

California Tobacco Facts and Figures 2024

California Department of Public Health
California Tobacco Prevention Program

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This publication was prepared by the California Tobacco Prevention Program, a branch in the Center for Healthy Communities of the California Department of Public Health.

In order to draw the most accurate and complete picture of tobacco use and behaviors in California, several data sources are used in this document. Data sources may be based on different survey methods; therefore, rates may be slightly different throughout this report.

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Abbreviations and Acronyms

CA	California
CDTFA	California Department of Tax and Fee Administration
CHIS	California Health Interview Survey
CSTS	California Student Tobacco Survey
CTPP	California Tobacco Prevention Program
CYTS	California Youth Tobacco Survey
FPL	Federal Poverty Level
LGBTQ+	Lesbian, Gay, Bisexual, Transgender, Queer, Questioning
NHPI	Native Hawaiian or Pacific Islander
NSUMHSS	National Substance Use and Mental Health Services Survey
MD	Maryland
Online CATS	Online California Adult Tobacco Survey
Proposition 31	Flavored Tobacco Products Ban Referendum of 2022
Proposition 56	California Healthcare, Research and Prevention Tobacco Tax Act of 2016
RTI	Research Triangle Institute
SAMHSA	Substance Abuse and Mental Health Services Administration
STPS	Synar Tobacco Purchase Survey
TNT	Teens Nicotine and Tobacco Survey
UCLA	University of California Los Angeles
U.S.	United States

Introduction

California is ready to end the tobacco epidemic. The state's comprehensive tobacco control program, a global leader for more than 30 years, begins its next chapter with a paradigm shift from trying to *control* the tobacco industry and the damage it inflicts to a new era of seeing an end to the tobacco epidemic. The program's new name, the California Tobacco Prevention Program (CTPP), reflects this change. CTPP's vision is to transform California by eradicating the tobacco industry's influence, and to end the damage tobacco products cause to the health and economic wellbeing of all Californians and the environment.

The tobacco industry has used predatory marketing to target California communities throughout its history. Californians have had enough. By passing Proposition 56 in 2016 and Proposition 31 in 2022, voters made clear their mandate for the state: prevent tobacco-industry targeted marketing, keep the industry's products out of the hands of youth and young adults, help people quit using tobacco, and ensure that all Californians can live, work, play, and learn in tobacco-free environments.

To empower communities to end the tobacco-industry created epidemic, CTPP launched an initiative to end the tobacco epidemic. This initiative has three overarching goals:

1. **End the tobacco use epidemic in California:** Empower Californians who use tobacco to quit, and vigorously counter industry strategies to retain current customers or addict replacement customers.
2. **Make all California communities tobacco free:** Ensure that all California communities are free from the sale of tobacco products, free from tobacco waste and free from exposure to secondhand and thirdhand smoke.
3. **Eliminate the tobacco industry's influence in California:** End California's role in financially sustaining the tobacco industry, remove the industry's ability to market to Californians, undo the tobacco industry's influence in past policy decisions, and stop its further interference in California's laws.

As part of its ongoing commitment to eliminate the health disparities caused by the tobacco industry, in 2023 CTPP funded [20 local projects](#) to work in communities that are disproportionately targeted by the tobacco industry (known as "priority populations"). The [Tobacco-Related Disparity Indicators Dashboard](#) tracks and monitors California's progress in reducing 17 tobacco-related disparity indicators among CTPP's priority populations.

The 2023 Tobacco Facts and Figures report highlights progress made toward California's goals to create tobacco-free communities, promote tobacco use prevention and cessation, and end tobacco industry influence. CTPP is committed to keeping equity at the forefront as we strive to improve the health and wellbeing of all Californians.

/s/ Gordon Sloss
Gordon Sloss, MPA
Chief, California Tobacco Prevention Program

End the Tobacco Use Epidemic in California

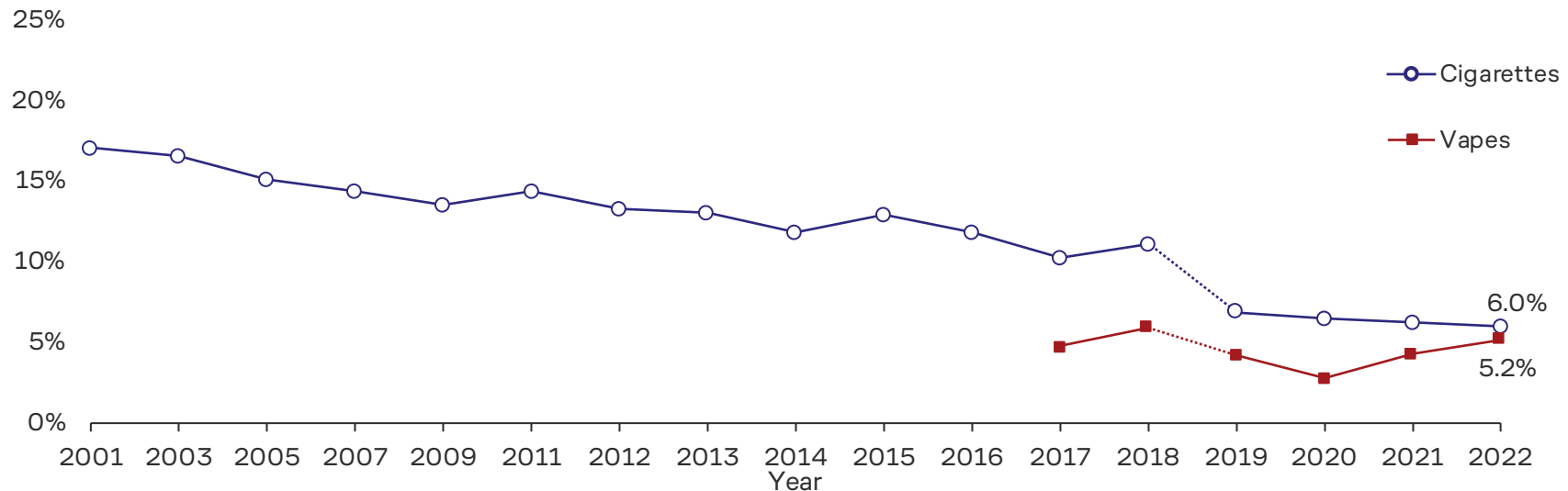
Empower Californians who use tobacco to quit, and vigorously counter industry strategies aimed at retaining current customers or addicting replacement customers.

Tobacco Product Use

Adult Tobacco Product Use

Fewer adults are smoking cigarettes than ever before; however, vaping has increased over the past year, returning to pre-COVID-19 pandemic levels (Figure 1). In 2022, 6.0% (1.8 million) of California adults reported current cigarette smoking and 5.2% (1.4 million) reported current vape use. Current tobacco use in this report is the use of any tobacco product in the past 30 days.

Figure 1. Current cigarette smoking and current vaping among adults aged ≥18 years—California Health Interview Survey, 2001 to 2022

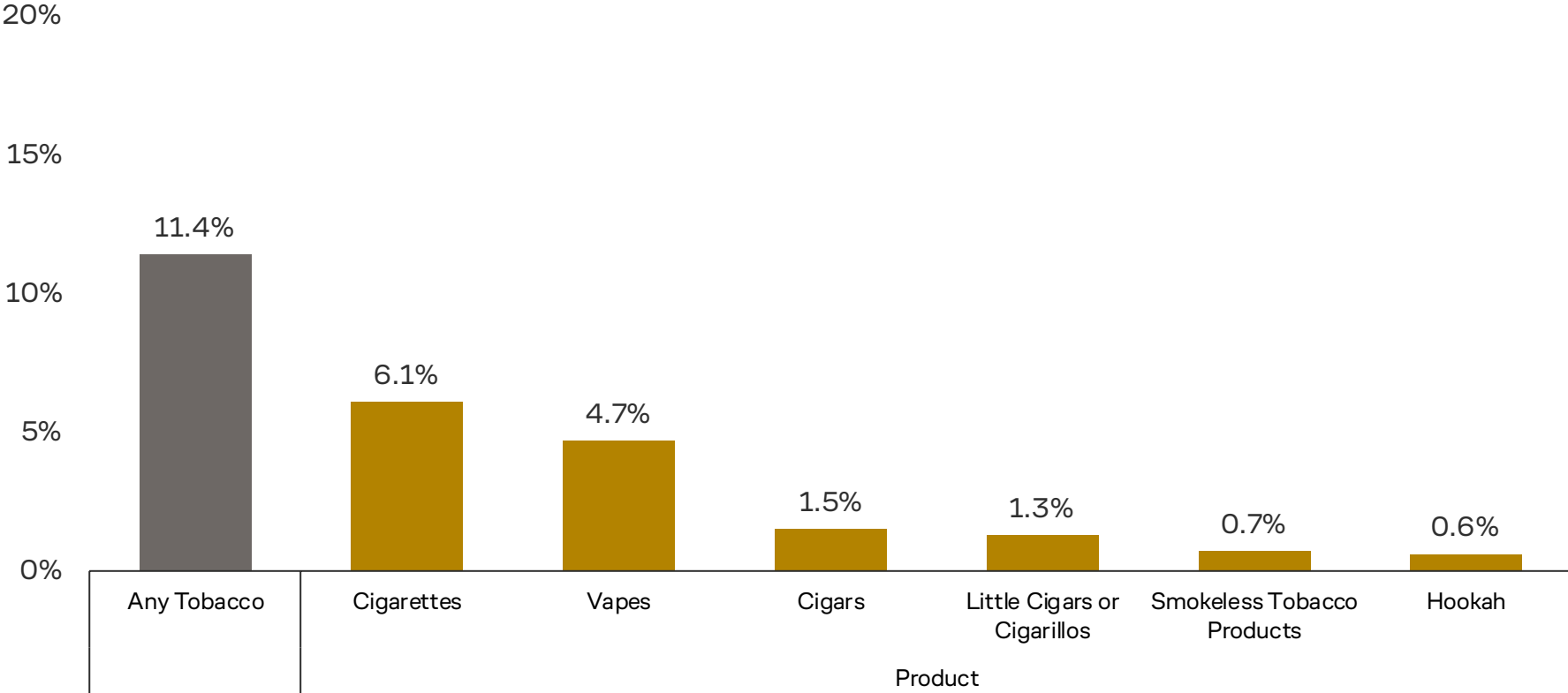


The dotted lines indicate a break in trend due to a methodology change. Prior to 2019, the survey was administered via computer-assisted telephone interview. Since 2019, the survey was administered via computer-assisted web interview and computer-assisted telephone interview. This methodology change significantly impacted cigarette smoking rates. Current vape use was first collected of all adults in 2017. See [Additional Notes](#) section for more information.

Source: California Health Interview Survey. CHIS 2001 to CHIS 2022 Adult Files. Los Angeles, CA: UCLA Center for Health Policy Research; October 2023.

Cigarettes are the most used tobacco product by California adults, followed by vapes, big cigars, little cigars or cigarillos, smokeless tobacco products, and hookah (Figure 2). Overall, 11.4% of California adults (about 3.4 million adults) reported current use of any tobacco product.

Figure 2. Current tobacco use among adults aged ≥18 years, by product—California Health Interview Survey, 2021-22

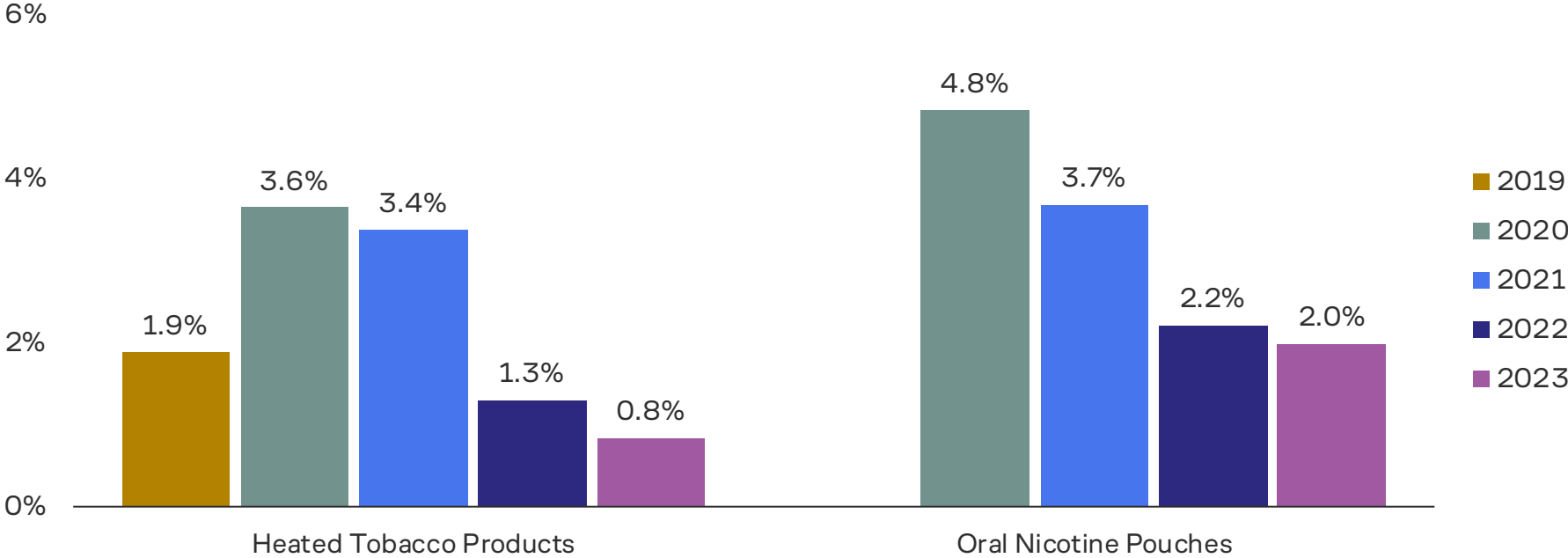


Tobacco use includes cigarettes, cigars, hookah, little cigars or cigarillos, smokeless tobacco products, or vapes. See [Additional Notes](#) section for more information.

Source: California Health Interview Survey. CHIS 2021 and CHIS 2022 Adult Files. Los Angeles, CA: UCLA Center for Health Policy Research; October 2023.

One step to ending the tobacco use epidemic is to monitor new products developed by the tobacco industry for adults (Figure 3). Two products that have been recently introduced by the tobacco industry are heated tobacco products and oral nicotine pouches.^{1,2} Heated tobacco products are devices that heat tobacco leaves to produce an inhalable aerosol. Oral nicotine pouches are pouches that are placed in the mouth and contain nicotine-containing powder. These pouches are often advertised as “tobacco-free,” although the nicotine powder may be derived from tobacco leaves.² Both heated tobacco products and oral nicotine pouches are not an approved method for smoking cessation by the U.S. Food and Drug Administration. In a survey among California adults, 0.8% reported using heated tobacco products in the past 30 days and 2.0% reported using oral nicotine pouches in the past 30 days in 2023.

Figure 3. Current emerging tobacco product use among adults aged 18 to 64 years—Online California Adult Tobacco Survey, 2019 to 2023

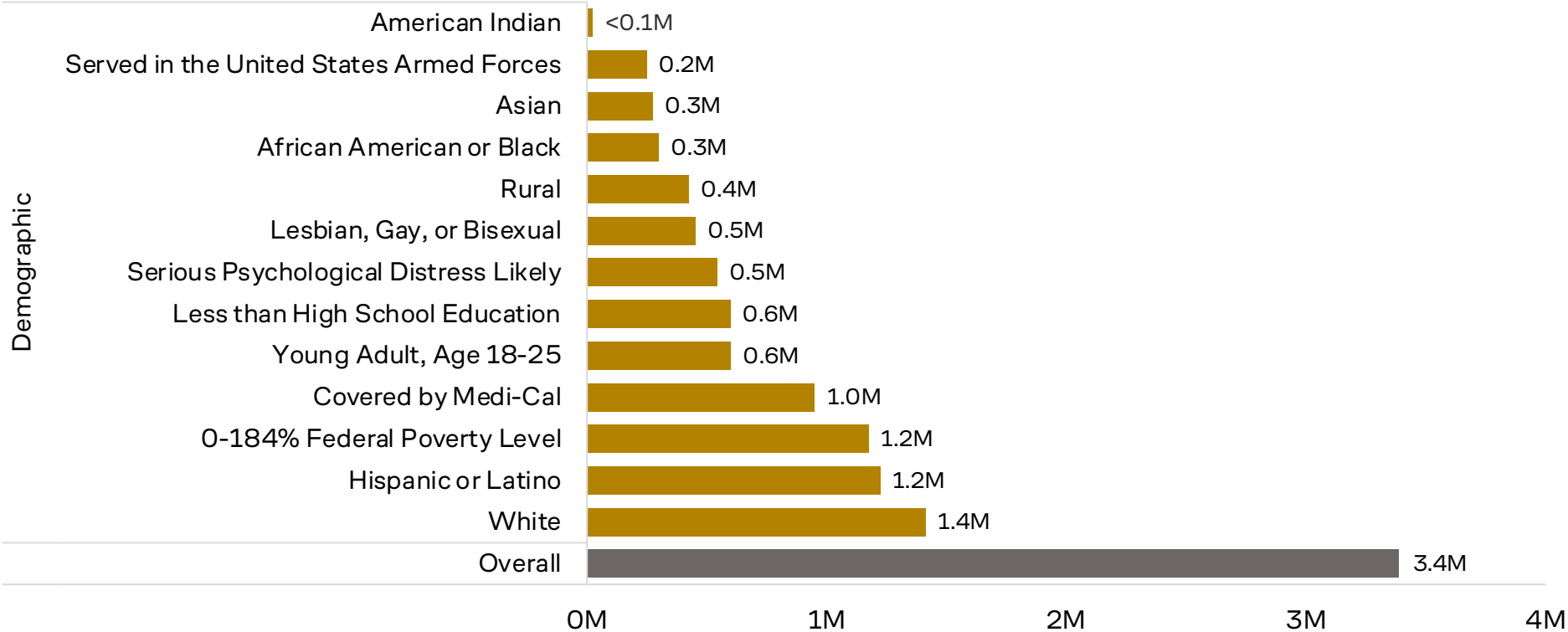


See [Additional Notes](#) section for more information.

Source: Online California Adult Tobacco Survey. Online CATS 2019-2023. Sacramento, CA: California Department of Public Health; January 2024.

Demographic data is an effective tool to inform and guide tobacco use prevention and cessation efforts, currently an estimated 3.4 million adults reported current tobacco use in California (Figure 4). Although Hispanic or Latino adults had a current tobacco use rate of 11.1% (Figure 7), Hispanic or Latino adults made up 36.1% (1.2 million) of all adults who reported current use of tobacco. This shows that despite a lower rate, tobacco use is a significant burden within the Hispanic or Latino population.

Figure 4. Number of adults ≥18 years who reported current tobacco use—California Health Interview Survey, 2021-22

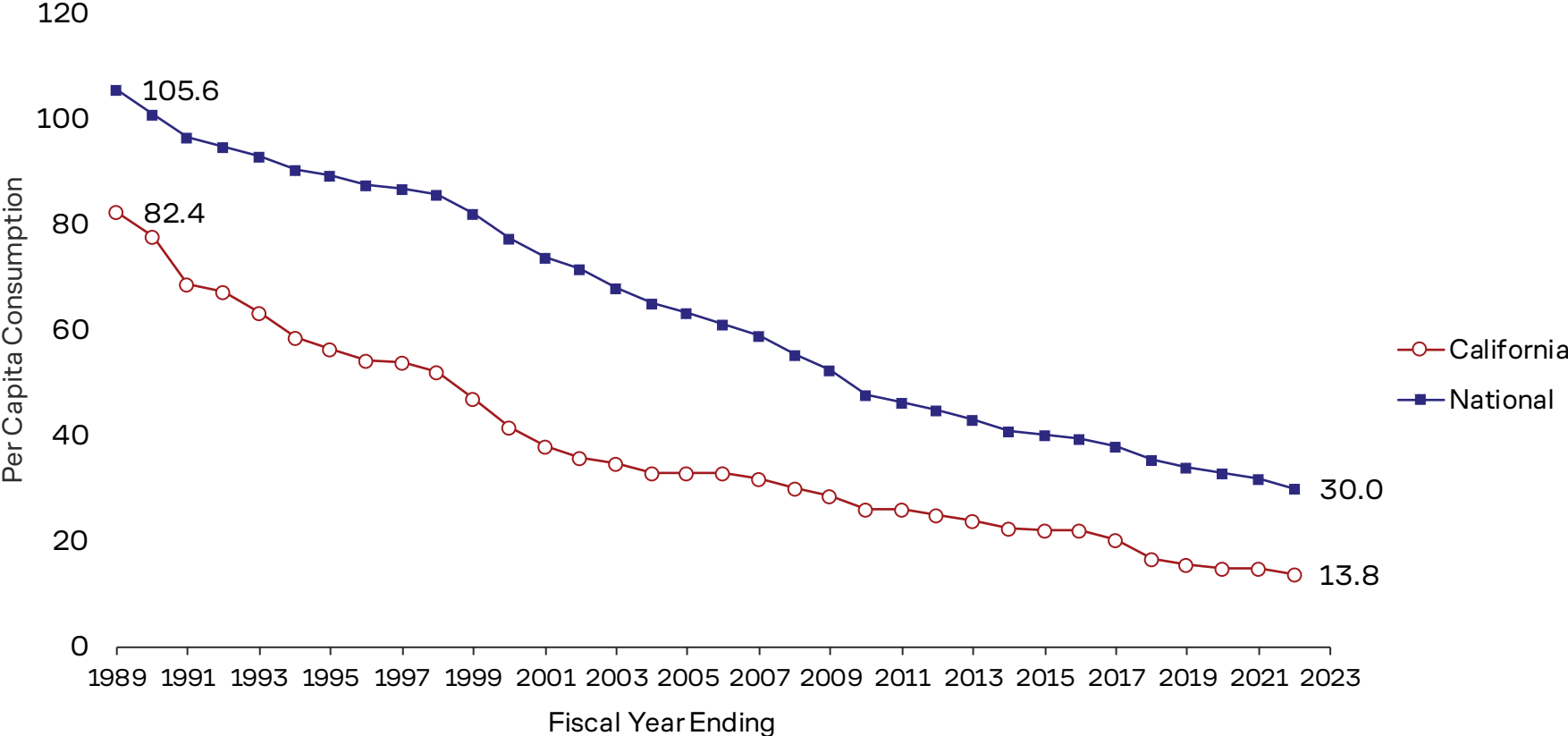


Tobacco use includes cigarettes, cigars, hookah, little cigars or cigarillos, smokeless tobacco products, or vapes. Racial groups include only non-Hispanic or Latino of a single race unless otherwise noted. Hispanic or Latino includes all racial groups. See [Additional Notes](#) section for more information.

Source: California Health Interview Survey. CHIS 2021 and CHIS 2022 Adult Files. Los Angeles, CA: UCLA Center for Health Policy Research; October 2023.

Cigarette consumption data is one tool to evaluate the effects of tobacco prevention policies (Figure 5). California saw a larger decline in cigarette consumption per capita occurring in years after increases in the cigarette excise tax (1989 and 2016). Between 1989 and 2022, the per capita cigarette pack consumption decreased by 83.3% in California (from 82.4 to 13.8) compared to 71.6% nationally (from 105.6 to 30.0).

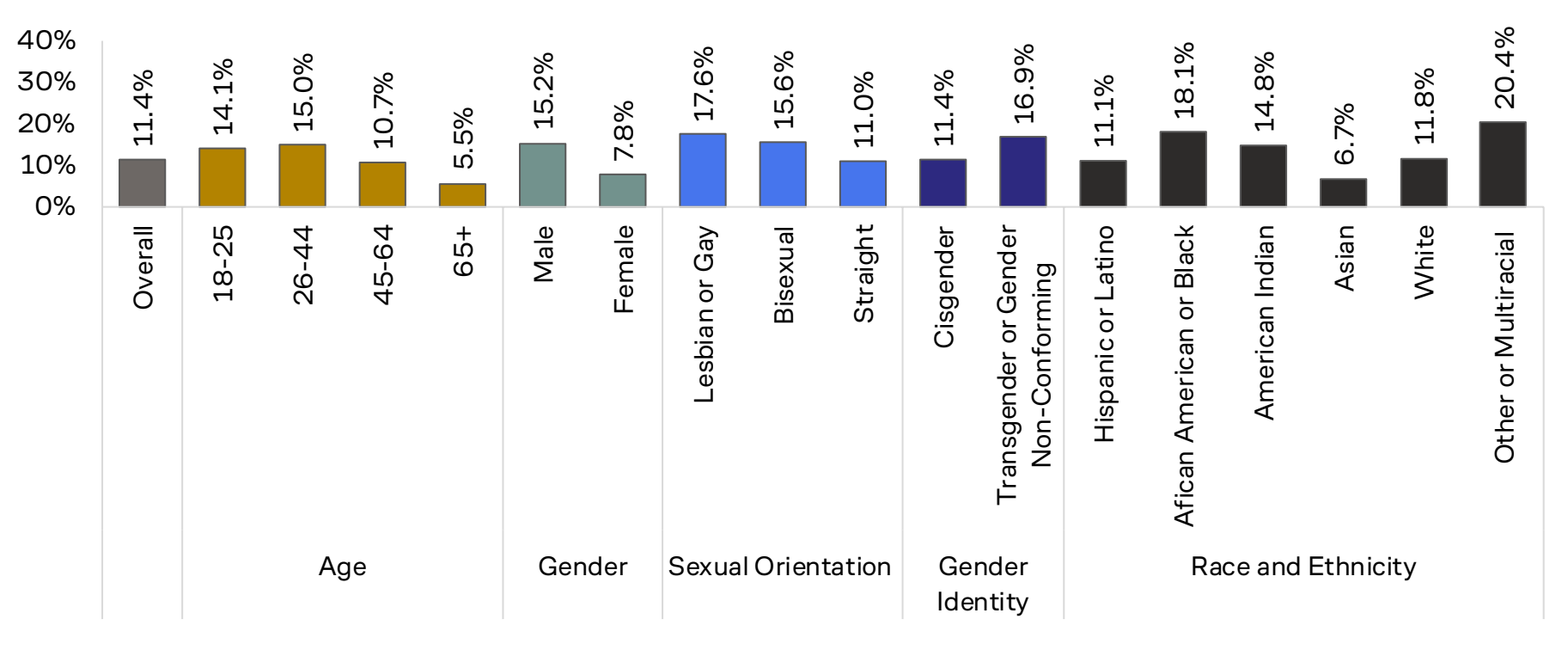
Figure 5. Per capita cigarette pack consumption—Fiscal Year 1988-89 to Fiscal Year 2021-22



Source: Orzechowski and Walker. The Tax Burden on Tobacco: Historical Compilation, Volume 57, 2022.

An important factor to ending the tobacco epidemic is by monitoring tobacco use. Among California adults, the overall current tobacco use rate is 11.4% and those categorized as other or multiracial had among the highest current tobacco use rate of 20.4% (Figure 6).

Figure 6. Current tobacco use among adults aged ≥18 years, by age, gender, sexual orientation, gender identity, and race and ethnicity —California Health Interview Survey, 2021-22

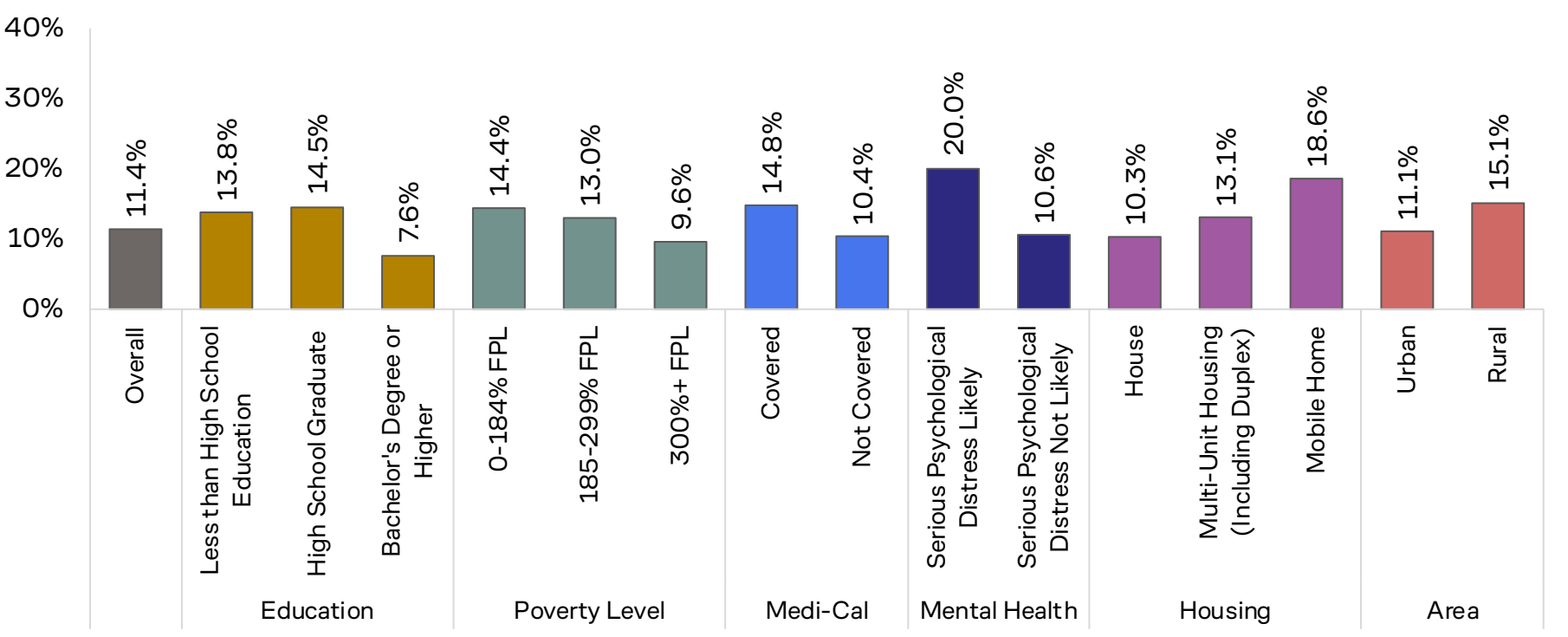


Tobacco use includes cigarettes, cigars, hookah, little cigars or cigarillos, smokeless tobacco products, or vapes. Racial groups include only non-Hispanic or Latino of a single race unless otherwise noted. Hispanic or Latino includes all racial groups. See [Additional Notes](#) section for more information.

Source: California Health Interview Survey. CHIS 2021 and CHIS 2022 Adult Files. Los Angeles, CA: UCLA Center for Health Policy Research; October 2023.

Demographic data can help provide a basis for understanding communities as well as highlighting disparities, especially in tobacco use across multiple groups defined by age, gender, sexual orientation, gender identity, race and ethnicity, educational attainment, poverty level, Medi-Cal coverage, mental health status, housing, and geographical area (Figures 6 and 7). Those with a serious psychological distress had a current tobacco use rate of 20.0% (Figure 7).

Figure 7. Current tobacco use among adults aged ≥18 years, by education, poverty level, Medi-Cal coverage, mental health, housing, and area—California Health Interview Survey, 2021-22



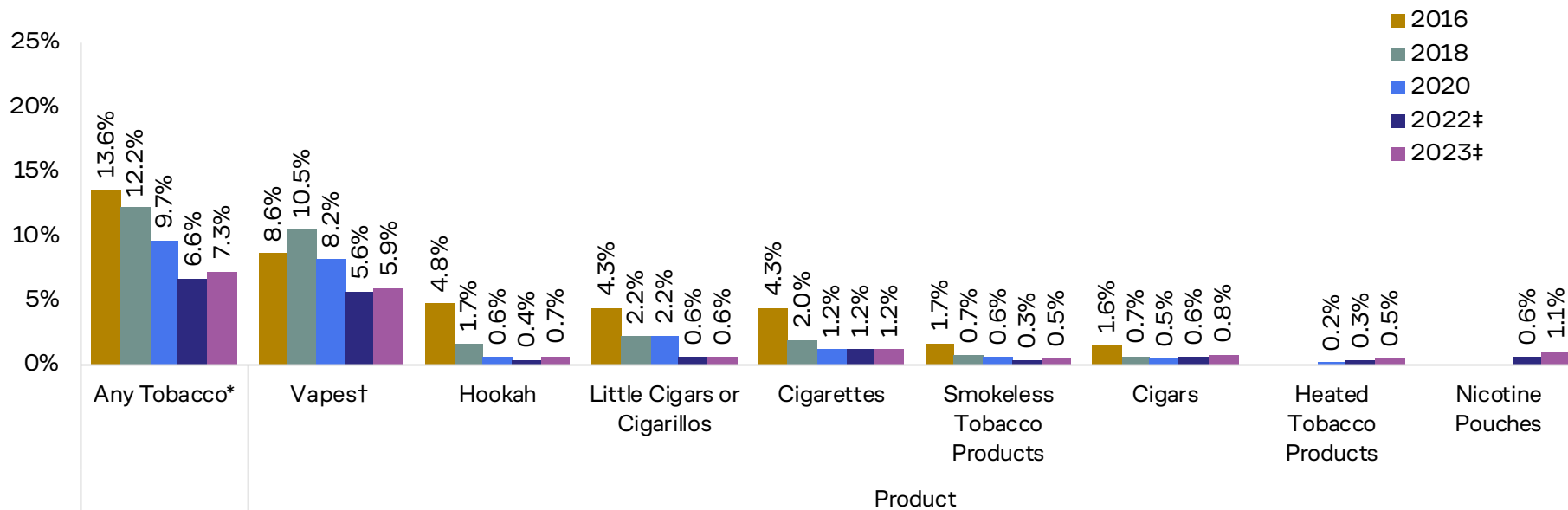
Abbreviations: FPL, federal poverty level. Tobacco use includes cigarettes, cigars, hookah, little cigars or cigarillos, smokeless tobacco products, or vapes. See [Additional Notes](#) section for more information.

Source: California Health Interview Survey. CHIS 2021 and CHIS 2022 Adult Files. Los Angeles, CA: UCLA Center for Health Policy Research; October 2023.

Youth Tobacco Product Use

Tobacco use among youth has declined since 2016. However, in California, a slight increase was observed in any tobacco use between 2022 and 2023 among high school students (Figure 8). Overall tobacco use was 7.3% among high school youth in 2023. Vapes were the most common tobacco product used among California high school youth, with 5.9% of high school youth vaping in 2023.

Figure 8. Current tobacco use among high school students, by product—California Youth Tobacco Survey, 2016 to 2023



Tobacco use includes cigarettes, cigars, heated tobacco products (2020 and 2022 only), hookah, kreteks (2016 only, data not shown), little cigars or cigarillos, nicotine pouches (2022-2023 only), smokeless tobacco products, or vapes (nicotine or just flavoring). See [Additional Notes](#) section for more information.

*CTPP recommends that readers not compare the 2016-2023 tobacco use rates due to changes to the tobacco use definition. Data is shown only together for informational purposes.

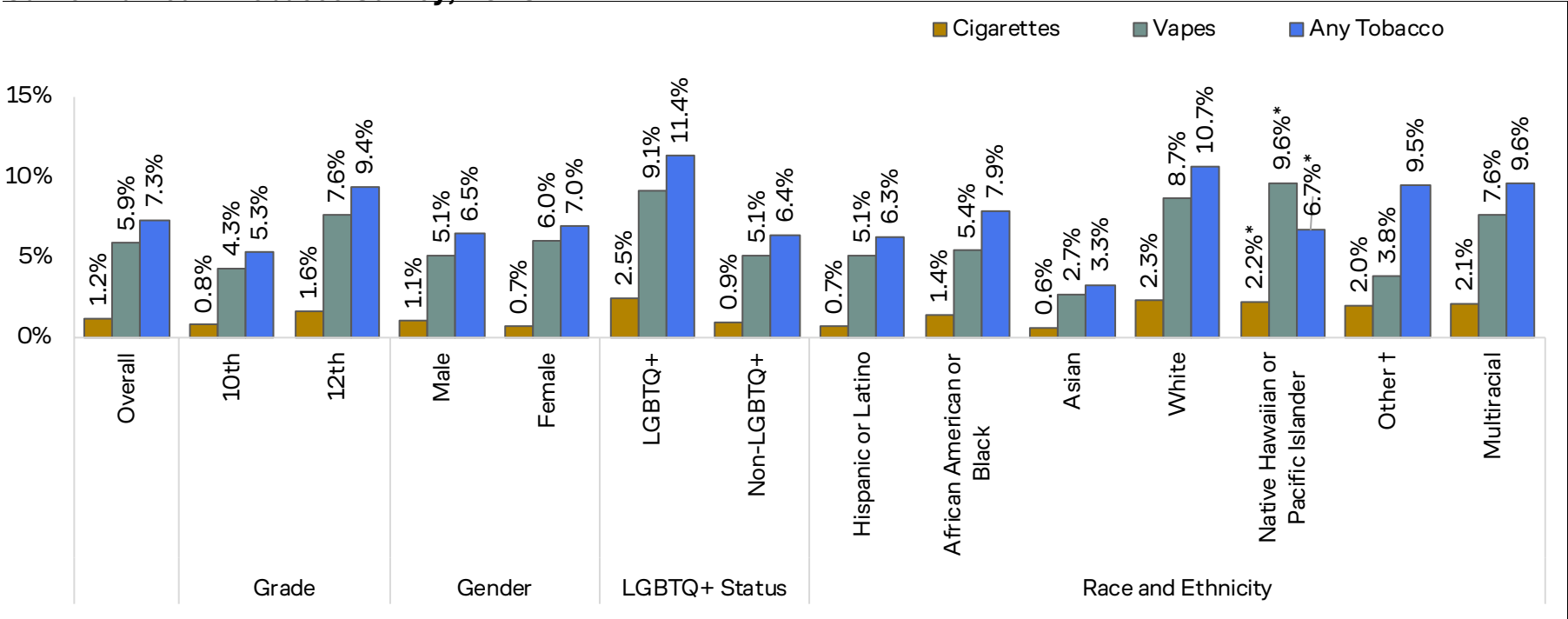
†CTPP recommends that readers not compare the 2016-2023 vape use rates due to changes to the question wording. Data is shown together only for informational purposes.

‡CTPP recommends that readers not compare the 2016-2020 data with the 2022-2023 data due a methodology change. Data is shown together only for informational purposes.

Source: [1] California Student Tobacco Survey. CSTS 2016 to CSTS 2020. San Diego, CA: University of California San Diego, Center for Research, and Intervention in Tobacco Control; 2021. [2] California Youth Tobacco Survey. CYTS 2023. Berkeley, CA: RTI International; 2024.

Tobacco use among youth is a major concern in California, driven by the popularity of vapes among this population (Figure 9). Current vape use among California high school students in 2023 was highest among Native Hawaiian or Pacific Islander (NHPI) youth at 9.6%. Current any tobacco use among California high school students in 2023 was highest among youth who identified with LGBTQ+ at 11.4%.

Figure 9. Current tobacco use among high school students, by grade, gender, LGBTQ+ status and race and ethnicity—California Youth Tobacco Survey, 2023



Tobacco use includes cigarettes, cigars, heated tobacco products, hookah, little cigars or cigarillos, nicotine pouches, smokeless tobacco products, or vapes (nicotine or just flavoring). Racial groups include only non-Hispanic or Latino of a single race unless otherwise noted. Hispanic or Latino includes all racial groups. See [Additional Notes](#) section for more information.

* Caution should be used as estimate is statistically unreliable.

† Other race and ethnicity includes American Indian and Native Hawaiian or Pacific Islander due to small sample sizes.

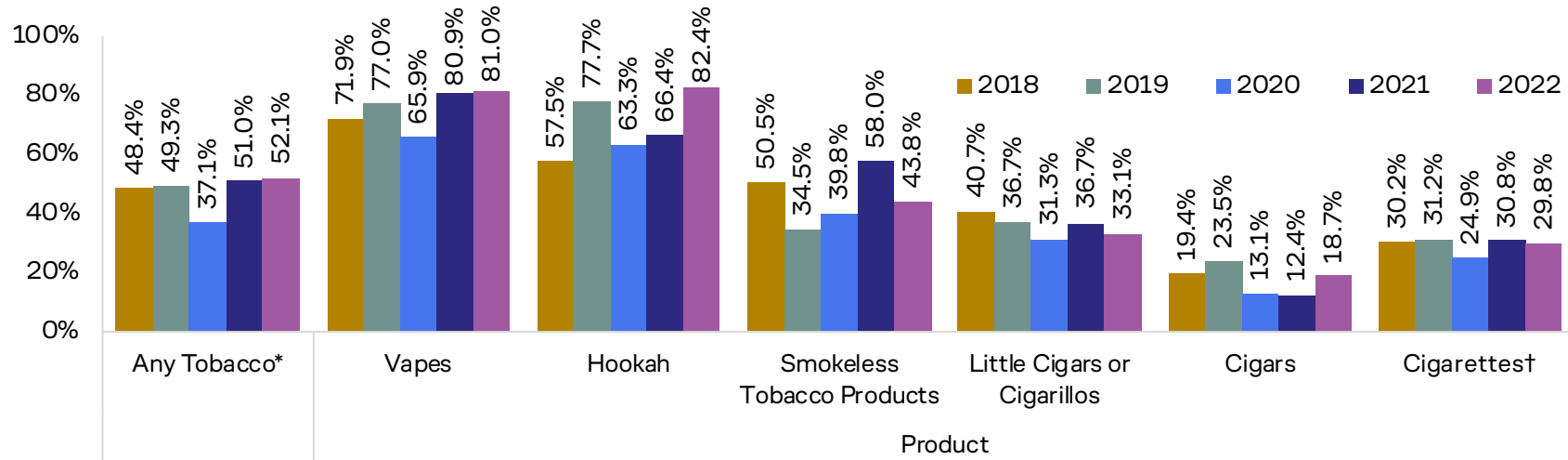
Source: California Youth Tobacco Survey. CYTS 2023. Berkeley, CA: RTI International; 2024.

Flavored Tobacco Product Use and Beliefs

Adult Flavored Tobacco Use

The use of flavored tobacco products has increased in recent years, with 52.1% of California adults used flavored tobacco products in 2022 (Figure 10). Flavored tobacco use was highest among those who vaped (81.0%) or used hookah (82.4%) in 2022. Effective December 21, 2022, California Senate Bill (SB) 793 prohibits retailers from selling most flavored tobacco products, including mint and menthol flavors, in the state of California.³ This flavor ban may affect use of these products in the future; the current data by itself cannot evaluate the effects of SB 793.

Figure 10. Flavored tobacco use among adults aged ≥18 years who currently use tobacco, by product—California Health Interview Survey, 2018 to 2022



Tobacco use includes cigarettes, cigars, hookah, little cigars or cigarillos, smokeless tobacco products, or vapes. Flavored cigarette use refers to menthol cigarette use. See [Additional Notes](#) section for more information.

* CTPP recommends that readers not compare the 2018-2020 flavored tobacco use rates with the 2021 flavored tobacco use rates due to changes to the menthol cigarette use definition. Menthol cigarette use rates changed from usual use to any use. Data is shown together only for informational purposes.

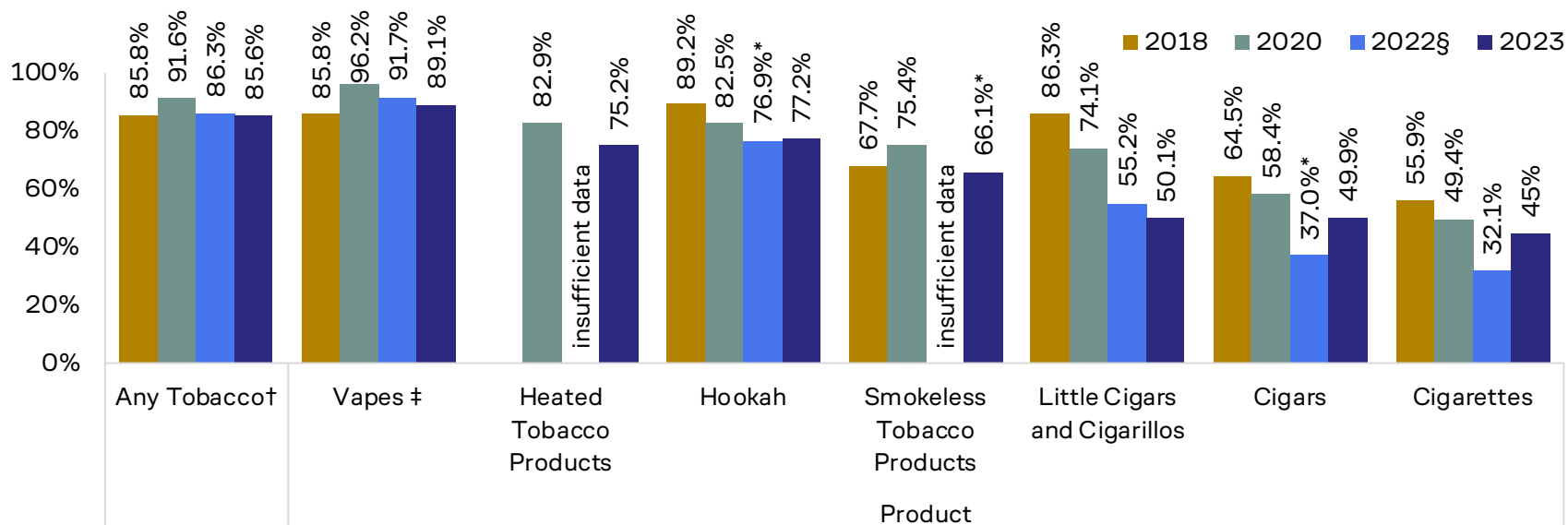
† CTPP recommends that readers not compare the 2018-2020 menthol cigarette use rates with the 2021 menthol cigarette use rates due to changes to the menthol cigarette use definition. Menthol cigarette use rates changed from usual use to any use. Data is shown together only for informational purposes.

Source: California Health Interview Survey. CHIS 2018 to CHIS 2022 Adult Files. Los Angeles, CA: UCLA Center for Health Policy Research; October 2023.

Youth Flavored Tobacco Use

Flavors mask the harshness of the tobacco products which make them more addictive and harder to quit.^{4,5} Use of flavored vapes and smokeless tobacco among California high school students increased between 2018 and 2020 (Figure 11), while use of flavored hookah, cigarettes, little cigars or cigarillos, and big cigars decreased over the same period. Use of flavored vapes, hookah, cigarettes, little cigars or cigarillos, and big cigars decreased between 2020 and 2023.

Figure 11. Flavored tobacco use among high school students who currently use tobacco, by product—California Youth Tobacco Survey, 2018 to 2023



Tobacco use includes cigarettes, vapes (nicotine or just flavoring), smokeless tobacco products, little cigars or cigarillos, cigars, hookah, heated tobacco products (2020 and 2022 only) or nicotine pouches (2022 and 2023 only). Flavored cigarette use refers to menthol cigarette use. See [Additional Notes](#) section for more information.

* Caution should be used as estimate is statistically unreliable.

† CTPP recommends that readers not compare the 2018-2023 flavored tobacco use rates due to changes to the tobacco use definition. Data is show together only for informational purposes.

‡ CTPP recommends that readers not compare the 2018-2023 flavored vape use rates due to changes to the question wording. Data is show together only for informational purposes.

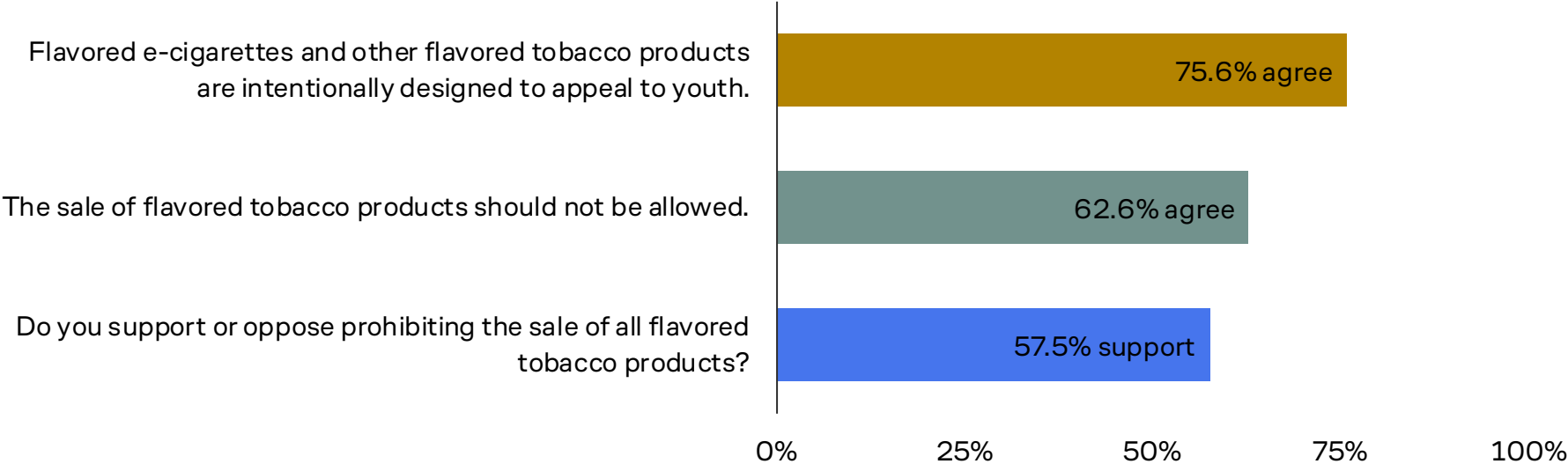
§ CTPP recommends that readers not compare the 2018-2020 data with the 2023 data due to changes to the question wording and due to a 2022 methodology change. Data is shown together only for informational purposes.

Source: [1] California Student Tobacco Survey. CSTS 2018 to CSTS 2020. San Diego, CA: University of California San Diego, Center for Research and Intervention in Tobacco Control; 2021. [2] California Youth Tobacco Survey. CYTS 2022 to CYTS 2023. Berkeley, CA: RTI International; 2024.

Adult Beliefs About Flavored Tobacco Products

Flavored tobacco products pose a public health risk as the products appeal to youth.⁶ A majority of Californians agreed with voters passing Proposition 31 that upheld California SB 793.³ In 2023, most Californian adults agreed that flavored tobacco products are intentionally designed to appeal to youth (75.6%) and that the sale of flavored tobacco should not be allowed (62.6%) (Figure 12).

Figure 12. Beliefs on flavored tobacco products among adults aged 18 to 64 years—Online California Adult Tobacco Survey, 2023



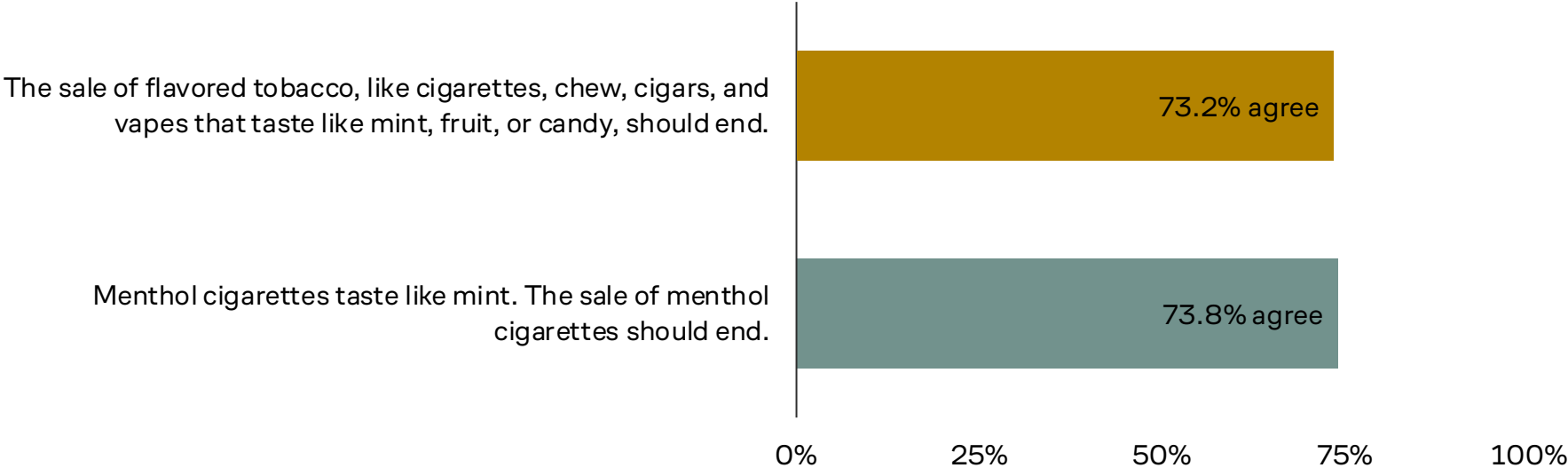
Response options of “agree” (or “support”) and “strongly agree” (or “strongly support”) were combined. See [Additional Notes](#) section for more information.

Source: Online California Adult Tobacco Survey. Online CATS 2023. Sacramento, CA: California Department of Public Health; January 2024.

Youth Beliefs About Flavored Tobacco Products

Flavors play an important role in addicting youth and young adults.⁶ In 2023, a majority of California youth supported statements calling for the sale of flavored tobacco products to end (73.2%) and the sale of menthol cigarettes to end (73.8%) (Figure 13).

Figure 13. Beliefs on flavored tobacco products among high school students—Teens Nicotine and Tobacco Survey, 2023



Response options of “I strongly agree” and “I agree” were combined.

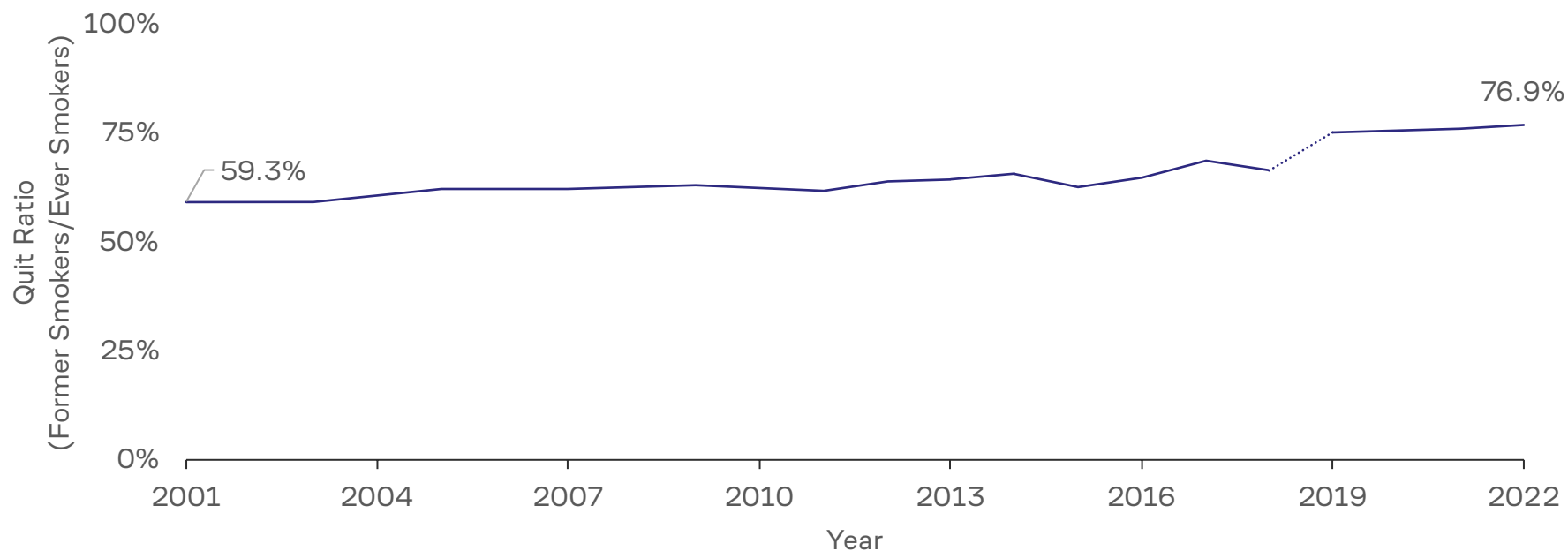
Source: Teens Nicotine and Tobacco Survey. TNT 2023. San Francisco, CA: University of California San Francisco; 2024.

Tobacco Cessation and Health

Adult Cessation

Smoking has many adverse health effects and smoking cessation (to quit smoking) reduces the risk of premature death, improves health, and enhances quality of life.⁷ California tracks successful cigarette cessation through measuring the percentage of ever smokers who have quit smoking cigarettes. This “quit ratio” is defined by calculating the percentage of California adults who have successfully quit smoking over who ever smoked cigarettes (Figure 14). The quit ratio among California adults has slowly increased over the past decade. In 2022, the quit ratio was at 76.9%.

Figure 14. Percentage of ever cigarette adult smokers aged ≥18 years who have quit smoking (quit ratio)—California Health Interview Survey, 2001 to 2022

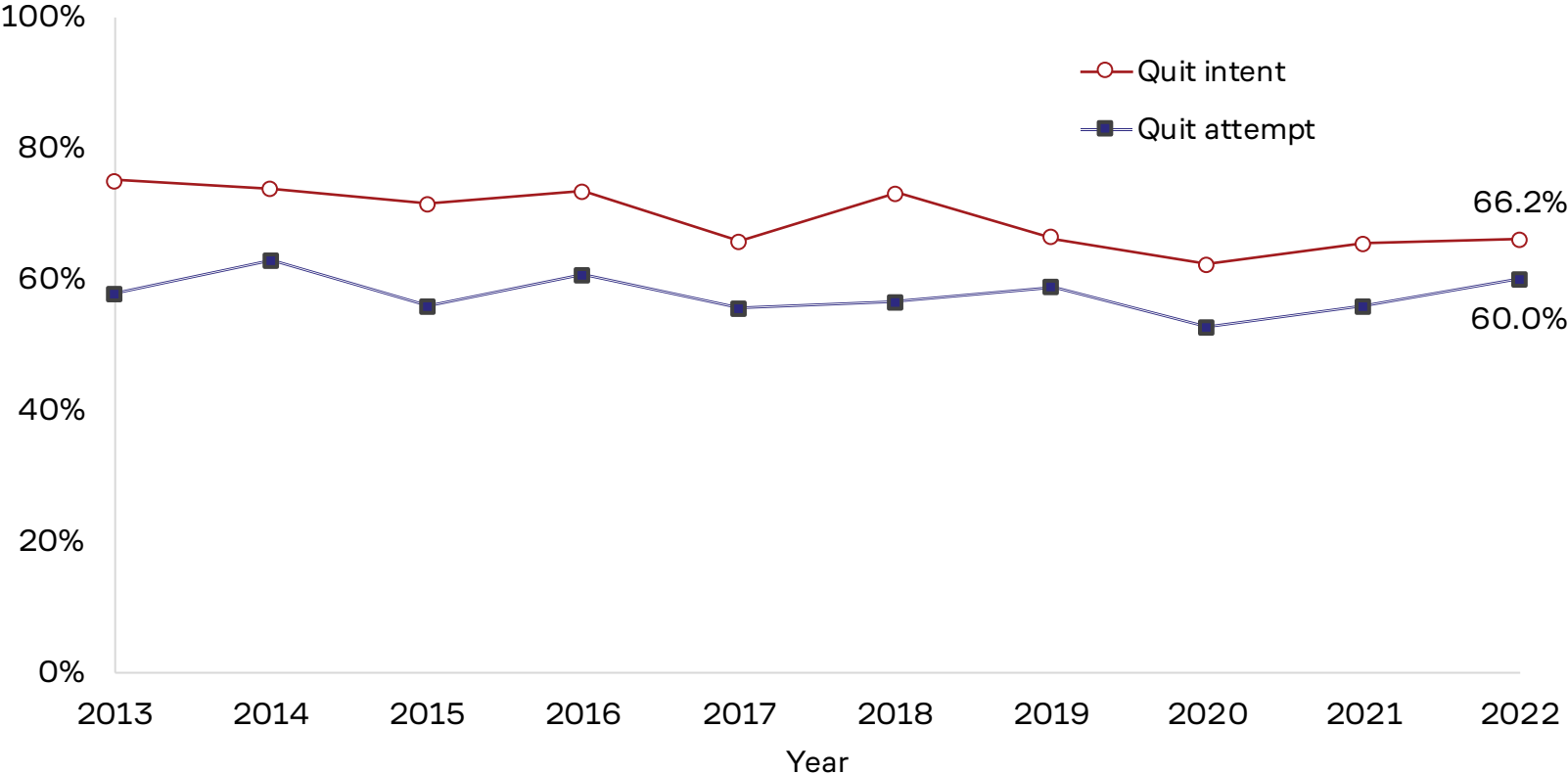


The dotted line indicates a break in trend due to a methodology change. Prior to 2019, the survey was administered via computer-assisted telephone interview. Since 2019, the survey was administered via computer-assisted web interview and computer-assisted telephone interview. This methodology change significantly impacted cigarette smoking rates. See [Additional Notes](#) section for more information.

Source: UCLA Center for Health Policy Research. AskCHIS 2001-2022. Smoking status – current, former, never. Accessed February 9, 2024. <https://ask.chis.ucla.edu/>

The intention to quit smoking is a precursor to subsequent quitting attempts or smoking cessation.^{8,9} Cigarette quit intents have decreased or remained constant over the past several years among adults who currently smoke cigarettes (Figure 15). Approximately two out of three (66.2%) adults who currently smoke cigarettes reported an intent to quit smoking cigarettes in the next six months in 2022. Cigarette quit attempts has seen a slight increase in 2022 with 60.0% of adults who stopped smoking one or more days in the past year.

Figure 15. Cigarette quit intent and quit attempt among adults aged ≥18 years who currently smoke cigarettes—California Health Interview Survey, 2013 to 2022



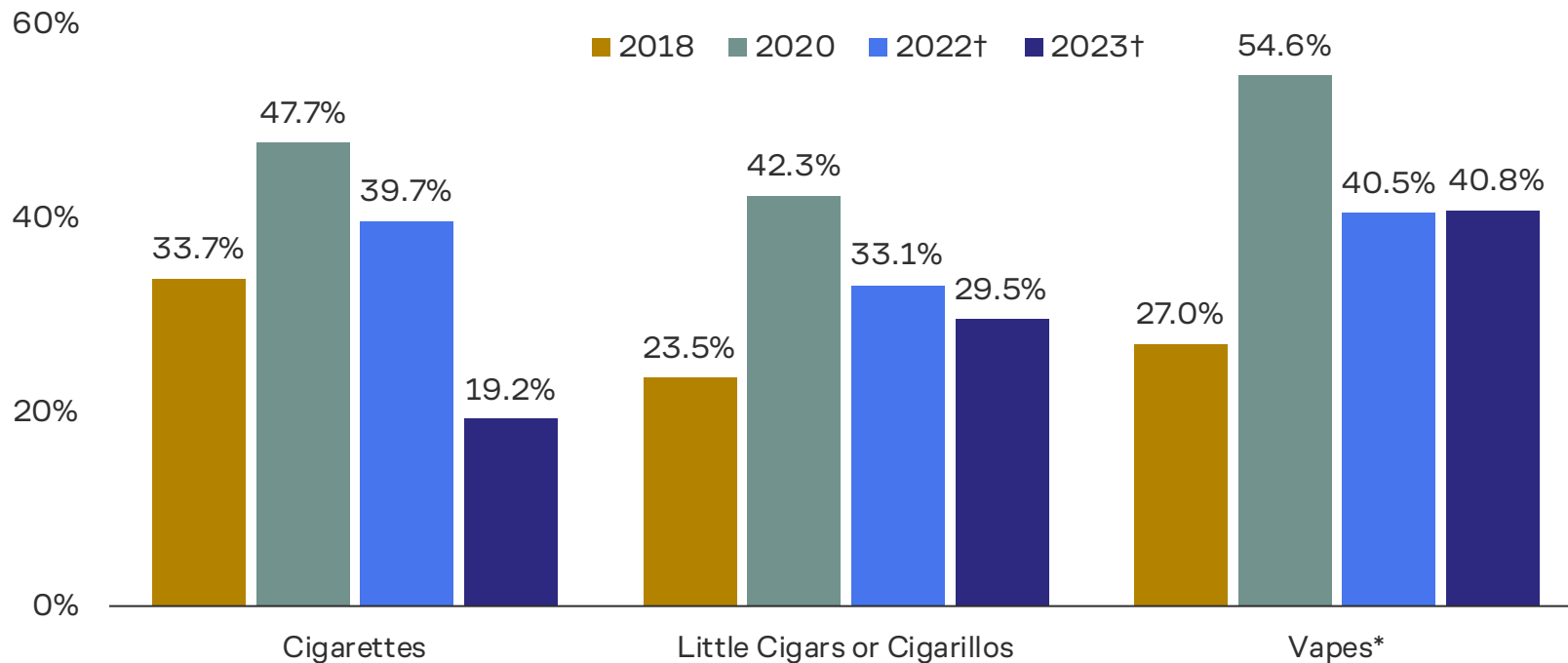
Cigarette quit intent is intent to quit smoking cigarettes in the next six months. Cigarette quit attempt is an attempt to quit smoking cigarettes for one day or longer in the past 12 months. See [Additional Notes](#) section for more information.

Source: California Health Interview Survey. CHIS 2013 to CHIS 2022 Adult Files. Los Angeles, CA: UCLA Center for Health Policy Research; October 2023.

Youth Cessation

Using tobacco products during adolescence can cause significant health problems and one of the most important actions young people can take is to quit tobacco use.¹⁰ Roughly 41% of high school students reported attempting to quit vaping in the last 12 months (Figure 16), while 29.5% attempted to quit little cigars or cigarillos, and 19.2% attempted to quit cigarettes in 2023.

Figure 16. Quit attempt among high school students who currently use tobacco, by product—California Youth Tobacco Survey, 2018 to 2023



Quit attempt is an attempt to quit in the past 12 months. See [Additional Notes](#) section for more information.

* CTPP recommends that readers not compare the 2018-2023 vape quit attempt rates due to changes to the question wording for vape use. Data is shown together only for informational purposes.

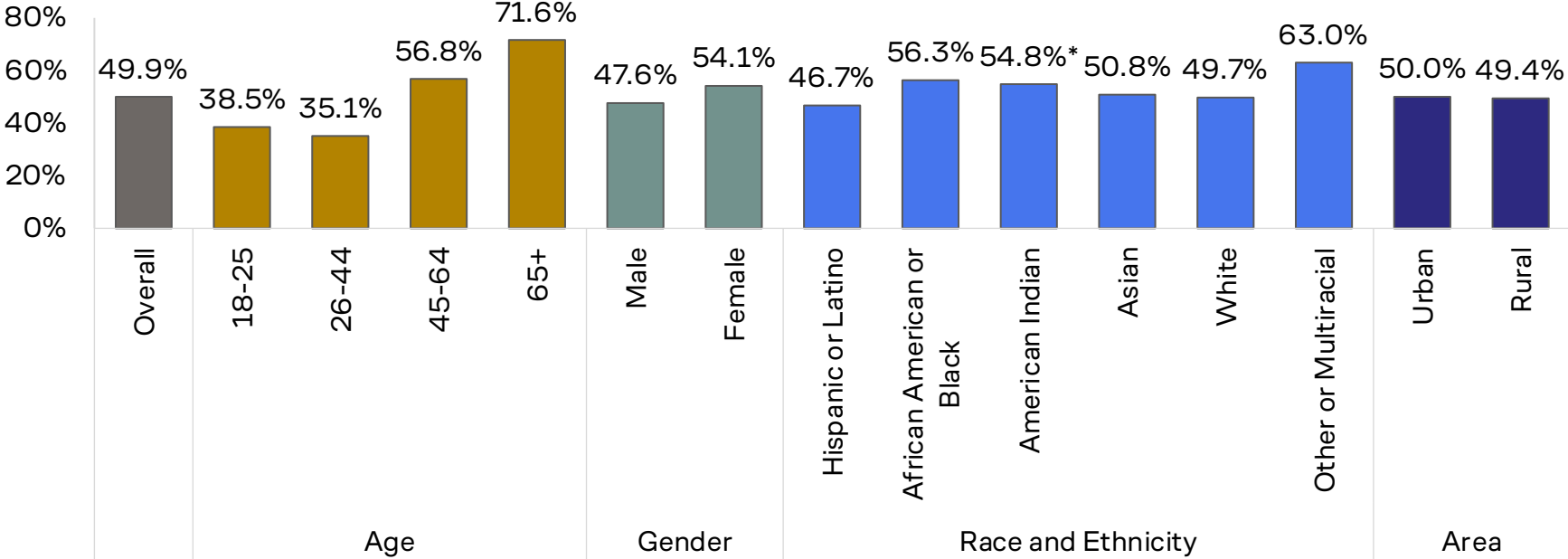
† CTPP recommends that readers not compare the 2018-2020 data with the 2022-2023 data due to a 2022 methodology change. Data is shown together only for informational purposes.

Source: [1] California Student Tobacco Survey. CSTS 2016 to CSTS 2020. San Diego, CA: University of California San Diego, Center for Research and Intervention in Tobacco Control; 2021. [2] California Youth Tobacco Survey. CYTS 2022 to CYTS 2023. Berkeley, CA: RTI International; 2024.

Cessation Referral

Healthcare providers can play a key part in helping adults quit smoking.^{11,12} Among California adults who reported current cigarette use, only 46.7% of Hispanics and 49.7% of Whites were advised to quit smoking (Figure 17).

Figure 17. Advised by the healthcare providers to quit smoking cigarettes among adults aged ≥18 years who currently smoke cigarettes, by age, gender, race and ethnicity, and area—California Health Interview Survey, 2022



See [Additional Notes](#) section for more information.

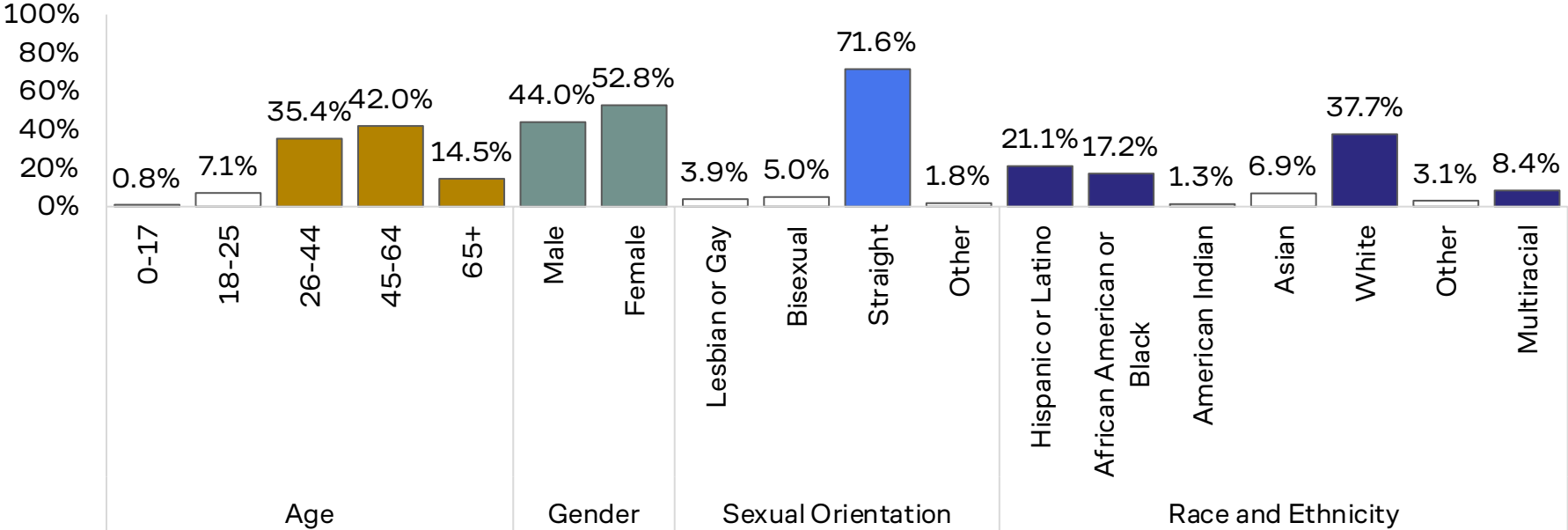
* Caution should be used as estimate is statistically unreliable.

Source: UCLA Center for Health Policy Research. AskCHIS 2022. Health professional gave advice to quit smoking. Accessed January 13, 2023. <https://ask.chis.ucla.edu/>

Cessation Support

Tobacco use is the leading cause of preventable death and disease in the U.S.,¹⁰ making it critically important that prevention and cessation programs are available to help people break their tobacco addiction for good.¹³ Kick It California is a free cessation program, offering cessation services by telephone, web, text messaging, chat sessions, and through a mobile app. Among the 21,500 California residents who utilized Kick It California services via telephone and web in 2023, 42.0% were between the age of 45 and 64, 52.8% were female, 71.6% identified as straight, and 37.7% were White (Figure 18).

Figure 18. Demographic characteristics of callers and web users of Kick It California, by age, gender, sexual orientation, and race and ethnicity—Kick It California, 2023

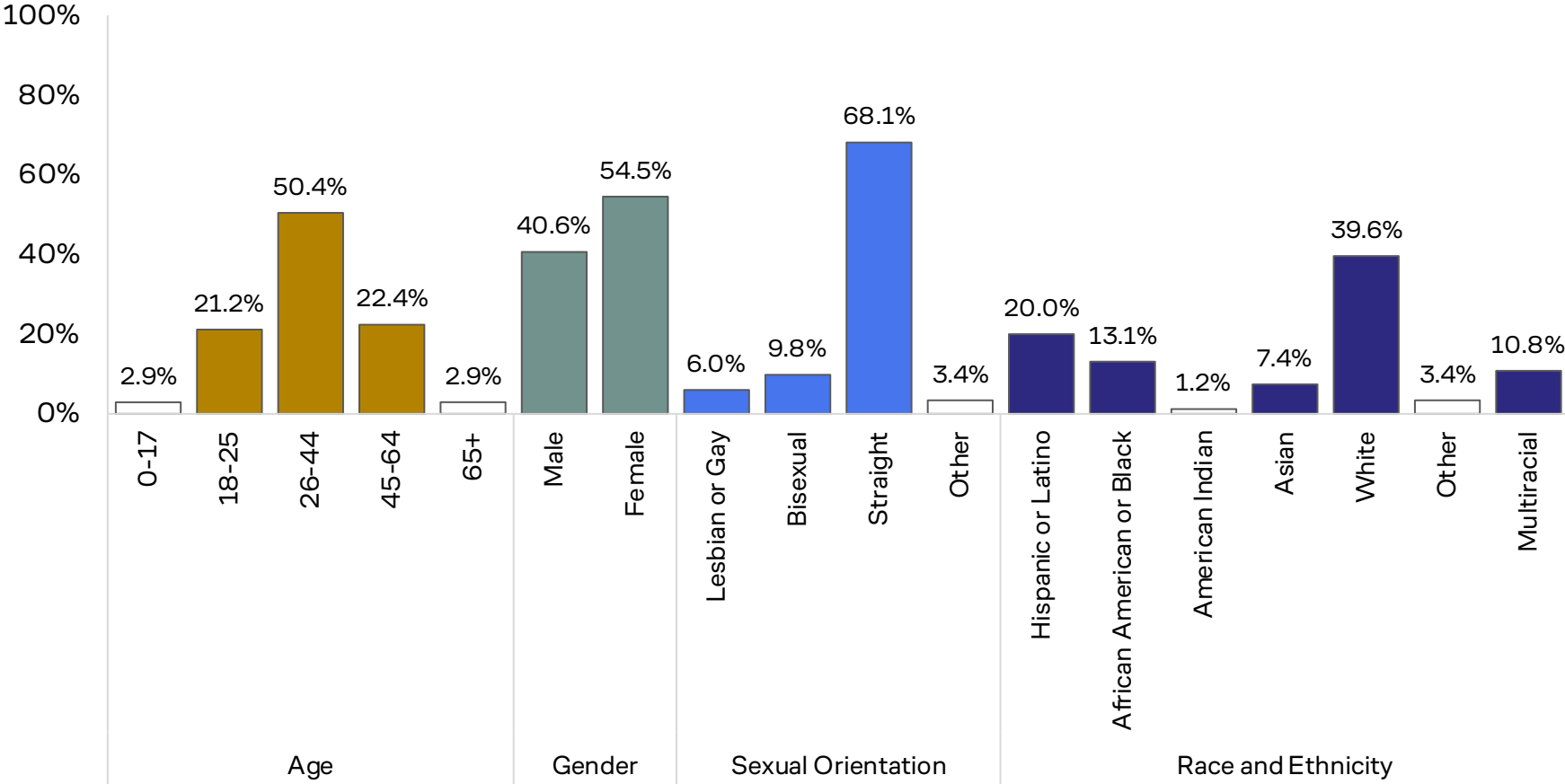


Racial groups include only non-Hispanic or Latino of a single race unless otherwise noted. Hispanic or Latino includes all racial groups. Did not include respondents who refused, responded don't know, not asked, missing or in another way.

Source: Helpline Caller Intake Reports, January-December 2023. San Diego, CA: Kick It California, University of California San Diego.

Kick It California has dedicated resources to help people who want to quit vaping. Among the approximately 5,000 California residents who utilized Kick It California services via telephone and web for help to quit vaping in 2023, 50.4% were between the age of 26 and 44, 54.5% were female, 68.1% identified as straight, and 39.6% were White (Figure 19).

Figure 19. Demographic characteristics of callers and web users of Kick It California for vaping cessation, by age, gender, sexual orientation, and race and ethnicity—Kick It California, 2023

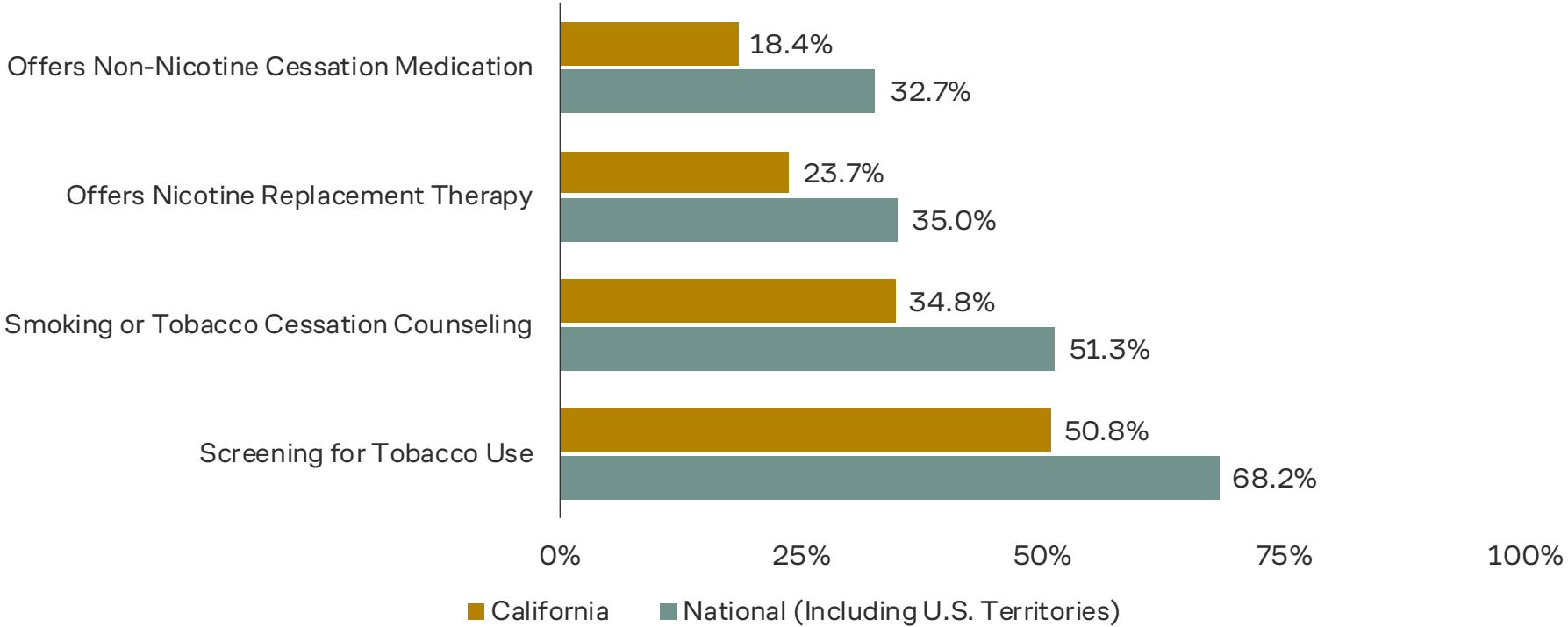


Racial groups include only non-Hispanic or Latino of a single race unless otherwise noted. Hispanic or Latino includes all racial groups. Did not include respondents who refused, responded don't know, not asked, missing or in another way.

Source: Helpline Caller Intake Reports, January-December 2023. San Diego, CA: Kick It California, University of California San Diego.

The most recent data available suggests California is lagging behind in implementing tobacco intervention and screening policies at mental health treatment facilities compared to national data (Figure 20). Only half (50.8%) of California’s mental health treatment facilities screened for tobacco use compared to 68.2% nationally.

Figure 20. Tobacco cessation intervention and tobacco screening policies among mental health treatment facilities—National Substance Use and Mental Health Services Survey, 2022

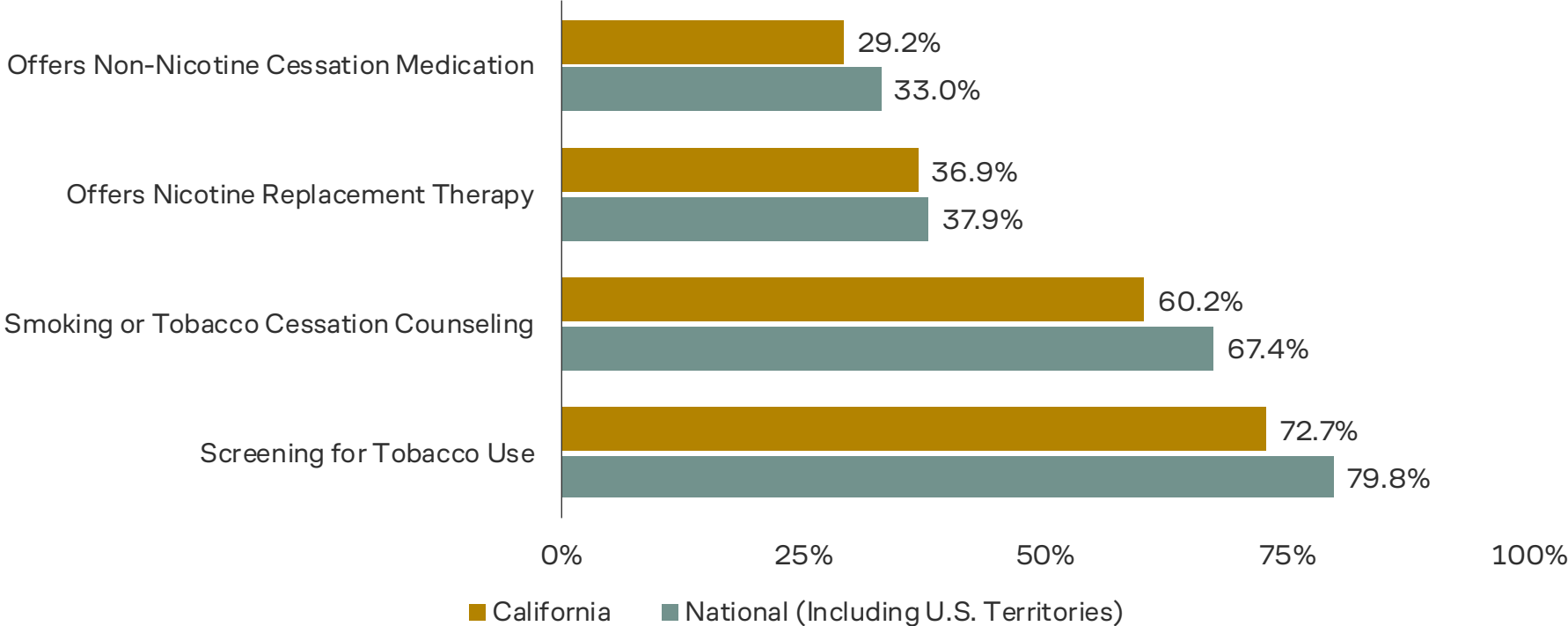


Facilities operated by federal agencies are included in the states in which the facilities are located. See [Additional Notes](#) section for more information.

Source: Substance Abuse and Mental Health Services Administration. National Substance Use and Mental Health Services Survey (N-SUMHSS), 2022: Annual Detailed Tables. SAMHSA publication PEP23-07-00-002. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration; 2023.

At substance abuse treatment facilities, California was also behind compared to national data in implementing tobacco intervention and screening policies (Figure 21). Only 60.2% of substance use treatment facilities in California offered smoking or tobacco cessation counseling compared to 67.4% nationally and only 72.7% screened for tobacco use compared to almost 80% nationally.

Figure 21. Tobacco cessation intervention and tobacco screening policies among substance use treatment facilities—National Substance Use and Mental Health Services Survey, 2022



Facilities operated by federal agencies are included in the states in which the facilities are located. See [Additional Notes](#) section for more information.

Source: Substance Abuse and Mental Health Services Administration. National Substance Use and Mental Health Services Survey (N-SUMHSS), 2022: Annual Detailed Tables. SAMHSA publication PEP23-07-00-002. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration; 2023.

Make All California Communities Tobacco-Free

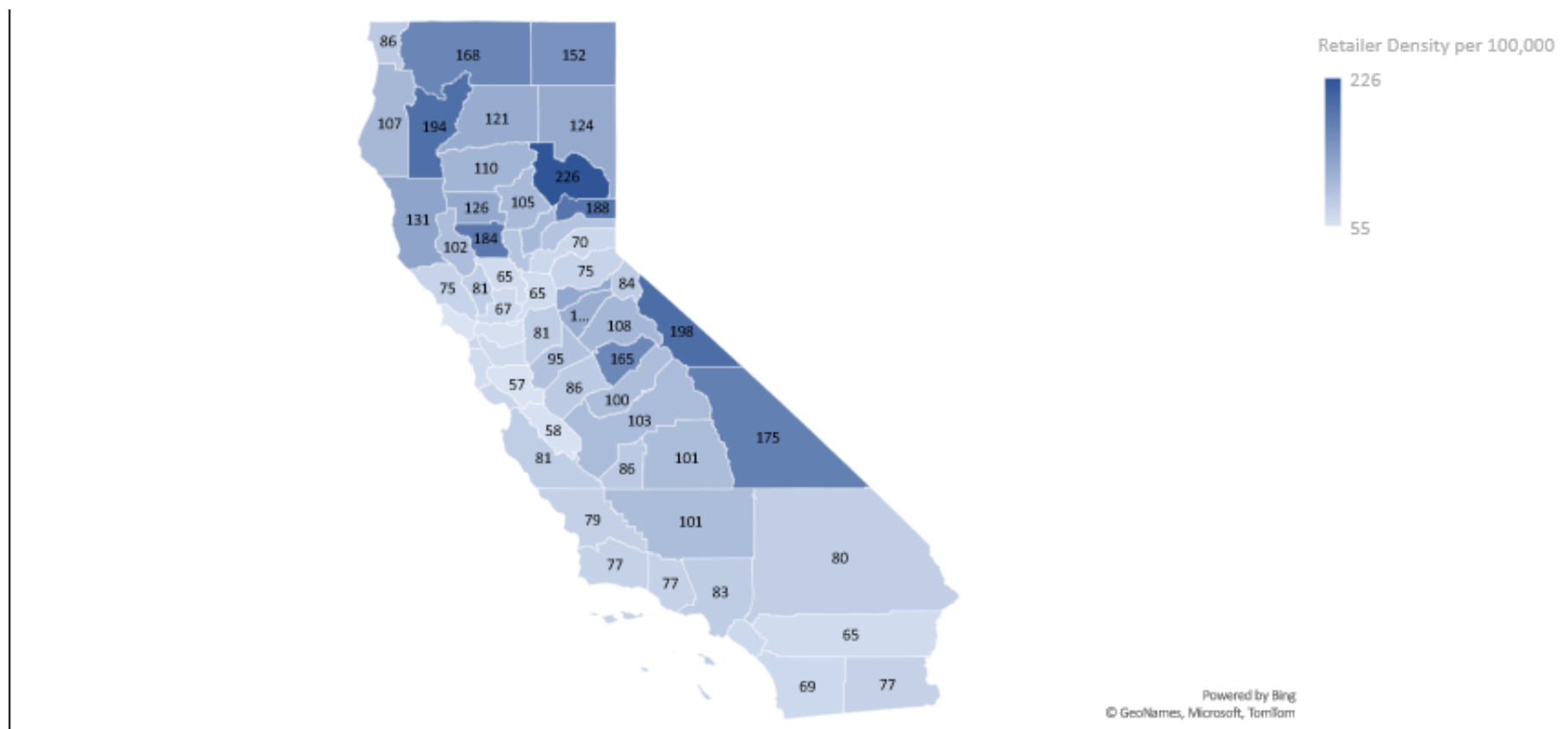
Ensure that all California communities are free from the sale of tobacco products, free from tobacco waste and free from exposure to secondhand and thirdhand smoke.

Retail Environment and Illegal Sales to Minors

Tobacco Retailers in California

Retailers are required to obtain a tobacco retail license from the California Department of Tax and Fee Administration (CDTFA) in order to legally sell tobacco products.¹⁴ In January 2023, there were 29,966 tobacco retailers in California (Figure 22). The retailer density was 77 tobacco retailers per 100,000 population.

Figure 22. Number of tobacco retailers and density of tobacco retailers per 100,000 population—California Department of Public Health, 2023

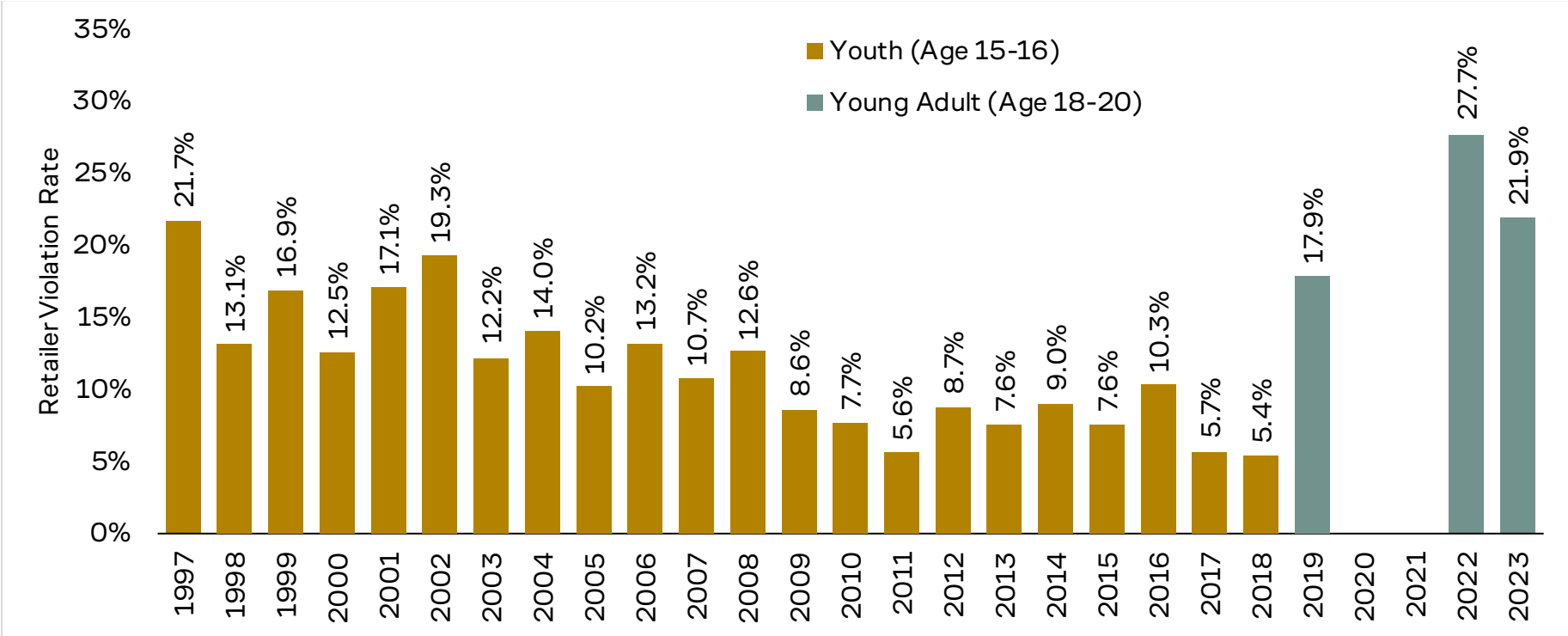


Source: California Department of Public Health; January 2024.

Illegal Sales to Minors

In June 2016, it became illegal for retailers to sell any tobacco products to anyone under the age of 21 in California.¹⁵ California assesses the retailer violation rate for tobacco sales to youth and young adults using underage decoys (Figure 23). Beginning in 2019, the age of decoys participating in compliance checks in California was increased from 15 to 16 years to 18 to 20 years to more accurately assess the increase in the age-of-sale law. The overall retailer violation rate for 2023 was 21.9%.

Figure 23. Tobacco products sold to underage decoys among licensed tobacco retailers—Synar Tobacco Purchase Survey, 1997 to 2023

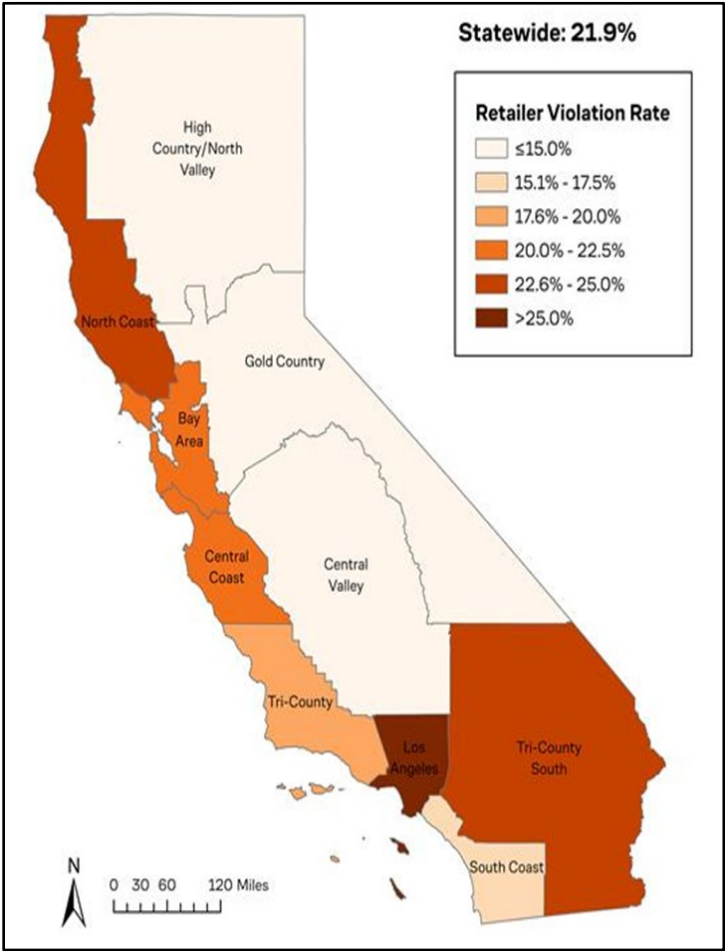


Restricted to licensed tobacco retailers that are youth accessible. Data was not collected in 2020 and 2021 due to the COVID-19 pandemic.

Source: Synar Tobacco Purchase Survey. STPS 1997 to STPS 2023. Sacramento, CA: California Department of Public Health; July 2023.

Despite California law restricting the sale of tobacco products to minors, California retailers continue to sell to underage persons. The Synar Tobacco Purchase Survey showed Los Angeles county had the highest rate of underage sales (33.0%) in 2023 (Figure 24).

Figure 24. Tobacco products sold to underage decoys among licensed tobacco retailers, by geographic region—Synar Tobacco Purchase Survey, 2023



Region	Number of Stores Inspected	Retailer Violation Rate	Counties
Bay Area	166	22.3%	Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, Solano
Central Coast	24	20.8%	Monterey, San Benito, Santa Cruz
Central Valley	134	11.9%	Fresno, Kern, Kings, Madera, Mariposa, Merced, Tulare
Gold Country	131	14.5%	Alpine, Amador, Calaveras, El Dorado, Inyo, Mono, Nevada, Placer, Sacramento, San Joaquin, Stanislaus, Sutter, Tuolumne, Yolo
High Country/ North Valley	36	13.8%	Butte, Colusa, Glenn, Lassen, Modoc, Plumas, Shasta, Sierra, Siskiyou, Tehama, Trinity, Yuba
Los Angeles	324	33.0%	Los Angeles
North Coast	22	22.7%	Del Norte, Humboldt, Lake, Mendocino, Napa, Sonoma
South Coast	176	15.9%	Orange, San Diego
Tri-County	55	20.0%	San Luis Obispo, Santa Barbara, Ventura
Tri-County South	141	22.7%	Imperial, Riverside, San Bernardino

Restricted to licensed tobacco retailers that are youth accessible.

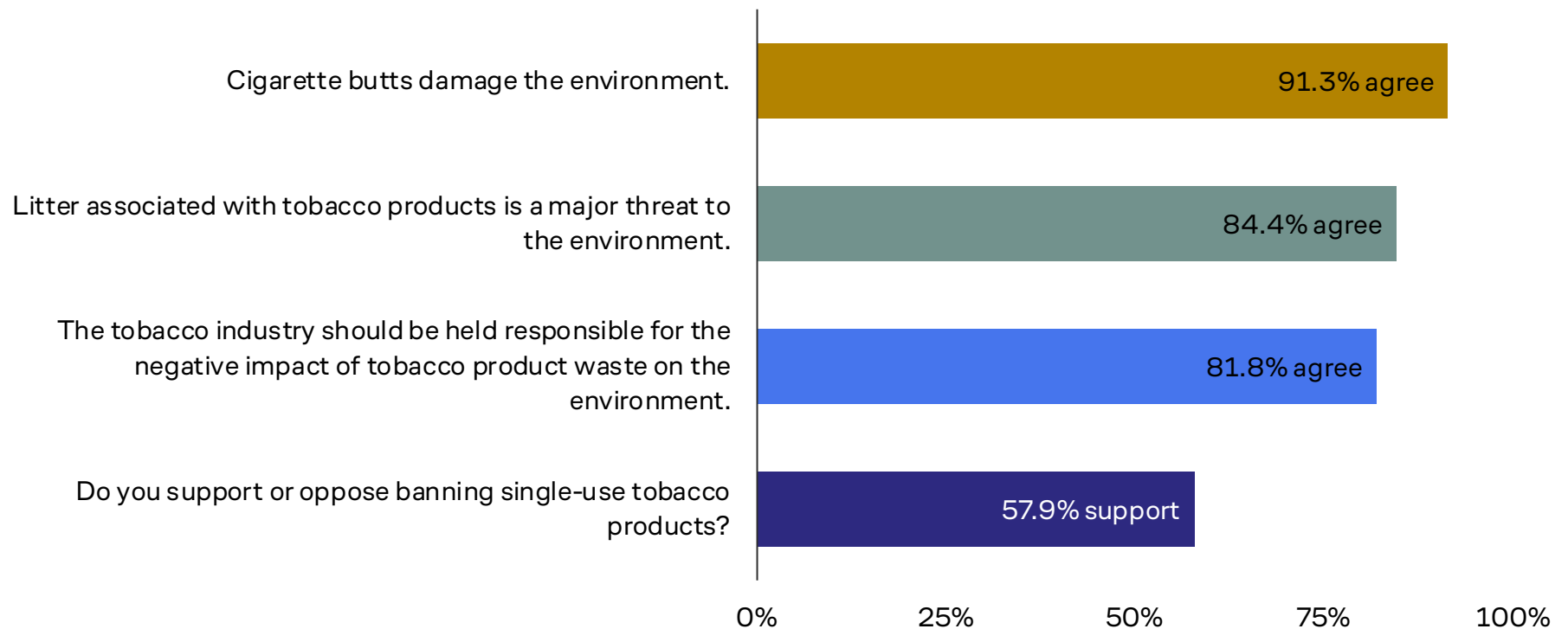
Source: Synar Tobacco Purchase Survey. STPS 2023. Sacramento, CA: California Department of Public Health; July 2023.

Tobacco Product Waste

Adult Beliefs on Tobacco Product Waste

The tobacco industry’s products not only cause dramatic negative health consequences, but they also create toxic waste that devastates California’s environment.¹⁶⁻¹⁸ Almost all cigarettes sold in the U.S. contain a filter that is made of plastic that doesn’t biodegrade, contributing to plastic accumulation. In a 2023 survey among California adults, the majority (81.8%) agreed that the tobacco industry should be held responsible for the negative impact of tobacco product waste (Figure 25).

Figure 25. Beliefs on tobacco product waste among adults aged 18 to 64 years—Online California Adult Tobacco Survey, 2023



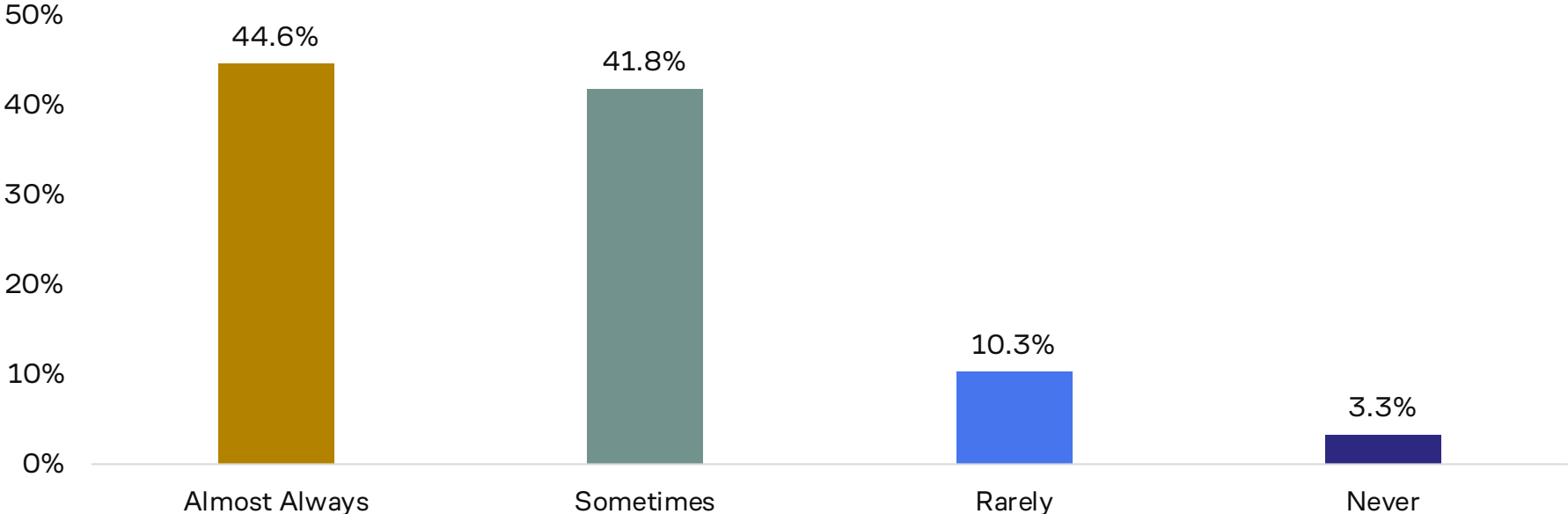
Response options of “agree” (or “support”) and “strongly agree” (or “strongly support”) were combined. See [Additional Notes](#) section for more information.

Source: Online California Adult Tobacco Survey. Online CATS 2023. Sacramento, CA: California Department of Public Health; January 2024.

Youth Notice of Tobacco Product Waste

Tobacco litter has many harmful effects on the environment.¹⁸ Almost half (44.6%) of California youth almost always notice tobacco litter in public spaces (Figure 26).

Figure 26. Noticing Tobacco Litter in Public Places—Teens Nicotine and Tobacco Survey, 2023



Tobacco product litter includes cigarette butts, cigar wrappers, or vape packaging in public spaces such as sidewalks, streets, parks, and beaches.

Source: Teens Nicotine and Tobacco Survey. TNT 2023. San Francisco, CA: University of California San Francisco; 2024.

Secondhand Tobacco Exposure

Secondhand Smoke Policies

Secondhand smoke can cause many negative health outcomes.^{19,20} Outdoor secondhand smoke exposure includes six desired areas: (1) dining areas, (2) bar areas, (3) public events and venues, (4) recreation areas (i.e., parks), (5) public easements and service lines, and (6) areas of outdoor employment. As of January 2024, a total of 53 jurisdictions have a policy that regulates smoking in all six desired areas, protecting 2,821,388 Californians or 7.1 % of the California population (Table 1). A total of 400 jurisdictions have a policy that regulates smoking in one or more of the six desired areas. In addition, 100 jurisdictions have a policy that at minimum regulates smoking in private units of multi-unit housing and 47 jurisdictions have a policy that prohibits smoking and vaping in private units of multi-unit housing properties with two or more units, without exemptions, and includes outdoor areas to a specified extent.

Table 1. Number of jurisdictions with outdoor secondhand smoke and smokefree multi-unit housing policies in CA and percent and proportion of the CA population covered by these policies- Policy Evaluation Tracking System, 2024

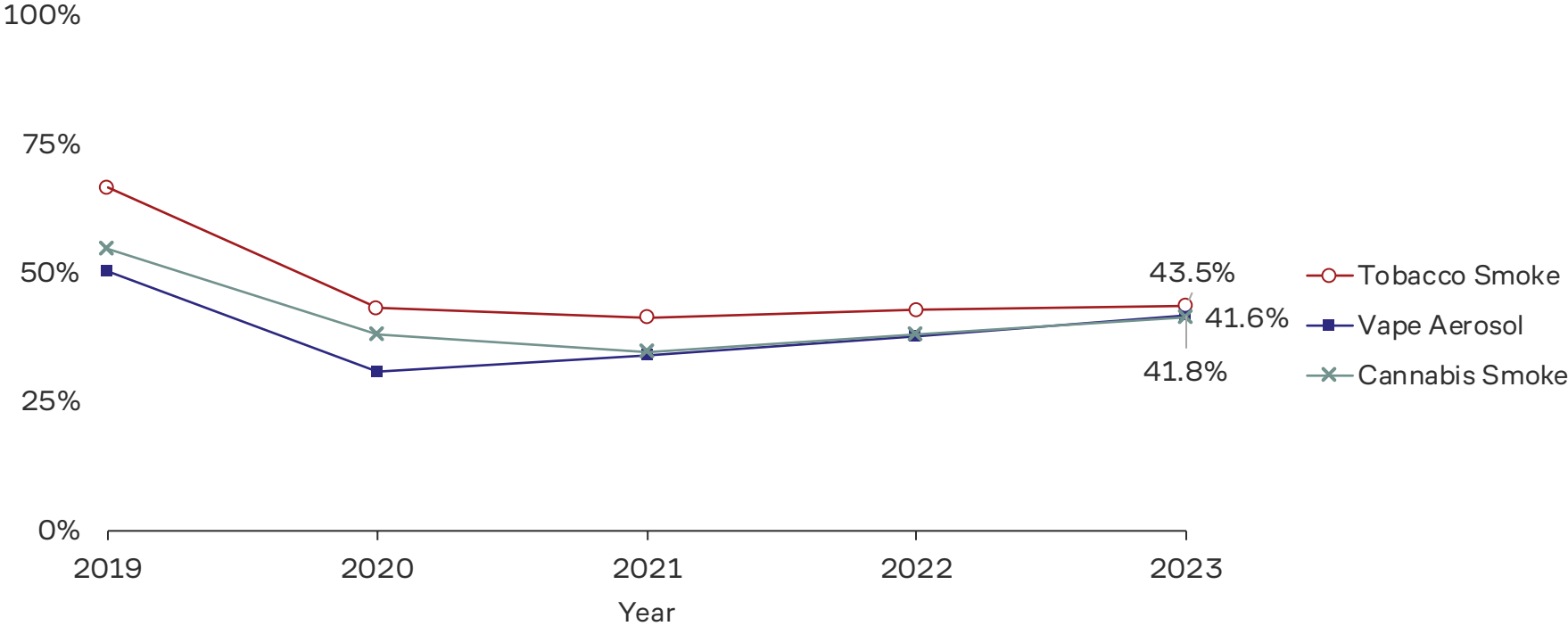
	Number of Jurisdictions	% CA Population	Population
Outdoor Secondhand Smoke			
Any Policies	400	87.5%	34,436,985
Comprehensive	53	7.1%	2,821,388
Smokefree Multi-Unit Housing			
Any Policies	100	16.1%	6,353,573
Comprehensive	47	6.4%	2,528,493

Source: American Nonsmokers' Rights Foundation. Matrix of smokefree outdoor air policies in California. Policy Evaluation Tracking System. January 2024. Accessed February 3, 2024.

Adult Secondhand Smoke Exposure

Rates of recent exposure to secondhand vape and secondhand marijuana smoke among adults in California has been slowly increasing since 2020 (Figure 27). Vape exposure has increased by 35.4% and marijuana smoke exposure has increased by 8.8% since 2020.

Figure 27. Exposure to secondhand tobacco smoke, vape aerosol, or cannabis smoke in the past two weeks among adults aged 18 to 64 years—Online California Adult Tobacco Survey, 2019 to 2023

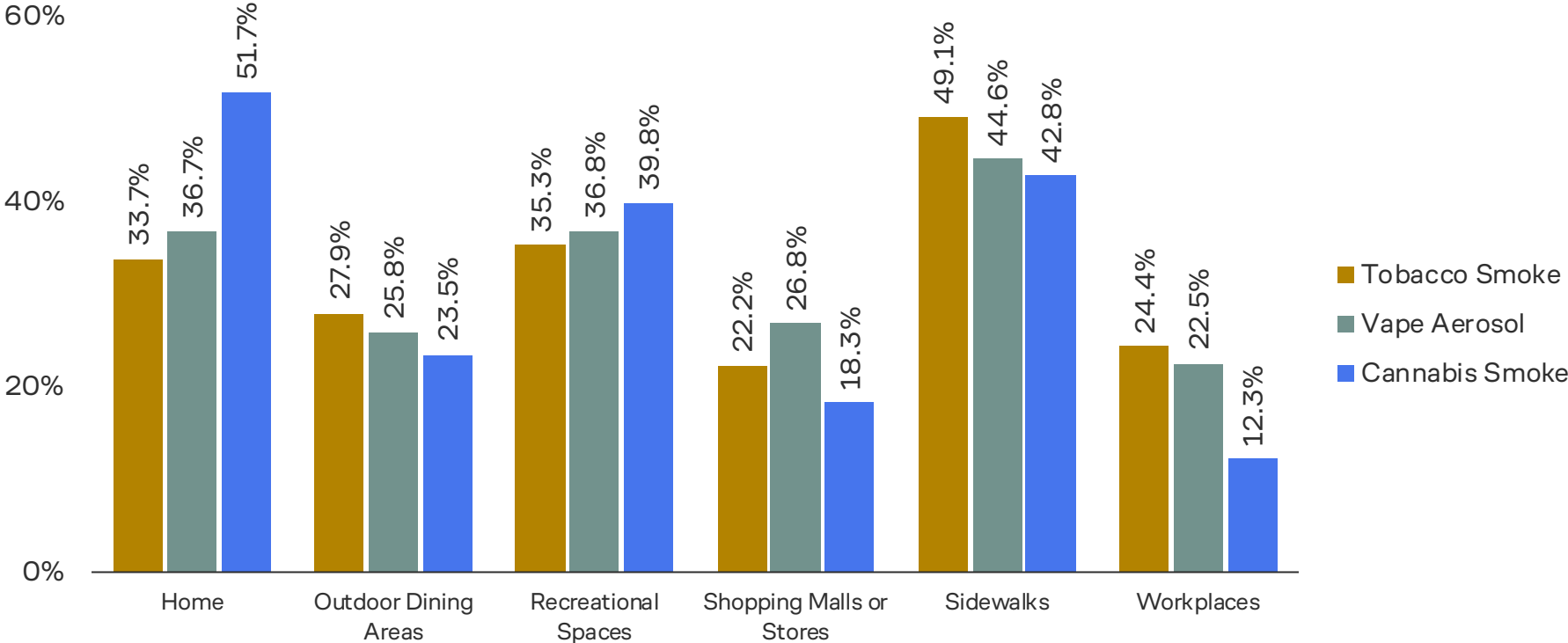


See [Additional Notes](#) section for more information.

Source: Online California Adult Tobacco Survey. Online CATS 2019-2023. Sacramento, CA: California Department of Public Health; January 2024.

Sidewalks were the most reported location of secondhand tobacco smoke and secondhand vape aerosol exposure among adults who were recently exposed to tobacco smoke or vape aerosol (Figure 28). Home was the most reported location for secondhand cannabis smoke exposure among adults who were recently exposed to cannabis smoke.

Figure 28. Exposure to secondhand tobacco smoke, vape aerosol, or cannabis smoke in the past two weeks among adults aged 18 to 64 years, by location of exposure—Online California Adult Tobacco Survey, 2023



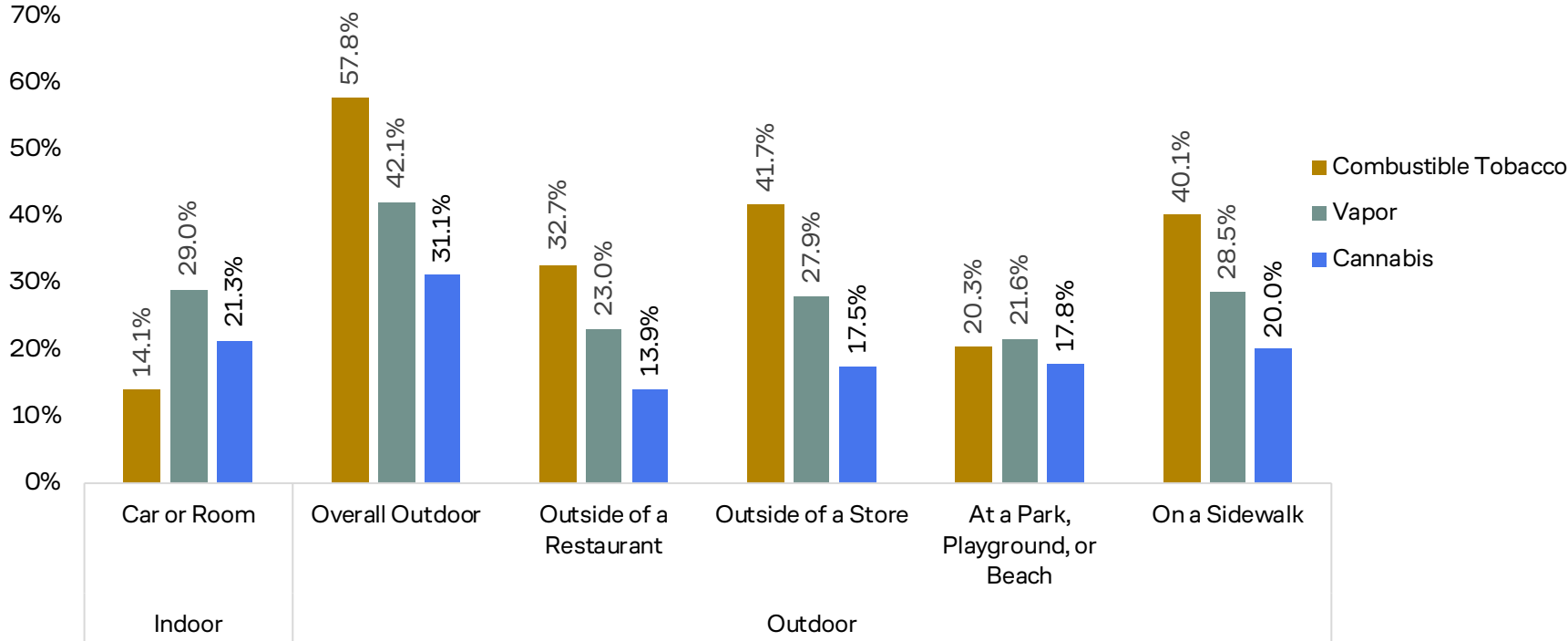
See [Additional Notes](#) section for more information.

Source: Online California Adult Tobacco Survey. Online CATS 2023. Sacramento, CA: California Department of Public Health; January 2024.

Youth Secondhand Smoke Exposure

Secondhand smoke affects everyone, but children are especially vulnerable because they are still growing and developing.²⁰ Among high school students, in the last two weeks, the most reported location for secondhand combustible tobacco exposure was outside of a store (41.7%) and on a sidewalk (40.1%) (Figure 29). The most reported location for secondhand vapor exposure was in a car or room (29.0%) and on a sidewalk (28.5%). The most reported location for secondhand cannabis exposure was in a car or room (21.3%) and on a sidewalk (20.0%).

Figure 29. Exposure to indoor and outdoor secondhand combustible tobacco, vape, and cannabis smoke among California high school students, by location of exposure—California Youth Tobacco Survey, 2023



Tobacco smoke refers to smoke from cigarettes, little cigars, or cigarillos. See [Additional Notes](#) section for more information.

Source: California Youth Tobacco Survey. CYTS 2023. Berkeley, CA: RTI International; 2024.

Eliminate Big Tobacco's Influence in California

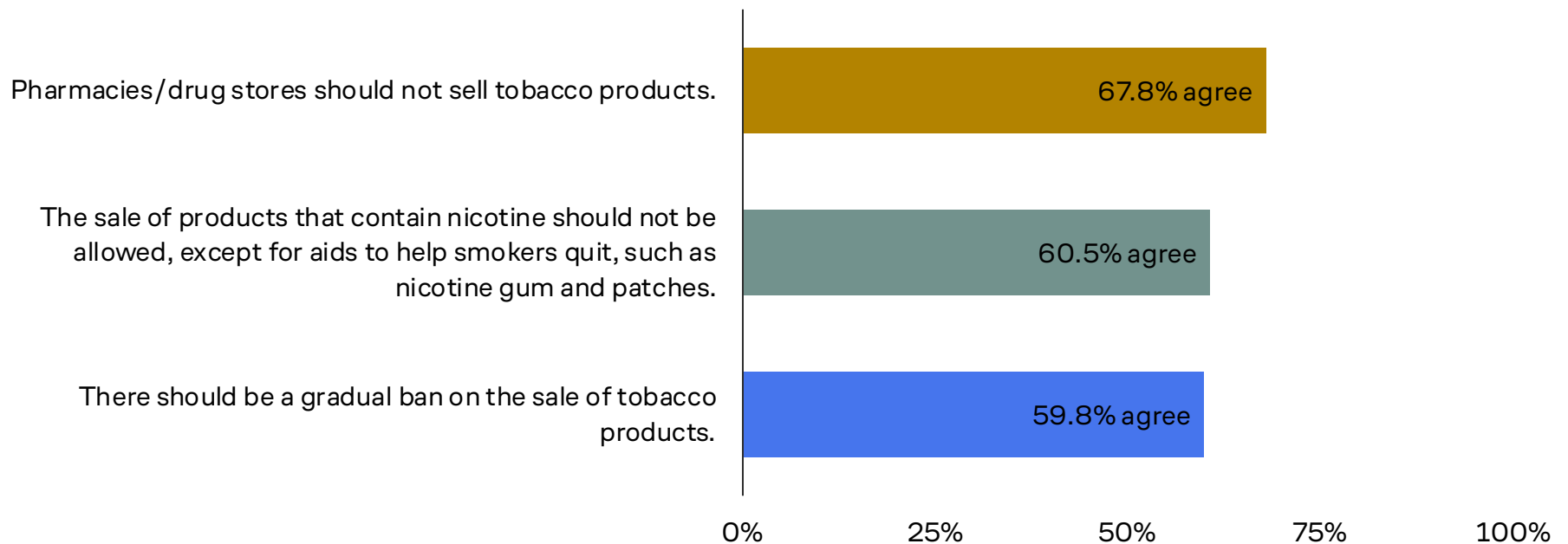
End California's role in financially sustaining the tobacco industry, remove the industry's ability to market to Californians, undo the tobacco industry's influence in past policy decisions, and stop its further interference in California's laws.

Retail Policy Support

Adult Support for Policies

California is building a framework to eradicate the tobacco industry’s manipulative and deadly influence by equitably increasing the health, environmental, and economic well-being of California’s diverse populations.²¹ Public support for creating a tobacco-free environment, specifically on retail availability and accessibility, is a crucial aspect to reaching this goal (Figure 30). In a 2023 survey among California adults, a majority agreed that there should be a gradual ban on the sale of tobacco products (59.8%) and that the sale of nicotine containing products should not be allowed with the exception for smoking cessation products (60.5%).

Figure 30. Beliefs on commercial tobacco retail availability and accessibility policies among adults aged 18 to 64 years—Online California Adult Tobacco Survey, 2023

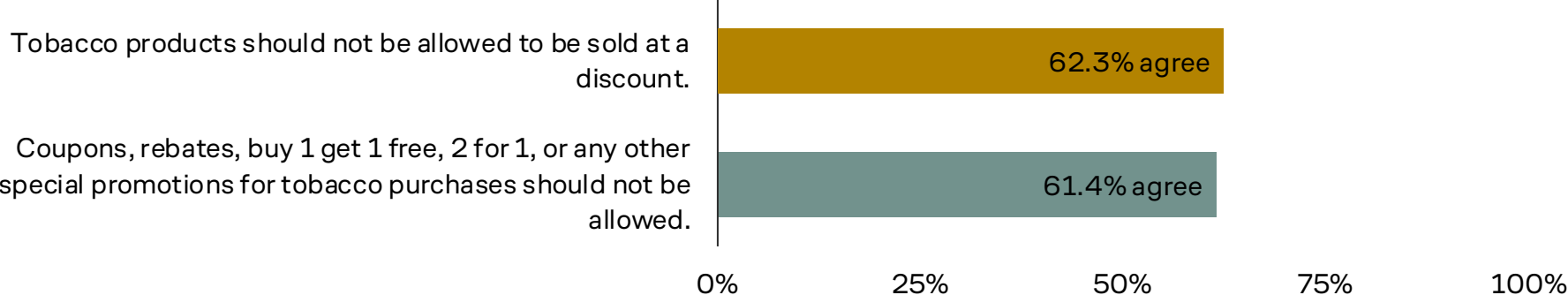


Response options of “agree” and “strongly agree” were combined. See [Additional Notes](#) section for more information.

Source: Online California Adult Tobacco Survey. Online CATS 2023. Sacramento, CA: California Department of Public Health; January 2024.

The tobacco industry spends over \$7 billion annually on price discounts to reduce cigarette, smokeless tobacco product, and vape prices in the United States.²²⁻²⁴ These price discount strategies are used by the tobacco industry to target certain demographics. Policies that increase the minimum price of tobacco products, restrict the redemption of coupons for tobacco products, and restrict multi-pack discounts are strategies to reduce youth access by making tobacco products less affordable.²⁵⁻²⁷ Californians are supportive of such policies (Figure 31), with 62.3% of adult respondents in a 2023 survey agreeing that tobacco products should not be allowed to be sold at a discount.

Figure 31. Beliefs on commercial tobacco retail pricing policies among adults aged 18 to 64 years—Online California Adult Tobacco Survey, 2023



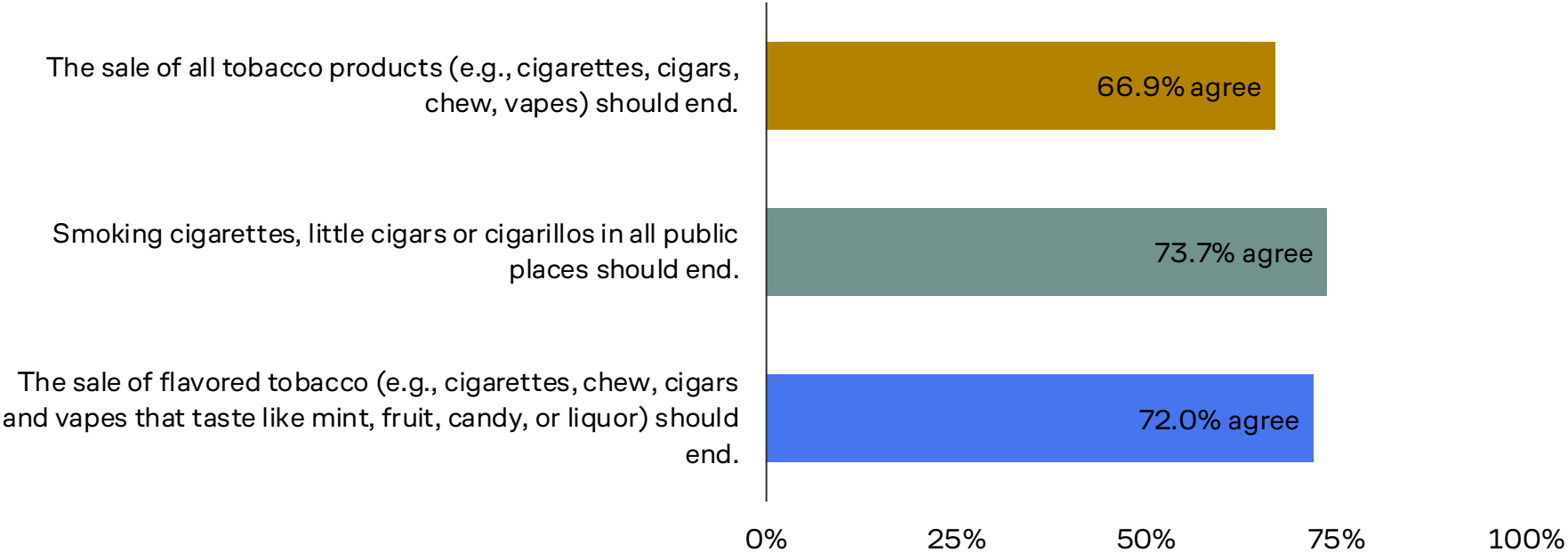
Response options of “agree” and “strongly agree” were combined. See [Additional Notes](#) section for more information.

Source: Online California Adult Tobacco Survey. Online CATS 2023. Sacramento, CA: California Department of Public Health; January 2024.

Youth Support for Policies

A major aim of California is to pass policies that will end the tobacco epidemic. In a 2023 youth survey, participants were asked their opinions about several policies that support this aim (Figure 32). More than half of participants agree with these policies. The highest support was for a public place tobacco use ban (73.7%), followed by a flavored tobacco ban (72%), and a tobacco sales ban (66.9%).

Figure 32. Agreement with policies to end the tobacco epidemic among youth—California Youth Tobacco Survey, 2023



Response options of “agree” and “strongly agree” were combined. See [Additional Notes](#) section for more information.

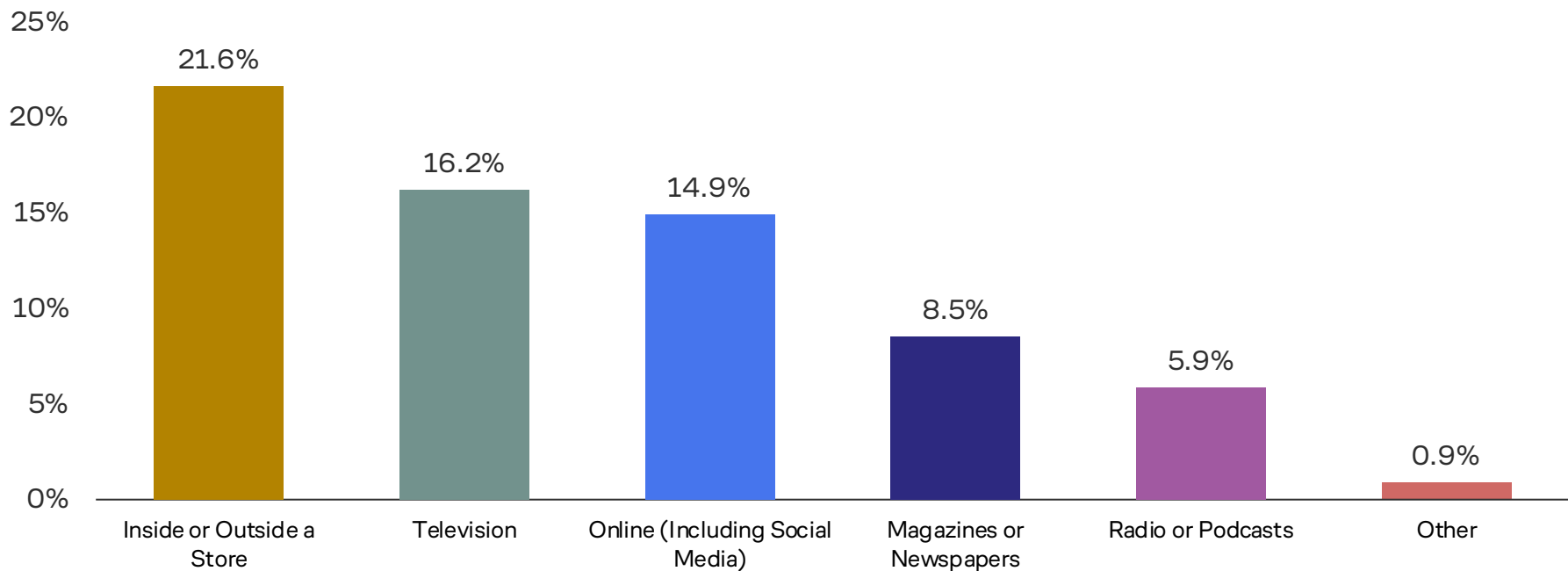
Source: California Youth Tobacco Survey. CYTS 2023. Berkeley, CA: RTI International; 2024.

Exposure to Tobacco Industry Marketing

Adult Exposure to Tobacco Industry Marketing

The ability of tobacco marketing to create new demand by encouraging smoking initiation among youth and adults is a critically important aspect of the role of the media in tobacco use.²⁸ Over 40% of California adults reported seeing or hearing tobacco product ads or promotions in the last seven days (Figure 33). Among those that reported seeing ads or promotions, the most cited location where they saw or heard ads or promotions was inside or outside a store, followed by television and online.

Figure 33. Exposure to tobacco product ads or promotions among adults aged 18 to 64 years—Online California Adult Tobacco Survey, 2023



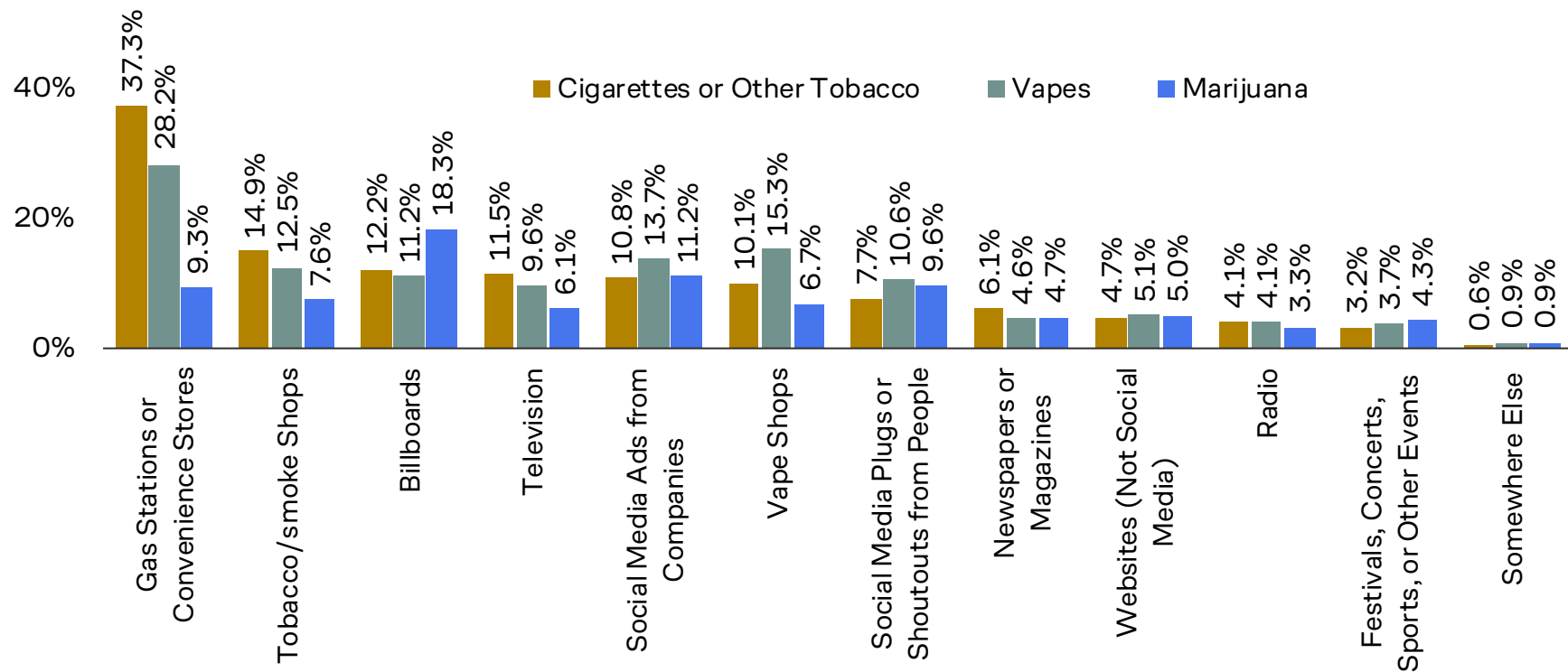
See [Additional Notes](#) section for more information.

Source: Online California Adult Tobacco Survey. Online CATS 2023. Sacramento, CA: California Department of Public Health; January 2024.

Youth Exposure to Tobacco Industry Marketing

More youth are seeing ads than adults and scientific evidence shows that tobacco company advertising and promotion influences young people to start using tobacco.²⁸ More than half (52.0%) of California youth indicated seeing any advertisements that were promoting cigarettes or other tobacco, 47.3% indicated seeing any advertisements that were promoting vaping, and more than 40% indicated seeing any advertisements that were promoting marijuana in the past 30 days. The most common place to see cigarette or other tobacco advertisements (37.3%) and vape advertisements (28.2%) was gas stations or convenience stores (Figure 34). The most common place to see marijuana advertisements (18.3%) was billboards.

Figure 34. Exposure to advertisements promoting cigarettes or tobacco, vapes and marijuana among youth—Teens, Nicotine and Tobacco Survey, 2023



Source: Teens Nicotine and Tobacco Survey. TNT 2023. San Francisco, CA: University of California San Francisco; 2024.

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Appendix: Additional Notes

American Community Survey (ACS)

Age: Age was ascertained from a constructed 23-level categorical variable based on respondent's current age.

Poverty level: Poverty level was ascertained from a constructed 7-level categorical variable based on self-reported household income and household size.

Race and ethnicity: Race and ethnicity were ascertained from a constructed 8-level categorical variable based on self-reported Hispanic or Latino ethnicity and race.

California Health Interview Survey (CHIS)

Advised to quit: Advised to quit was ascertained from the question: *In the past 12 months, did a doctor or other health professional advise you to quit smoking?* This question was asked of respondents who currently use cigarettes.

Age: Age was ascertained from a constructed 14-level categorical based on respondent's current age.

Area: Area was ascertained from a constructed dichotomous variable based on respondent's zip code population density.

Cigarette quit attempt: Cigarette quit attempt was ascertained from the question: *During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?* This question was asked of respondents who currently use cigarettes.

Cigarette quit intention: Cigarette quit intention was ascertained from the question: *Are you thinking about quitting smoking in the next six months?* This question was asked of respondents who currently use cigarettes.

Cigarette use: Cigarette smoking was ascertained from the questions: *Do you now smoke cigarettes every day, some days, or not at all?* This question was asked of respondents who ever smoked 100 cigarettes. Respondents reporting smoking every day or some days are classified as currently using cigarettes.

Cigarette use, flavored: Flavored cigarette (menthol cigarette) use was ascertained from the question: *Were any of the cigarettes you smoked in flavors, such as menthol?* This question was asked of respondents who currently use cigarettes.

Cigar use: Cigar use was ascertained from the question: *During the past 30 days, on how many days did you smoke big cigars?* Respondents reporting smoking big cigars in the past 30 days are classified as currently using cigars.

Cigar use, flavored: Flavored cigar use was ascertained from the question: *Were any of the cigars you smoked in flavors such as mint, fruit, candy, or wine?* This question was asked of respondents who currently use cigars.

Education: Education was ascertained from a constructed 9-level categorical variable based on respondent's self-reported highest education completed.

Gender: Gender was ascertained from a constructed dichotomous variable based on respondent's self-reported gender.

Hookah use: Hookah use was ascertained from the question: *During the past 30 days, on how many days did you use a hookah water pipe?* Respondents reporting using hookah in the past 30 days are classified as currently using hookah.

Hookah use, flavored: Flavored hookah use was ascertained from the question: *Were any of the hookahs you smoked in flavors such as mint, fruit, candy, or wine?* This question was asked of respondents who currently use hookah.

Housing: Housing was ascertained from the question: *Do you live in a house, a duplex, a building with 3 or more units, or in a mobile home?* Respondents who live in a duplex or a building with 3 or more units are classified as living in a multi-unit housing.

Little cigar or cigarillo use: Little cigar or cigarillo use was ascertained from the question: *During the past 30 days, on how many days did you smoke cigarillos, or little cigars?* Respondents reporting smoking little cigars or cigarillos in the past 30 days are classified as currently using little cigars or cigarillos.

Little cigar or cigarillo use, flavored: Flavored little cigar or cigarillo use was ascertained from the question: *Were any of the cigarillos you smoked in flavors such as mint, fruit, candy, or wine?* This question was asked of respondents who currently use little cigars or cigarillos.

Medi-Cal coverage: Medi-Cal coverage was ascertained from the questions: *Are you covered by Medi-Cal?, Are you now receiving TANF or CalWORKS?, and Are you receiving Supplemental Security Income (SSI)?* Respondents reporting being covered by Medi-Cal or receiving Temporary Assistance to Needy Families (TANF), California Work Opportunities and Responsibilities to Kids (CalWORKs), or Supplemental Security Income (SSI) are considered to be covered by Medi-Cal.

Poverty level: Poverty level was ascertained from a constructed continuous variable based on respondent's self-reported household income and household size.

Race and ethnicity: Race and ethnicity were ascertained from a constructed 6-level categorical variable based on self-reported Hispanic or Latino ethnicity and race. The race and ethnicity classification were based on the 1997 Office of Management and Budget revised guidelines. Respondents who reported any Hispanic or Latino ethnicity are classified as Hispanic or Latino. Respondents who reported not Hispanic or Latino and reported multiple races are classified as two or more races. All other race categories are single-race non-Hispanic or Latino unless stated otherwise.

Serious psychological distress: Serious psychological distress was ascertained from a constructed dichotomous variable based on respondent's answer from the Kessler 6-Item Psychological Distress Scale (K6) questionnaire. A K6 score of 13 or more is classified as likely to have serious psychological distress in the past month.

Service in the United States Armed Forces: Military service was ascertained from the question: *Did you ever serve on active duty in the Armed Forces of the United States?*

Sexual orientation: Sexual orientation was ascertained from the question: *Do you think of yourself as straight or heterosexual, as gay {, lesbian,} or homosexual, or bisexual?*

Smokeless tobacco product use: Smokeless tobacco product use was ascertained from the question: *During the past 30 days, on how many days did you use chewing tobacco, snuff, or snus?* Respondents reporting using chewing tobacco, snuff, or snus in the past 30 days are classified as currently using smokeless tobacco products.

Smokeless tobacco product use, flavored: Flavored smokeless tobacco product use was ascertained from the question: *Were any of the chewing tobacco you used in flavors such as mint, fruit, candy, or wine?* This question was asked of respondents who currently use smokeless tobacco products.

Statistically unreliable data: Estimates that are statistically unreliable did not meet the statistical reliability standards. Estimates are statistically unreliable if the coefficient of variance is 30% or more. An exception to the coefficient of variance guideline is made when the estimate is below 10% or above 90% and the absolute width of the 95% confidence interval is less than 10%.

Tobacco use: Any tobacco use is current use of any of the following tobacco products: cigarettes, cigars, hookah, little cigars or cigarillos, smokeless tobacco products, or vapes.

Tobacco use, flavored: Any flavored tobacco use is current use of any of the following flavored tobacco products: menthol cigarettes, flavored cigars, flavored hookah, flavored little cigars or cigarillos, flavored smokeless tobacco products, or flavored vapes.

Vape use: Vape use was ascertained based on the questions:

2016-2018: *During the past 30 days, on how many days did you use electronic cigarettes?*

2019-2022: *In the past 30 days, on how many days did you use an e-cigarette or other electronic vaping product?*

These questions were asked of respondents who ever used vapes. Respondents reporting using vapes in the past 30 days are classified as currently using vapes.

Vape use, flavored: Flavored vape use was ascertained from the question: *Were any of the e-cigarette you used in flavors such as mint, fruit, candy, or wine?* This question was asked of respondents who currently use vapes.

California Youth Tobacco Survey (CYTS)

Cigarette quit attempt: Cigarette quit attempt was ascertained from the following questions:

2018: “In the last 12 months, did you try to quit smoking cigarettes?” (response options included “Yes, I tried to quit in the last 12 months”, “no, I did not”, “I prefer not to answer”).

2020: “In the last 12 months, did you try to quit smoking cigarettes?” (response options were “yes” or “no”).

2022-2023: “Which products have you tried to completely stop using in the past 12 months? (response options were “vapes”, “cigarettes”, “heated tobacco/heat-not-burn products”, “big cigars”, “little cigars/cigarillos”, “hookah, waterpipe, or shisha”, “chewing tobacco, snuff, snus, dip, or dissolvable tobacco”, “nicotine pouches like Zyn, On, or Velo”, “other” and “I have not tried to completely stop using any tobacco product in the past 12 months”). Respondents that selected cigarettes were classified as making a quit attempt.

Cigarette use: Cigarette use was ascertained from the following questions:

2002-2012: “During the past 30 days, on how many days did you smoke cigarettes?” (response options were “0 days”, “1 or 2 days”, “3 to 5 days”, “6 to 9 days”, “10 to 19 days”, “20 to 29 days”, or “all 30 days”).

2016: “Have you used any of the following products in last 30 days? cigarettes” (response options were “yes” or “no”).

2018-2023: “Have you smoked cigarettes in the last 30 days?” (response options were “yes” or “no”).

Respondents who reported smoking cigarettes in the past 30 days are classified as current cigarette smokers.

Cigarette use, flavored: Flavored cigarette use was ascertained from the following questions:

2020: “Were any of the cigarettes you smoked in the last 30 days flavored, such as menthol/mint?” (response options included “yes” or “no”).

2022-2023: “Were any of the cigarettes you smoked in the last 30 days flavored, such as menthol?” (response options were “yes” or “no”).

Cigar use: Cigar use was ascertained from the following questions:

2016: “Have you used any of the following products in last 30 days? big cigars” (response options were “yes” or “no”).

2018-2023: “Have you smoked big cigars in the last 30 days?” (response options were “yes” or “no”).

Respondents who reported smoking cigars in the past 30 days are classified as current cigar users.

Cigar use, flavored: Flavored cigar use was ascertained from the following questions:

2018: “Were any of the big cigars you smoked in the last 30 days flavored? (such as cherry, rum, vanilla, etc.)” (response options were “yes” or “no”).

2020: “Were any of the big cigars you smoked in the last 30 days flavored (such as fruit, sweet, alcohol, mint, etc.)?” (response options were “yes” or “no”).

2022: “Which flavor of cigar do you smoke most often”? Flavored users were defined as respondents that selected menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “other”, as opposed to “unflavored or tobacco flavored.”

2023: “Which flavor of cigar do you smoke most often”? Flavored users were defined as respondents that selected menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “some other flavor”, as opposed to “unflavored or tobacco-flavored.”

Gender: Gender was ascertained from a from the following questions:

2016: “What is your gender?” (response options were “female” or “male”).

2018: “What is your gender?” (response options were “female”, “male”, “I identify my gender in another way”, or “I prefer not to answer”).

2020: “How do you describe yourself?” (response options were “male”, “female”, “female-to-male (FTM)/transgender male/trans man”, “male-to-female (MTF)/transgender female/trans woman”, “genderqueer, neither exclusively male nor female”, “additional gender category or other”, or “choose not to disclose”).

2022-2023: “How do you describe yourself?” (response options were “male”, “female”, “transgender”, “something else”, or “I’m not sure yet”).

Heated tobacco product use: Heated tobacco product use was ascertained from the following questions:

2020: “Have you used a heat-not-burn tobacco products in the last 30 days?” (response options were “yes” or “no”).

2022-2023: “Which of the following tobacco products have you used in the last 30 days?” (responses included “chewing tobacco, snuff, snus, dip, or dissolvable tobacco”, “heated tobacco/heat-not burn products like IQOS”, “hookah, waterpipe, or shisha”, “nicotine pouches like Zyn, On, or Velo”, and “I have not used any of the products listed above in the past 30 days”).

Respondents who reported using heated tobacco products in the past 30 days are classified as current heated tobacco product users.

Heated tobacco product use, flavored: Flavored heated tobacco product use was ascertained from the following questions:

2020: “Were any of the tobacco or heat-sticks you used in the last 30 days flavored (such as fruit, sweet, alcohol, menthol, etc.)?” (response options were “yes” or “no”).

2022: “Which flavor of heated tobacco/heat-not-burn product do you use most often”? Flavored users were defined as respondents that selected “menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “other”, as opposed to “unflavored or tobacco flavored.”

2023: Which flavor of heated tobacco/heat-not-burn product do you use most often”? Flavored users were defined as respondents that selected “menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “some other flavor”, as opposed to “unflavored or tobacco-flavored.”

Hookah use: Hookah use was ascertained from the following questions:

2016: “Have you used any of the following products in last 30 days? hookah” (response options were “yes” or “no”).

2018: “Have you used hookah (water pipe) in the last 30 days?” (response options were “yes” or “no”).

2020: “Have you smoked hookah water pipe in the last 30 days?” (response options were “yes” or “no”).

2022-2023: “Which of the following tobacco products have you used in the last 30 days?” (responses included “chewing tobacco, snuff, snus, dip, or dissolvable tobacco”, “heated tobacco/heat-not burn products like IQOS”, “hookah, waterpipe, or shisha”, “nicotine pouches like Zyn, On, or Velo”, and “I have not used any of the products listed above in the past 30 days”).

Respondents who reported using hookah in the past 30 days are classified as current hookah users.

Hookah use, flavored: Flavored hookah use was ascertained from the following questions:

2018: “Was any of the hookah (water pipe) you smoked in the last 30 days flavored? (such as mint, apple, blueberry, etc.)” (response options were “yes” or “no”).

2020: “Was any of the hookah water pipe you smoked in the last 30 days flavored (such as fruit, sweet, alcohol, mint, etc.)?” (response options were “yes” or “no”).

2022: “Which flavor of hookah, waterpipe, or shisha do you smoke most often?” Flavored users were defined as respondents that selected “menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “other”, as opposed to “unflavored or tobacco flavor.”

2023: “Which flavor of hookah, waterpipe, or shisha do you smoke most often?” Flavored users were defined as respondents that selected “menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “some other flavor”, as opposed to “unflavored or tobacco-flavored.”

Kretek use: Kretek use was ascertained from the question, “Have you used any of the following products in last 30 days? kreteks (clove cigars)” (response options were “yes” or “no”). Respondents who reported using kreteks in the past 30 days are classified as current kretek users.

LGBTQ+: LGBTQ+ status was ascertained from the following questions:

2018: “What is your gender?” (response options were “female”, “male”, “I identify my gender in another way”, or “I prefer not to answer”) and “Do you identify yourself as LGBTQ?” (response options were “yes”, “no”, or “I prefer not to answer”).

2020: “How do you describe yourself” (response options were “male”, “female”, “female-to-male (FTM)/transgender male/trans man”, “male-to-female (MTF)/transgender female/trans woman”, “genderqueer, neither exclusively male nor female”, “additional gender category or other”, or “choose not to disclose”) and “Do you consider yourself to be...” (response options were “lesbian, gay, or homosexual”, “straight or heterosexual”, “bisexual”, “something else”, “I don’t know”, or “choose not to disclose”).

2022: “How do you describe yourself”? (response options were “male”, “female”, “transgender”, “something else”, or “I’m not sure yet”) and “Which of the following best represents how you think of yourself”? (response options were “gay or lesbian”, “bisexual”, “something else”, “I’m not sure yet”, or “don’t know what this question means”).

2023: “How do you describe yourself”? (response options were “male”, “female”, “transgender”, “something else”, or “I’m not sure yet”) and “Which of the following best represents how you think of yourself”? (response options were “gay or lesbian”, “straight, that is, not gay or lesbian”, “bisexual”, “something else”, “I’m not sure yet”, or “don’t know what this question means”).

Respondents who identified as lesbian, gay, bisexual, transgender, queer, or gender non-conforming are classified as LGBTQ+.

Little cigar or cigarillo quit attempt: Little cigar or cigarillo quit attempt was ascertained from the questions:

2018: “In the last 12 months, did you try to quit smoking little cigars or cigarillos?” (response options included “yes, I tried to quit in the last 12 months”, “no, I did not”, “I prefer not to answer”).

2020: “In the last 12 months, did you try to quit smoking little cigars or cigarillos?” (response options were “yes” or “no”).

2022-2023: “Which products have you tried to completely stop using in the past 12 months? (response options were “vapes”, “cigarettes”, “heated tobacco/heat-not-burn products”, “big cigars”, “little cigars/cigarillos”, “hookah, waterpipe, or shisha”, “chewing tobacco, snuff, snus, dip, or dissolvable tobacco”, “nicotine pouches like Zyn, On, or Velo”, “other”, and “I have not tried to completely stop using any tobacco product in the past 12 months”). Respondents that selected little cigar or cigarillo were classified as making a quit attempt.

Little cigar or cigarillo use: Little cigar or cigarillo use was ascertained from the following questions:

2016: “Have you used any of the following products in last 30 days? little cigars or cigarillos” (response options were “yes” or “no”).

2018-2023: “Have you smoked little cigars or cigarillos in the last 30 days?” (response options were “yes” or “no”).

Respondents who reported smoking little cigars or cigarillos in the past 30 days are classified as current little cigar or cigarillo users.

Little cigar or cigarillo use, flavored: Flavored little cigar or cigarillo use was ascertained from the following questions:

2018: “Were any of the little cigars or cigarillos you smoked in the last 30 days flavored? (such as strawberry, grape, peach, etc.)” (response options were “yes” or “no”).

2020: “Were any of the little cigars or cigarillos you smoked in the last 30 days flavored (such as fruit, sweet, alcohol, mint, etc.)?” (response options were “yes” or “no”).

2022: “Which flavor of little cigar or cigarillo do you smoke most often”? Flavored users were defined as respondents that selected “menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “other”, as opposed to “unflavored or tobacco flavored.”

2023: “Which flavor of little cigar or cigarillo do you smoke most often”? Flavored users were defined as respondents that selected “menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “some other flavor”, as opposed to “unflavored or tobacco-flavored.”

Mental health: Mental health was ascertained from the question, “In general, how would you rate your mental health?” (response options were “excellent”, “very good”, “good”, “fair”, or “poor”).

Nicotine pouch use: Nicotine pouch use was ascertained from the question, “Which of the following tobacco products have you used in the last 30 days?” (responses included “chewing tobacco, snuff, snus, dip, or dissolvable tobacco”, “heated tobacco/heat-not burn products like IQOS”, “hookah, waterpipe, or shisha”, “nicotine pouches like Zyn, On, or Velo”, and “I have not used any of the products listed above in the past 30 days”). Respondents who reported using nicotine pouches in the past 30 days are classified as current nicotine pouch users.

Percent change: Percent change between baseline and most recent estimate was calculated with the following formula: percent change = [(most recent estimate – baseline estimate)/(baseline estimate)].

Percentage difference: Percentage difference between the baseline and most recent estimate was calculated with the following formula: percentage difference = most recent estimate – baseline estimate.

Race and ethnicity: Race and ethnicity were ascertained from the following:

2016-2020: A constructed 8-level categorical variable (options were “non-Hispanic (NH) White”, “NH Black”, “Hispanic”, “NH Asian”, “NH American Indian/Alaska Native”, “NH Native Hawaiian or other Pacific Islander”, “NH other”, or “NH multiple race”) based on self-reported Hispanic or Latino ethnicity and race.

2022-2023: A constructed categorical variable based on self-reported Hispanic or Latino ethnicity and race. Due to small sample sizes for American Indian/Alaska Native and Native Hawaiian or other Pacific Islander, these groups were collapsed with Other.

The race and ethnicity classification were based on the 1997 Office of Management and Budget revised guidelines. Respondents who reported any Hispanic or Latino ethnicity are classified as Hispanic or Latino. Respondents who reported not Hispanic or Latino and reported multiple races are classified as two or more races. All other race categories are single-race non-Hispanic or Latino unless stated otherwise.

Secondhand cigarette or little cigar/cigarillo smoke exposure: Secondhand cigarette or little cigar/cigarillo smoke exposure was ascertained from the following questions, “In the last 2 weeks, were you in a car or room when someone was smoking a cigarette, little cigar, or cigarillo?” (response options were “yes” or “no”) Respondents who reported exposure in the car or room in the past two weeks are classified as being recently exposed to secondhand cigarette or little cigar/cigarillo smoke.

Secondhand vape aerosol exposure: Secondhand vape aerosol exposure was ascertained from the following questions, “In the last 2 weeks, were you in a car or room when someone was using a vape?” (response options were “yes” or “no”). Respondents who reported exposure in the car or room in the past two weeks are classified as being recently exposed to secondhand vape aerosol.

Smokeless tobacco product use: Smokeless tobacco product use was ascertained from the following questions:

2016: “Have you used any of the following products in last 30 days? smokeless tobacco (chew, dip, snuff, or snus)” (response options were “yes” or “no”).

2018-2020: “Have you used smokeless tobacco in the last 30 days?” (response options were “yes” or “no”). Smokeless tobacco product is defined as chew, dip, snuff, or snus.

2022-2023: “Which of the following tobacco products have you used in the last 30 days?” (responses included “chewing tobacco, snuff, snus, dip, or dissolvable tobacco”, “heated tobacco/heat-not burn products like IQOS”, “hookah, waterpipe, or shisha”, “nicotine pouches like Zyn, On, or Velo”, and “I have not used any of the products listed above in the past 30 days”).

Respondents who reported using smokeless tobacco product, chewing tobacco, snuff, dip, or dissolvable tobacco in the past 30 days are classified as current smokeless tobacco product users.

Smokeless tobacco product use, flavored: Flavored smokeless tobacco product use was ascertained from the following questions:

2018: “Was any of the smokeless tobacco you used in the last 30 days flavored? (such as fruit, menthol, cinnamon, etc.)?” (response options were “yes” or “no”).

2020: “Was any of the smokeless tobacco you used in the last 30 days flavored (such as fruit, sweet, alcohol, mint, etc.)?” (response options were “yes” or “no”).

2022: “Which flavor of chewing tobacco, snuff, snus, dip, or dissolvable tobacco do you use most often”? Flavored users were defined as respondents that selected “menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “other”, as opposed to “unflavored or tobacco flavored.”

2023: “Which flavor of chewing tobacco, snuff, snus, dip, or dissolvable tobacco do you use most often”? Flavored users were defined as respondents that selected “menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “some other flavor”, as opposed to “unflavored or tobacco-flavored.”

Statistically unreliable data: Estimates that are statistically unreliable did not meet the following statistical reliability standards:

2016-2020: Coefficient of variance of 30% or more.

2022-2023: The estimate should be interpreted with caution given concerns about precision. The estimate meets one or both of the following criteria: (a) the absolute width of the Korn-Graubard confidence interval for the estimate is ≥ 0.30 OR (b) the

absolute width of the Korn-Graubard confidence interval is < 0.30 and > 0.05 and the relative width of the Korn-Graubard confidence interval is greater than 130% of the estimate.

Tobacco use: Any tobacco use is current use of any of the following tobacco products:

2016: cigarettes, cigars, hookah, kreteks, little cigars or cigarillos, smokeless tobacco products, or vapes.

2018: cigarettes, cigars, hookah, little cigars or cigarillos, smokeless tobacco products, or vapes.

2020: cigarettes, cigars, heated tobacco products, hookah, little cigars or cigarillos, smokeless tobacco products, or vapes.

2022-2023: cigarettes, cigars, heated tobacco products, hookah, little cigars or cigarillos, nicotine pouches, smokeless tobacco products, or vapes.

Tobacco use, flavored: Any flavored tobacco use is current use of any of the following flavored tobacco products:

2018: menthol cigarettes, flavored cigars, flavored hookah, flavored little cigars or cigarillos, flavored smokeless tobacco products, or flavored vapes.

2020: menthol cigarettes, flavored cigars, flavored heated tobacco products, flavored hookah, flavored little cigars or cigarillos, flavored smokeless tobacco products, or flavored vapes.

2022-2023: menthol cigarettes, flavored cigars, flavored hookah, flavored little cigars or cigarillos, flavored smokeless tobacco products, flavored vapes, or flavored nicotine pouches.

Vape quit attempt: Vape quit attempt was ascertained from the following questions:

2018: “In the last 12 months, did you try to quit using e-cigarettes?” (response options were “yes” or “no”).

2020: “In the last 12 months, did you try to quit using vapes with just flavoring?” (response options were “yes” or “no”) and “In the last 12 months, did you try to quit using vapes with nicotine (with or without flavor)?” (response options were “yes” or “no”).

2022-2023: “Which products have you tried to completely stop using in the past 12 months? (response options were “vapes”, “cigarettes”, “heated tobacco/heat-not-burn products”, “big cigars”, “little cigars/cigarillos”, “hookah, waterpipe, or shisha”, “chewing tobacco, snuff, snus, dip, or dissolvable tobacco”, “nicotine pouches like Zyn, On, or Velo”, “other”, and “I have not tried to completely stop using any tobacco product in the past 12 months”). Respondents that selected vape were classified as making a quit attempt.

Analyses for 2018 data was restricted to current vape users to allow for comparison with 2020 data.

Vape quit intention: Vape quit intent was ascertained from the following questions:

2018: “Do you plan to quit using e-cigarettes?” (response options were “I already quit”, “yes, I plan to quit in the next month”, “yes, I plan to quit sometime, but not in the next month”, or “no, I do not plan to quit”). Respondents that selected “I already quit” and “yes, I plan to quit in the next month” were classified as making a quit intent.

2020: “Do you plan to quit using vapes with just flavoring (without nicotine, marijuana, or another drug)?” (response options were “I already quit”, “yes, I plan to quit in the next month”, “yes, I plan to quit sometime, but not in the next month”, or “no, I do not plan to quit”) and “Do you plan to quit using vapes with nicotine (with or without flavor)?” (response options were “I already quit”, “yes, I plan to quit in the next month”, “yes, I plan to quit sometime, but not in the next month”, or “no, I do not plan to quit”). Respondents that selected “I already quit” and “yes, I plan to quit in the next month” were classified as making a quit intent.

2022-2023: “Do you plan to quit using any of the following products in the next 30 days?” (response options include, “vapes”, “cigarettes”, “heated tobacco/heat-not-burn products”, “big cigars”, “little cigars/cigarillos”, “hookah, waterpipe, or shisha”, “chewing tobacco, snuff, snus, dip, or dissolvable tobacco”, “nicotine pouches like Zyn, On, or Velo”, “other”, and “I don’t not plan to quit any tobacco product in the next 30 days”). Respondents that selected vapes were classified as making a quit intent.

Analyses for 2018 data was restricted to current vape users to allow for comparison with 2020 data.

Vape use: Vape use was ascertained from the following questions:

2016: “Have you used any of the following products in last 30 days? e-cigarettes” (response options were “yes” or “no”).

2018: “Have you used e-cigarettes in the last 30 days?” (response options were “yes” or “no”).

2020: “Have you vaped in the last 30 days?” (response options were “yes” or “no”) and “Which of the following have you vaped in the last 30 days?” (response options were “nicotine (with or without flavor)”, “marijuana (wax, oil, THC, or CBD), and “just flavoring (without nicotine, marijuana, or another drug)”), or “Have you used a hookah pen in the last 30 days?” (response options were “yes” or “no”).

2022-2023: “Have you vaped in the last 30 days?” (response options were “yes” or “no”).

Respondents who reported using vapes in the past 30 days (2016-2018 and 2022) or using vapes with nicotine or just flavoring in the past 30 days (2020) are classified as current vape users.

Vape use, flavored: Flavored vape use was ascertained from the following questions:

2018: “Were any of the e-cigarettes you used in the last 30 days flavored (such as coffee, menthol, tobacco, cherry, etc.)? (response options were “yes”, “no” or “I prefer not to answer”).

2020: “Were any of the vapes with nicotine you used in the last 30 days flavored (such as fruit, sweet, alcohol, mint, tobacco, etc.)?” (response options were “yes” or “no”), “In the last 30 days, how many days did you vape just flavoring?” (response options were “1 or 2 days”, “3 to 5 days”, “6 to 9 days”, “10 to 19 days”, “20 to 29 days”, or “all 30 days”), or “Were any of the hookah pens you used in the last 30 days flavored (such as fruit, sweet, alcohol, mint, tobacco, etc.)?” (response options were “yes” or “no”).

2022-2023: “Which flavor do you vape most often?” Flavored users were defined as respondents that selected “menthol”, “mint”, “cooling, ice, or frosty”, “clove or spice”, “fruit”, “an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a non-alcoholic drink (such as coffee, soda, energy drinks, or other beverages)”, “candy, chocolate, desserts or other sweets”, or “other”, as opposed to “unflavored or tobacco flavored.”

National Substance Use and Mental Health Services Survey (N-SUMHSS)

Tobacco use screening: For substance use treatment facilities, tobacco use screening was ascertained from the question: *Which of the following services are offered by this facility at this location—that is, the location listed on the front cover?* For mental health treatment facilities, tobacco use screening was ascertained from the question: *Which of these services and practices are offered at this facility, at this location?*

Cessation counseling: For substance use treatment facilities, cessation counseling was ascertained from the question: *Which of the following services are offered by this facility at this location—that is, the location listed on the front cover?* For mental health treatment facilities, cessation counseling was ascertained from the question: *Which of these services and practices are offered at this facility, at this location?*

Offers nicotine replacement therapy: For substance use treatment facilities, offers nicotine replacement therapy was ascertained from the question: *Which of the following services are offered by this facility at this location—that is, the location listed on the front cover?* For mental health treatment facilities, offers nicotine replacement therapy was ascertained from the question: *Which of these services and practices are offered at this facility, at this location?*

Offers non-nicotine cessation medication: For substance use treatment facilities, offers non-nicotine cessation medication was ascertained from the question: *Which of the following services are offered by this facility at this location—that is, the location listed on the front cover?* For mental health treatment facilities, offers non-nicotine cessation medication was ascertained from the question: *Which of these services and practices are offered at this facility, at this location?*

Online California Adult Tobacco Survey (Online CATS)

Attitude and support: Attitudinal belief and support was ascertained by asking the following before each statement: Please indicate whether you agree or disagree with each statement. or Do you support or oppose... Respondents reporting strongly agree or agree are classified as agreeing to the statement. Respondents reporting strongly support or support are classified as supporting the statement.

Exposure to tobacco ads or promotions: Exposure to tobacco ads or promotions was ascertained from the question: In the past 7 days, did you see or hear any ads or promotions for tobacco products in any of the following places? (Please include any ads or promotions aimed at selling tobacco products. Do not include anti-tobacco ads or ads encouraging quitting tobacco use).

Heated tobacco product use: Heated tobacco product use was ascertained from the questions:

Fall 2019: During the past 30 days, on how many days did you use a heat-not-burn tobacco product? This question was asked of respondents who were aware of heated tobacco products and have ever used heated tobacco products.

Spring 2020 to Spring 2022: During the past 30 days, on how many days did you use a heated tobacco product? In Spring 2020, this question was asked of respondents who were aware of heated tobacco products and have ever used heated tobacco products. Between Fall 2020 and Spring 2022, this question was asked to all respondents.

Fall 2022 to Fall 2023: During the past 30 days, have you used any of the following products?

Respondents reporting using heated tobacco products in the past 30 days are classified as currently using heated tobacco products.

Oral nicotine pouch use: Oral nicotine pouch use was ascertained from the questions:

Spring 2020 to Spring 2022: During the past 30 days, on how many days did you use a nicotine pouch?

Fall 2022 to Fall 2023: During the past 30 days, have you used any of the following products?

Respondents reporting using oral nicotine pouches in the past 30 days are classified as currently using oral nicotine pouches.

Secondhand cannabis smoke exposure: Secondhand cannabis smoke exposure were ascertained from the questions: In the last two weeks, have you ever been exposed to marijuana smoke in California? or How recently did someone else smoke marijuana around you in California? Respondents reporting exposure to cannabis smoke in the past two weeks are classified as being recently exposed to secondhand cannabis smoke.

Secondhand tobacco smoke exposure: Secondhand tobacco smoke exposure were ascertained from the questions: In the last two weeks, have you ever been exposed to tobacco secondhand smoke in California? or How recently did someone else smoke cigarettes, little cigars, cigars, or hookah around you in California? Respondents reporting exposure to tobacco smoke in the past two weeks are classified as being recently exposed to secondhand tobacco smoke.

Secondhand vape aerosol exposure: Secondhand vape aerosol exposure were ascertained from the questions: In the last two weeks, have you ever been exposed to vapor from an e-cigarette or other electronic vaping product in California? or How recently did someone else use an e-cigarette or other electronic vaping product (including for marijuana around you in California)? Respondents reporting exposure to vape aerosol in the past two weeks are classified as being recently exposed to secondhand vape aerosol.

Statistically unreliable data: Estimates that are statistically unreliable did not meet the statistical reliability standards. Estimates are statistically unreliable if the absolute width of the 95% confidence intervals is 30% or more, or if the coefficient of variance is 30% or more. An exception to the coefficient of variance guideline is made when the estimate is below 10% or above 90% and the absolute width of the 95% confidence interval is less than 10%.