Note: Prior to 1997, protocol was based on attempted buy and not actual buy. The 2016 survey was conducted before the effective date that changed the minimum purchase age from 18 to 21.  
 Source: Youth Tobacco Purchase Survey, 1995–2016.

## Compliance by Store Type

Figure 6.6 shows the percentage of sales in various store types in 2016. The store type with the highest noncompliance rate was tobacco stores, with a noncompliance rate of 31.8%. Convenience stores attached to gas stations had a noncompliance rate of 10.3%. The broad category of “other” stores are considered non-traditional tobacco retailers, including donut shops, discount stores, deli/meat markets, gift stores, produce markets, and restaurants; the illegal sales rate for these non-traditional tobacco retailers in 2016 was 12.3%, above the statewide noncompliance rate of 10.3%.

Figure 6.6. Percent of retailers selling tobacco to youth by store type, 2016



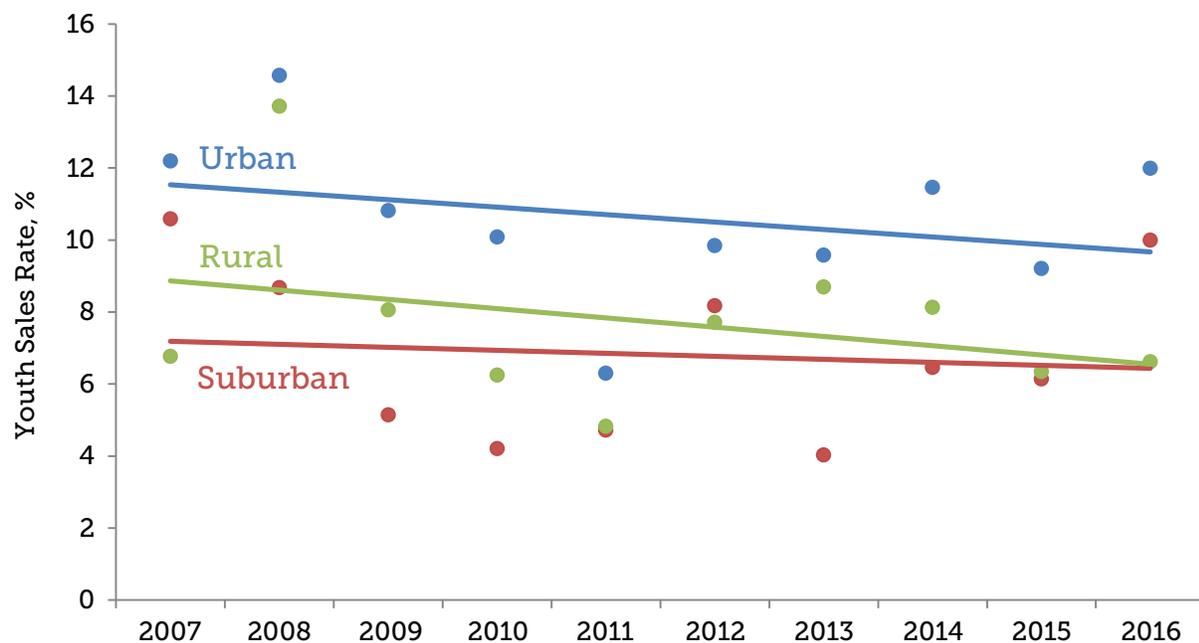
Note: Sales rates are standardized to an equal distribution of youth’s gender and age. The 2016 survey was conducted before the effective date that changed the minimum purchase age from 18 to 21. \* Other includes donut shops, discount stores, deli/meat markets, gift stores, produce markets, restaurants, and others.

Source: Youth Tobacco Purchase Survey, 2016.

## Compliance by Rurality

Rates of illegal tobacco sales to minors vary based on geography; 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 6.7). There is similar evidence of improving rates of compliance among suburban retailers. As of 2016, percentages in urban, suburban, and rural areas were 12.0%, 10.0% and 6.6%, respectively.

Figure 6.7. Percent of retailers selling tobacco to youth by urban, suburban and rural, 2007–2016

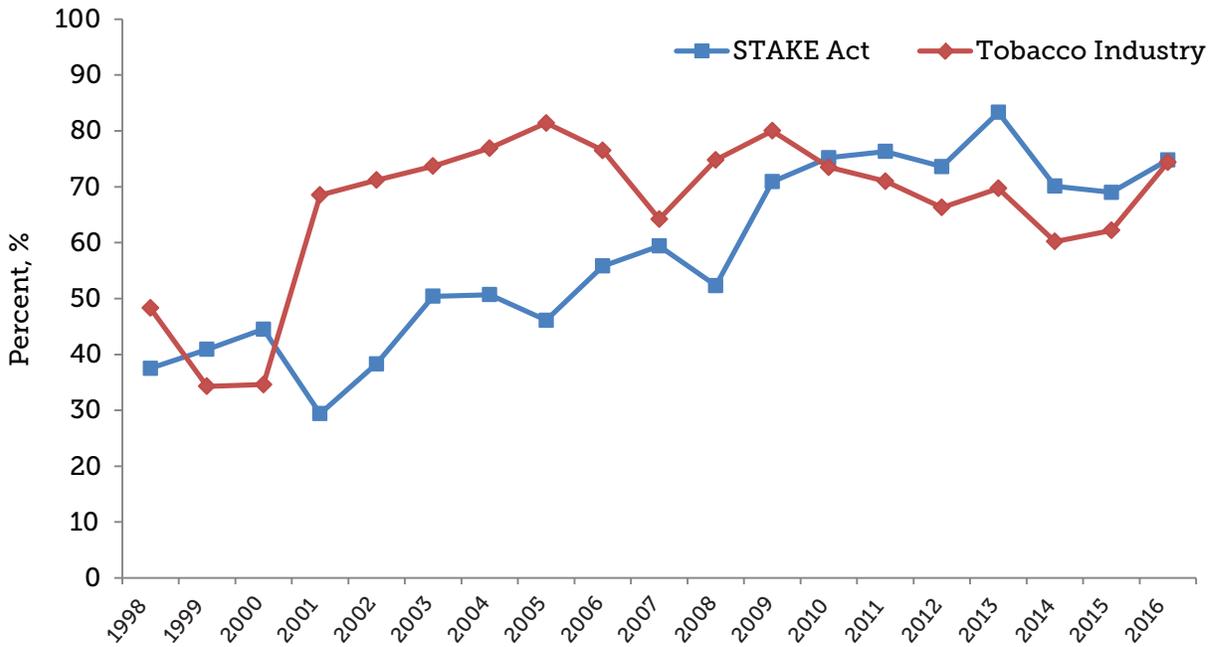


Note: Urban area is defined as 5,000 people and above per zip code. Rural area is defined as 500 people and under per zip code. All other areas are classified as suburban. The 2016 survey was conducted before the effective date that changed the minimum purchase age from 18 to 21.  
 Source: Youth Tobacco Purchase Survey, 2007–2016.

## STAKE Act Signage Compliance

YTPS also assesses in-store compliance with the signage component of California Business and Professions Code Section 22952, referred as the California Stop Tobacco Access to Kids Enforcement Act (STAKE Act). The STAKE Act, 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 21 and older (18 and over prior to June 9, 2016). 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.<sup>17</sup> Usage of STAKE Act signage increased steadily since 2001, and now exceeds usage of tobacco industry signage (Figure 6.8).

Figure 6.8. Percent of retailers displaying tobacco industry age-of-sale warning signs and STAKE Act age-of-sale warning signs, 1998–2016



Note: 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.

Source: Youth Tobacco Purchase Survey, 1998–2016.

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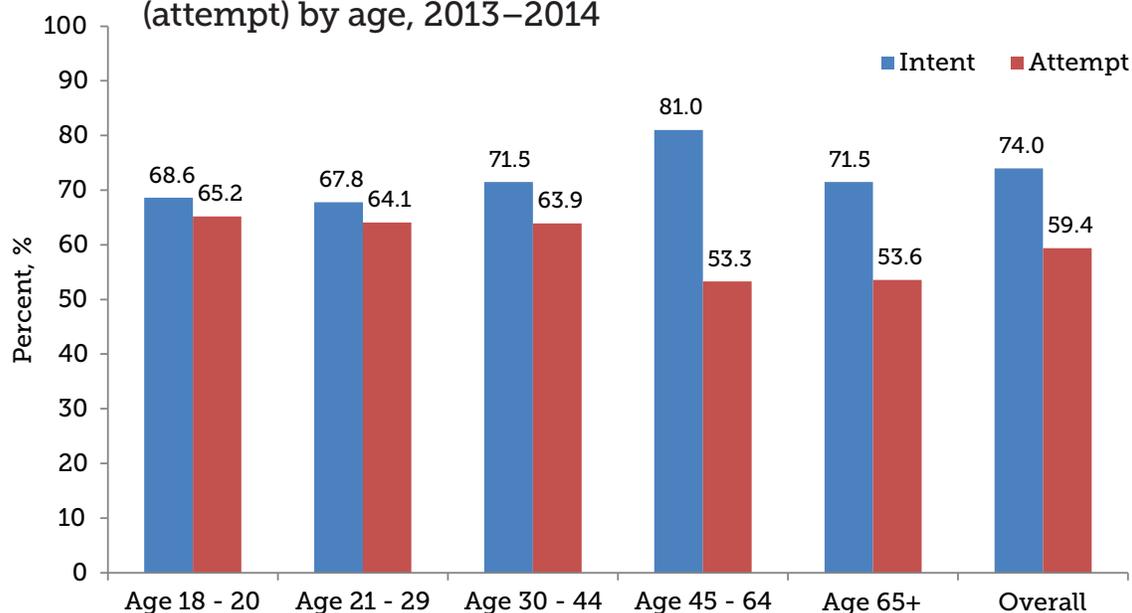


## Section 7. Smoking Cessation

Smoking cessation is a complex and often extended process. It begins with an individual considering trying to quit and, in some cases, proceeds to repeat quit attempts until successful. Smoking cessation 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. Smoking cessation rates in California have been assessed in comparison to other states and California has consistently done well relative to the rest of the nation.

Past studies found that ex-smokers recalled an average of 4.7 life-time quit attempts to achieve successful cessation.<sup>1</sup> In California, 74.0% of current adult smokers thought about quitting smoking in the next six months and 59.4% of current adult smokers made a quit attempt lasting at least one day in the past year.<sup>2,3</sup> Older adult smokers have a higher rate of thinking about quitting versus younger smokers; however, younger smokers have a higher rate of attempting to quit (Figure 7.1). No statistical difference was found for quit intention and quit attempts by gender or race/ethnicity (Appendix Table 7.1; Appendix Table 7.2).

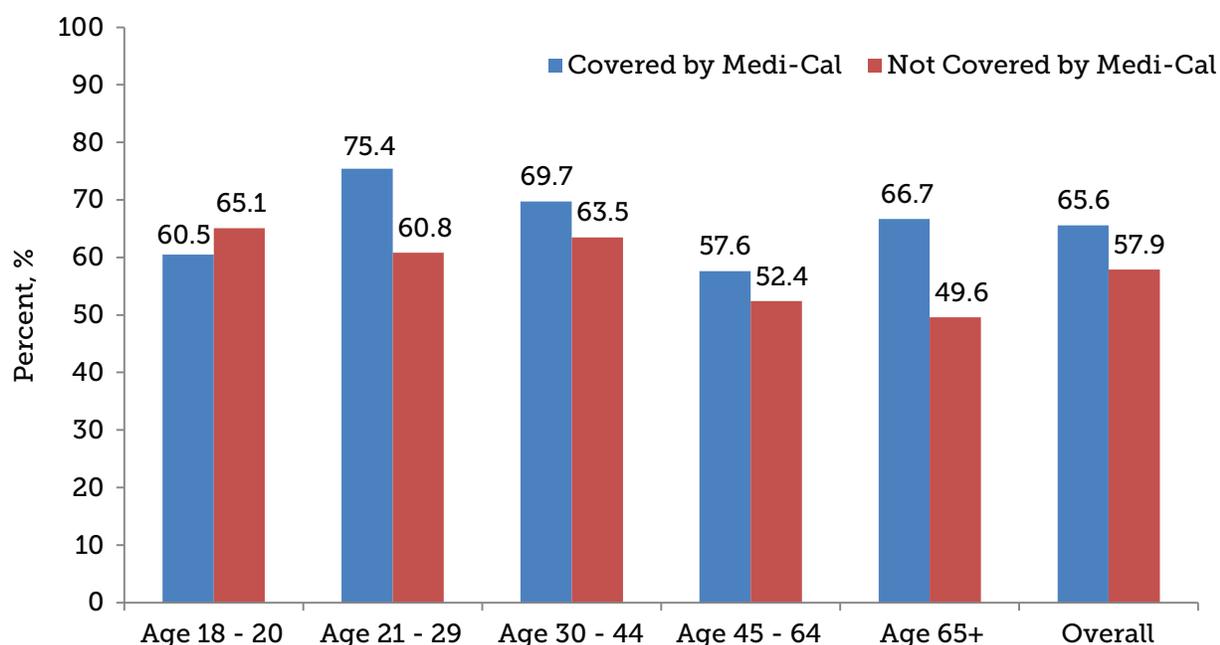
Figure 7.1. Percent of current California adult smokers thinking about quitting smoking (intent) and quitting one day or longer (attempt) by age, 2013–2014



Note: Respondents who are current smokers aged 18+ were asked if they were thinking about quitting (intention) in the next six months and also if a quit attempt lasting one day or longer was made in the past year. Data for 2013 and 2014 were pooled together. Source: California Health Interview Survey, 2013–2014.

The percentage of current California adult smokers making a quit attempt is higher among non-daily smokers than daily smokers with a rate of 69.8% and 52.9%, respectively.<sup>3</sup> Additionally, 65.6% of California adult smokers covered by Medi-Cal made a quit attempt lasting one day or longer versus 57.9% of California adults not covered by Medi-Cal (Figure 7.2). However, quitting smoking successfully is a major challenge for smokers. In another survey, only 18.8% of California smokers aged 18 through 64 who were smoking 12 months ago and made a quit attempt in the past 12 months were able to quit smoking for 6 months or longer.<sup>4</sup>

Figure 7.2. Percent of current California adult smokers who made a quit attempt lasting one day or longer by age and Medi-Cal coverage, 2013–2014



Note: Respondents who are current smokers aged 18+ were asked if they stopped smoking for one day or longer as an attempt to quit smoking and current Medi-Cal coverage. Data for 2013 and 2014 were pooled together.  
 Source: California Health Interview Survey, 2013–2014.

Collectively, there has been a steady increase in the use of cessation treatment and/or nicotine replacement therapy. As shown in Table 7.1, 67.4% of California smokers aged 18 through 64 still reported attempting to quit smoking without assistance (“cold turkey”) during the past 12 months, consistent with known literature.<sup>5</sup> Also, 19.5% of individuals also reported using e-cigarettes as a quit attempt.

**Table 7.1 Methods used to quit smoking in the past 12 months among California smokers aged 18–64, 2016**

Method	Percent (95% C.I.)
Quit cold turkey	67.4 (59.8 – 75.0)
Use e-cigarettes	19.5 (12.8 – 26.1)
Nicotine patches, gum, or lozenges	18.5 (12.2 – 24.8)
California Smoker’s helpline (1-800-NO-BUTTS)	7.3 (2.8 – 11.8)
Medication (e.g., Chantix, Zyban)	6.7 (3.6 – 9.8)
Self-help materials	5.9 (3.3 – 8.6)
Counseling	4.1 (1.1 – 7.0)

Note: Respondents who successful or attempted to quit smoking in the last 12 months were asked the method used to quit smoking cigarettes in their last attempt. Percent does not equal to 100% as smokers could use multiple methods of quitting. Weighted to 2015 Current Population Survey California population.  
Source: Online California Adult Tobacco Survey, 2016.

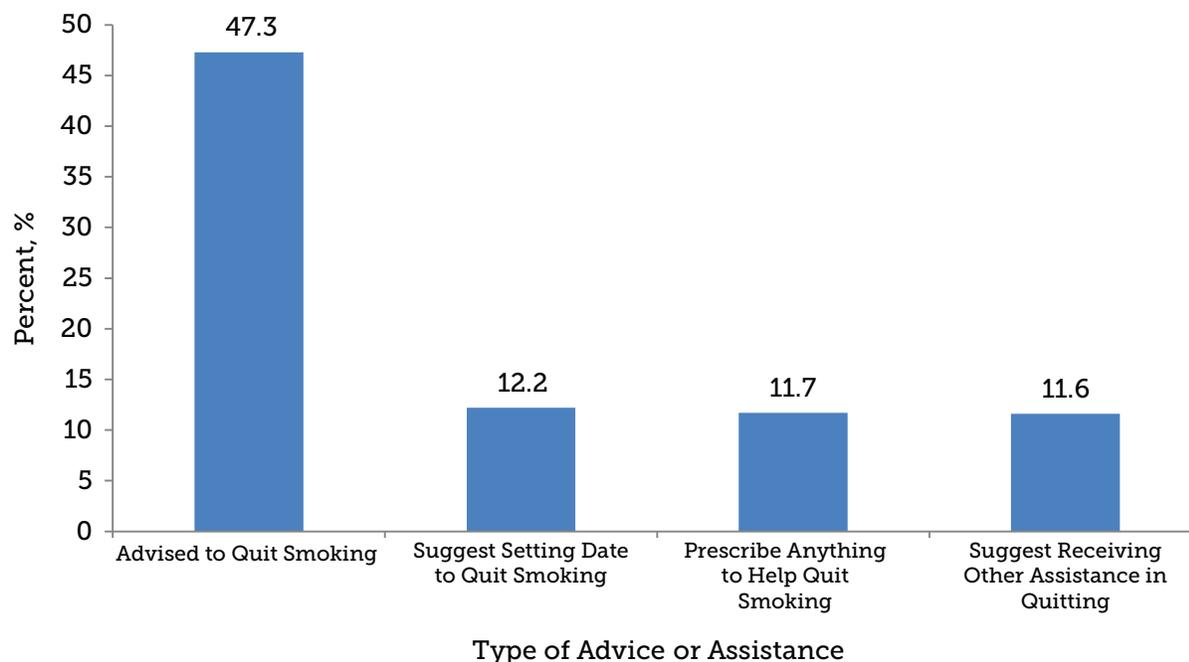
For the youth population, 48.7% of current California high school smokers wanted to quit smoking.<sup>6</sup> In addition, 54.4% of California high schoolers who smoked cigarettes in the past 12 months had made a quit attempt in that same time frame.

## Cessation Advice and Interventions by Health Care Professionals

Research has shown that health care professionals, such as physicians, play a critical role in reducing smoking prevalence and increasing smoking cessation success.<sup>7,8</sup> California adult smokers who were advised to quit smoking by physicians in the past 12 months were more likely to make a quit attempt (65% versus 41%).<sup>9</sup>

As a majority of tobacco users reported seeing a physician each year, it is essential that physicians (as well as other health care professionals) be prepared in advising and providing cessation information or counseling to patients.<sup>10</sup> In California, 59.5% of current and recent adult smokers age 18 to 64 reported visiting a physician or other health care provider in the past 12 months but only 47.3% of adult smokers who saw a physician or health care provider were advised to stop smoking (Figure 7.3).<sup>4</sup>

Figure 7.3. Type of advice or assistance provided by physicians to current and recent adult smokers, 2016



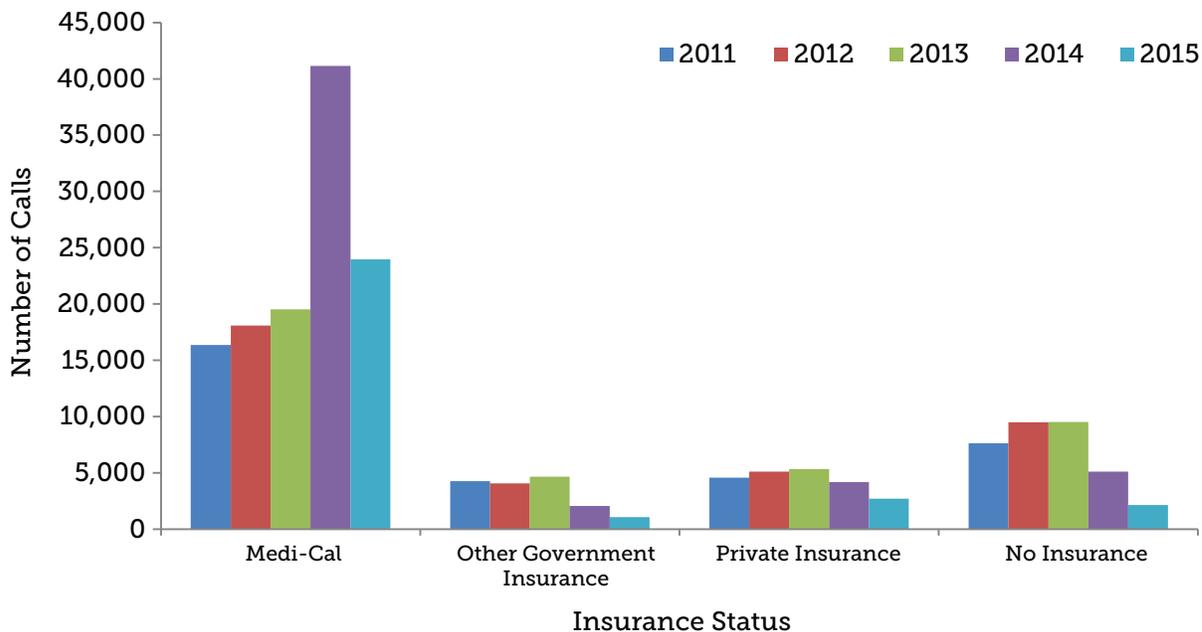
Note: Respondents who are current or recent smokers aged 18 through 64 who saw a doctor or other health care provider in the past 12 months were asked type of advice or assistance provided by the doctor or other health care provider. Weighted to 2015 Current Population Survey California population.  
 Source: Online California Adult Tobacco Survey, 2016.

## 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.<sup>10-12</sup> The Helpline provides services to about 40,000 participants annually. From 1992 to 2015, the Helpline provided services in English, Spanish, Mandarin, Cantonese, Korean, and Vietnamese;<sup>13</sup> beginning in August 2015, the provision of Asian language services transferred to the national Asian Smokers’ Quitline funded by the CDC.

In 2015, the Helpline provided services to approximately 31,000 people.<sup>14</sup> Consistent with previous research,<sup>15</sup> most callers to the Helpline are smokers or other tobacco users who want help to quit, but some are proxies (e.g., friends, family members) calling on behalf of the smoker. The majority of the program participants in 2015 were between the ages of 45 and 64; with only 5.8% of participants under the age 25.<sup>14</sup> In addition, insurance status was collected from participants: 78.8% of participants reported having Medi-Cal, 8.9% reported having private insurance, and 7.0% reported having no insurance (Figure 7.4). There was a large increase in the number of calls in 2014 due to a major educational outreach campaign that targeted Medi-Cal beneficiaries known as the Medi-Cal Incentives to Quit Smoking program.

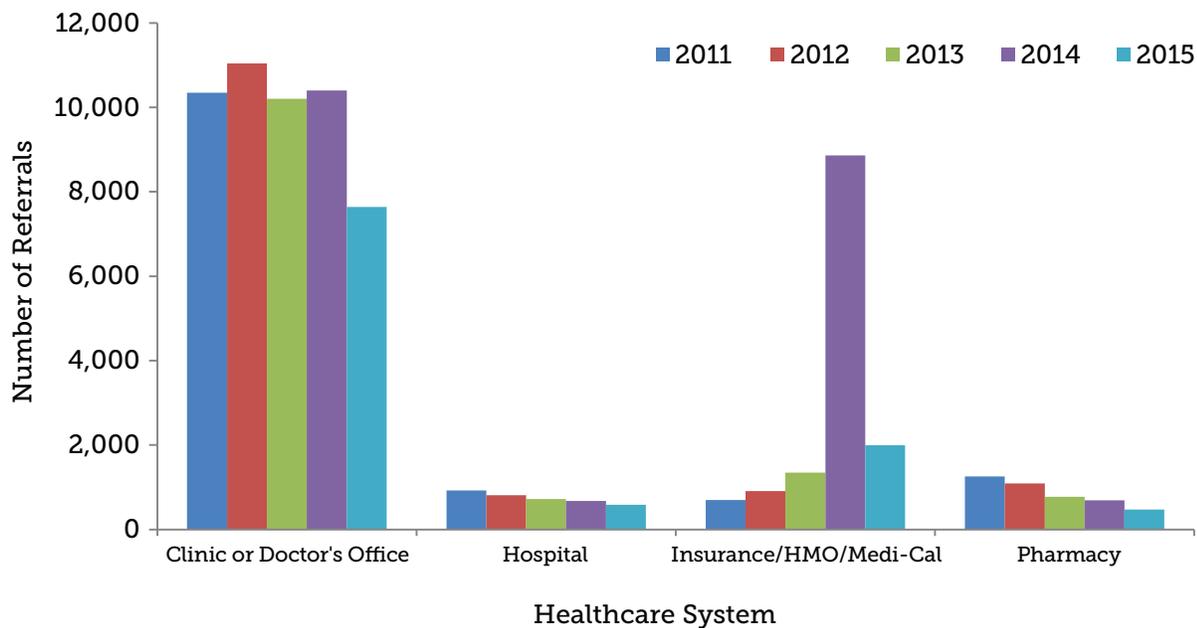
Figure 7.4. Number of calls to the California Smokers' Helpline by health insurance status, 2011–2015



Note: Callers to the California Smokers' Helpline were asked about current insurance status.  
 Source: California Smokers' Helpline, 2011–2015.

Referral to the Helpline is vital in reducing adverse health effects through smoking cessation. In 2015, 24.8% of callers were referred to the Helpline by health care professionals at their clinic or doctor's office.<sup>14</sup> Referrals from insurance plans (e.g., Medi-Cal, private insurance) continue to trend upwards (Figure 7.5); however, referrals from clinic or doctor's office decreased in 2015 after remaining consistent in 2011 through 2014.

Figure 7.5. Number of referrals to the California Smokers' Helpline by the healthcare industry, 2011–2015



Note: Callers to the California Smokers' Helpline were asked how they heard about the helpline.  
 Source: California Smokers' Helpline, 2011–2015.

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# Appendix

Appendix Table 1.1. Adult cigarette smoking prevalence within California and the rest of the United States (US-CA), 1988–2014 (Figure 1.1)

	88	89	90	91	92	93	94	95	96	97
CA	23.7	22.1	20.4	20.2	21.0	19.2	17.6	16.9	17.8	17.4
US-CA									24.0	23.6
	98	99	00	01	02	03	04	05	06	07
CA	17.5	17.1	16.3	16.4	15.8	15.4	14.6	14.0	13.3	13.8
US-CA	23.4	23.1	23.0	23.6	23.5	23.0	21.6	21.3	20.3	20.2
	08	09	10	11	12	13	14			
CA	13.3	13.1	11.9	12.0	12.7	11.7	11.6			
US-CA	19.1	18.7	17.1	21.0	19.7	19.1	18.1			

Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. 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 California but changed for the rest of the United States in 2011. Weighted to the 2000 California population from 1988–2011 and to the 2010 California population since 2012. The U.S. estimate does not include California adults.  
 Source: Behavioral Risk Factor Surveillance System, 1988–2014.

Appendix Table 1.2. California adult tobacco use trends, 1996–2014  
(Figure 1.2)

	96	97	98	99	00	01	02	03
Any 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	4.1	4.4	5.5	5.2	5.4	5.9	5.9	5.5
Dual Use	1.0	1.2	2.4	2.2	2.1	2.3	2.3	2.0
	04	05	06	07	08	09	10	11
Any 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	5.4	6.3	5.5	5.1	3.0	3.7	4.9	4.2
Dual Use	1.9	2.3	1.8	1.6	0.9	1.2	1.4	1.3
	12	13	14					
Any Tobacco	17.5	17.3	17.5					
Cigarettes	12.8	11.7	10.8					
Other Tobacco	7.9	9.3	9.4					
Dual Use	3.2	3.7	2.7					

Note: Respondents aged 18+ were asked to report current cigarette, cigar/cigarillo, pipe, chew, snuff, and snus behavior. Weighted to the 2000 California population from 1988–2011 and to the 2010 California population since 2012. From 1996–2011, current tobacco use is defined as: 1) any 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, and snus); and 4) dual use (cigarette users who also use another tobacco product). From 2012–2014, hookah pipe and electronic cigarettes were included in the tobacco definition.

Source: Behavioral Risk Factor Surveillance System/California Adult Tobacco Survey, 1996–2014.

**Appendix Table 1.3. Adult cigarette smoking prevalence by gender within California, 1988–2014 (Figure 1.3)**

	88	89	90	91	92	93	94	95	96	97
Male	25.6	22.5	21.1	22.7	22.3	20.7	18.9	18.7	20.8	21.1
Female	19.9	19.8	17.9	15.8	17.8	15.8	14.4	13.2	14.8	13.9
	98	99	00	01	02	03	04	05	06	07
Male	20.6	19.7	18.7	20.2	18.8	18.4	18.2	17.0	17.6	17.1
Female	14.4	14.6	13.9	12.7	12.8	12.5	11.1	11.1	9.1	11.3
	08	09	10	11	12	13	14			
Male	16.5	15.6	14.4	14.9	15.5	15.1	14.9			
Female	10.7	10.7	9.4	9.3	10.0	8.5	8.4			

Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. An adjustment was made to address the change of smoking definition in 1996 that included more occasional smokers. The weighting methodology changed in 2012. Weighted to the 2000 California population from 1988–2011 and to the 2010 California population since 2012. Source: Behavioral Risk Factor Surveillance System, 1984–2014.

**Appendix Table 1.4. Adult smoking prevalence among California males by race/ethnicity, 2001–2014 (Figure 1.4)**

	01	03	05	07	09	11–12	13–14
White, Non-Hispanic	19.4	18.7	17.1	17.1	16.0	15.9	14.8
African American, Non-Hispanic	23.4	22.0	21.6	27.4	16.4	24.5	20.0
Asian, Non-Hispanic	21.3	22.2	19.6	19.4	15.6	16.4	15.6
American Indian/Alaska Native, Non-Hispanic	37.2	27.8	39.1	36.4	22.7*	17.3	36.2
Hispanic	20.8	21.0	19.2	17.7	18.9	16.4	15.0

Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. California Health Interview Survey was a biennial survey from 2001–2009 and became a continuous since 2011. Data for 2011 and 2012 were pooled together. Data for 2013 and 2014 were pooled together. \* Statistically unstable. Source: California Health Interview Survey, 2001–2014.

Appendix Table 1.5. Adult smoking prevalence among California females by race/ethnicity, 2001–2014 (Figure 1.5)

	01	03	05	07	09	11–12	13–14
White, Non-Hispanic	16.7	15.8	14.8	12.8	12.5	13.1	13.1
African American, Non-Hispanic	20.8	18.2	15.6	17.4	16.7	18.5	14.7
Asian, Non-Hispanic	6.4	5.9	4.2	4.1	5.5	4.4	3.5
American Indian/Alaska Native, Non-Hispanic	28.3	32.3	28.2	18.7	25.6	30.7	28.4
Hispanic	9.0	8.5	8.2	7.9	6.3	8.5	5.6

Note: Respondents aged 18+ were asked to report current cigarette smoking behavior. California Health Interview Survey was a biennial survey from 2001–2009 and became a continuous since 2011. Data for 2011 and 2012 were pooled together. Data for 2013 and 2014 were pooled together.  
 Source: California Health Interview Survey, 2001–2014.

Appendix Table 1.6. California adult smoking prevalence by county, 2012–2014 (Figure 1.9)

	2012–14		2012–14
Alameda	12.3	Orange	11.0
Alpine	16.8	Placer	9.8
Amador	16.8	Plumas	20.5
Butte	15.9	Riverside	13.0
Calaveras	16.8	Sacramento	16.9
Colusa	16.6	San Benito	11.2
Contra Costa	14.3	San Bernardino	12.3
Del Norte	20.5	San Diego	12.0
El Dorado	16.3	San Francisco	10.1
Fresno	19.1	San Joaquin	15.5
Glenn	16.6	San Luis Obispo	12.5
Humboldt	20.6	San Mateo	6.6
Imperial	14.7	Santa Barbara	9.8
Inyo	16.8	Santa Clara	9.9
Kern	15.5	Santa Cruz	13.5
Kings	17.5	Shasta	20.2
Lake	28.0	Sierra	20.5
Lassen	20.5	Siskiyou	20.5
Los Angeles	12.2	Solano	13.6
Madera	16.4	Sonoma	7.6
Marin	9.7	Stanislaus	11.9
Mariposa	16.8	Sutter	13.7
Mendocino	17.7	Tehama	16.6
Merced	16.5	Trinity	20.5
Modoc	20.5	Tulare	20.9
Mono	16.8	Tuolumne	16.8
Monterey	10.3	Ventura	11.7
Napa	12.4	Yolo	9.4
Nevada	15.3	Yuba	21.7

Note: Respondents aged 18+ were asked to report current cigarette smoking behavior.  
Source: California Health Interview Survey, 2012–2014.

Appendix Table 5.1. Lung and bronchus cancer incidence by race/ethnicity in California, 1988–2013 (Figure 5.4)

	88	89	90	91	92	93	94	95	96	97
White	149.0	146.1	147.8	145.9	145.4	142.1	142.4	141.1	139.2	137.8
African American	165.9	169.6	181.2	175.2	171.2	168.0	158.2	170.6	166.5	159.5
Asian	85.5	85.3	88.1	82.0	90.3	82.5	79.6	81.7	79.1	84.2
Hispanic	75.1	75.1	77.4	73.1	71.8	72.9	65.5	71.8	66.6	66.4
	98	99	00	01	02	03	04	05	06	07
White	134.7	134.8	132.6	130.7	127.6	123.7	123.0	121.1	121.3	119.6
African American	159.1	155.5	151.2	149.3	141.7	149.0	143.6	150.1	141.8	131.9
Asian	82.8	78.8	83.7	82.8	77.2	80.4	77.1	78.7	77.2	73.4
Hispanic	69.5	65.1	61.7	61.7	64.0	62.4	63.3	60.7	58.4	57.9
	08	09	10	11	12	13				
White	115.2	116.2	109.4	102.9	101.6	96.2				
African American	127.8	137.5	126.8	115.4	113.6	104.6				
Asian	73.4	76.5	71.3	70.3	71.4	69.0				
Hispanic	57.4	57.9	54.6	50.8	48.2	49.2				

Note: 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; annual percent changes (APCs) were calculated using non-weighted least squares method. \* The APC is not significantly different from zero (p<0.05).  
Source: California Cancer Registry.

Appendix Table 5.2. Lung and bronchus cancer mortality by race/ethnicity in California, 1988–2013 (Figure 5.4)

	88	89	90	91	92	93	94	95	96	97
White	115.2	117.0	117.3	116.0	113.8	115.3	114.4	113.0	110.5	108.9
African American	137.7	139.8	138.3	147.0	143.0	138.2	136.5	137.7	131.0	139.1
Asian	67.7	62.6	61.5	67.0	62.1	65.0	62.9	60.8	59.4	58.8
Hispanic	54.1	56.1	54.2	56.8	53.2	54.6	55.6	55.1	55.2	58.1
	98	99	00	01	02	03	04	05	06	07
White	106.3	105.6	103.7	103.8	101.9	98.2	95.1	93.2	91.7	90.2
African American	127.3	129.0	122.0	126.3	117.2	116.5	109.1	113.3	113.7	107.3
Asian	56.5	62.2	59.2	62.8	55.8	60.2	56.1	54.6	54.3	53.5
Hispanic	52.5	51.1	50.9	51.8	48.8	47.7	50.4	48.5	44.3	43.3
	08	09	10	11	12	13				
White	87.1	85.5	82.1	78.2	75.7	72.7				
African American	96.4	101.2	97.7	93.4	86.5	82.8				
Asian	53.6	53.5	50.3	51.8	48.7	48.6				
Hispanic	45.0	41.3	41.0	39.8	36.8	36.6				

Note: 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; annual percent changes (APCs) were calculated using non-weighted least squares method. \* The APC is not significantly different from zero (p<0.05).

Source: California Cancer Registry.

Appendix Table 6.1. Percent of retailers selling tobacco to youth, 1995–2016 (Figure 6.5)

	95	96	97	98	99
Illegal Sales Rate	37.0	29.3	21.7	13.1	16.9
95% C.I.			17.9–25.5	10.0–16.2	13.4–20.4
	00	01	02	03	04
Illegal Sales Rate	12.5	17.1	19.3	12.2	14.0
95% C.I.	10.0–15.0	14.2–20.0	16.1–22.5	8.9–15.5	11.5–16.5
	05	06	07	08	09
Illegal Sales Rate	10.2	13.2	10.7	12.6	8.6
95% C.I.	8.0–12.4	10.6–15.8	8.5–12.9	10.2–15.0	6.2–11.0
	10	11	12	13	14
Illegal Sales Rate	7.7	5.6	8.7	7.6	9.0
95% C.I.	5.8–9.6	4.0–7.2	6.6–10.8	5.7–9.5	7.0–11.1
	15	16			
Illegal Sales Rate	7.6	10.3			
95% C.I.	5.7–9.6	8.2–12.5			

Note: Prior to 1997, protocol was based on attempted buy and not actual buy. The 2016 survey was conducted before the effective date that changed the minimum purchase age from 18 to 21.  
 Source: Youth Tobacco Purchase Survey, 1995–2016.

Appendix Table 6.2. Percent of retailers selling tobacco to youth by urban, suburban and rural, 2007–2016 (Figure 6.7)

	07	08	09	10	11	12	13	14	15	16
Urban	12.2	14.6	10.8	10.1	6.3	9.8	9.6	11.5	9.2	12.0
Suburban	10.6	8.7	5.1	4.2	4.7	8.2	4.0	6.5	6.1	10.0
Rural	6.8	13.7	8.1	6.3	4.8	7.7	8.7	8.1	6.3	6.6

Note: 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. The 2016 survey was conducted before the effective date that changed the minimum purchase age from 18 to 21.  
 Source: Youth Tobacco Purchase Survey, 2007–2016.

**Appendix Table 6.3. Percent of retailers displaying tobacco industry age-of-sale warning signs and STAKE Act age-of-sale warning signs, 1998–2016 (Figure 6.8)**

	98	99	00	01	02	03	04	05	06	07
STAKE Act	37.5	40.9	44.5	29.4	38.3	50.4	50.7	46.1	55.8	59.4
Tobacco Industry	48.3	34.3	34.6	68.5	71.2	73.7	76.9	81.4	76.5	64.2
	08	09	10	11	12	13	14	15	16	
STAKE Act	52.3	70.9	75.2	76.3	73.6	83.3	70.1	69.0	74.8	
Tobacco Industry	74.8	80.0	73.5	71.0	66.3	69.7	60.2	62.2	74.4	

Note: 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.

Source: Youth Tobacco Purchase Survey, 1998–2016.

**Appendix Table 7.1. California adult smokers thinking about quitting by race/ethnicity, 2013–2014**

	2013–14 (95% C.I.)
White, Non-Hispanic	73.2 (69.4–76.9)
African American, Non-Hispanic	83.1 (74.9–91.3)
Asian, Non-Hispanic	71.6 (61.8–81.5)
American-Indian/Alaska Native, Non-Hispanic	88.4* (70.9–100.0)
Hispanic	72.2 (66.2–78.2)

Note: Respondents who smoked and aged 18+ were asked about quitting intention in the next six months. Data for 2013 and 2014 were pooled together. \* Statistically unstable.

Source: California Health Interview Survey, 2013–2014.

Appendix Table 7.2. California adult smokers making a quit attempt lasting one day or longer by race/ethnicity, 2013–2014

	2013–14 (95% C.I.)
White, Non-Hispanic	54.8 (51.1–58.6)
African American, Non-Hispanic	61.6 (50.8–72.3)
Asian, Non-Hispanic	63.2 (54.1–72.4)
American-Indian/Alaska Native, Non-Hispanic	61.9 (40.8–83.0)
Hispanic	63.7 (58.2–69.2)

Note: Respondents who smoked and aged 18+ were asked if they stopped smoking for one day or longer as an attempt to quit smoking. Data for 2013 and 2014 were pooled together.  
 Source: California Health Interview Survey, 2013–2014.