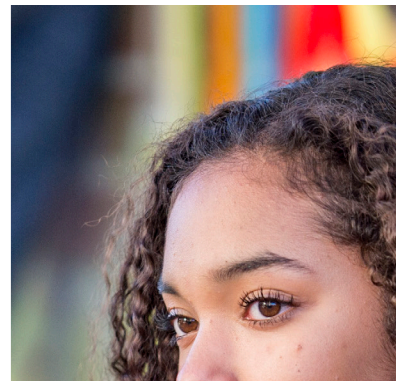


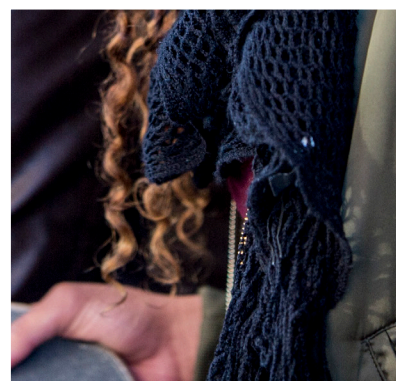
# 2023 Results

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# **Results of the 2023 California Youth Tobacco Survey**

## **Report**

**March 2024**

Prepared for

**California Department of Public Health,  
California Tobacco Prevention Program**

Prepared by

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## Executive Summary

This report summarizes the main results from the 2023 California Youth Tobacco Survey (CYTS). The CYTS has been administered annually to 8th-, 10th-, and 12th-grade students from California middle and high schools since 2021 and prior to 2021, once every 2 years. Data collection for the 2023 survey occurred between January and June 2023. Schools and classrooms within schools were randomly selected. The sample was designed to provide statewide and county-level estimates of tobacco use among youth in California. In 2023, we collected data from 356 schools and 41,755 students who consented to participate in the survey and provided valid survey data (see Appendix B for additional information). The survey was administered online during the school day. Most respondents completed the survey at their school, except for those engaged in virtual learning or independent study.

The survey was designed to assess the use of, knowledge of, and attitudes toward tobacco products, including cigarettes, vapes, little cigars or cigarillos (LCCs), cigars, hookah, smokeless tobacco, heated tobacco products (HTPs), and nicotine pouches. The survey also examined social and environmental exposure to tobacco. Marijuana and alcohol were included in the survey because the co-use of marijuana and alcohol with tobacco products is common. This report primarily focuses on high school respondents (16,255 respondents in 10th grade and 14,711 in 12th grade). Key results for 8th graders (10,789) are presented in Chapter 10.

This year's report includes tobacco prevalence estimates by rurality, region, and county or county group for any tobacco use and the use of specific products. In addition, we compare the prevalence of current tobacco use for high school students between the 2022 and 2023 administrations of the CYTS.

Appendix B provides a brief overview of the survey methodology. Additional details about the sampling strategy, survey administration, and statistical analysis can be found in the Technical Report on Analytic Methods and Approaches Used in the California Youth Tobacco Survey 2023, by Russell et al.<sup>1</sup> Appendix B also includes information about comparing CYTS estimates between 2022 and 2023 and information about the criteria we used to label estimates as imprecise and to suppress specific estimates. For definitions of the terminology included in table footnotes, see the definitions for analytic terms section in Appendix A.

### ES-1. Key Findings

#### ES-1.1 Tobacco Use Behavior (Chapters 1 and 2)

- In 2023, 21.6% of California high school respondents had ever used any tobacco product, and 7.3% currently used tobacco.

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<sup>1</sup> Russell, S., Dutra, L. M., Carter, S.E., Baum, L., & Levine, B. (2023). *Technical report for the California Youth Tobacco Survey 2023*. RTI International.

- Vapes were the most commonly used tobacco product among high school respondents (18.3% ever use, 5.9% current use), regardless of gender identity, race/ethnicity, and grade.
- Ever use of vapes was 18.3% among high school respondents, and current use was 5.9%.
- Ever cigarette smoking prevalence was 5.6%; 1.2% of high school respondents reported currently smoking cigarettes.
- Current prevalence of use of nicotine pouches was 1.1%.
- Current prevalence was less than 1% for LCCs, cigars, HTPs, smokeless tobacco, and hookah.
- Current tobacco use prevalence varied by demographics. Current use was highest among White (10.7%) respondents, 12th-grade (9.4%) respondents, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) (11.4%) respondents, and respondents who reported poor mental health (14.8%).
- Approximately a quarter (27.2%) of respondents who reported currently using tobacco also reported currently using two or more tobacco products. Polytobacco use varied by LGBTQ+ status.
- Two-thirds of high school students (66.1%) reported experiencing one or more types of discrimination a few times or more often in the past 30 days. The most commonly reported experience of discrimination was being treated with less courtesy or respect than others, with 6.9% of respondents reporting experiencing this almost every day, 12.6% reporting experiencing it at least once a week, and 32.1% reporting experiencing it a few times in the past month.
- Experiences of discrimination were more commonly reported by respondents currently using tobacco than respondents not currently using tobacco. Respondents who were currently using tobacco (11.5%) reported being treated with less courtesy or respect than others almost every day, compared to 6.4% of non-current tobacco users.
- Almost half of respondents who were currently vaping reported attempting to quit vaping in the last 12 months (40.8%), and approximately the same percentage reported intending to quit vaping in the next 30 days (38.8%).
- The survey asked respondents who were currently using tobacco which flavor they used most often (e.g., unflavored, fruit, mint). A substantial majority of respondents who reported currently using tobacco also reported using flavored tobacco products (85.6%), with flavored tobacco use being highest for vapes (89.1%) out of all tobacco products. Fruit was the most popular flavor of vapes reported by respondents who were currently vaping.
- In terms of flavored tobacco use by demographics, among respondents who reported currently using tobacco, current use of flavored tobacco was highest among respondents who selected "something else" as their gender identity (90.1%) and 10th-grade respondents (86.6%). In terms of race/ethnicity, use of flavored tobacco was highest among African American or Black respondents and lowest among Hispanic respondents. While 96.0% of respondents who reported current use and identified as African American or Black reported using flavored tobacco, only 82.7% of respondents who reported current use and identified as Hispanic reported using flavored tobacco.

### **ES-1.2 Methods of Accessing Vapes and Cigarettes (Chapter 3)**

- Among respondents who were currently vaping, the most commonly reported method of obtaining vapes was buying them (34.9%). Among respondents who reported buying their own vapes, the most common method of buying them was from someone else (30.5%).
- Among respondents who were currently smoking cigarettes, the most commonly reported method of obtaining cigarettes was buying them (26.5%).
- Reports of respondents buying their own vapes or cigarettes varied by grade; 12th-grade respondents reported higher prevalence of buying vapes (38.8%) than 10th-grade respondents (28.7%), and 10th-grade respondents reported higher prevalence of buying cigarettes (28.5%) than 12th-grade respondents (25.5%).
- Overall, high school respondents reported that it was easy to obtain vapes and cigarettes. For vapes, 49.9% of respondents reported that it was easy to access them from a store, 67.3% that it was easy to access them from the internet, and 71.6% that it was easy to access them from someone else. For cigarettes, 37.0% of respondents reported it was easy to access them from a store, 58.7% that it was easy to access them from the internet, and 60.8% that it was easy to access them from someone else.

### **ES-1.3 Secondhand Exposure and Other Environmental Influences (Chapter 4)**

- Regarding secondhand exposure to vapes, 29.0% of high school respondents reported being exposed in a car or room in the last 2 weeks. More than a third (42.1%) reported being exposed outside during the same time period.
- For secondhand tobacco smoke exposure, 14.1% of high school respondents reported being exposed to secondhand smoke in a car or room in the last 2 weeks. More than half (57.8%) reported being exposed to secondhand smoke outside.
- Among high school respondents who reported living in multiunit housing (MUH) (29.7%), approximately half (48.8%) reported being exposed to secondhand tobacco smoke in the home in the last 6 months.
- Respondents who were currently vaping reported higher prevalence of exposure to secondhand vapor in a car or room in the last 2 weeks (80.1%), compared with respondents who formerly vaped (49.9%) and those who had never vaped (22.2%).
- Respondents who were currently smoking tobacco reported higher prevalence of exposure to secondhand tobacco smoke in a car or room in the last 2 weeks (60.1%), compared with former (30.5%) and never smokers (12.4%).
- Respondents who were currently vaping or smoking tobacco reported higher prevalence of exposure to secondhand vapor or tobacco smoke outside in the last 2 weeks (76.1% for vaping, 84.7% for smoking), compared with those who reported former (56.0% for vaping, 65.8% for smoking) and never use (37.6% for vaping, 56.9% for smoking).
- Most high school respondents reported having a complete ban on vaping (81.0%) and tobacco smoking (78.4%) in the home. Generally, a higher percentage of respondents who had never vaped reported complete home bans compared to respondents who were currently vaping or had formerly vaped.

- Few (3.8%) respondents reported having a favorite vaping advertisement.
- Over two-thirds (71.8%) of respondents reported being exposed to vaping (rarely, sometimes, often, or always) on social media in the last 30 days. Respondents who currently (84.5%) vaped and had formerly (84.8%) vaped more commonly reported being exposed to vaping advertisements than respondents who had never vaped (69.1%).
- About half of respondents (55.9%) reported being exposed to cigarette smoking on social media (rarely, sometimes, often, or always) in the last 30 days. Respondents who were currently smoking cigarettes (72.1%) or formerly smoked cigarettes (72.4%) reported being exposed to cigarette smoking on social media more than respondents who had never smoked (55.0%).
- Less than half of respondents (40.9%) reported paying any attention to social media posts about vaping. Attention to these posts varied by vaping status, with a higher percentage of respondents who currently vaped (55.1%) reporting they paid attention, compared to respondents who had formerly (48.1%) and never vaped (38.8%).

#### **ES-1.4 Tobacco Susceptibility and Knowledge, Attitudes, and Beliefs (Chapter 5)**

- Overall, 44.3% of respondents who had never used tobacco were susceptible to one or more tobacco products, and 37.8% were susceptible to vapes specifically.
- Among high school respondents who had never smoked, 20.1% were susceptible to future cigarette smoking.
- Among respondents who had never smoked LCCs, 21.4% were susceptible to future use of LCCs.
- Susceptibility to vapes, cigarettes, and LCCs varied by gender identity and race/ethnicity. Susceptibility was highest for respondents who identified their gender as “something else” or “I’m not sure yet” (49.8%) and non-Hispanic multiracial respondents (46.4%).
- Respondents who rated their mental health as poor (55.3%) or fair (51.8%) had higher susceptibility to vapes, cigarettes, and LCCs than those who rated it good, very good, or excellent (39.5%).
- Respondents who were LGBTQ+ were more susceptible (52.6%) to vapes, cigarettes, and LCCs than respondents who were not LGBTQ+ (42.2%) and respondents with unclear LGBTQ+ status (44.7%).
- Among youths who had never vaped, never smoked cigarettes, and never smoked LCCs, 37.8% were susceptible to future vaping, 20.1% to future cigarette smoking, and 21.4% to future LCC smoking.
- The most commonly endorsed reason for vaping (among current vapers) was to relax or relieve stress and anxiety (35.2%).
- Most respondents believed that adults who were important to them viewed vaping and smoking cigarettes negatively (96.3% and 96.8%, respectively), and this belief was consistent across demographic categories.

- Perceived approval of vaping and smoking among peers varied by product. About half (49.8%) of respondents reported that other respondents at school would view vaping negatively, while most (83.6%) reported that their peers would view smoking cigarettes negatively. A higher percentage of respondents who were never users of each product believed their peers would disapprove of their use compared to respondents who were current or former users of vapes and cigarettes.
- Respondents perceived that more of their peers held negative views of smoking cigarettes (83.6%) than vaping (49.8%).

### **ES-1.5 Tobacco Endgame Attitudes (Chapter 6)**

- Two-thirds (66.9%) of high school respondents reported that they supported a ban on the sale of all tobacco products. Almost three-quarters supported a ban on public use of cigarettes and LCCs (73.7%) and a similar percentage supported a ban on the sale of all flavored tobacco (72.0%).
- Support for policies varied across vaping and smoking status, with 71.2%, 77.0%, and 76.9% of never vapers reporting support for a tobacco sales ban, a tobacco public use ban, and a flavored tobacco ban, respectively, and fewer respondents who were currently smoking cigarettes reporting support for such bans (19.0% for sales, 29.9% for public use, and 26.8% for flavored).

### **ES-1.6 Geographic Differences (Chapter 7)**

- In general, towns and rural settings (9.6%) tended to have higher tobacco use in comparison to cities (6.9%) and suburban areas (6.8%).
- Madera (18.7%, 4.2%), Merced (16.2%, 4.5%), Tulare (15.0%, 4.2%), Contra Costa (15.5%, 2.8%), and Los Angeles (16.6%, 5.0%) counties had the lowest ever and current tobacco use estimates, respectively, out of all counties or county groupings.
- In general, current use estimates for specific products were consistent across region, except for vaping; the Northern region of the state (8.1%) had the highest prevalence of current vaping.

### **ES-1.7 Marijuana Use (Chapter 8)**

- Almost a quarter (23.0%) of high school respondents reported having ever used marijuana, while 10.4% reported current use of marijuana.
- Current marijuana use (10.4%) was higher than current use of any tobacco (7.3%) among high school respondents.
- Current marijuana use varied by demographics. Current use was highest among respondents who identified their gender as "something else" or "I'm not sure yet" (14.1%), African American or Black (18.1%) respondents, and 12th-grade (14.0%) respondents. Prevalence of current use among LGBTQ+ respondents was more than double (18.0%) that of non-LGBTQ+ respondents (8.9%) or respondents of unclear LGBTQ+ status (6.4%).
- Among respondents who were currently using marijuana, the most common mode of use was smoking marijuana (49.0%).



- Overall, the prevalence of current use of marijuana only (5.5%) was slightly higher than co-use of marijuana and any tobacco product (4.9%). For some demographic subgroups, co-use was higher than marijuana-only use.
- Among respondents who were currently co-using marijuana and tobacco, the most commonly used tobacco product was vapes (39.1%).
- Overall, 21.3% of respondents reported being exposed to marijuana smoke in a car or room within the last 2 weeks, and 31.1% reported being exposed outside. Respondents who were currently using marijuana reported greater exposure to secondhand marijuana smoke than respondents who reported former and never use.
- Among respondents currently using marijuana, the most commonly endorsed methods of obtaining the product were buying it (38.2%) and someone giving it to them (27.0%). Among those who reported purchasing their own marijuana, the most common methods of obtaining marijuana were from someone else (44.9%) or from a store or dispensary (38.3%).

### **ES-1.8 Comparisons of Tobacco Use from 2022 to 2023 (Chapter 9)**

- The use of current and ever use of any tobacco product changed little between 2022 and 2023. Current use of tobacco was 6.6% in 2022 and 7.3% in 2023; ever use was 20.3% in 2022 and 21.6% in 2023. There were no significant changes in ever or current use of any tobacco product or ever or current use of specific tobacco products among all high school respondents.
- There was one significant change over time by race and ethnicity. Current cigarette smoking increased significantly between 2022 (0.1%) and 2023 (1.8%) among students who identified as non-Hispanic other race.
- There were also significant changes by grade. Current hookah use increased between 2022 (0.5%) and 2023 (1.0%) among 12th graders, current smokeless tobacco use increased among 10th graders (0.2% in 2022 and 0.6% in 2023), and current use of nicotine pouches increased in both grades (10th: 0.5% in 2022 and 0.9% in 2023; 12th: 0.7% in 2022 and 1.2% in 2023).

### **ES-1.9 8th-Grade Tobacco Use (Chapter 10)**

- Prevalence of ever tobacco use was lower for 8th-grade respondents (11.4%) than high school respondents (21.6%).
- Prevalence of current tobacco use was lower for 8th-grade respondents (3.2%) than high school respondents (7.3%).
- Vaping was the most common form of current tobacco use (2.5%), followed by nicotine pouches (0.6%), among middle school respondents.
- In terms of demographics, current tobacco use was highest among 8th-grade respondents who identified their gender as “something else” or “I’m not sure yet” (6.8%). Among racial/ethnic categories, multiracial respondents (5.9%) reported the highest current use, and Asian respondents (0.7%) reported the lowest.
- Almost all 8th-grade respondents who currently vaped reported using flavored vapes (91.9%).
- Eighth-grade respondents reported greater exposure to secondhand vapor (20.3%) than tobacco smoke (15.2%) indoors, and greater exposure to smoke (54.3%) than

vapor (31.8%) outdoors. Of those respondents who reported living in MUH, about half (49.2%) reported tobacco smoke exposure in their unit within the last 6 months.

- Eighth-grade respondents who were currently vaping most commonly acquired vapes by buying them (26.2%), and the most common source was buying them from someone (45.1%). Of those who currently smoked cigarettes, the most common method of obtaining them was someone giving them to them (38.6%). Among 8th-grade respondents, 3.1% reported current marijuana use and 8.5% reported ever marijuana use.

## 1. Tobacco Use Behavior, Overall and for Priority Populations

This chapter presents high school tobacco use behavior data from the 2023 California Youth Tobacco Survey (CYTS), including both ever and current use of various tobacco products. *Ever use* is defined as any tobacco use in one’s lifetime, and *current use* is defined as any use within the last 30 days. In this report, the terms current use and last-30-day use are used interchangeably. This chapter also provides the overall prevalence rates of tobacco product use and the frequency of current use of products. Additionally, it presents the use of multiple tobacco products (i.e., polytobacco use). Last, this chapter includes tobacco use by demographics commonly found in surveys, specifically, gender identity, race/ethnicity, and grade. For tobacco use among 8th-grade respondents, see Chapter 10.

This chapter also presents high school tobacco use among specific populations. Because of high observed tobacco use among members of priority populations, the chapter examines use by lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) status<sup>2</sup>; mental health<sup>3</sup>; and experiences of discrimination.<sup>4,5</sup> Because of higher use of multiple tobacco products among LGBTQ+ individuals<sup>2</sup> (compared to individuals who do not identify as LGBTQ+), this chapter also examines polytobacco use by LGBTQ+ status. In addition, this chapter examines characteristics of current vapers who attempted to quit vaping in the last 12 months and who intended to quit vaping in the next 30 days.

### 1.1 Tobacco Use Among High School Respondents

We asked respondents not to include marijuana products when answering questions about the use of tobacco products. Table 1-1 presents ever and current use of tobacco products among high school respondents. The first row of Table 1-1 indicates any tobacco use (use of one or more of the included tobacco products). Current use of any tobacco product was 7.3%. Vaping was the most popular at 5.9%. The use of tobacco products other than vapes was low. Current use of cigarettes was 1.2%. Nicotine pouch use was 1.1%. Less than 1% of high school respondents reported current use of little cigars or cigarillos (LCCs) (0.6%), cigars (0.8%), hookah (0.7%), smokeless tobacco (0.5%), or heated tobacco products (HTPs) (0.5%).

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<sup>2</sup> Creamer, M. R., Everett Jones, S., Gentzke, A. S., Jamal, A., & King, B. A. (2020). Tobacco product use among high school students – Youth Risk Behavior survey, United States, 2019. *MMWR*, 69(1), 56–63.

<sup>3</sup> National Institute on Drug Abuse. (2022). *Research report: Tobacco, nicotine, and e-cigarettes research report*. <https://nida.nih.gov/publications/research-reports/tobacco-nicotine-e-cigarettes/>.

<sup>4</sup> Dutra, L. M., Williams, D. R., Kawachi, I., & Okechukwu, C. A. (2014). Racial and nonracial discrimination and smoking status among South African adults ten years after apartheid. *Tobacco Control*, 23(e2), e114–121. doi:10.1136/tobaccocontrol-2013-051478.

<sup>5</sup> Borrell, L. N., Jacobs, D. R., Williams, D. R., Pletcher, M. J., Houston, T. K., & Kiefe, C. I. (2007). Self-reported discrimination and substance use in the Coronary Artery Risk Development in Adults Study. *American Journal of Epidemiology*, 166(9), 1068–1079.

**Table 1-1. Prevalence of Ever and Current Use of Tobacco Products Among High School Respondents**

Tobacco Product	Ever Use			Current Use		
	N	% (95% CI)		N	% (95% CI)	
Any tobacco use	30,966	21.6	(20.3–22.9)	30,966	7.3	(6.5–8.1)
Vapes	30,933	18.3	(17.2–19.5)	30,930	5.9	(5.3–6.5)
Cigarettes	30,943	5.6	(4.9–6.5)	30,943	1.2	(0.9–1.5)
LCCs	30,953	2.3	(2.0–2.6)	30,951	0.6	(0.5–0.8)
Cigars	30,948	3.3	(2.9–3.7)	30,947	0.8	(0.7–1.0)
Hookah	30,966	2.5	(2.0–3.0)	30,966	0.7	(0.5–1.0)
Smokeless	30,966	1.5	(1.3–1.7)	30,966	0.5	(0.4–0.7)
HTPs	30,966	1.2	(1.0–1.4)	30,966	0.5	(0.3–0.7)
Nicotine pouches	30,966	3.1	(2.7–3.5)	30,966	1.1	(0.9–1.3)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos. CI = confidence interval

## 1.2 Frequency of Tobacco Use

The 2023 CYTS asked respondents who reported currently using a tobacco product to indicate how many days they had used the product within the last 30 days. Table 1-2 presents the mean frequency of use among respondents who were currently using each product. Of the 5.9% of high school respondents who reported vaping in the last 30 days, 41.5% reported frequent vaping (20 or more days in the last 30 days). Among current vapers, 29.9% reported vaping daily in the last 30 days (daily use not shown in table). Frequent use (20 or more days in the last month) was the most common response for users of vapes, LCCs, cigars, and smokeless tobacco. For cigarettes, hookah, HTPs, and nicotine pouches, using the product either 1 day or 2 days were the most common responses.

**Table 1-2. Frequency of Current Use Among High School Respondents Who Were Currently Using a Given Tobacco Product**

Tobacco product	N	1 or 2 days % (95% CI)		3–5 days % (95% CI)		6–19 days % (95% CI)		20–30 days % (95% CI)	
Vapes	2,051	26.1	(22.9–29.4)	14.1	(11.2–17.4)	18.4	(15.4–21.7)	41.5	(37.4–45.7)
Cigarettes	452	41.1	(33.6–48.9)	Q	(13.9–29.7)	12.9	(8.0–19.1)	25.1	(17.1–34.4)
LCCs	231	24.4	(15.8–34.8)	18.9	(9.1–32.7)	18.8	(10.3–30.1)	38.0	(26.9–50.0)
Cigars	293	38.9	(29.9–48.6)	11.8	(6.4–19.3)	7.4†	(3.5–13.5)	41.9	(31.0–53.3)
Hookah	192	51.2	(36.2–66.0)	11.4†	(3.1–27.2)	11.1†	(4.5–21.8)	26.3	(16.7–37.8)
Smokeless	176	32.9†	(18.1–50.6)	11.4†	(4.3–23.2)	—	—	40.8†	(23.4–60.0)
HTPs	137	39.8†	(23.7–57.7)	8.7†	(2.7–19.5)	21.4†	(9.6–38.2)	30.2	(18.0–44.7)

(continued)

**Table 1-2. Frequency of Current Use Among High School Respondents Who Were Currently Using a Given Tobacco Product (continued)**

Tobacco product	N	1 or 2 days % (95% CI)	3–5 days % (95% CI)	6–19 days % (95% CI)	20–30 days % (95% CI)
Nicotine pouches	410	51.9 (38.5–65.1)	—	11.5 (6.3–18.6)	22.5 (15.3–31.1)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos. CI = confidence interval

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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. For more information about Korn-Graubard confidence intervals, see Appendix A.

### 1.3 Tobacco Use by Gender Identity

Table 1-3 presents current use of each tobacco product by gender identity. The gender identity category “identified in another way” includes respondents who reported their gender as “something else” or “I’m not sure yet.” The “declined to answer” gender identity category represents those who skipped this question.

Respondents who identified their gender in another way (12.5%) or declined to answer the question about gender identity (15.6%) had a higher prevalence of current use of any tobacco product than those who identified as female (7.0%) or male (6.5%). This pattern was similar for vapes and hookah. For the remaining products, those who identified another way, but not those who declined to answer, reported higher use than those who identified as male or female.

**Table 1-3. Prevalence of Current Use of Tobacco Products Among High School Respondents, by Gender Identity**

Tobacco Product	Male N = 13,750 % (95% CI)	Female N = 13,537 % (95% CI)	Identified in Another Way N = 1,767 % (95% CI)	Declined to Answer N = 198 % (95% CI)
Any tobacco use	6.5 (5.7–7.5)	7.0 (6.1–8.0)	12.5 (9.8–15.5)	15.6 (8.4–25.5)
Vapes	5.1 (4.4–5.8)	6.0 (5.1–6.9)	8.6 (6.8–10.8)	12.3† (5.8–21.9)
Cigarettes	1.1 (0.8–1.5)	0.7 (0.5–1.1)	5.2 (3.6–7.2)	1.5 (0.2–5.1)
LCCs	0.5 (0.4–0.7)	0.3 (0.2–0.5)	3.9 (2.5–5.6)	0.7 (0.2–1.8)
Cigars	1.0 (0.8–1.4)	0.2 (0.1–0.3)	4.2 (2.8–6.0)	1.1 (0.3–3.1)
Hookah	0.7 (0.4–1.0)	0.5 (0.3–1.0)	2.9 (1.6–4.7)	3.4† (0.8–9.4)
Smokeless	0.5 (0.3–0.8)	0.2 (0.0–0.5)	2.8 (1.5–4.7)	0.6 (0.2–1.5)
HTPs	0.3 (0.2–0.5)	0.4 (0.2–0.8)	2.6 (1.5–4.1)	0.2 (0.0–1.0)
Nicotine pouches	1.3 (1.0–1.6)	0.7 (0.3–1.2)	3.1 (1.9–4.7)	1.0 (0.2–2.9)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos. CI = confidence interval

† 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  $\geq 0.30$  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.

## 1.4 Tobacco Use by Race/Ethnicity

Tables 1-4a and 1-4b present tobacco use by race/ethnicity. The race/ethnicity variable was created by combining responses to two questions, one about Hispanic ethnicity and the other about race (Hispanic is not considered a race in the survey). Tables 1-4a and 1-4b include all race/ethnicity categories created by combining Hispanic ethnicity with the response options for race. However, elsewhere in the survey, American Indian or Alaska Native (AI/AN), Native Hawaiian or other Pacific Islander (NHOPI), and respondents who did not identify with any of the races listed in the survey are collapsed into a category called “other” due to small sample sizes. For more information on demographic variables used in the survey, see Appendix A.

Tables 1-4a and 1-4b present race/ethnicity differences in current use of any tobacco product. Although we make comparisons between NHOPI respondents and other race/ethnicity categories in the text, all estimates for NHOPI and all comparisons that include this group should be interpreted with caution due to small sample sizes. For AI/AN respondents, we were not able to provide estimates for any current tobacco use or any vaping due to small sample sizes, and the estimates for LCCs and cigars should be interpreted with caution for the same reason.

**Table 1-4a. Prevalence of Current Use of Tobacco Products Among High School Respondents, by Race/Ethnicity**

Tobacco Product	White N = 7,386		African American or Black N = 688		Hispanic N = 16,691		Asian N = 3,172	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Any tobacco use	10.7	(9.4–12.2)	7.9	(5.4–11.1)	6.3	(5.5–7.1)	3.3	(2.5–4.2)
Vapes	8.7	(7.6–9.9)	5.4	(2.9–9.0)	5.1	(4.4–5.9)	2.7	(2.1–3.4)
Cigarettes	2.3	(1.6–3.1)	1.4	(0.2–4.5)	0.7	(0.5–0.9)	0.6	(0.3–1.2)
LCCs	0.6	(0.3–0.9)	0.7	(0.1–1.9)	0.7	(0.5–0.9)	0.4	(0.1–0.9)
Cigars	1.3	(0.8–1.8)	0.7	(0.2–1.7)	0.7	(0.5–0.9)	0.5	(0.2–1.0)
Hookah	0.9	(0.4–1.5)	2.1 <sup>†</sup>	(0.4–6.2)	0.5	(0.3–0.7)	0.6	(0.3–1.2)
Smokeless	0.6	(0.3–1.1)	0.3	(0.1–0.6)	0.4	(0.2–0.6)	0.5	(0.2–1.1)
HTPs	0.4	(0.2–0.8)	1.0	(0.0–5.0)	0.4	(0.2–0.6)	0.5	(0.2–1.1)
Nicotine pouches	1.7	(1.3–2.2)	1.5	(0.3–4.5)	0.7	(0.5–0.9)	0.8	(0.4–1.3)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos. CI = confidence interval

<sup>†</sup> 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  $\geq 0.30$  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.

For any tobacco use, non-Hispanic White (hereafter, White) high school respondents had the highest current use (10.7%) followed by NHOPI (9.6%), and multiracial respondents (9.5%). Asian respondents had the lowest current use (3.3%). For vapes, NHOPI respondents (9.6%), followed by White respondents (8.7%), had the highest current prevalence of use. For cigarette smoking, current use was similar across multiple races and ethnicities, with the highest prevalence estimates for White (2.3%), NHOPI (2.2%), multiracial (2.1%), and other race (2.0%) respondents. AI/AN (1.5%) and NHOPI (1.7%) respondents had notably higher use of LCCs than other races and ethnicities, but, again, these estimates should be interpreted with caution. African American/Black (2.1%), NHOPI (1.7%), other race (2.0%), and multiracial (2.1%) respondents all reported higher current hookah use than the other race/ethnicity categories. NHOPI respondents reported the highest current use of smokeless tobacco (2.0%) and HTPs (2.0%). For nicotine pouches, current use was higher for White (1.7%), African American/Black (1.5%), NHOPI (2.1%), multiracial (1.8%), and other race (1.5%) respondents, compared to the other race/ethnicity groups.

**Table 1-4b. Prevalence of Current Use of Tobacco Products Among High School Respondents, by Race/Ethnicity**

Tobacco Product	American Indian or Alaska Native N = 177		Native Hawaiian or Other Pacific Islander N = 117		Other N = 492		Multiracial N = 2,168	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Any tobacco use	—	—	9.6†	(2.7–22.7)	6.7	(3.9–10.6)	9.5	(7.7–11.7)
Vapes	—	—	9.6†	(2.7–22.7)	3.8	(1.9–6.9)	7.6	(5.9–9.6)
Cigarettes	0.5	(0.0–2.3)	2.2†	(0.1–9.5)	2.0	(0.6–4.8)	2.1	(1.3–3.3)
LCCs	1.5†	(0.0–7.9)	1.7†	(0.0–9.6)	0.2	(0.0–1.0)	0.8	(0.3–1.7)
Cigars	1.4†	(0.0–8.0)	1.7†	(0.0–9.6)	1.1	(0.4–2.4)	0.9	(0.4–1.6)
Hookah	0.8	(0.0–3.6)	1.7†	(0.0–9.6)	2.0	(0.5–5.1)	1.6	(0.8–2.9)
Smokeless	0.7	(0.0–3.7)	2.0†	(0.1–9.4)	0.8	(0.1–3.1)	1.2	(0.5–2.5)
HTPs	0.7	(0.0–3.7)	2.0†	(0.1–9.4)	0.8	(0.1–3.1)	1.1	(0.5–2.2)
Nicotine pouches	0.7	(0.0–3.6)	2.1†	(0.1–9.3)	1.5	(0.5–3.5)	1.8	(1.0–2.9)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos. CI = confidence interval

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

## 1.5 Tobacco Use by Grade

Table 1-5 presents current tobacco use by grade. Current use of any tobacco product was higher among 12th graders (9.4%) than 10th graders (5.3%). Current use of specific products was higher among 12th-grade respondents for each product except for HTPs and nicotine pouches.

**Table 1-5. Prevalence of Current Use of Tobacco Products Among High School Respondents, by Grade**

Tobacco Product	10th Grade			12th Grade		
	N	% (95% CI)		N	% (95% CI)	
Any tobacco use	16,255	5.3	(4.6–6.2)	14,711	9.4	(8.2–10.8)
Vapes	16,235	4.3	(3.7–5.0)	14,695	7.6	(6.6–8.6)
Cigarettes	16,244	0.8	(0.5–1.1)	14,699	1.6	(1.2–2.1)
LCCs	16,244	0.6	(0.4–0.8)	14,707	0.7	(0.5–0.9)
Cigars	16,243	0.7	(0.5–1.0)	14,704	1.0	(0.7–1.3)
Hookah	16,255	0.4	(0.3–0.6)	14,711	1.0	(0.6–1.6)
Smokeless	16,255	0.6	(0.4–0.9)	14,711	0.4	(0.2–0.6)
HTPs	16,255	0.5	(0.3–0.7)	14,711	0.5	(0.3–0.9)
Nicotine pouches	16,255	0.9	(0.7–1.2)	14,711	1.2	(0.9–1.5)

*Note.* HTPs = heated tobacco products; LCCs = little cigars or cigarillos. CI = confidence interval

## 1.6 Tobacco Use by LGBTQ+ Status

Respondents were asked to indicate their sexual orientation and gender identity in two separate questions. Using responses from these questions, three categories of LGBTQ+ status were created: LGBTQ+, non-LGBTQ+, and unclear LGBTQ+ status. See Appendix A for additional information on this variable.

Table 1-6 presents tobacco use by LGBTQ+ status. LGBTQ+ respondents had higher prevalence of any current tobacco use (11.4%) than non-LGBTQ+ respondents (6.4%) and those of unclear LGBTQ+ status (5.3%). LGBTQ+ respondents also had a higher prevalence of tobacco use for each specific tobacco product than respondents with unclear LGBTQ+ status or who identified as non-LGBTQ+. Vapes were the most commonly used product across all groups. Current vaping was 9.1% among LGBTQ+ respondents, 4.0% among respondents with unclear LGBTQ+ status, and 5.1% among non-LGBTQ+ respondents.



**Table 1-6. Prevalence of Current Tobacco Use Among High School Respondents, by LGBTQ+ Status**

Tobacco Product	LGBTQ+*		Non-LGBTQ+*		Unclear LGBTQ+ Status*	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Any tobacco use	5,146	11.4 (9.5–13.6)	21,360	6.4 (5.6–7.2)	2,414	5.3 (4.0–6.8)
Vapes	5,142	9.1 (7.7–10.7)	21,337	5.1 (4.5–5.9)	2,412	4.0 (2.8–5.4)
Cigarettes	5,145	2.5 (1.8–3.3)	21,348	0.9 (0.6–1.2)	2,413	1.1 (0.6–1.8)
LCCs	5,143	1.6 (1.1–2.2)	21,353	0.4 (0.3–0.5)	2,414	0.4 (0.2–0.8)
Cigars	5,144	1.5 (1.0–2.2)	21,352	0.7 (0.5–0.9)	2,412	0.6 (0.3–1.1)
Hookah	5,146	1.5 (0.8–2.3)	21,360	0.5 (0.3–0.9)	2,414	1.0 (0.4–1.9)
Smokeless	5,146	1.2 (0.7–1.9)	21,360	0.3 (0.2–0.5)	2,414	0.7 (0.3–1.5)
HTPs	5,146	1.4 (0.8–2.3)	21,360	0.3 (0.2–0.5)	2,414	0.5 (0.1–1.2)
Nicotine pouches	5,146	1.7 (1.1–2.5)	21,360	1.0 (0.7–1.3)	2,414	0.9 (0.5–1.6)

Note. LCCs = little cigars or cigarillos; HTPs = heated tobacco products; LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning. CI = confidence interval

\* Respondents who reported (a) their gender identity as transgender or “something else” and/or (b) identified their sexual orientation as gay or lesbian, bisexual, “something else,” or “don’t know what this question means” were considered LGBTQ+. Respondents who identified as female or male and straight (that is, not gay or lesbian) were considered non-LGBTQ+. Respondents who responded (a) unsure for gender identity and straight for sexual orientation or (b) male, female, or unsure for gender identity and unsure or “don’t know” for sexual orientation were considered to have unclear LGBTQ+ status.

## 1.7 Tobacco Use by General Mental Health

Table 1-7 presents respondents’ current tobacco use according to reported general mental health (see Appendix A). Respondents who rated their mental health as poor reported higher use of any tobacco product (14.8%) than those who reported their mental health as fair (7.2%) or good to excellent (5.9%). This pattern was consistent for each tobacco product.

**Table 1-7. Prevalence of Current Use of Tobacco Products Among High School Respondents, by General Mental Health**

Tobacco Product	Good to Excellent		Fair		Poor	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Any tobacco use	19,149	5.9 (5.1–6.7)	7,155	7.2 (6.0–8.7)	3,107	14.8 (12.3–17.6)
Vapes	19,137	4.6 (4.0–5.2)	7,146	6.3 (5.2–7.7)	3,098	11.5 (9.4–13.8)
Cigarettes	19,141	1.1 (0.8–1.5)	7,151	0.9 (0.6–1.2)	3,103	2.4 (1.7–3.3)
LCCs	19,141	0.6 (0.4–0.8)	7,154	0.3 (0.2–0.6)	3,105	0.9 (0.4–1.8)
Cigars	19,141	0.9 (0.7–1.2)	7,153	0.3 (0.2–0.5)	3,104	1.2 (0.6–2.3)
Hookah	19,149	0.8 (0.5–1.3)	7,155	0.3 (0.2–0.5)	3,107	0.9 (0.5–1.7)
Smokeless	19,149	0.5 (0.3–0.6)	7,155	0.2 (0.1–0.5)	3,107	1.4 (0.6–2.6)
HTPs	19,149	0.5 (0.3–0.7)	7,155	0.2 (0.1–0.4)	3,107	1.2 (0.6–2.1)
Nicotine pouches	19,149	1.1 (0.9–1.3)	7,155	0.5 (0.3–0.8)	3,107	2.3 (0.9–4.7)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos. CI = confidence interval

## 1.8 Polytobacco Use

Table 1-8 presents the current use of multiple tobacco products, often referred to as polytobacco use. Some estimates are imprecise due to small sample sizes. Overall, 27.2% of high school respondents who were currently using tobacco reported using two or more tobacco products. Due to small sample sizes, we excluded respondents who declined to answer questions about gender identity from the table. Of the remaining categories, respondents who identified their gender another way reported the highest prevalence of polytobacco use (50.6%). Polytobacco use was higher for 10th-grade respondents (30.4%) than 12th-grade respondents (25.2%). LGBTQ+ respondents had a higher prevalence of polytobacco use (31.1%) than non-LGBTQ+ (26.8%) or respondents with unclear LGBTQ+ status (27.0%).

**Table 1-8. Prevalence of Current Polytobacco Use Among High School Respondents Currently Using Tobacco, by Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status**

Characteristic	N	Used Only One Tobacco Product % (95% CI)	Used Two or More Tobacco Products % (95% CI)
Overall	2,584	72.8 (69.0–76.3)	27.2 (23.7–31.0)
Gender identity			
Male	1,027	67.4 (61.3–73.0)	32.6 (27.0–38.7)
Female	1,078	80.9 (75.5–85.6)	19.1 (14.4–24.5)

(continued)

**Table 1-8. Prevalence of Current Polytobacco Use Among High School Respondents Currently Using Tobacco, by Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status (continued)**

Characteristic	N	Used Only One Tobacco Product % (95% CI)		Used Two or More Tobacco Products % (95% CI)	
Identified in another way	252	49.4	(39.6–59.3)	50.6	(40.7–60.4)
Declined to answer	35	—	—	—	—
Race/ethnicity*					
White	958	71.0	(62.2–78.7)	29.0	(21.3–37.8)
African American or Black	68	—	—	—	—
Hispanic	1,133	76.9	(72.4–80.9)	23.1	(19.1–27.6)
Asian	126	73.1	(60.0–83.8)	26.9	(16.2–40.0)
Other	60	—	—	—	—
Multiracial	232	65.7	(55.8–74.8)	34.3	(25.2–44.2)
Grade					
10	1,056	69.6	(62.6–76.0)	30.4	(24.0–37.4)
12	1,528	74.8	(70.0–79.2)	25.2	(20.8–30.0)
LGBTQ+ status					
LGBTQ+	671	68.9	(62.8–74.5)	31.1	(25.5–37.2)
Non-LGBTQ+	1,522	73.2	(67.9–78.1)	26.8	(21.9–32.1)
Unclear LGBTQ+ status	161	73.0	(60.9–83.0)	27.0	(17.0–39.1)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning. CI = confidence interval

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

## 1.9 Tobacco Use by Experiences of Discrimination

The CYTS captures experiences of discrimination based on literature establishing a relationship between discrimination and tobacco use.<sup>6,7,8</sup> Specifically, since 2022, the CYTS has contained a modified version of the Everyday Discrimination Scale.<sup>9</sup> The scale was

<sup>6</sup> See Dutra et al., 2014.

<sup>7</sup> Borrell, L. N., Jacobs, D. R., Williams, D. R., Pletcher, M. J., Houston, T. K., & Kiefe, C. I. (2007). Self-reported discrimination and substance use in the Coronary Artery Risk Development in Adults Study. *American Journal of Epidemiology*, 166(9), 1068–1079.

<sup>8</sup> Wiehe, S.E., Aalsma, M.C., Liu, G.C., Fortenberry, J.D. (2010). Gender differences in the association between perceived discrimination and adolescent smoking. *American Journal of Public Health*, 100(3), 510–516.

<sup>9</sup> Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socioeconomic status, stress, and discrimination. *Journal of Health Psychology*, 2(3), 335–351.

modified to specify a time period for the experiences—the past 30 days; otherwise, the scale is identical to its original version. Additional information on the discrimination variable is available in Appendix A.

Table 1-9 presents the list of experiences and how frequently high school students reported experiencing them. Overall, 66.1% of high school students reported one or more experiences of discrimination a few times or more in the past month. The most commonly endorsed experience of discrimination was “people acted as if they think you are not smart;” 8.1% of respondents reported having this experience almost every day. The second most common experience was “you were treated with less courtesy or respect than other people;” 6.9% of respondents reported having this experience almost daily.

**Table 1-9. Prevalence of Experiences of Discrimination in the Last Month Among High School Respondents**

<b>Experience of Discrimination</b>	<b>N</b>	<b>Almost Every Day % (95% CI)</b>	<b>At Least Once a Week % (95% CI)</b>	<b>A Few Times % (95% CI)</b>	<b>Not At All % (95% CI)</b>
You were treated with less courtesy or respect than other people	28,871	6.9 (6.3–7.6)	12.6 (11.8–13.5)	32.1 (31.1–33.2)	48.3 (46.7–50.0)
You received poorer service than other people at restaurants or stores	28,852	2.7 (2.3–3.2)	4.7 (4.2–5.2)	15.8 (14.9–16.7)	76.9 (75.7–78.0)
People acted as if they think you are not smart	28,835	8.1 (7.4–8.8)	12.2 (11.4–13.0)	30.1 (29.3–31.0)	49.5 (48.3–50.8)
People acted as if they are afraid of you	28,829	4.4 (3.8–5.0)	6.4 (5.9–6.9)	16.9 (16.1–17.8)	72.3 (70.9–73.6)
You were threatened or harassed	28,843	3.5 (3.0–4.0)	4.7 (4.1–5.4)	14.0 (13.3–14.7)	77.8 (76.6–79.0)

Note. CI = confidence interval

We examined these experiences by tobacco user status (Table 1-10). The two most commonly reported experiences were the same among respondents who were using tobacco and not using tobacco, but those using tobacco endorsed them at higher rates. For example, respondents who used tobacco reported experiencing “almost every day” that “people acted as if they think you are not smart” at twice the rate (15.6%) of those who didn’t use tobacco (7.5%). Respondents who used tobacco generally reported higher rates of discrimination than respondents who didn’t use tobacco.

**Table 1-10. Prevalence of Experiences of Discrimination in the Last Month Among High School Respondents, by Current Tobacco Use**

<b>Experience of Discrimination</b>	<b>Almost Every Day % (95% CI)</b>	<b>At Least Once a Week % (95% CI)</b>	<b>A Few Times % (95% CI)</b>	<b>Not At All % (95% CI)</b>
<b>Currently using tobacco<sup>1</sup></b>				
You were treated with less courtesy or respect than other people	13.5 (10.6–16.9)	19.9 (17.2–22.8)	31.3 (27.5–35.3)	35.3 (31.2–39.5)
You received poorer service than other people at restaurants or stores	6.6 (4.3–9.6)	11.0 (8.7–13.6)	17.5 (14.8–20.4)	64.9 (60.9–68.8)
People acted as if they think you are not smart	15.6 (12.5–19.2)	18.7 (15.5–22.2)	29.3 (25.8–33.0)	36.4 (32.5–40.4)
People acted as if they are afraid of you	11.7 (9.0–14.8)	12.0 (9.8–14.4)	24.3 (20.9–27.8)	52.1 (48.2–56.0)
You were threatened or harassed	9.4 (6.9–12.5)	10.3 (8.1–12.9)	20.1 (17.4–23.0)	60.1 (56.7–63.6)
<b>Not currently using tobacco<sup>2</sup></b>				
You were treated with less courtesy or respect than other people	6.4 (5.8–7.1)	12.0 (11.2–13.0)	32.2 (31.1–33.4)	49.3 (47.7–51.0)
You received poorer service than other people at restaurants or stores	2.4 (2.0–2.8)	4.2 (3.8–4.6)	15.6 (14.7–16.6)	77.8 (76.6–78.9)
People acted as if they think you are not smart	7.5 (6.9–8.2)	11.7 (11.0–12.5)	30.2 (29.3–31.1)	50.6 (49.2–51.9)
People acted as if they are afraid of you	3.8 (3.3–4.4)	6.0 (5.5–6.5)	16.4 (15.5–17.3)	73.8 (72.5–75.1)
You were threatened or harassed	3.0 (2.6–3.5)	4.3 (3.8–4.9)	13.5 (12.8–14.3)	79.1 (78.0–80.2)

Note. CI = confidence interval

<sup>1</sup> n = 2,324 for respondents currently using tobacco in this table.

<sup>2</sup> n = 26,547 for respondents not currently using tobacco in this table.

Next, we examined the perceived reason for experiences of discrimination among high school students who reported one or more of the experiences of discrimination (Table 1-11). The most common perceived reasons for experiencing discrimination in the last month were some other aspect of physical appearance (35.3%) and age (30.7%). The least common

reason was religion (8.4%). The findings were similar when examining reason for discrimination across tobacco user status.

**Table 1-11. Perceived Reasons for Experiencing Discrimination in the Last Month Among High School Respondents, by Current Tobacco User Status**

Reason for Discrimination (Select All That Apply)	Overall		Currently Using Tobacco		Not Currently Using Tobacco	
	N = 19,152		N = 1,861		N = 17,291	
	% (95% CI)		% (95% CI)		% (95% CI)	
Age	30.7	(29.4–32.0)	33.8	(29.3–38.4)	30.4	(29.0–31.9)
Race/ethnicity	28.6	(26.8–30.4)	28.0	(23.9–32.4)	28.6	(26.8–30.5)
Gender identity	27.8	(26.5–29.2)	31.0	(27.2–35.0)	27.5	(26.2–29.0)
Some other aspect of physical appearance	35.3	(33.7–37.0)	38.7	(34.8–42.7)	35.0	(33.4–36.7)
Weight	20.8	(19.6–22.1)	23.3	(19.9–26.9)	20.6	(19.3–22.0)
Height	19.9	(18.6–21.3)	20.1	(16.6–23.8)	19.9	(18.6–21.3)
Ancestry or national origins	11.3	(10.5–12.1)	14.2	(10.8–18.2)	11.0	(10.3–11.8)
Household or family education or income	17.6	(16.6–18.8)	17.2	(14.4–20.4)	17.7	(16.6–18.8)
Sexual orientation	11.5	(10.6–12.4)	16.7	(13.0–20.9)	11.0	(10.2–11.8)
Religion	8.4	(7.5–9.4)	9.2	(7.0–11.8)	8.3	(7.4–9.3)
Other	19.2	(18.3–20.2)	16.3	(13.5–19.5)	19.5	(18.4–20.6)

Note. CI = confidence interval

## 1.10 Vaping Cessation

The 2023 CYTS examined quit attempts among current vapers and their intentions to quit vaping in the future. Appendix A provides additional information about these variables.

Table 1-12 presents reported quit attempts and intention to quit vaping in the next 30 days among vapers in specific populations. Among respondents who currently vaped, 40.8% reported attempting to quit vaping in the last 12 months, and 38.8% reported intending to quit in the next 30 days. Respondents who identified their gender in another way had the lowest prevalence of quit attempts (30.6%) and lowest reported intention to quit (24.5%). Quit attempts and intention to quit were more common among 12th-grade respondents (41.8% and 40.8%, respectively) than 10th-grade respondents (39.2% and 35.5%, respectively). Non-LGBTQ+ respondents had a higher prevalence of quit attempts and reporting intentions to quit (41.7% and 41.5%, respectively) than respondents who were LGBTQ+ (36.9% and 32.6%, respectively) and respondents who had unclear LGBTQ+ status (36.7% and 33.6%, respectively). Respondents with poor mental health (36.4%) reported fewer quit attempts, but respondents with fair mental health status (43.1%) reported a higher prevalence of quit attempts than those with good to excellent mental health (40.5%). When asked about the next 30 days, respondents with good to excellent

mental health (41.7%) had the highest prevalence of intention to quit out of all mental health statuses. Suppressed values prevented comparisons by race/ethnicity.

**Table 1-12. Percentage of Respondents Who Reported Attempting to Quit Vaping in the Last 12 Months or Intending to Quit Vaping in the Next 30 Days Among Currently Vaping High School Respondents**

Characteristic	Attempted to Quit			Intending to Quit		
	N	% (95% CI)		N	% (95% CI)	
Overall	2,099	40.8	(37.5–44.2)	2,099	38.8	(34.3–43.3)
Gender identity						
Male	767	41.2	(35.4–47.2)	767	40.7	(34.3–47.3)
Female	965	40.6	(35.9–45.4)	965	39.2	(33.7–45.0)
Identified in another way	182	30.6	(19.6–43.6)	182	24.5	(14.6–36.8)
Declined to answer	25	—	—	25	—	—
Race/ethnicity*						
White	761	39.1	(33.5–44.8)	761	32.7	(25.3–40.7)
African American or Black	55	—	—	55	—	—
Hispanic	939	42.1	(36.9–47.5)	939	42.4	(36.1–48.9)
Asian	107	39.9	(27.2–53.6)	107	44.8	(31.5–58.8)
Other	43	—	—	43	—	—
Multiracial	192	42.6	(30.8–55.1)	192	40.2	(28.4–52.9)
Grade						
10	853	39.2	(33.1–45.6)	853	35.5	(30.6–40.7)
12	1,246	41.8	(37.2–46.5)	1,246	40.8	(34.6–47.2)
LGBTQ+ status						
LGBTQ+	543	36.9	(29.8–44.4)	543	32.6	(25.0–40.9)
Non-LGBTQ+	1,246	41.7	(36.9–46.5)	1,246	41.5	(36.2–46.9)
Unclear LGBTQ+ status	124	36.7	(24.0–50.9)	124	33.6†	(18.9–51.0)
Mental health status						
Good to excellent	980	40.5	(35.0–46.2)	980	41.7	(34.0–49.6)
Fair	537	43.1	(35.5–50.9)	537	38.4	(31.2–46.0)
Poor	420	36.4	(27.7–45.8)	420	30.8	(23.8–38.5)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

### **1.11 Summary**

In 2023, the most frequently used tobacco product among California high school respondents was vapes, with 5.9% reporting current use and 18.3% reporting ever use. Current use of cigarettes was 1.2%, and current use of LCCs, cigars, hookah, smokeless tobacco, and HTPs were all less than 1.0%. Respondents who identified their gender in another way or declined to answer questions about gender had a higher prevalence of any tobacco used compared to female or male respondents. This was also true for most individual tobacco products. Tobacco use was highest among respondents in the 12th grade (compared with 10th grade). About a quarter (27.2%) of respondents who currently used tobacco also reported using two or more tobacco products. Experiences of discrimination were common (66.1%), and respondents who currently used tobacco reported experiencing discrimination more frequently. A higher prevalence of quit attempts and intention to quit was observed among males, 12th graders, and non-LGTBQ+ respondents. Prevalence of quit attempts in the last 12 months and intention to quit in the next 30 days varied by self-reported mental health status.



## 2. Use of Flavored Tobacco Products

This chapter presents the information about the use of flavored tobacco products among respondents currently using tobacco. It also presents the use of specific flavors. It should be noted that the flavored cigarette use reported in this chapter reflects the use of menthol cigarettes (the only flavor available). For flavored tobacco use among 8th-grade respondents, see Chapter 10.

### 2.1 Flavored Tobacco Use

The 2023 CYTS asked respondents who were currently using tobacco which flavors they used most often for each tobacco product. Since menthol cigarettes are the only type of flavored cigarette, the CYTS only asked about the use of menthol cigarettes in the past 30 days for respondents reporting current smoking. However, for the other products, the CYTS asked respondents to select their most commonly used flavor from a list of multiple flavors. We divided respondents based on their use of flavored or unflavored products. This report defines flavored tobacco use as smoking menthol cigarettes in the last 30 days or, for users of all other tobacco products, selecting any flavor other than tobacco or unflavored as their most used flavor (see Appendix A). This report defines unflavored tobacco use as not having smoked menthol cigarettes in the last 30 days or, for users of all other products, selecting “tobacco” or “unflavored” as their most used flavor.

Table 2-1 indicates that, for the products included in the table, most respondents who were using tobacco also reported using a flavored tobacco product (85.6%), with the use of flavored vapes (89.1%) being the most prevalent. Almost half of respondents who were smoking cigarettes (45.0%) reported using menthol cigarettes in the past 30 days.

**Table 2-1. Descriptive Analysis of Current Flavored Tobacco Product Use by Product, Among Respondents Currently Using Tobacco**

Tobacco Product	Flavored Product Use		
	<i>N</i>	% (95% CI)	
Any of the below*	2,464	85.6	(82.6–88.2)
Vapes	2,070	89.1	(85.8–91.9)
Cigarettes**	457	45.0	(36.4–53.9)
LCCs	232	50.1	(38.5–61.7)
Cigars	294	49.9	(38.1–61.6)
Hookah	195	77.2	(60.8–89.2)
Smokeless	178	66.1†	(49.3–80.5)

(continued)

**Table 2-1. Descriptive Analysis of Current Flavored Tobacco Product Use by Product, Among Respondents Currently Using Tobacco (continued)**

Tobacco Product	Flavored Product Use		
	N	% (95% CI)	
HTPs	140	75.2	(60.8–86.3)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos; CI = confidence interval.

\* As the sample size for the subgroup for each product varies, estimates for each product may be greater than that of “any of the below.”

\*\* Menthol was the only available flavor for cigarettes.

† 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  $\geq 0.30$  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.

## 2.2 Flavored Tobacco Use by Demographics

Table 2-2 presents the current use of flavored tobacco among respondents who reported currently using tobacco, by demographics. Overall, most respondents who used these products reported using a flavored tobacco product. Use of flavored tobacco was highest among high school respondents who identified their gender in another way (90.1%) and lowest among males (81.5%). Use of flavored tobacco was highest among African American or Black respondents, followed by Asian respondents. Among respondents who currently used tobacco, 96.0% of African American or Black respondents and 94.4% of Asian respondents reported using flavored tobacco. Use of flavored tobacco was lowest among Hispanic respondents (82.7%). Use among 10th- and 12th-grade students was 86.6% and 85.0% respectively. LGBTQ+ respondents reported higher use (86.9%) than non-LGBTQ+ respondents (85.7%) and respondents with unclear LGBTQ+ status (79.8%).

**Table 2-2. Prevalence of Current Use of Any Flavored Tobacco Among High School Respondents Who Reported Currently Using These Products, by Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status**

Characteristic	Current Use		
	N	% (95% CI)	
Overall	2,464	85.6	(82.6–88.2)
Gender identity			
Male	951	81.5	(77.5–85.1)
Female	1,056	88.4	(83.4–92.3)
Identified in another way	244	90.1	(84.8–94.1)
Declined to answer	30	—	—
Race/ethnicity*			

(continued)

**Table 2-2. Prevalence of Current Use of Any Flavored Tobacco Among High School Respondents Who Reported Currently Using These Products, by Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status (continued)**

Characteristic	Current Use		
	N	% (95% CI)	
White	900	86.3	(82.0–89.8)
African American or Black	67	96.0	(91.2–98.6)
Hispanic	1,085	82.7	(77.1–87.4)
Asian	120	94.4	(87.4–98.2)
Other	59	91.7	(77.1–98.4)
Multiracial	226	87.8	(80.8–93.0)
Grade			
10	998	86.6	(82.1–90.3)
12	1,466	85.0	(81.4–88.1)
LGBTQ+ status			
LGBTQ+	656	86.9	(80.6–91.8)
Non-LGBTQ+	1,441	85.7	(82.7–88.4)
Unclear LGBTQ+ status	151	79.8	(63.1–91.3)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

### 2.3 Use of Specific Flavored Tobacco Products by Demographics

The following section (Tables 2-3, 2-4, and 2-5) presents the current use of flavored tobacco for specific products among respondents who were currently using tobacco across respondent demographics, including gender identity, race/ethnicity, and grade.

Table 2-3 indicates the percentage of respondents currently using vapes, cigarettes, and cigars who were using flavored versions of these products, by gender identity, excluding participants who declined to answer gender identity questions due to small sample sizes. We excluded other tobacco products due to small sample sizes. Female respondents reported the highest use of flavored vapes (90.3%) out of the gender identities included in the table. Participants who identified their gender in another way (69.0%) reported higher current use of menthol cigarettes than males (38.0%), but the estimate for males should be interpreted with caution, and we could not include females in this comparison due to small sample sizes.

**Table 2-3. Prevalence of Current Flavored Tobacco Product Use Among High School Respondents Who Reported Currently Using Each Tobacco Product by Gender Identity**

Tobacco Product	Male		Female		Identified in Another Way	
	<i>N</i>	% (95% CI)	<i>N</i>	% (95% CI)	<i>N</i>	% (95% CI)
Any flavored tobacco use*	951	81.5 (77.5–85.1)	1,056	88.4 (83.4–92.3)	244	90.1 (84.8–94.1)
Vapes	752	87.7 (83.2–91.4)	958	90.3 (84.5–94.5)	180	85.5 (72.0–94.1)
Cigarettes**	183	38.0† (23.6–54.2)	138	—	98	69.0 (55.6–80.5)

*Note.* CI = confidence interval. The “decline to answer” category for gender identity was removed because all values were suppressed due to small sample size.

\* Includes use of vapes, cigarettes, LCCs, cigars, hookah, smokeless tobacco, and/or HTPs. All products except for vapes and cigarettes were removed from the table due to small sample sizes.

\*\* Menthol was the only available flavor for cigarettes.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

Tables 2-4a and 2-4b display the use of flavored tobacco products by race/ethnicity. African American/Black respondents reported the highest use of any flavored tobacco (96.0%), followed by Asian (94.4%) and other race (91.7%) respondents. For flavored vapes, African American/Black respondents had the highest prevalence of using flavored vapes (98.7%) of the race/ethnicity groups with a sufficient sample size to include in the table (all groups except “other race”). The sample sizes for menthol cigarette smoking use were too small to determine patterns by product and race/ethnicity. We excluded the remaining tobacco products from the table due to small sample sizes.

**Table 2-4a. Prevalence of Current Flavored Tobacco Product Use Among High School Respondents Who Reported Currently Using Each Tobacco Product by Race/Ethnicity**

Tobacco Product	White		African American or Black		Hispanic	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Any flavored tobacco use*	900	86.3 (82.0–89.8)	67	96.0 (91.2–98.6)	1,085	82.7 (77.1–87.4)
Vapes	754	92.9 (89.9–95.2)	55	98.7 (95.4–99.8)	923	84.6 (78.3–89.7)
Cigarettes**	222	28.7 (19.0–40.0)	13	—	137	57.6 (43.7–70.6)

Note. CI = confidence interval.

\* Includes use of vapes, cigarettes, LCCs, cigars, hookah, smokeless tobacco, and/or HTPs. All products except for vapes and cigarettes were removed from the table due to small sample sizes.

\*\* Menthol was the only available flavor for cigarettes.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

**Table 2-4b. Prevalence of Current Flavored Tobacco Product Use Among High School Respondents Who Reported Currently Using Each Tobacco Product by Race/Ethnicity**

Tobacco Product	Asian		Other		Multiracial	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Any flavored tobacco use*	120	94.4 (87.4–98.2)	59	91.7 (77.1–98.4)	226	87.8 (80.8–93.0)
Vapes	104	95.9 (88.3–99.2)	43	—	189	89.2 (79.7–95.3)
Cigarettes**	20	—	13	—	52	—

Note. CI = confidence interval.

\* Includes use of vapes, cigarettes, LCCs, cigars, hookah, smokeless tobacco, and/or HTPs. All products except for vapes and cigarettes were removed from the table due to small sample sizes.

\*\* Menthol was the only available flavor for cigarettes.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

Table 2-5 shows results by grade. Due to small sample sizes, we are unable to make comparisons for some tobacco products. Use of flavored vapes was higher among respondents in 12th grade (90.0%) than in 10th grade (87.7%). Use of menthol cigarettes and flavored cigars was higher among respondents in 10th grade (51.1% and 62.7%, respectively) than in 12th grade (41.7% and 39.7%, respectively).

**Table 2-5. Prevalence of Current Flavored Tobacco Product Use Among High School Respondents Who Reported Currently Using Each Tobacco Product by Grade**

Tobacco Product	10th Grade			12th Grade		
	N	% (95% CI)		N	% (95% CI)	
Any of the below*	998	86.6	(82.7–90.5)	1,466	85.0	(81.7–88.3)
Vapes	839	87.7	(82.8–92.6)	1,231	90.0	(87.1–92.8)
Cigarettes**	160	51.1	(38.3–63.9)	297	41.7	(29.9–53.4)
LCCs	102	—	—	130	51.5	(38.4–64.5)
Cigars	122	62.7†	(46.8–78.6)	172	39.7	(27.9–51.4)
Hookah	88	76.2†	(61.1–91.3)	107	—	—
Smokeless	89	72.0	(58.5–85.5)	89	—	—
HTPs	72	—	—	68	77.7	(64.8–90.6)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos; CI = confidence interval.

\* As the sample size for the subgroup for each product varies, estimates for each product may be greater than that of “any of the below.”

\*\* Menthol was the only available flavor for cigarettes.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

Table 2-6 shows the use of flavored tobacco products by LGBTQ+ status. Estimates for respondents of unclear LGBTQ+ status and estimate for products other than vapes, cigarettes, and cigars are suppressed due to small sample sizes. Where estimates are available for specific products, use of flavored tobacco products varied by LGBTQ+ status. Use of menthol cigarettes and flavored cigars was higher among LGBTQ+ respondents (48.4% and 63.8%, respectively) than non-LGBTQ+ respondents (39.5% and 44.2%, respectively); however, these estimates should be interpreted with caution. Use of flavored vapes was higher among non-LGBTQ+ respondents (89.7%) than LGBTQ+ respondents (88.7%).

**Table 2-6. Prevalence of Current Flavored Tobacco Product Use Among High School Respondents Who Reported Currently Using Each Tobacco Product, by LGBTQ+ Status**

Tobacco Product	LGBTQ+			Non-LGBTQ+		
	N	%	(95% CI)	N	%	(95% CI)
Any flavored tobacco use*	656	86.9	(80.6–91.8)	1,441	85.7	(82.7–88.4)
Vapes	537	88.7	(80.4–94.3)	1,229	89.7	(86.3–92.5)
Cigarettes**	165	49.4	(37.4–61.4)	216	39.5†	(24.8–55.7)
Cigars	86	63.8†	(44.6–80.2)	164	44.2†	(28.8–60.4)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* Includes use of vapes, cigarettes, LCCs, cigars, hookah, smokeless tobacco, and/or HTPs. All products except for vapes and cigarettes were removed from the table due to small sample sizes.

\*\* Menthol was the only available flavor for cigarettes.

† 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  $\geq 0.30$  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.

## 2.4 Use of Specific Flavor Types

The 2023 CYTS asked respondents to indicate the flavor type they used most often. As shown in Tables 2-7a and 2-7b, flavor popularity varied by product. Fruit was the most popular flavor among respondents who were currently vaping (48.7%), using hookah (32.9%), and using HTPs (17.5%). Tobacco was the most popular flavor among respondents who were smoking cigars (29.8%) and using smokeless tobacco (23.5%). Almost half (45%) of respondents who currently smoked reported smoking menthol cigarettes.

**Table 2-7a. Prevalence of Endorsing Specific Flavors Among High School Respondents Who Reported Currently Using Each Tobacco Product**

Flavors	Vapes N = 2,070		Cigarettes*** N = 457		LCCs N = 232		Cigars N = 294	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Unflavored	8.0	(5.6–11.0)	55.0	(46.1–63.6)	29.2	(18.6–41.6)	20.4	(12.4–30.5)
Tobacco flavored	2.9	(1.6–4.7)	N/A		20.8	(13.2–30.1)	29.8	(21.0–39.8)
Menthol	2.2	(1.3–3.6)	45.0	(36.4–53.9)	9.7†	(3.6–20.0)	3.4†	(1.0–8.1)
Mint	9.3	(7.1–12.0)	N/A		2.3†	(0.5–6.6)	7.2†	(1.1–22.2)
Cooling, ice, or frosty	9.2	(7.1–11.6)	N/A		0.4	(0.0–1.3)	5.8†	(2.1–12.4)
Clove or spice	0.4	(0.1–1.4)	N/A		3.9†	(1.1–9.5)	1.0	(0.4–2.3)

(continued)

**Table 2-7a. Prevalence of Endorsing Specific Flavors Among High School Respondents Who Reported Currently Using Each Tobacco Product (continued)**

Flavors	Vapes N = 2,070 % (95% CI)	Cigarettes*** N = 457 % (95% CI)	LCCs N = 232 % (95% CI)	Cigars N = 294 % (95% CI)
Fruit	48.7 (44.1–53.4)	N/A	14.4 (7.5–24.2)	10.7† (5.1–19.1)
Alcoholic drink*	1.2 (0.7–2.1)	N/A	2.5 (1.1–4.7)	3.1 (1.3–6.1)
Non-alcoholic drink**	0.9 (0.3–1.9)	N/A	0.8 (0.2–2.0)	1.8† (0.2–5.9)
Candy, chocolate, desserts, or other sweets	10.0 (7.7–12.7)	N/A	7.5† (2.9–15.3)	5.6† (2.2–11.5)
Some other flavor	7.1 (5.4–9.0)	N/A	8.7† (3.8–16.5)	11.3† (5.4–20.3)

Note. LCCs = little cigars or cigarillos; CI = confidence interval.

\* Such as wine, cognac, margarita, or other cocktails.

\*\* Such as coffee, soda, energy drinks, or other beverages.

\*\*\* Menthol was the only available flavor for cigarettes. All other flavors are labeled N/A (not applicable).

† 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  $\geq 0.30$  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.

**Table 2-7b. Prevalence of Endorsing Specific Flavors Among High School Respondents Who Reported Currently Using Each Tobacco Product**

Flavors	Hookah N = 195 % (95% CI)	Smokeless N = 178 % (95% CI)	HTPs N = 140 % (95% CI)
Unflavored	5.7† (2.4–11.2)	10.4 (5.3–17.8)	10.6 (6.2–16.5)
Tobacco flavored	17.1† (6.1–34.7)	23.5 (10.9–40.8)	14.3† (5.2–29.2)
Menthol	7.9 (4.1–13.6)	13.5† (5.4–26.5)	8.9 (4.4–15.5)
Mint	8.1† (2.8–17.3)	—	—
Cooling, ice, or frosty	1.1 (0.3–2.8)	2.0 (0.7–4.6)	4.7† (1.7–10.3)
Clove or spice	6.9† (2.1–16.1)	1.6 (0.2–5.1)	1.9† (0.3–5.8)
Fruit	32.9 (21.4–46.1)	9.4† (2.6–22.3)	17.5† (8.0–31.4)
Alcoholic drink*	2.1† (0.4–6.4)	2.0 (0.9–3.8)	—
Non-alcoholic drink**	—	0.2 (0.0–1.0)	0.6 (0.2–1.3)

(continued)



**Table 2-7b. Prevalence of Endorsing Specific Flavors Among High School Respondents Who Reported Currently Using Each Tobacco Product (continued)**

Flavors	Hookah N = 195 % (95% CI)		Smokeless N = 178 % (95% CI)		HTPs N = 140 % (95% CI)	
	Candy, chocolate, desserts, or other sweets	4.2†	(1.5–9.1)	9.4†	(2.4–23.1)	1.7
Some other flavor	8.2	(4.2–14.2)	9.7	(5.2–16.2)	9.6†	(4.4–17.6)

Note. HTPs = heated tobacco products; CI = confidence interval.

\* Such as wine, cognac, margarita, or other cocktails.

\*\* Such as coffee, soda, energy drinks, or other beverages.

– The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

## 2.5 Perceived Accessibility of Flavored Tobacco Products

In addition to asking questions of respondents who were currently using tobacco products about which flavors they were using, we asked all respondents, regardless of user status, how easy they thought it was to access flavored tobacco products from a store, the internet (including apps), or someone else. The survey did not provide a definition for flavored tobacco products in the survey item. Respondents who responded “somewhat easy” or “very easy” to each question were coded as perceiving that it was easy to access flavored tobacco products. Respondents who responded “somewhat difficult” or “very difficult” were coded as not perceiving that it was easy to access flavored tobacco products. Perceived access for vapes and cigarettes (without mention of the products being flavored or unflavored) is presented in Chapter 3.

Table 2-8 presents the percentage of high school respondents who perceived that it was easy to obtain flavored tobacco products from a store, from the internet, and from someone else. About a third of respondents thought it was easy to access flavored tobacco products from a store (38.5%), while many more thought it was easy to access flavored products from the internet (61.4%) or from someone else (63.6%).

**Table 2-8. Prevalence of Perceiving That it was Easy to Access Flavored Tobacco Products Among High School Respondents**

Characteristic	From a store		From the internet		From someone else	
	<i>N</i>	% (95% CI)	<i>N</i>	% (95% CI)	<i>N</i>	% (95% CI)
Overall	29,943	38.5 (37.3–39.8)	29,809	61.4 (60.2–62.6)	29,861	63.6 (62.3–64.9)

## 2.6 Summary

Most high school respondents who were currently using tobacco reported using flavored tobacco. This finding was consistent regardless of gender identity, race/ethnicity, or grade. Out of all tobacco products, flavored product use was highest for vapes, with 89.1% of respondents who currently vaped reporting using flavored vapes. Almost half (45.0%) of respondents who smoked cigarettes reported using menthol cigarettes in the last 30 days. The popularity of flavor types varied by product, but fruit flavors were popular for several products, including vapes. Respondents reported that they believed it was easier to access flavored tobacco products from the internet or another person than from a store. Findings for flavored tobacco should be interpreted with caution. The CYTS asks respondents to identify their most commonly used flavor, as opposed to asking them for all flavors they have used in the past 30 days. As a result, it is possible that some users categorized as unflavored users have also used flavored products in the past 30 days, and vice versa. For discussion of flavored tobacco use within the context of Senate Bill (SB) 793, please see the Conclusions section of the report.

### 3. Access to Vapes and Cigarettes

Age restrictions are intended to make it difficult for youth to access tobacco products. The minimum legal age to purchase tobacco products, including vapes, in California is 21 years old. As a result, it is important to monitor how underage youth acquire tobacco products, particularly through retail sources. This chapter presents data on how respondents acquired vapes and cigarettes. We asked respondents who currently vaped and smoked cigarettes how they usually got their vapes (or pods or e-liquid) or cigarettes, respectively. We then asked respondents who reported buying their own vapes or cigarettes where they usually bought their vapes (or pods or e-liquid) or cigarettes.

#### 3.1 Acquisition of Vapes

Table 3-1 presents methods of vape acquisition among respondents who reported currently vaping. The most common method of obtaining vapes was buying their own (34.9%). Besides purchasing one’s own vapes, other common methods were asking someone else to buy them (21.4%) and someone giving them to the respondent (18.2%). The least commonly reported method was taking them from someone (4.9%).

Among respondents who reported purchasing their own vapes, the most common source was buying them from another person (30.5%), followed by from a tobacco or smoke shop (25.0%). When looking by grade, among respondents who purchased their own vapes, the most common purchasing source reported by 10th graders was another person (45.5%), and the most common purchasing source for 12th graders was a tobacco or smoke shop (29.6%).

**Table 3-1. Methods of Accessing Vapes Among High School Respondents Who Were Currently Vaping, by Grade**

Method	Overall N = 2,055 % (95% CI)		10th Grade N = 836 % (95% CI)		12th Grade N = 1,219 % (95% CI)	
I ask someone to buy them for me	21.4	(18.0–25.1)	23.9	(17.9–30.8)	19.8	(16.2–23.8)
Someone gives them to me	18.2	(15.2–21.6)	16.8	(11.5–23.4)	19.1	(15.9–22.7)
I ask someone for them	11.5	(9.3–14.1)	11.2	(7.2–16.5)	11.7	(9.2–14.6)
I take them from someone	4.9	(3.5–6.7)	6.8	(3.9–10.9)	3.7	(2.5–5.2)
I get them some other way	9.0	(6.8–11.7)	12.5	(8.7–17.3)	6.8	(4.5–9.8)
I buy them myself*	34.9	(30.9–39.1)	28.7	(21.7–36.5)	38.8	(34.0–43.8)
From a gas station or convenience store	11.0	(6.6–17.1)	8.0†	(3.3–15.8)	12.5	(7.2–19.6)
From a grocery store	1.4	(0.4–3.5)	2.2†	(0.5–5.9)	1.0	(0.0–4.6)

(continued)

**Table 3-1. Methods of Accessing Vapes Among High School Respondents Who Were Currently Vaping, by Grade (continued)**

Method	Overall N = 2,055 % (95% CI)		10th Grade N = 836 % (95% CI)		12th Grade N = 1,219 % (95% CI)	
	From a drugstore or pharmacy	0.0	N/A	0.0	N/A	0.0
From a liquor store	2.7	(1.0–5.7)	0.7	(0.0–3.7)	3.6†	(1.2–8.1)
From a tobacco or smoke shop	25.0	(17.6–33.7)	15.4†	(5.2–32.2)	29.6	(21.0–39.5)
From a vape shop	17.4	(12.8–22.8)	14.0	(7.0–24.1)	19.0	(13.0–26.3)
From a mall or shopping center kiosk/ stand	0.0	N/A	0.0	N/A	0.0	N/A
On the internet (including apps)	2.1	(1.2–3.4)	2.8	(1.1–5.6)	1.8	(0.7–3.6)
From someone	30.5	(23.1–38.7)	45.5†	(28.7–63.1)	23.4	(16.3–31.8)
Some other way	7.9	(4.8–12.0)	9.6†	(4.2–18.2)	7.1	(3.6–12.3)

Note. CI = confidence interval. A value of 0.0 indicates that no respondents selected that item. N/A is used in the table to indicate that there is no confidence interval because the value of the estimate is 0.0. For definitions of nominal and effective sample size, see Appendix A.

\* Numbers below this row represent the percentage of respondents endorsing each location among those who reported buying their own vapes.

† 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  $\geq 0.30$  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.

### 3.2 Acquisition of Cigarettes

Table 3-2 shows how respondents who were current cigarette smokers acquired cigarettes. The most common method of obtaining cigarettes was buying them (26.5%). Besides purchasing one's own cigarettes, other common methods of obtaining them were being given them (22.1%) and taking them from someone (22.0%). The least common method was to ask someone for them (7.5%). In terms of location of purchase among respondents who reported purchasing their own cigarettes, for several methods, the estimate was suppressed. However, among the estimates that could be obtained, the most common method of purchase among those who reported buying their own cigarettes was from a gas station or convenience store (41.0%).

**Table 3-2. Methods of Accessing Cigarettes Among High School Respondents Who Were Currently Smoking Cigarettes, by Grade**

Method	Overall N = 452 % (95% CI)		10th Grade N = 156 % (95% CI)		12th Grade N = 296 % (95% CI)	
I ask someone to buy them for me	8.8	(5.0–14.2)	5.5†	(2.1–11.4)	10.6	(5.4–18.2)
Someone gives them to me	22.1	(15.9–29.4)	14.9	(7.2–26.1)	26.0	(19.4–33.5)
I ask someone for them	7.5	(4.5–11.7)	7.7†	(2.8–16.2)	7.4	(3.9–12.7)
I take them from someone	22.0	(14.5–31.1)	24.7	(12.6–40.7)	20.6	(11.5–32.4)
I get them some other way	12.9	(7.2–20.9)	18.6†	(7.3–35.9)	9.9	(4.9–17.5)
I buy them myself*	26.5	(19.2–35.0)	28.5	(17.5–41.7)	25.5	(17.3–35.2)
From a gas station or convenience store	41.0	(28.3–54.6)	—	—	41.7	(28.1–56.4)
From a grocery store	—	—	5.9†	(0.6–20.2)	—	—
From a drugstore or pharmacy	0.0	N/A	0.0	N/A	0.0	N/A
From a liquor store	4.0†	(0.8–11.5)	0.0	N/A	6.4†	(1.4–17.6)
From a tobacco or smoke shop	12.6†	(4.1–27.4)	2.5	(0.9–5.2)	—	—
From a vape shop	—	—	0.0	N/A	0.0	N/A
From a mall or shopping center kiosk/ stand	0.0	N/A	0.0	N/A	0.0	N/A
On the internet (including apps)	5.2†	(1.5–12.2)	—	—	3.3†	(0.7–9.3)
From someone	16.9	(11.2–23.9)	—	—	9.4†	(4.2–17.7)
Some other way	6.9†	(2.1–16.0)	—	—	3.6†	(0.9–9.0)

Note. CI = confidence interval. A value of 0.0 indicates that no respondents selected that item. N/A is used in the table to indicate that there is no confidence interval because the value of the estimate is 0.0.

\* Numbers below this row represent the percentage of respondents endorsing each location among those who reported buying their own cigarettes.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

There were some differences by grade. In terms of method of acquisition, 10th-grade respondents reported buying their own cigarettes (28.5%) as the most common method, followed by getting them some other way (18.6%). Twelfth-grade respondents reported being given cigarettes as the most common method of acquisition (26.0%), followed by

buying them (25.5%). For 10th graders, too many estimates were suppressed to determine the most common method of purchase among respondents who were currently smoking cigarettes and reported purchasing their own cigarettes. Several methods of purchase were also suppressed for 12th graders, but for those estimates that could be presented, purchasing from a gas station or convenience store was the most common method of purchase (41.7%).

### 3.3 Perceived Accessibility of Vapes

In addition to asking questions of respondents who were currently using vapes about how they obtained their products, we asked all respondents, regardless of user status, how easy they thought it was to access these products from a store, the internet (including apps), or someone else. Respondents who responded “somewhat easy” or “very easy” to these questions were coded as perceiving that it was easy to access these products. Respondents who responded “somewhat difficult” or “very difficult” were coded as not perceiving that it was easy to access these products. Overall, about half of respondents or more reported that they thought it was easy to get vapes from a store, the internet, or someone else. Variation in perceived ease of access existed by current vaping status.

Table 3-3 presents the percentage of high school respondents who perceived that it was easy to get vapes from a store, from the internet, and from someone else. A little over two-thirds of respondents thought it was easy to access vapes from someone else (71.6%) or from the internet (67.3%), and about half of high school respondents thought it was easy to access vapes from a store (49.9%). Current vapers reported the highest perceived ease of access from a store or from someone else, but the lowest perceived access to vapes from the internet.

**Table 3-3. Prevalence of Perceiving That It Was Easy to Access Vapes Among High School Respondents, by Vaping Status**

Characteristic	From a Store		From the Internet		From Someone Else	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	29,941	49.9 (48.7–51.1)	29,814	67.3 (66.0–68.6)	29,858	71.6 (70.3–72.8)
Vaping status						
Never vaping	23,927	48.3 (47.0–49.6)	23,842	67.0 (65.7–68.4)	23,876	68.8 (67.5–70.1)
Former vaping	4,000	54.2 (51.2–57.2)	3,972	70.5 (67.4–73.4)	3,981	83.5 (81.2–85.7)
Current vaping	2,014	63.2 (59.2–67.1)	2,000	64.2 (60.6–67.7)	2,001	84.4 (81.5–87.1)

Note. CI = confidence interval.

Table 3-4 includes findings for perceived access to vapes from a store by vaping status and demographics. Overall, respondents who currently vaped had the highest perceived access

to vapes from a store (63.2%), followed by those who formerly (54.2%) and never vaped (48.3%). This pattern was generally true across gender identity, race/ethnicity, and grade, and LGBTQ+ status, with a couple of exceptions. Asian respondents who had never vaped and respondents who had never vaped and identified their gender in another way had higher perceived ease of access than former vapers in these same categories.

**Table 3-4. Prevalence of Perceiving That It Was Easy to Access Vapes from a Store Among High School Respondents, by Vaping Status and Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status**

Characteristic	Never Vaping			Former Vaping			Current Vaping		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	23,927	48.3	(47.0–49.6)	4,000	54.2	(51.2–57.2)	2,014	63.2	(59.2–67.1)
Gender identity									
Male	11,142	48.3	(46.5–50.0)	1,649	55.1	(50.1–60.1)	752	65.5	(59.4–71.3)
Female	10,466	49.1	(47.5–50.8)	1,903	54.7	(51.5–57.8)	952	62.2	(56.4–67.7)
Identified in another way	1,311	46.4	(41.7–51.2)	243	45.8	(34.6–57.3)	177	60.0	(46.5–72.5)
Declined to answer	121	45.9	(31.9–60.4)	27	—	—	22	—	—
Race/ethnicity*									
White	5,379	49.9	(47.5–52.3)	1,038	54.4	(48.1–60.5)	732	66.7	(59.2–73.7)
African American or Black	503	58.7	(50.5–66.6)	101	71.4	(61.9–79.7)	53	88.8	(75.8–96.2)
Hispanic	12,943	46.3	(44.5–48.1)	2,266	51.7	(47.5–56.0)	893	58.5	(51.6–65.1)
Asian	2,782	48.9	(46.2–51.5)	215	47.2	(38.1–56.5)	104	69.8	(55.7–81.6)
Other	641	52.8	(44.9–60.7)	77	69.5 <sup>†</sup>	(52.5–83.3)	42	—	—
Multiracial	1,628	50.6	(46.5–54.7)	299	61.9	(54.5–69.0)	188	65.1	(53.6–75.4)
Grade									
10	13,100	46.2	(44.7–47.7)	1,768	49.3	(45.0–53.5)	816	59.7	(54.0–65.2)
12	10,827	50.8	(48.9–52.7)	2,232	58.2	(54.4–61.9)	1,198	65.4	(59.5–71.0)
LGBTQ+ status									
LGBTQ+	3,639	46.9	(43.6–50.2)	904	53.3	(47.0–59.5)	531	63.4	(56.8–69.5)
Non-LGBTQ+	17,174	50.0	(48.7–51.4)	2,642	55.9	(52.2–59.7)	1,224	63.8	(57.8–69.6)
Unclear LGBTQ+ status	1,999	39.7	(34.6–45.0)	241	41.5	(31.7–51.8)	123	57.9 <sup>†</sup>	(41.7–72.9)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

Perceived access to vapes from the internet shows a different pattern (Table 3-5). Overall, more respondents who had formerly vaped perceived it was easy to access vapes from the

internet (70.5%) than those who had never vaped (67.0%) or currently vaped (64.2%). However, this pattern varied by gender identity, race/ethnicity, grade, and LGBTQ+ status.

**Table 3-5. Prevalence of Perceiving That It Was Easy to Access Vapes from the Internet Among High School Respondents, by Vaping Status and Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status**

Characteristic	Never Vaping		Former Vaping		Current Vaping	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	23,842	67.0 (65.7–68.4)	3,972	70.5 (67.4–73.4)	2,000	64.2 (60.6–67.7)
Gender identity						
Male	11,106	67.1 (65.6–68.7)	1,640	68.1 (64.6–71.4)	749	59.3 (54.2–64.3)
Female	10,453	67.6 (65.7–69.5)	1,893	73.7 (70.3–76.8)	943	67.2 (61.8–72.2)
Identified in another way	1,310	70.1 (66.2–73.8)	241	66.6 (54.4–77.3)	179	69.9 (55.8–81.6)
Declined to answer	120	59.5 (44.3–73.5)	24	—	23	—
Race/ethnicity*						
White	5,368	69.7 (67.1–72.3)	1,023	69.0 (62.9–74.6)	730	60.9 (53.6–67.9)
African American or Black	499	67.9 (63.1–72.4)	100	73.8 (60.0–84.8)	53	—
Hispanic	12,899	64.8 (62.8–66.8)	2,256	70.2 (66.0–74.1)	886	65.4 (59.5–71.0)
Asian	2,780	72.1 (69.8–74.3)	215	67.1 (56.8–76.4)	103	68.4 (52.5–81.7)
Other	631	66.1 (58.5–73.1)	77	86.0 (74.6–93.6)	41	—
Multiracial	1,613	68.4 (64.1–72.5)	297	76.8 (68.0–84.2)	185	64.5 (50.8–76.7)
Grade						
10	13,058	66.5 (64.7–68.2)	1,758	70.8 (66.9–74.4)	813	69.6 (64.4–74.5)
12	10,784	67.7 (65.9–69.5)	2,214	70.3 (66.6–73.8)	1,187	60.8 (55.6–65.8)
LGBTQ+ status						
LGBTQ+	3,631	71.6 (68.4–74.6)	901	75.1 (69.4–80.3)	533	73.0 (65.9–79.3)
Non-LGBTQ+	17,138	67.9 (66.5–69.2)	2,624	70.0 (66.8–73.1)	1,214	60.9 (56.0–65.5)
Unclear LGBTQ+ status	1,990	58.6 (53.9–63.2)	240	67.5 (58.0–76.0)	122	51.8 (37.9–65.6)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

Table 3-6 presents findings for perceived access to vapes from someone else. Overall, respondents who currently vaped had the highest perceived access to vapes from someone else (84.4%), followed by respondents who had formerly (83.5%) and never vaped (68.8%). This pattern was generally true across gender identity, race/ethnicity, grade, and LGBTQ+



status. One exception was that Hispanic respondents who had formerly vaped reported higher perceived access than Hispanic respondents who currently vaped.

**Table 3-6. Prevalence of Perceiving That It Was Easy to Access Vapes from Someone Else Among High School Respondents, by Vaping Status and Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status**

Characteristic	Never Vaping			Former Vaping			Current Vaping		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	23,876	68.8	(67.5–70.1)	3,981	83.5	(81.2–85.7)	2,001	84.4	(81.5–87.1)
Gender identity									
Male	11,135	67.4	(65.5–69.3)	1,644	81.1	(78.0–83.9)	750	82.6	(77.9–86.7)
Female	10,494	72.1	(70.5–73.6)	1,900	87.1	(84.4–89.6)	953	87.2	(82.6–91.0)
Identified in another way	1,314	63.2	(58.5–67.7)	245	76.6	(66.2–85.1)	177	81.9	(71.0–90.0)
Declined to answer	115	55.3	(40.8–69.2)	25	—	—	23	—	—
Race/ethnicity*									
White	5,380	72.2	(69.9–74.5)	1,032	85.3	(80.4–89.4)	729	89.0	(83.5–93.2)
African American or Black	502	71.8	(61.1–81.0)	100	83.8	(74.5–90.8)	52	92.3	(79.5–98.3)
Hispanic	12,910	67.7	(65.8–69.6)	2,261	82.8	(79.7–85.7)	888	80.9	(75.7–85.4)
Asian	2,780	65.6	(61.9–69.2)	212	80.3	(71.7–87.2)	103	82.0	(67.9–91.8)
Other	636	65.2	(58.7–71.3)	77	75.4†	(56.9–88.8)	42	—	—
Multiracial	1,618	72.4	(68.8–75.8)	295	86.7	(80.2–91.7)	185	87.1	(75.7–94.4)
Grade									
10	13,077	66.8	(65.0–68.6)	1,758	84.6	(81.1–87.7)	812	85.7	(80.7–89.9)
12	10,799	71.2	(69.6–72.7)	2,223	82.7	(78.6–86.2)	1,189	83.6	(78.8–87.7)
LGBTQ+ status									
LGBTQ+	3,637	70.7	(68.0–73.2)	907	85.8	(81.6–89.4)	531	87.4	(82.5–91.3)
Non-LGBTQ+	17,191	70.3	(68.6–72.0)	2,635	83.9	(81.0–86.5)	1,224	83.7	(79.3–87.4)
Unclear LGBTQ+ status	2,005	59.0	(53.8–64.0)	239	79.5	(71.4–86.2)	123	81.3	(69.2–90.1)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

### 3.4 Perceived Access for Cigarettes

We also examined perceived access to cigarettes from the same three locations (Table 3-7). As with vapes, respondents reported highest perceived access from someone else (60.8%), followed by the internet (58.7%) or a store (37.0%). Also in alignment with vapes,

respondents who currently smoked cigarettes reported the highest perceived access to cigarettes from someone else or from a store, and respondents who had never smoked reported the lowest. Respondents who currently, formerly, and never smoked reported similar perceived access to cigarettes from the internet.

**Table 3-7. Prevalence of Perceiving That It Was Easy to Access Cigarettes Among High School Respondents, by Cigarette Smoking Status**

Characteristic	From a Store		From the Internet		From Someone Else	
	<i>N</i>	% (95% CI)	<i>N</i>	% (95% CI)	<i>N</i>	% (95% CI)
Overall	29,963	37.0 (35.9–38.0)	29,826	58.7 (57.4–60.0)	29,866	60.8 (59.3–62.2)
Cigarette smoking status						
Never smoking	27,967	36.2 (35.2–37.2)	27,845	58.7 (57.3–60.0)	27,884	59.9 (58.4–61.5)
Former smoking	1,554	44.5 (40.1–48.9)	1,546	58.7 (54.2–63.2)	1,549	71.3 (64.1–77.8)
Current smoking	442	66.3 (56.4–75.2)	435	55.7 (46.1–65.0)	433	85.9 (79.6–90.8)

*Note.* CI = confidence interval.

Table 3-8 presents findings for perceived access to cigarettes from a store by vaping status and demographics. Overall, more respondents who currently smoked reported it was easy to access cigarettes from a store (66.3%) than those who had formerly (44.5%) or never smoked (36.2%). This pattern was consistent across gender identity categories, race/ethnicity, grade, and LGBTQ+ status, where responses were not suppressed.

Table 3-9 examines perceived ease of access to cigarettes on the internet. Perceived ease of access was similar among respondents who currently smoked and those who had formerly and never smoked. For subgroups in which there was variation across smoking status (e.g., Hispanic and LGBTQ+ students), the highest perceived access was reported by respondents who had never smoked, followed by those who currently smoked and those who had formerly smoked. This is the opposite pattern as that observed by smoking status for access to cigarettes from a store or another person. However, many of these differences should be interpreted with caution due to low precision for some estimates.

**Table 3-8. Prevalence of Perceiving That It Was Easy to Access Cigarettes from a Store Among High School Respondents, by Cigarette Smoking Status and Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status**

Characteristic	Never Smoking			Former Smoking			Current Smoking		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	27,967	36.2	(35.2–37.2)	1,554	44.5	(40.1–48.9)	442	66.3	(56.4–75.2)
Gender identity									
Male	12,706	36.6	(34.8–38.4)	665	49.0	(42.0–56.1)	182	65.2†	(48.5–79.6)
Female	12,544	36.4	(34.9–37.9)	648	43.0	(36.2–49.9)	137	55.4†	(39.3–70.7)
Identified in another way	1,491	33.3	(29.4–37.5)	142	35.9	(24.4–48.6)	99	76.0	(59.8–88.2)
Declined to answer	154	31.6	(19.6–45.6)	11	—	—	6	—	—
Race/ethnicity*									
White	6,359	35.6	(33.3–37.9)	577	44.6	(37.6–51.9)	215	66.5	(51.2–79.6)
African American or Black	622	44.1	(38.1–50.4)	23	—	—	13	99.1	—
Hispanic	15,278	34.8	(33.7–36.0)	703	42.5	(36.7–48.3)	133	59.4†	(42.8–74.6)
Asian	3,001	40.2	(38.0–42.4)	81	45.8†	(29.0–63.3)	20	—	—
Other	710	37.1	(29.5–45.1)	41	—	—	12	—	—
Multiracial	1,943	38.6	(34.9–42.5)	125	41.0	(28.3–54.6)	49	—	—
Grade									
10	14,923	33.4	(32.1–34.7)	618	43.9	(35.1–53.0)	157	60.8†	(41.7–77.8)
12	13,044	39.5	(38.0–40.9)	936	44.8	(40.1–49.6)	285	69.2	(58.0–79.0)
LGBTQ+ status									
LGBTQ+	4,466	34.2	(31.7–36.7)	444	38.9	(30.3–48.0)	165	69.6	(56.0–81.0)
Non-LGBTQ+	19,949	37.3	(36.1–38.5)	890	50.0	(43.6–56.3)	214	63.9	(49.8–76.4)
Unclear LGBTQ+ status	2,213	32.4	(28.7–36.2)	117	32.5	(19.4–48.0)	38	—	—

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

**Table 3-9. Prevalence of Perceiving That It Was Easy to Access Cigarettes from the Internet Among High School Respondents, by Cigarette Smoking Status and Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status**

Characteristic	Never Smoking			Former Smoking			Current Smoking		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	27,845	58.7	(57.3–60.0)	1,546	58.7	(54.2–63.2)	435	55.7	(46.1–65.0)
Gender identity									
Male	12,655	59.0	(57.4–60.7)	664	57.0	(50.9–63.0)	181	41.6†	(27.0–57.3)
Female	12,519	58.8	(57.2–60.4)	644	56.9	(48.5–65.1)	134	55.3†	(38.6–71.1)
Identified in another way	1,490	61.1	(57.2–64.9)	142	77.3	(65.5–86.7)	97	—	—
Declined to answer	149	56.3	(43.5–68.5)	12	—	—	7	—	—
Race/ethnicity*									
White	6,341	59.8	(57.4–62.1)	568	52.7	(45.0–60.4)	212	46.9	(34.6–59.6)
African American or Black	617	60.5	(54.0–66.8)	23	—	—	13	—	—
Hispanic	15,211	56.4	(54.4–58.3)	706	59.5	(53.5–65.2)	130	51.1	(37.1–65.0)
Asian	2,997	66.2	(63.9–68.4)	81	67.5†	(49.8–82.1)	20	—	—
Other	701	61.8	(54.7–68.6)	41	—	—	11	—	—
Multiracial	1,924	61.1	(57.2–64.9)	123	59.8†	(42.5–75.5)	49	—	—
Grade									
10	14,871	58.5	(56.9–60.2)	614	59.6	(51.3–67.5)	155	51.2	(38.9–63.5)
12	12,974	58.9	(57.2–60.5)	932	58.2	(52.9–63.3)	280	58.1	(44.6–70.8)
LGBTQ+ status									
LGBTQ+	4,462	63.3	(60.6–65.9)	445	61.6	(53.4–69.5)	162	60.2	(45.4–73.9)
Non-LGBTQ+	19,886	59.0	(57.5–60.5)	888	59.4	(54.2–64.4)	211	46.2†	(31.5–61.5)
Unclear LGBTQ+ status	2,199	52.4	(48.3–56.5)	115	39.7†	(25.0–55.9)	38	—	—

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

Table 3-10 presents findings for perceived access of cigarettes from someone else by vaping status and demographics. Overall, respondents who currently smoked had the highest perceived access (85.9%) compared to those who had formerly (71.3%) and never smoked (59.9%). This pattern was consistent across gender identity, race/ethnicity, grade and LGBTQ+ status. Comparisons by smoking status and race/ethnicity were difficult to make due to suppressed values.

**Table 3-10. Prevalence of Perceiving That It Was Easy to Access Cigarettes from Someone Else Among High School Respondents, by Cigarette Smoking Status and Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status**

Characteristic	Never Smoking			Former Smoking			Current Smoking		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	27,884	59.9 (58.4–61.5)		1,549	71.3 (64.1–77.8)		433	85.9 (79.6–90.8)	
Gender identity									
Male	12,683	57.9 (56.0–59.8)		663	68.5 (54.4–80.5)		179	83.2 (69.6–92.4)	
Female	12,572	63.3 (61.1–65.4)		650	73.4 (66.5–79.5)		136	87.5 (78.5–93.8)	
Identified in another way	1,496	53.1 (48.9–57.4)		144	76.0 (63.0–86.2)		96	87.6 (75.4–95.1)	
Declined to answer	145	51.5 (38.7–64.2)		12	—	—	7	—	—
Race/ethnicity*									
White	6,358	62.0 (59.6–64.4)		575	77.3 (69.9–83.6)		211	88.7 (79.6–94.7)	
African American or Black	619	55.5 (48.5–62.4)		23	—	—	13	98.0	—
Hispanic	15,224	59.6 (57.6–61.6)		704	68.4 (60.9–75.2)		129	77.4 (62.0–88.7)	
Asian	2,995	58.9 (55.9–61.8)		80	72.8† (53.8–87.2)		20	93.7 (72.7–99.7)	
Other	705	58.1 (51.4–64.5)		41	—	—	12	—	—
Multiracial	1,931	62.0 (58.2–65.8)		122	81.7 (67.5–91.5)		48	90.1 (73.6–98.0)	
Grade									
10	14,884	58.0 (56.2–59.8)		618	66.8 (54.9–77.3)		154	77.3 (62.8–88.2)	
12	13,000	62.2 (60.2–64.1)		931	74.3 (68.1–79.9)		279	90.5 (82.1–95.8)	
LGBTQ+ status									
LGBTQ+	4,470	59.8 (55.8–63.6)		446	72.2 (64.1–79.3)		161	89.2 (79.8–95.2)	
Non-LGBTQ+	19,950	61.2 (59.6–62.8)		893	72.1 (61.7–81.1)		211	83.0 (72.2–90.9)	
Unclear LGBTQ+ status	2,215	53.1 (48.9–57.3)		116	62.9† (46.3–77.5)		38	—	—

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

### 3.5 Summary

The most common method of obtaining vapes among high school respondents who currently vaped was buying their own. Among those who bought their own vapes, the most common method of accessing them was to buy from someone else. The most common method of obtaining cigarettes was buying them.

Among all respondents, vapes were perceived as easier to obtain than cigarettes. We examined perceived ease of access via a store, the internet, and someone else. For vapes, the source that was easiest to access was from another person; 71.6% of respondents thought it was easy to access vapes from someone else. The same was true for cigarettes; 60.8% of respondents thought it was easy to access cigarettes from someone else. There were differences in perceived access by vaping and cigarette smoking status, with respondents who were currently using vapes generally reporting greater ease of access than those who had formerly or never used them, except when accessing vapes from the internet. For accessing vapes from the internet, respondents who had formerly and never vaped reported higher ease of access than those who currently vaped. In general, patterns of ease of access by user status persisted across demographic categories.

## **4. Secondhand Exposure and Other Environmental Influences**

This chapter focuses on environmental influences for tobacco use. It presents self-reported respondent exposure to secondhand vapor (i.e., vapor or aerosol from a vape or e-cigarette) and tobacco smoke and information on home bans for vaping and tobacco smoke. It also presents information on exposure to vaping and smoking in the media. The prevalence of exposure to environmental influences is compared across tobacco use status when possible. It should be noted that questions about vapes reported in this chapter asked about vapes generally and did not specify the substance in the vape (e.g., nicotine, marijuana). As a result, responses could include exposure to vapes with marijuana.

### **4.1 Exposure to Secondhand Vapor and Tobacco Smoke in Car or Room and Outside**

The 2023 CYTS asked respondents about exposure to vapor and tobacco smoke. To assess exposure to secondhand vapor in a car or room, the survey asked, "In the last 2 weeks, were you in a car or room when someone was using a vape?" A similar question asked about secondhand exposure to tobacco smoke in a car or room by replacing the phrase "using a vape" with the phrase "smoking a cigarette, little cigar, or cigarillo." To assess exposure to secondhand vapor outside, the survey asked, "In the last 2 weeks, were you near someone who was using a vape..." We defined participants as having been exposed to secondhand vapor outside if they endorsed one or more of the following: "outside of a restaurant;" "outside of a store;" "at a park, playground, or beach"; or "on a sidewalk." A similar question asked about secondhand exposure to tobacco smoke outside by replacing the phrase "using a vape" with the phrase "smoking a cigarette, little cigar, or cigarillo." Table 4-1 reports high school respondents' exposure to secondhand vapor and tobacco smoke in a car or room. One-third (32.9%) of respondents had been exposed to vapor or tobacco smoke in a car or room within the last 2 weeks. Secondhand exposure in a car or room was higher for exposure to vapes (29.0%) than tobacco smoke (14.1%). Respondents who currently vaped and currently smoked tobacco reported higher rates of exposure to vapor, tobacco smoke, and either vapor or tobacco smoke, compared to those who had never or formerly vaped and never or formerly smoked tobacco.

**Table 4-1. Prevalence of Last-2-Week Exposure to Vapor and Tobacco Smoke in Car or Room Among High School Respondents, by Vaping and Tobacco Smoking Status**

Use Status	Vapor Exposure		Tobacco Smoke* Exposure		Vapor or Tobacco Smoke Exposure	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	30,917	29.0 (27.2–30.9)	30,940	14.1 (13.3–15.0)	30,918	32.9 (31.0–34.8)
Vaping status						
Never	24,689	22.2 (20.5–24.0)	24,703	11.6 (10.7–12.6)	24,690	26.2 (24.4–28.1)
Former	4,110	49.9 (46.7–53.0)	4,113	21.4 (19.2–23.6)	4,111	53.5 (50.5–56.5)
Current	2,092	80.1 (76.3–83.5)	2,093	33.4 (29.5–37.6)	2,091	81.7 (78.0–85.0)
Tobacco smoking status*						
Never	28,467	26.4 (24.7–28.2)	28,484	12.4 (11.6–13.3)	28,466	30.3 (28.5–32.2)
Former	1,849	60.6 (56.3–64.8)	1,851	30.5 (27.4–33.8)	1,851	63.7 (59.5–67.8)
Current	584	79.3 (73.0–84.8)	585	60.1 (52.3–67.5)	584	84.9 (78.9–89.8)

Note. CI = confidence interval.

\*Includes cigarettes, little cigars or cigarillos, or both.

Table 4-2 shows respondents' exposure to secondhand vapor and tobacco smoke outside. Respondents were considered having been exposed outside if they reported being near someone who was using a vape, smoking tobacco, or either outside of a restaurant, outside of a store, on a sidewalk, or at a park, playground, or beach in the last 2 weeks. Reported exposure outside was higher than reported exposure in a car or room. Over half (63.8%) of respondents had been exposed to vapor or tobacco smoke outside within the last 2 weeks. Exposure to tobacco smoke outside (57.8%) was higher than exposure to vapor outside (42.1%). Respondents who currently vaped and currently smoked tobacco reported higher rates of exposure to vapor, tobacco smoke, and either vapor or tobacco smoke outside than respondents who had never or formerly vaped and never or formerly smoked tobacco.



**Table 4-2. Prevalence of Last-2-Week Exposure to Vapor and Tobacco Smoke Outside Among High School Respondents, by Vaping and Tobacco Smoking Status**

Use Status	Vapor Exposure		Tobacco Smoke Exposure		Vapor or Tobacco Smoke Exposure	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	30,649	42.1 (40.6-43.7)	30,696	57.8 (56.1-59.4)	30,660	63.8 (62.2-65.4)
Vaping status						
Never	24,501	37.6 (36.0-39.2)	24,526	56.1 (54.4-57.7)	24,499	60.9 (59.1-62.6)
Former	4,066	56.0 (53.6-58.4)	4,070	63.1 (60.0-66.1)	4,067	72.6 (70.3-74.8)
Current	2,057	76.1 (72.5-79.5)	2,071	69.9 (65.7-73.8)	2,067	85.4 (82.3-88.1)
Tobacco smoking status*						
Never	28,236	40.3 (38.8-41.8)	28,269	56.9 (55.2-58.5)	28,238	62.6 (60.9-64.2)
Former	1,821	64.6 (60.2-68.9)	1,830	65.8 (60.8-70.5)	1,829	77.9 (73.2-82.1)
Current	576	80.2 (74.2-85.4)	577	84.7 (76.9-90.7)	576	91.6 (87.0-95.0)

Note. CI = confidence interval.

\* Includes cigarettes, little cigars or cigarillos, or both.

Table 4-3 shows exposure to secondhand smoke in MUH. About half of respondents (49.8%) reported any exposure to smoke in their home in the last 6 months. However, less than 10% of respondents reported frequent exposure ("often" or "most of the time").

**Table 4-3. Prevalence of Last-6-Month Exposure to Tobacco Smoke in Multiunit Housing Among High School Respondents Living in Multiunit Housing**

Frequency of Exposure	Tobacco Smoke Exposure*		
	N	% (95% CI)	
Never	4,135	51.2	(48.8-53.5)
Rarely	1,749	25.2	(23.8-26.7)
Sometimes	962	13.8	(12.6-15.1)
Often	327	5.7	(4.7-6.8)
Most of the time	238	4.1	(3.0-5.5)

Note. CI = confidence interval.

\* Includes cigarettes, little cigars or cigarillos, or both.

## 4.2 Exposure to Secondhand Vapor and Tobacco Smoke by Race/Ethnicity

### 4.2.1 Indoors

We examined exposure to secondhand vapor and tobacco smoke by demographics. Table 4-4 provides data on secondhand exposure to vapor, tobacco smoke, and either vapor or tobacco smoke in a car or room by race/ethnicity. White respondents had the highest reported secondhand vapor exposure (42.0%), tobacco smoke exposure (32.7%), and either vapor or tobacco smoke exposure (45.6%) out of all race/ethnicity groups, and Asian respondents had the lowest (20.2% vapor exposure, 16.5% smoke exposure, 25.4% exposure to either).

**Table 4-4. Prevalence of Last-2-Week Exposure to Vapor or Tobacco Smoke in a Car or Room Among High School Respondents, by Race/Ethnicity**

Characteristic	Vapor Exposure			Tobacco Smoke Exposure			Vapor or Tobacco Smoke Exposure		
	N	%	(95% CI)	N	%	(95% CI)	N	%	(95% CI)
Overall	30,891	29.0	(27.2–30.9)	30,920	14.1	(13.3–15.0)	30,918	32.9	(31.0–34.8)
Race/ethnicity*									
White	7,375	42.0	(39.7–44.2)	7,378	18.1	(16.5–19.8)	7,380	45.6	(43.2–47.9)
African American or Black	686	28.4	(24.0–33.1)	688	19.9	(14.3–26.6)	687	36.2	(29.9–43.0)
Hispanic	16,652	24.5	(22.5–26.7)	16,667	11.7	(10.6–12.8)	16,666	27.8	(25.6–30.0)
Asian	3,171	20.2	(17.3–23.4)	3,171	12.5	(10.5–14.6)	3,171	25.4	(22.6–28.3)
Other	778	27.5	(22.7–32.7)	781	16.0	(12.3–20.2)	779	32.5	(28.1–37.2)
Multiracial	2,160	36.6	(33.4–40.0)	2,165	18.0	(15.4–20.8)	2,164	41.1	(37.6–44.6)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

Table 4-5 presents exposure to vapor in a car or room by vaping status and race/ethnicity. Overall, current vapers reported higher exposure (80.1%) than former (49.9%) and never vapers (22.2%). This pattern was consistent across race/ethnicity categories, where values were available.

Table 4-6 shows secondhand exposure to tobacco smoke in a car or room by smoking status and race/ethnicity. As with vaping, respondents who currently smoked reported higher exposure (60.1%) than respondents who formerly (30.5%) or never smoked (12.4%). This pattern was consistent across race/ethnicity categories, where values were available.

**Table 4-5. Prevalence of Last-2-Week Exposure to Vapor in Car or Room Among High School Respondents, by Vaping Status and Race/Ethnicity**

Characteristic	Never Vaping			Former Vaping			Current Vaping		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	24,689	22.2	(20.5–24.0)	4,110	49.9	(46.7–53.0)	2,092	80.1	(76.3–83.5)
Race/ethnicity*									
White	5,543	32.7	(30.3–35.1)	1,071	63.7	(59.4–67.8)	761	89.1	(84.5–92.8)
African American or Black	524	19.8	(15.0–25.3)	107	—	—	55	—	—
Hispanic	13,402	18.7	(16.7–20.9)	2,315	42.8	(38.9–46.9)	935	73.1	(67.6–78.0)
Asian	2,843	16.5	(13.8–19.4)	221	49.7	(39.8–59.7)	107	78.9	(63.1–90.2)
Other	656	23.3	(18.3–29.0)	80	31.4†	(17.1–48.9)	42	—	—
Multiracial	1,658	28.8	(25.7–32.2)	312	53.9	(42.8–64.7)	190	86.7	(78.8–92.4)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

**Table 4-6. Prevalence of Last-2-Week Exposure to Tobacco Smoke in Car or Room Among High School Respondents, by Tobacco Smoking Status and Race/Ethnicity**

Characteristic	Never Smoking**			Former Smoking**			Current Smoking**		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	28,484	12.4	(11.6–13.3)	1,851	30.5	(27.4–33.8)	585	60.1	(52.3–67.5)
Race/ethnicity*									
White	6,465	15.6	(14.0–17.2)	656	34.0	(28.8–39.4)	257	63.8	(50.4–75.7)
African American or Black	634	19.4	(13.2–26.8)	36	—	—	18	—	—
Hispanic	15,591	10.2	(9.2–11.3)	866	28.7	(23.8–34.1)	210	60.0	(47.6–71.6)
Asian	3,062	11.5	(9.6–13.7)	87	36.1†	(20.8–53.8)	22	—	—
Other	718	14.7	(10.7–19.4)	48	—	—	15	—	—
Multiracial	1,949	16.1	(13.3–19.2)	155	32.0	(21.3–44.3)	61	53.9†	(34.7–72.3)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

\*\* Includes cigarettes, little cigars or cigarillos, or both.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

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### 4.2.2 Outside

Table 4-7 presents data on secondhand exposure to vapor or tobacco smoke outside by race/ethnicity. White respondents reported the greatest secondhand exposure to vapor (47.9%) outside. High school students who identified as multiracial reported the greatest secondhand exposure to tobacco smoke (60.0%) outside. Exposure to vapor outside was lowest among Asian respondents (34.5%) and exposure to smoke outside was lowest among African American or Black respondents (45.9%). When looking at exposure to either vapor or smoke, White respondents reported greatest exposure to either vapor or tobacco smoke (67.7%) and African American or Black respondents reported the lowest exposure (53.5%).

**Table 4-7. Prevalence of Last-2-Week Exposure to Vapor or Tobacco Smoke Outside Among High School Respondents, by Race/Ethnicity**

Characteristic	Vapor Exposure		Tobacco Smoke Exposure		Vapor or Tobacco Smoke Exposure	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	30,624	42.1 (40.6–43.7)	30,676	57.8 (56.1–59.4)	30,660	63.8 (62.2–65.4)
Race/ethnicity*						
White	7,307	47.9 (45.5–50.4)	7,315	59.8 (57.6–61.9)	7,315	67.7 (65.5–69.9)
African American or Black	674	37.0 (31.2–43.1)	676	45.9 (37.2–54.7)	672	53.5 (45.8–61.1)
Hispanic	16,500	41.2 (39.2–43.1)	16,530	57.7 (55.3–60.0)	16,512	63.1 (60.8–65.4)
Asian	3,159	34.5 (31.5–37.6)	3,158	58.6 (55.5–61.6)	3,159	62.4 (59.2–65.5)
Other	770	39.6 (32.7–46.8)	780	55.7 (50.6–60.8)	779	60.4 (53.7–66.8)
Multiracial	2,147	47.0 (43.9–50.2)	2,149	60.0 (56.7–63.1)	2,154	66.8 (63.7–69.8)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

Table 4-8 presents exposure to vapor outside by vaping status and race/ethnicity. Overall, current vapers reported higher exposure to vapor (76.1%) than former (56.0%) or never vapers (37.6%). This pattern was consistent across race/ethnicity categories.

**Table 4-8. Prevalence of Last-2-Week Exposure to Vapor Outside Among High School Respondents, by Vaping Status and Race/Ethnicity**

Characteristic	Never Vaping		Former Vaping		Current Vaping	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	24,501	37.6 (36.0–39.2)	4,066	56.0 (53.6–58.4)	2,057	76.1 (72.5–79.5)
Race/ethnicity*						
White	5,496	42.2 (39.6–44.8)	1,061	59.2 (55.0–63.3)	750	80.6 (73.9–86.3)
African American or Black	513	33.9 (27.5–40.7)	107	38.8 (29.7–48.6)	54	— —
Hispanic	13,299	37.0 (34.9–39.2)	2,287	56.0 (52.4–59.6)	914	72.0 (66.3–77.2)
Asian	2,833	31.7 (28.7–34.8)	220	57.8 (48.3–66.9)	106	74.3 (61.6–84.6)
Other	650	35.8 (28.2–44.1)	78	54.2† (36.4–71.3)	42	— —
Multiracial	1,648	41.4 (38.3–44.5)	309	59.1 (47.9–69.6)	190	84.1 (74.5–91.1)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

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Table 4-9 presents exposure to tobacco smoke outside by vaping status and race/ethnicity. As with vapor, exposure to tobacco smoke outside was higher for respondents who currently smoked (84.7%) than those who had formerly (65.8%) or never smoked (56.9%) overall. Too many values are suppressed to compare race/ethnicity categories.

**Table 4-9. Prevalence of Last-2-Week Exposure to Tobacco Smoke Outside Among High School Respondents, by Tobacco Smoking Status and Race/Ethnicity**

Characteristic	Never Smoking**		Former Smoking**		Current Smoking**	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	28,269	56.9 (55.2–58.5)	1,830	65.8 (60.8–70.5)	577	84.7 (76.9–90.7)
Race/ethnicity*						
White	6,413	58.4 (56.1–60.6)	649	67.6 (61.7–73.1)	253	89.3 (81.1–94.8)
African American or Black	622	46.8 (38.4–55.3)	36	—	18	—
Hispanic	15,470	56.8 (54.4–59.1)	854	68.7 (62.5–74.6)	206	83.4 (71.8–91.6)
Asian	3,049	58.4 (55.3–61.5)	87	56.3† (39.2–72.4)	22	—
Other	717	54.1 (48.7–59.5)	48	—	15	—
Multiracial	1,935	58.8 (55.4–62.1)	153	66.2 (54.1–76.9)	61	—

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

\*\* Includes cigarettes, little cigars or cigarillos, or both.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

### 4.3 Home Bans on Vaping and Tobacco Smoking

Home bans are an important influence on tobacco use, including influencing initiation, relapse among respondents who previously used tobacco, and continued use among respondents who currently use tobacco. In two separate questions, respondents were asked to indicate which statement best described rules about (a) vaping and (b) smoking cigarettes or other tobacco products inside their homes. Respondents who indicated that vaping or smoking was not allowed anywhere or at any time inside their home were classified as having a “complete home ban” on vaping or smoking and were compared with respondents who provided all other responses for rules about vaping or smoking in the home (“incomplete home ban”).

Tables 4-10 and 4-11 present the prevalence of complete home bans on vaping and tobacco smoking by vaping and tobacco smoking status. For tobacco user status, tobacco smoking included smoking cigarettes and/or LCCs to create consistency with the definition for secondhand tobacco smoke exposure. Most respondents had a complete home ban on vaping and tobacco smoking (81.0% and 78.4%, respectively). Respondents who had never

vaped (82.9%) and formerly vaped (76.0%) more commonly reported complete home vaping bans than respondents who currently vaped (64.7%).

**Table 4-10. Prevalence of Complete Home Bans on Vaping Among High School Respondents, by Current Use of Vapes**

Use Status	Vaping Ban		
	N	% (95% CI)	
Overall	30,837	81.0	(79.9–82.0)
Vaping status			
Never	24,634	82.9	(81.8–84.0)
Former	4,094	76.0	(73.3–78.5)
Current	2,084	64.7	(59.7–69.4)

Note. CI = confidence interval.

Similarly, respondents who had never smoked (79.1%) and formerly smoked (71.0%) more commonly reported complete home bans on smoking than those who currently smoked (56.8%; Table 4-11).

**Table 4-11. Prevalence of Complete Home Bans on Tobacco Smoking Among High School Respondents, by Current Use of Smoked Tobacco**

Use Status	Tobacco Smoking Ban		
	N	% (95% CI)	
Overall	30,745	78.4	(77.2–79.5)
Tobacco smoking status*			
Never	28,322	79.1	(78.0–80.3)
Former	1,829	71.0	(67.0–74.8)
Current	577	56.8	(48.3–65.0)

Note. CI = confidence interval.

\*Includes cigarettes, little cigars or cigarillos, or both.

We examined home bans by demographics. Table 4-12 provides data on complete home bans on vaping and smoking by race/ethnicity. Hispanic respondents had the highest prevalence of complete home bans on vaping (82.1%), and Asian respondents had the highest prevalence of complete home bans on smoking (79.6%).

Table 4-13 presents the prevalence of home vaping bans by vaping status and race/ethnicity. Generally, a higher percentage of respondents who had never vaped reported complete home bans (82.9%) compared to those who currently (64.7%) and formerly (76.0%) vaped. The pattern of bans by vaping status observed for the overall sample was consistent with the pattern observed across race/ethnicity categories, where data were not suppressed. The exception was among Asian respondents, where those who currently vaped (70.8%) reported a higher prevalence of home vaping bans than those who

had formerly vaped (66.2%), but those who had never vaped still reported the highest prevalence of bans (82.8%) across vaping user status.

**Table 4-12. Prevalence of Complete Home Bans on Vaping and Tobacco Smoking Among High School Respondents, by Race/Ethnicity**

Characteristic	Vaping Ban			Tobacco Smoking Ban		
	N	% (95% CI)		N	% (95% CI)	
Overall	30,812	81.0	(79.9–82.0)	30,728	78.4	(77.2–79.5)
Race/ethnicity*						
White	7,358	80.7	(78.4–82.9)	7,346	79.2	(76.8–81.5)
African American or Black	683	72.0	(65.2–78.2)	684	66.1	(58.3–73.3)
Hispanic	16,593	82.1	(80.8–83.4)	16,540	79.1	(77.8–80.4)
Asian	3,170	81.4	(79.3–83.4)	3,163	79.6	(76.9–82.1)
Other	778	79.5	(74.8–83.7)	770	75.1	(69.7–80.0)
Multiracial	2,162	78.4	(75.2–81.3)	2,158	77.5	(74.4–80.5)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

**Table 4-13. Prevalence of Complete Home Vaping Bans Among High School Respondents, by Vaping Status and Race/Ethnicity**

Characteristic	Never Vaping			Former Vaping			Current Vaping		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	24,634	82.9	(81.8–84.0)	4,094	76.0	(73.3–78.5)	2,084	64.7	(59.7–69.4)
Race/ethnicity*									
White	5,535	83.3	(80.9–85.4)	1,067	75.2	(69.2–80.6)	756	67.3	(60.4–73.7)
African American or Black	521	73.6	(64.0–81.8)	108	70.4	(54.9–83.0)	54	—	—
Hispanic	13,357	83.9	(82.5–85.3)	2,305	78.5	(75.4–81.4)	931	62.3	(54.8–69.4)
Asian	2,843	82.8	(80.5–84.9)	220	66.2	(53.5–77.4)	107	70.8	(56.5–82.6)
Other	657	81.4	(76.6–85.5)	79	67.8†	(49.1–83.1)	42	—	—
Multiracial	1,659	80.4	(76.8–83.6)	311	71.8	(63.5–79.1)	192	69.2	(57.8–79.1)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.



Table 4-14 presents the prevalence of home smoking bans by smoking status and race/ethnicity. Consistent with home vaping bans, a higher percentage of respondents who had never smoked reported complete home bans (79.1%) compared to those who currently (56.8%) and formerly (71.0%) smoked. Too many values were suppressed to make comparisons across race/ethnicity.

**Table 4-14. Prevalence of Complete Home Bans on Tobacco Smoking Among High School Respondents, by Smoking Status and Race/Ethnicity**

Characteristic	Never Smoking**		Former Smoking**		Current Smoking**	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	28,322	79.1 (78.0–80.3)	1,829	71.0 (67.0–74.8)	577	56.8 (48.3–65.0)
Race/ethnicity*						
White	6,442	80.3 (78.0–82.4)	651	72.1 (65.6–77.9)	253	60.9 (46.2–74.2)
African American or Black	631	68.1 (60.9–74.7)	35	—	18	—
Hispanic	15,480	79.7 (78.3–81.0)	853	73.0 (66.4–78.9)	207	60.1 (46.9–72.4)
Asian	3,055	80.3 (77.5–82.9)	87	63.0† (45.0–78.7)	21	—
Other	709	76.2 (70.6–81.1)	46	—	15	—
Multiracial	1,943	78.1 (75.0–81.0)	154	78.1 (67.5–86.5)	61	—

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

\*\* Includes cigarettes, little cigars or cigarillos, or both.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

#### 4.4 Exposure to Vape and Cigarette Advertisements in Last 30 Days

Exposure to advertising influences tobacco use behavior. The survey asked respondents several questions about advertising exposure. First, they were asked whether they had a favorite advertisement for vaping products. They were also asked how often they saw someone smoking cigarettes or vaping on a social media site in the last 30 days (never, rarely, sometimes, often, always). Respondents were also asked how much attention they paid to social media posts about vaping (none, a little, some, or a lot).

Table 4-15 presents results for having a favorite vaping advertisement. Very few respondents (3.8%) reported having a favorite vaping advertisement. The prevalence of reporting having a favorite advertisement was highest among current vapers (13.8%).

**Table 4-15. Prevalence of Having Favorite Vaping Advertisement Among High School Respondents, by Vaping Status**

Use Status	Have a Favorite Advertisement		
	N	% (95% CI)	
Overall	29,497	3.8	(3.4–4.4)
Vaping status			
Never	23,655	2.6	(2.3–3.1)
Former	3,892	7.1	(6.0–8.4)
Current	1,950	13.8	(10.9–17.1)

Note. CI = confidence interval.

Table 4-16 presents the reported prevalence of having seen someone on a social media site vaping in the last 30 days. Response options were rarely, sometimes, often, or always. Approximately two-thirds of respondents reported some exposure (rarely, sometimes, often or always in the past 30 days) to vaping on social media (71.9%). Responses to this question varied by vaping status. Respondents who currently and formerly vaped more commonly reported being exposed to vaping advertisements always (14.2% and 9.7%, respectively) or often (31.3% and 26.5%, respectively) compared with those who had never vaped (5.8% always, 16.7% often).

**Table 4-16. Last-30-Day Social Media Exposure to Vaping Among High School Respondents, by Vaping Status**

Frequency of Exposure	Overall N = 29,288 % (95% CI)		Never Vaping N = 23,508 % (95% CI)		Former Vaping N = 3,863 % (95% CI)		Current Vaping N = 1,917 % (95% CI)	
Never	28.1	(26.8–29.5)	31.0	(29.5–32.5)	15.3	(12.7–18.2)	15.6	(13.1–18.4)
Rarely	20.7	(19.9–21.6)	21.3	(20.3–22.3)	19.8	(17.8–21.9)	14.2	(11.9–16.8)
Sometimes	25.7	(24.8–26.5)	25.3	(24.3–26.2)	28.8	(26.0–31.8)	24.8	(21.4–28.4)
Often	18.7	(17.9–19.5)	16.7	(15.8–17.6)	26.5	(24.3–28.7)	31.3	(26.9–35.9)
Always	6.7	(6.1–7.5)	5.8	(5.1–6.6)	9.7	(8.4–11.1)	14.2	(11.5–17.3)

Note. CI = confidence interval.

Respondents also answered the same question about exposure to tobacco smoking on social media. Half (55.9%) of respondents reported being exposed to smoking on social media in the last 30 days (i.e., rarely, sometimes, often, or always; Table 4-17). Respondents who

currently smoked reported a higher prevalence of being exposed than those who had formerly or never smoked. For example, 17.6% of respondents who currently smoked reported always being exposed, compared with 7.5% of those who had formerly smoked and 3.1% of those who had never smoked.

**Table 4-17. Last-30-day Social Media Exposure to Smoking Among High School Respondents, by Smoking Status**

Frequency of Exposure	Overall N = 29,296 % (95% CI)	Never Smoking N = 27,389 % (95% CI)	Former Smoking N = 1,490 % (95% CI)	Current Smoking N = 417 % (95% CI)
Never	44.1 (42.5–45.6)	45.0 (43.5–46.6)	27.6 (24.0–31.6)	27.9 (19.9–37.1)
Rarely	26.3 (25.3–27.3)	26.3 (25.3–27.4)	29.2 (24.1–34.7)	16.0 (9.8–24.0)
Sometimes	18.4 (17.5–19.3)	18.1 (17.2–18.9)	23.4 (19.3–27.9)	22.8 (15.1–32.1)
Often	7.8 (7.1–8.5)	7.5 (6.8–8.3)	12.3 (9.4–15.6)	15.7 (10.5–22.2)
Always	3.4 (3.0–3.9)	3.1 (2.7–3.5)	7.5 (4.5–11.5)	17.6 (11.3–25.5)

Note. CI = confidence interval.

The survey also asked respondents how much attention they paid to social media posts on vaping (Table 4-18). More than half (59.1%) of respondents reported not paying any attention to social media posts about vaping. Attention to these posts varied by vaping status. A higher percentage of respondents who currently vaped reported that they paid a lot of attention to these posts (3.9%) than those who had formerly (2.6%) and never (1.8%) vaped.

**Table 4-18. Attention Paid to Social Media Posts About Vaping Among High School Respondents, by Vaping Status**

Amount Of Attention	Overall N = 29,400 % (95% CI)	Never Vaping N = 23,583 % (95% CI)	Former Vaping N = 3,881 % (95% CI)	Current Vaping N = 1,936 % (95% CI)
None	59.1 (57.6–60.5)	61.2 (59.5–62.8)	51.9 (48.9–54.9)	44.9 (40.8–49.0)
A little	27.8 (26.7–28.9)	26.5 (25.4–27.7)	32.6 (29.7–35.7)	35.5 (31.5–39.5)
Some	11.1 (10.4–11.9)	10.5 (9.7–11.4)	12.9 (11.0–15.0)	15.7 (12.7–19.1)
A lot	2.0 (1.7–2.4)	1.8 (1.4–2.3)	2.6 (1.6–3.8)	3.9 (2.6–5.7)

Note. CI = confidence interval.

## 4.5 Summary

Most high school respondents reported living in a home that had a complete home ban on tobacco smoking and vaping. Still, 22.2% of respondents who had never vaped had been exposed to vapor in a car or room in the last 2 weeks, and 37.6% reported exposure to

vaping outside during the same time period. Only 12.4% of respondents who had never smoked tobacco reported exposure to secondhand tobacco smoke in a car or room, but 56.9% reported being exposed outside. About half (49.8%) of respondents who lived in MUH reported any exposure to tobacco smoke in the last 6 months. Of all races and ethnicities, White respondents and multiracial respondents reported the highest exposure to secondhand vapor and secondhand smoke both in a car or room and outside, with the exception of tobacco smoke exposure in a car or room, for which African American or Black respondents reported the highest exposure.

More than half of respondents reported being exposed to social media posts about vaping or smoking in the past 30 days. Less than half of respondents reported paying any attention to social media posts about vaping, and few respondents reported having a favorite vaping advertisement.

## 5. Susceptibility to Future Tobacco Use and Perceptions of Vaping and Smoking

The 2023 CYTS measured susceptibility in two different ways. For the most popular products (vapes, cigarettes, and LCCs), we used a three-item susceptibility scale. These questions were only asked of respondents who reported that they had never used each product. The scale asked three questions: whether they would use a product if one of their best friends offered the product to them, whether they thought they would try the product soon, and whether they thought they would use the product in the next year. Only those who answered “definitely not” to all three items were considered not susceptible to future tobacco use. All others were considered susceptible. For the other tobacco products captured by the survey (HTPs, hookah, smokeless, and nicotine pouches), we only asked one question: whether respondents would use the product if one of their best friends offered the product to them. Because of low use of cigars among youth, we did not administer a susceptibility item for cigars. Because the three-item susceptibility scale is superior to the single-item scale, we only present susceptibility for vapes, cigarettes, and LCCs in this chapter.

Social norms affect tobacco use behavior. This chapter also presents data on reported reasons for vaping among current vapers. It also presents data on respondents’ beliefs about how adults, peers or classmates, and friends perceive vaping and smoking cigarettes. Finally, respondents’ opinions of the tobacco industry are reported. These perceptions are compared across tobacco use status (i.e., never, former, or current use) or demographics, when appropriate.

### 5.1 Susceptibility to Vapes, Cigarettes, and LCCs by Demographics

Table 5-1 presents susceptibility to future use of vapes, cigarettes, and/or LCCs among respondents who had never used one or more of these three products by respondent demographics. This table only includes those three products because the susceptibility items were different for other products. Overall, 44.3% of respondents who had never used one or more of these products were susceptible to one or more products. We found differences in susceptibility by demographics. Respondents who identified their gender in another way were the most susceptible (49.8%) out of all gender categories. Multiracial and White respondents were the most susceptible (46.4% and 46.0%, respectively) out of all race/ethnicity categories, and Asian respondents were the least susceptible (35.8%). Twelfth-grade respondents were more susceptible (45.6%) than 10th-grade respondents (43.2%). LGBTQ+ respondents were more susceptible (52.6%) than non-LGBTQ+ respondents (42.2%) and respondents with unclear LGBTQ+ status (44.7%). Respondents who rated their mental health as fair (51.8%) or poor (55.3%) were more susceptible to future use than who rated their mental health status as good to excellent (39.5%).

**Table 5-1. Susceptibility to Vapes, Cigarettes, and/or LCCs Among High School Respondents Who Had Never Used One or More of These Products, by Gender Identity, Race/Ethnicity, Grade, LGBTQ+ Status, and General Mental Health**

Characteristic	Susceptible to Vapes, Cigarettes, and/or LCCs		
	N	% (95% CI)	
Overall	30,493	44.3	(42.7–45.9)
Gender identity			
Male	13,523	42.3	(40.5–44.1)
Female	13,415	45.4	(43.0–47.8)
Identified in another way	1,691	49.8	(45.7–53.9)
Declined to answer	191	43.2	(32.2–54.7)
Race/ethnicity*			
White	7,204	46.0	(43.7–48.2)
African American or Black	681	40.1	(33.9–46.6)
Hispanic	16,490	45.7	(43.4–48.0)
Asian	3,152	35.8	(33.7–37.9)
Other	772	36.6	(32.0–41.3)
Multiracial	2,125	46.4	(43.3–49.4)
Grade			
10	16,078	43.2	(41.6–44.8)
12	14,415	45.6	(43.3–48.0)
LGBTQ+ status			
LGBTQ+	5,017	52.6	(49.8–55.4)
Non-LGBTQ+	21,085	42.2	(40.4–44.1)
Unclear LGBTQ+ status	2,395	44.7	(40.4–49.0)
Mental health status			
Good to excellent	18,914	39.5	(37.8–41.3)
Fair	7,057	51.8	(49.6–53.9)
Poor	3,014	55.3	(52.0–58.6)

*Note.* LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

When looking at susceptibility to vapes, cigarettes, and LCCs individually (Table 5-2), patterns of susceptibility varied by demographics. Female respondents were most susceptible to vapes (41.0%) out of all gender identities. Respondents who identified their gender in a different way were most susceptible to cigarettes (29.4%). Respondents who identified as males and respondents who identified in another way both had the highest susceptibility to LCCs (24.0%).

**Table 5-2. Proportion of High School Respondents Who Had Never Vaped, Never Smoked Cigarettes, and/or Never Smoked LCCs Who Were Susceptible to Future Use of These Products, by Gender Identity, Race/Ethnicity, Grade, LGBTQ+ Status, and General Mental Health**

Characteristic	Vapes			Cigarettes			LCCs		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	24,693	37.8 (36.4–39.3)		28,865	20.1 (19.1–21.2)		30,054	21.4 (20.1–22.6)	
Gender identity									
Male	11,313	34.5 (32.7–36.3)		12,882	18.6 (17.2–20.0)		13,285	24.0 (22.5–25.6)	
Female	10,620	41.0 (38.8–43.3)		12,734	20.5 (19.1–21.9)		13,293	18.0 (16.4–19.7)	
Identified in another way	1,335	39.0 (35.2–43.0)		1,520	29.4 (25.5–33.6)		1,648	24.0 (21.2–27.0)	
Declined to answer	139	34.9 <sup>†</sup> (20.9–51.1)		176	22.4 (14.8–31.6)		187	19.9 (12.1–29.9)	
Race/ethnicity*									
White	5,544	36.1 (34.0–38.3)		6,560	22.1 (20.2–24.1)		7,095	25.9 (23.9–28.0)	
African American or Black	523	38.5 (33.0–44.3)		651	12.2 (9.1–16.1)		662	12.2 (8.4–17.0)	
Hispanic	13,402	40.3 (38.0–42.7)		15,806	20.5 (19.1–22.0)		16,246	21.3 (19.7–22.9)	
Asian	2,841	30.7 (28.8–32.6)		3,070	17.6 (15.9–19.4)		3,139	14.5 (12.9–16.2)	
Other	658	28.1 (23.4–33.2)		729	14.4 (10.6–19.0)		762	18.9 (14.9–23.5)	
Multiracial	1,663	37.9 (33.9–41.9)		1,983	21.0 (18.5–23.7)		2,083	24.9 (22.5–27.5)	
Grade									
10	13,558	37.1 (35.5–38.7)		15,431	20.0 (18.9–21.1)		15,884	19.9 (18.9–21.0)	
12	11,135	38.7 (36.8–40.7)		13,434	20.3 (18.5–22.1)		14,170	23.0 (21.1–25.0)	
LGBTQ+ status									
LGBTQ+	3,687	44.2 (41.2–47.3)		4,525	28.6 (26.3–31.1)		4,942	24.6 (22.6–26.8)	
Non-LGBTQ+	17,416	36.3 (34.7–38.0)		20,225	17.9 (16.7–19.1)		20,780	20.4 (18.9–21.8)	
Unclear LGBTQ+ status	2,042	39.2 (35.0–43.5)		2,257	23.3 (19.8–27.2)		2,372	21.3 (18.5–24.2)	
Mental health status									
Good to excellent	15,937	33.1 (31.5–34.7)		18,110	16.7 (15.5–17.9)		18,667	18.8 (17.4–20.1)	
Fair	5,489	46.9 (44.6–49.1)		6,644	25.3 (23.5–27.1)		6,969	24.0 (22.0–26.2)	
Poor	2,113	47.9 (43.8–52.1)		2,712	29.3 (25.9–32.9)		2,943	29.0 (26.1–32.0)	

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

† 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  $\geq 0.30$  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.

When examining susceptibility to specific products by race and ethnicity, Hispanic respondents had highest susceptibility to vapes (40.3%), and White respondents had the highest susceptibility to cigarettes (22.1%) and LCCs (25.9%). In general, respondents in

12th grade had a higher susceptibility than respondents in 10th grade for all products. LGBTQ+ respondents had the highest susceptibility to all three products, followed by respondents with unclear LGBTQ+ status and non-LGBTQ+ respondents.

Table 5-2 also presents susceptibility to vaping, smoking cigarettes, and LCCs by self-rated general mental health, among respondents who had never vaped, never smoked cigarettes, and/or never smoked LCCs. The results broken down by individual product were consistent with the overall findings: respondents with poor mental health status were the most susceptible, and respondents with good to excellent mental health were the least susceptible.

## 5.2 Susceptibility to Vape and Cigarette Use by Peer Vaping and Smoking

One factor that affects youth susceptibility is peer tobacco use. The survey asked respondents to indicate the proportion of their friends who used vapes or smoked cigarettes. It should be noted that this question asked about vapes generally and did not specify the substance in the vape (e.g., nicotine, marijuana, or only flavoring). As a result, responses could include friends who used vapes with marijuana.

Overall, peer use and individual susceptibility appeared to be positively correlated. Tables 5-3 and 5-4 present the susceptibility to future vape or cigarette use (among respondents who had never used these products), by the self-reported proportion of their friends who used the tobacco product. Susceptibility to vaping among respondents increased as the proportion of their friends who vaped increased, with half (52.1%) of those who had never vaped and were susceptible to vaping reporting that most or all of their friends vaped.

**Table 5-3. Prevalence of Susceptibility to Vaping Among High School Respondents Who had Never Vaped, by Friend Vaping Status**

Friends Who Vape	Susceptible to Vapes		
	N	% (95% CI)	
None	3,921	28.4	(27.1–29.8)
Some	4,449	48.3	(45.9–50.7)
Most/all	995	52.1	(47.0–57.2)

*Note.* CI = confidence interval.

Respondents who had never smoked cigarettes and reported having some (33.5%) or most/all (31.5%) friends who smoked had higher susceptibility to cigarettes than those who did not have friends who smoked cigarettes (18.0%).



**Table 5-4. Prevalence of Susceptibility to Cigarette Smoking Among High School Respondents Who Had Never Smoked Cigarette, by Friend Smoking Status**

Friends Who Smoke Cigarettes	Susceptible to Cigarettes		
	N	% (95% CI)	
None	4,372	18.0	(17.0–19.0)
Some	1,114	33.5	(30.7–36.3)
Most/all	219	31.5	(23.7–40.3)

Note. CI = confidence interval.

### 5.3 Reasons for Vaping

Respondents who had vaped in the last 30 days were asked why they vaped. Table 5-5 shows the percentage of respondents who endorsed each reason. The most commonly endorsed response was “to relax or relieve stress and anxiety” (35.2%). The next top response was “for the nicotine buzz” (20.6%).

**Table 5-5. Reported Reasons for Vaping Among High School Respondents Who Were Currently Vaping**

Reason for Vaping	Current Vapers N = 2,069 % (95% CI)
To relax or relieve stress and anxiety	35.2 (31.1–39.4)
For the nicotine buzz	20.6 (17.8–23.6)
To have a good time with my friends	9.8 (7.7–12.2)
Because I am “hooked”	5.6 (4.3–7.3)
Cloud competitions	4.7 (3.2–6.7)
To focus or concentrate	4.6 (3.1–6.6)
It looks cool	4.6 (2.8–7.0)
To control my weight	4.3 (2.7–6.4)
They are available in flavors I like	4.0 (2.8–5.5)
To fit in/peer pressure	2.9 (1.8–4.6)
To try to quit using other products	2.1 (1.2–3.4)
I can use them unnoticed or hide them at home or at school	1.6 (0.7–3.0)

Note. CI = confidence interval.

## 5.4 Adult Disapproval of Vaping and Smoking

Respondents were asked how adults who were important to them (such as parents, teachers, coaches, or relatives) would feel about the respondent using vapes. The same questions were asked about smoking cigarettes, using marijuana, and drinking alcohol.

Table 5-6 presents the percentage of respondents who reported that adults important to them would feel negatively (“negative” and “very negative” as opposed to “positive” or “very positive”) about the respondent vaping. Most respondents (96.3%) believed that adults important to them would feel negatively about the respondent vaping. Across all demographic categories, most respondents held this belief.

**Table 5-6. Percentage of High School Respondents Who Believed That Adults Would Feel Negatively About Them Vaping and Smoking, by Demographics**

Characteristic	Negative Views About Vaping			Negative Views About Smoking		
	N	% (95% CI)		N	% (95% CI)	
Overall	29,661	96.3	(95.6–96.9)	29,668	96.8	(96.2–97.3)
Gender identity						
Male	13,594	96.2	(95.1–97.0)	13,597	96.8	(96.0–97.4)
Female	13,399	97.4	(96.9–97.9)	13,404	97.8	(97.2–98.4)
Identified in another way	1,745	89.9	(87.3–92.2)	1,745	90.4	(87.7–92.6)
Declined to answer	149	—	—	149	—	—
Race/ethnicity*						
White	7,112	97.2	(96.4–97.9)	7,112	98.0	(97.4–98.5)
African American or Black	644	93.0	(90.1–95.2)	645	95.8	(92.0–98.1)
Hispanic	15,921	96.0	(95.0–96.8)	15,924	96.4	(95.6–97.1)
Asian	3,093	98.1	(97.2–98.8)	3,095	97.7	(96.7–98.5)
Other	750	91.6	(87.1–94.9)	750	92.4	(88.1–95.5)
Multiracial	2,078	96.2	(93.9–97.8)	2,079	96.6	(94.3–98.2)
Grade						
10	15,535	96.3	(95.5–97.0)	15,537	96.6	(95.9–97.2)
12	14,126	96.3	(95.5–96.9)	14,131	97.0	(96.3–97.6)
LGBTQ+ status						
LGBTQ+	5,100	95.0	(93.8–96.0)	5,103	95.4	(94.4–96.3)
Non-LGBTQ+	21,134	97.0	(96.2–97.7)	21,139	97.6	(96.9–98.2)
Unclear LGBTQ+ status	2,378	93.6	(91.4–95.3)	2,377	93.8	(91.6–95.6)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

Table 5-6 also presents the percentage of respondents who reported that adults important to them would feel negatively about the respondent smoking cigarettes. Almost all respondents (96.8%) believed that adults important to them would feel negatively about the respondent smoking cigarettes. This opinion was consistent across demographic categories.

## 5.5 Peer Disapproval of Vaping and Smoking

In addition to being asked about adults, respondents were asked to describe the views of “other respondents at your school” on using vapes. Response options included “very positive,” “positive,” “negative,” and “very negative.” The same questions were asked about smoking cigarettes.

Tables 5-7 and 5-8 present the percentage of respondents who believed that their peers would view vaping and smoking cigarettes negatively (“negative” or “very negative”). A greater proportion of respondents reported that their peers would view smoking negatively (83.6%) than those who reported that their peers would view vaping negatively (49.8%). The percentage of respondents endorsing these views for vaping varied by vaping status, with respondents who had never used vapes reporting the highest peer disapproval.

**Table 5-7. Percentage of High School Respondents Who Believed That Close Friends and Other Respondents at School Would View Vaping Negatively, by Vaping Status**

Use Status	Negative Views About Vaping		
	N	% (95% CI)	
Overall	29,585	49.8	(48.2–51.5)
Vaping status			
Never	23,686	52.3	(50.4–54.2)
Former	3,920	39.5	(36.9–42.1)
Current	1,979	37.4	(33.9–41.0)

Note. CI = confidence interval.

**Table 5-8. Percentage of High School Respondents Who Believed That Close Friends and Other Respondents at School Would View Smoking Negatively, by Smoking Status**

Use Status	Negative Views About Smoking		
	N	% (95% CI)	
Overall	29,589	83.6	(82.5–84.7)
Cigarette smoking status			
Never	27,637	83.8	(82.7–85.0)
Former	1,518	80.9	(77.2–84.3)
Current	434	74.9	(66.4–82.2)

Note. CI = confidence interval.

The same was true for smoking, with the highest proportion of respondents who had never smoked believing their peers would view smoking negatively.

Table 5-9 presents the perceived prevalence of peers' negative views of vaping and smoking by demographics. Male respondents had the highest perceived prevalence of negative views of both vaping (57.6%) and smoking cigarettes (86.8%). Across different races/ethnicities, Asian respondents most commonly reported that their peers viewed vaping negatively (63.2%), and African American or Black respondents most commonly reported that their peers viewed smoking cigarettes negatively (88.0%). It was more common for 10th-grade respondents to believe that peers viewed vaping negatively (52.2%) than 12th-grade respondents (47.2%), whereas 10th- and 12th-grade respondents held similar beliefs that their peers viewed smoking cigarettes negatively (83.5% and 83.7%, respectively). Respondents with unclear LGBTQ+ status had the highest perceived prevalence of reporting that their peers had negative views of vaping (54.8%), whereas non-LGBTQ+ respondents had the highest prevalence of reporting that their peers had negative views of smoking (84.4%).

**Table 5-9. Percentage of High School Respondents Who Believed That Close Friends or Other Respondents Would Feel Negatively About Them Smoking Cigarettes, by Demographics**

Characteristic	Negative Views About Vaping			Negative Views About Smoking		
	N	% (95% CI)		N	% (95% CI)	
Overall	29,606	49.8	(48.2–51.5)	29,599	83.6	(82.5–84.7)
Gender identity						
Male	13,548	57.6	(55.5–59.7)	13,542	86.8	(85.3–88.1)
Female	13,316	42.6	(40.4–44.9)	13,315	81.6	(79.9–83.3)
Identified in another way	1,740	46.9	(42.2–51.7)	1,741	78.3	(74.7–81.6)
Declined to answer	151	50.5 <sup>†</sup>	(34.4–66.6)	150	—	—
Race/ethnicity*						
White	7,096	44.5	(42.1–47.0)	7,095	84.8	(83.0–86.4)
African American or Black	648	50.7	(45.5–55.8)	648	88.0	(83.8–91.4)
Hispanic	15,886	49.6	(47.6–51.6)	15,879	82.3	(80.8–83.8)
Asian	3,083	63.2	(59.0–67.3)	3,085	86.6	(84.0–88.9)
Other	750	51.1	(46.0–56.2)	750	82.2	(77.3–86.4)
Multiracial	2,081	48.9	(44.6–53.3)	2,081	82.6	(79.4–85.5)
Grade						
10	15,482	52.2	(50.1–54.4)	15,470	83.5	(82.1–84.8)
12	14,124	47.2	(45.5–49.0)	14,129	83.7	(82.4–85.0)

(continued)

**Table 5-9. Percentage of High School Respondents Who Believed That Close Friends or Other Respondents Would Feel Negatively About Them Smoking Cigarettes, by Demographics (continued)**

Characteristic	Negative Views About Vaping		Negative Views About Smoking	
	N	% (95% CI)	N	% (95% CI)
LGBTQ+ status				
LGBTQ+	5,078	43.9 (41.0–46.9)	5,080	82.2 (79.9–84.4)
Non-LGBTQ+	21,042	50.7 (48.9–52.5)	21,034	84.4 (83.2–85.6)
Unclear LGBTQ+ status	2,365	54.8 (49.5–60.0)	2,366	81.4 (77.5–85.0)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

## 5.6 Summary

Almost half of respondents who had never used vapes, cigarettes, and/or LCCs were susceptible to one or more of these products. Susceptibility to these three products combined was highest for individuals who identified their gender in another way than the options listed in the survey, non-Hispanic multiracial respondents, LGBTQ+ respondents, 12th graders, and respondents with poor mental health. Susceptibility varied by product. Differences in susceptibility by race and ethnicity also varied by product. In general, LGBTQ+ respondents and respondents with poor or fair mental health were more susceptible to tobacco use than their counterparts, regardless of product. Among high school respondents who were currently vaping, the most commonly endorsed reason for vaping was “to relax or relieve stress and anxiety.” Respondents believed that adults who were important to them held overwhelmingly negative views on vaping and smoking cigarettes. When asked about the beliefs of their peers, only about half of respondents reported that their peers would view vaping negatively, while almost all respondents reported that their peers viewed smoking cigarettes negatively. While there was little variation in perceptions about adults’ opinions by gender identity, race/ethnicity, grade, and LGBTQ+ status, there were differences in peers’ views by these variables.

## 6. Tobacco Endgame Attitudes

As part of the survey, respondents were asked their opinions about several tobacco endgame policies. They were asked how much they disagreed or agreed with the following statements: (a) the sale of all tobacco products (e.g., cigarettes, cigars, chew, vapes) should end; (b) smoking cigarettes, little cigars, or cigarillos in all public places should end; and (c) the sale of flavored tobacco (e.g., cigarettes, chew, cigars, and vapes that taste like mint, fruit, candy, or liquor) should end. Response options were “strongly agree,” “agree,” “disagree,” and “strongly disagree.” Respondents were considered supporting these policies if they responded “strongly agree” or “agree” and not supporting them if they responded “disagree” or “strongly disagree.”

Table 6-1 shows responses to these questions by vaping status and cigarette smoking status. Overall, more than two-thirds of respondents supported these policies. The highest support was for a public tobacco use ban (73.7%), followed by a flavored tobacco ban (72.0%) and tobacco sales ban (66.9%). Respondents who had never vaped and never smoked cigarettes tended to express more support for these bans than those who formerly or currently vaped and smoked.

**Table 6-1. Agreement with Tobacco Endgame Policies Among High School Respondents, by Vaping Status and Cigarette Smoking Status**

Characteristic	Support for Complete Tobacco Sales Ban <sup>1</sup>		Support for Public Tobacco Use Ban <sup>2</sup>		Support for Flavored Tobacco Sales Ban <sup>3</sup>	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	30,127	66.9 (65.7–68.1)	30,037	73.7 (72.4–74.9)	30,099	72.0 (71.1–72.9)
Vaping status						
Never	24,093	71.2 (70.2–72.3)	24,030	77.0 (75.8–78.1)	24,070	76.9 (76.1–77.8)
Former	3,994	53.7 (50.9–56.4)	3,983	64.8 (62.2–67.2)	3,993	57.4 (54.8–60.0)
Current	2,019	34.2 (30.1–38.3)	2,004	46.5 (42.1–50.9)	2,016	35.3 (31.1–39.6)
Cigarette smoking status						
Never	28,115	68.7 (67.6–69.7)	28,040	75.2 (74.0–76.4)	28,091	73.8 (72.9–74.7)
Former	1,560	42.6 (37.8–47.5)	1,550	53.1 (48.0–58.1)	1,559	47.1 (42.6–51.7)
Current	439	19.0 (13.0–26.3)	435	29.9 (23.1–37.4)	436	26.8 (20.1–34.4)

Note. CI = confidence interval.

<sup>1</sup> Responded “strongly agree” or “agree” to the statement “the sale of all tobacco products (e.g., cigarettes, cigars, chew, vapes) should end.”

<sup>2</sup> Responded “strongly agree” or “agree” to the statement “smoking cigarettes, little cigars, or cigarillos in all public places should end.”

<sup>3</sup> Responded “strongly agree” or “agree” to the statement “the sale of flavored tobacco (e.g., cigarettes, chew, cigars, and vapes that taste like mint, fruit, candy, or liquor) should end.”

We examined support for tobacco endgame policies by demographics (Table 6-2). Female respondents reported the highest level of support for all three bans, compared with other gender categories. Within race/ethnicity categories, Asian respondents reported the highest support across all three bans (75.5%, 82.6%, and 81.2%, respectively), and White respondents reported the least support (60.1%, 69.8%, and 69.2%, respectively). Respondents in the 10th grade reported more support for all three bans (69.5%, 75.4%, and 74.1%, respectively) than 12th-grade respondents did (64.0%, 71.7%, and 69.7%, respectively). Non-LGBTQ+ respondents reported the highest support for all three bans (68.6%, 75.3%, and 73.7%, respectively) and LGBTQ+ respondents reported the least support (60.5%, 69.0%, and 67.0%, respectively).

**Table 6-2. Agreement With Tobacco Endgame Policies Among High School Respondents, by Demographics**

Characteristic	Support for Complete Tobacco Sales Ban <sup>1</sup>			Support for Public Tobacco Use Ban <sup>2</sup>			Support For Flavored Tobacco Sales Ban <sup>3</sup>		
	N	%	(95% CI)	N	%	(95% CI)	N	%	(95% CI)
Overall	30,127	66.9	(65.7–68.1)	30,037	73.7	(72.4–74.9)	30,099	72.0	(71.1–72.9)
Gender identity									
Male	13,596	63.6	(61.8–65.5)	13,572	71.3	(69.7–72.8)	13,587	71.2	(69.7–72.7)
Female	13,361	71.5	(69.9–73.0)	13,318	77.8	(76.2–79.4)	13,348	74.2	(72.9–75.5)
Identified in another way	1,747	57.4	(54.0–60.8)	1,738	63.5	(60.1–66.8)	1,744	64.5	(61.0–67.8)
Declined to answer	174	58.6	(44.5–71.7)	170	66.4	(52.4–78.7)	173	63.2	(49.3–75.6)
Race/ethnicity*									
White	7,202	60.1	(57.9–62.3)	7,181	69.8	(67.8–71.7)	7,199	69.2	(66.5–71.8)
African American or Black	662	67.9	(61.4–73.9)	661	72.7	(65.6–79.1)	663	71.1	(66.6–75.3)
Hispanic	16,204	68.4	(66.7–70.0)	16,149	73.9	(72.1–75.6)	16,181	71.9	(70.5–73.2)
Asian	3,108	75.5	(73.1–77.9)	3,102	82.6	(80.5–84.6)	3,105	81.2	(79.1–83.2)
Other	764	66.4	(60.0–72.3)	760	71.6	(66.5–76.4)	762	71.5	(64.8–77.6)
Multiracial	2,120	63.8	(60.1–67.4)	2,118	72.9	(69.5–76.0)	2,123	70.2	(66.3–73.9)
Grade									
10	15,769	69.5	(67.8–71.2)	15,728	75.4	(73.6–77.1)	15,751	74.1	(72.7–75.6)
12	14,358	64.0	(62.3–65.6)	14,309	71.7	(70.1–73.4)	14,348	69.7	(68.2–71.2)

(continued)

**Table 6-2. Agreement With Tobacco Endgame Policies Among High School Respondents, by Demographics (continued)**

Characteristic	Support for Complete Tobacco Sales Ban <sup>1</sup>			Support for Public Tobacco Use Ban <sup>2</sup>			Support For Flavored Tobacco Sales Ban <sup>3</sup>		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
LGBTQ+ status									
LGBTQ+	5,089	60.5	(58.2–62.7)	5,071	69.0	(66.7–71.3)	5,087	67.0	(64.7–69.2)
Non-LGBTQ+	21,103	68.6	(67.2–70.0)	21,055	75.3	(73.9–76.7)	21,086	73.7	(72.6–74.7)
Unclear LGBTQ+ status	2,385	65.8	(62.5–69.0)	2,376	71.9	(69.2–74.6)	2,379	70.0	(66.8–73.1)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

<sup>1</sup> Responded “strongly agree” or “agree” to the statement “the sale of all tobacco products (e.g., cigarettes, cigars, chew, vapes) should end.”

<sup>2</sup> Responded “strongly agree” or “agree” to the statement “smoking cigarettes, little cigars, or cigarillos in all public places should end.”

<sup>3</sup> Responded “strongly agree” or “agree” to the statement “the sale of flavored tobacco (e.g., cigarettes, chew, cigars, and vapes that taste like mint, fruit, candy, or liquor) should end.”

## 6.1 Summary

Over two-thirds of high school respondents supported tobacco endgame policies. Support was highest for a public use ban on tobacco. The second most popular endgame policy was a ban on flavored tobacco products. Support for endgame policies was highest among respondents who had never or formerly smoked cigarettes or used vapes and among respondents who identified as female. Some differences existed by race/ethnicity for each ban, but support was over 60% for all race/ethnicity groups and all endgame policies measured. Tenth-grade respondents supported the bans more than 12th-grade respondents, and non-LGBTQ+ respondents supported the bans more than LGBTQ+ respondents and respondents of unclear LGBTQ+ status.



## 7. Geographic Differences

This chapter examines geographic differences. We only examined whether differences were significant for counties and county groupings to make sense of the large number of estimates provided by dividing the state into these groups. For these comparisons, we compared individual counties and county groups to the state average for each outcome using independent two sample t-tests with unequal variance.

### 7.1 Rurality

To capture tobacco use by rurality, students were divided into three categories based on the locations of their schools. The categories were obtained from the National Center for Education Statistics using school address.<sup>10</sup> Further information on this variable is available in Appendix A. Table 7-1 presents prevalence of current any tobacco use and current use of specific tobacco products by rurality. Current use was most prevalent among respondents living in towns or rural settings (9.6%), compared with cities (6.9%) and suburban areas (6.8%). Estimates for cities and suburban areas were similar. The same pattern was present for current vaping, with higher prevalence estimates observed for towns or rural setting (8.0%) and similar vaping prevalence estimates for cities (5.7%) and suburban areas (5.3%). In general, this finding applies to all tobacco products included in the survey with few exceptions. Current use of HTPs was identical for all areas. In addition, use of hookah was very similar across all categories of rurality (0.9% town or rural settings, 0.7% cities, and 0.7% suburban areas).

**Table 7-1. Prevalence of Current Use of Tobacco Products Among High School Respondents, by Rurality**

Tobacco Product	City		Suburban		Town or Rural	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Any tobacco use	11,637	6.9 (5.9–8.0)	12,853	6.8 (5.6–8.3)	6,476	9.6 (7.5–12.0)
Vapes	11,626	5.7 (4.8–6.8)	12,835	5.3 (4.3–6.4)	6,469	8.0 (6.2–10.1)
Cigarettes	11,628	1.1 (0.7–1.6)	12,844	1.0 (0.7–1.4)	6,471	1.9 (1.2–2.7)
LCCs	11,634	0.7 (0.5–1.0)	12,844	0.4 (0.3–0.6)	6,473	1.0 (0.6–1.5)
Cigars	11,628	0.9 (0.6–1.2)	12,848	0.6 (0.4–0.9)	6,471	1.3 (0.9–1.9)
Hookah	11,637	0.7 (0.3–1.2)	12,853	0.7 (0.4–1.2)	6,476	0.9 (0.4–1.6)
Smokeless	11,637	0.4 (0.2–0.8)	12,853	0.3 (0.2–0.5)	6,476	1.1 (0.6–1.9)
HTPs	11,637	0.5 (0.3–0.8)	12,853	0.5 (0.3–0.8)	6,476	0.5 (0.1–1.1)

(continued)

<sup>10</sup> National Center for Education Statistics. (n.d.). *Education demographic and geographic estimates*. Retrieved March 1, 2023, from <https://nces.ed.gov/programs/edge/Geographic/LocaleBoundaries>

**Table 7-1. Prevalence of Current Use of Tobacco Products Among High School Respondents, by Rurality (continued)**

Tobacco Product	City		Suburban		Town or Rural	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Nicotine pouches	11,637	0.8 (0.6–1.1)	12,853	1.1 (0.7–1.5)	6,476	1.7 (1.2–2.2)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos; CI = confidence interval.

Table 7-2 presents intentions to quit vaping in the next 30 days among respondents who currently vaped by rurality. Respondents who currently vaped and were living in suburban areas were most likely to report intending to quit (42.0%), and those living in a city were least likely to report this intention (35.7%).

**Table 7-2. Percentage of Respondents Who Reported Intending to Quit Vaping in the Next 30 Days Among High School Respondents Who Were Currently Vaping, by Rurality**

Characteristic	Intending to Quit		
	N	% (95% CI)	
Overall	2,099	38.8	(34.3–43.3)
Rurality			
City	755	35.7	(29.2–42.5)
Suburban	793	42.0	(34.1–50.3)
Town or rural	551	38.3	(32.6–44.2)

Note. CI = confidence interval.

## 7.2 County-Level Estimates

In addition to analyses by rurality, because the 2023 CYTS was designed to enable county-level prevalence estimates for tobacco use, we also examined tobacco use by county or county grouping. Figure 1 displays the counties that were combined into county groups. The individual counties that compose each county grouping are listed in a footnote of Table 7-3.

**Figure 1. Map of County Groups**

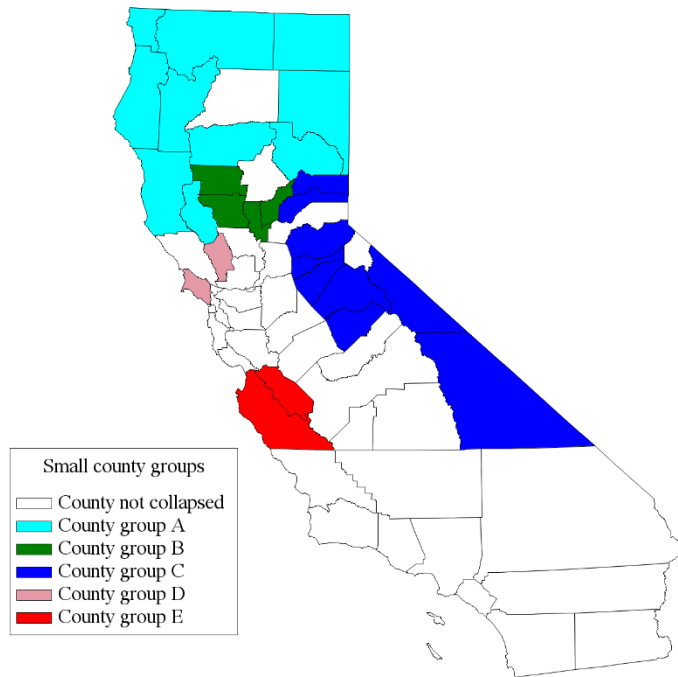


Table 7-3 presents these results for ever and current use of any tobacco product. The p-values in the table represent comparisons with the state average. The five counties with the highest level of any tobacco ever use were Shasta (41.2%), county group A (37.8%), county group D (36.4%), Butte (33.2%), and county group C (29.3%). The five counties with the lowest prevalence of ever use were Tulare County (15.0%), Contra Costa (15.5%), Merced (16.2%), Los Angeles (16.6%), and Santa Clara (17.5%).

**Table 7-3. Prevalence of Ever and Current Use of Any Tobacco Products Among High School Respondents, by County Grouping**

Characteristic	Ever Use			Current Use		
	N	% (95% CI)		N	% (95% CI)	
Overall	30,966	21.6	(20.3–22.9)	30,966	7.3	(6.5–8.1)
County Group						
County group A	810	37.8*	(32.3–43.4)	810	16.4*	(13.2–20.1)
County group B	1,126	27.1	(20.7–34.2)	1,126	11.6	(6.9–17.8)
County group C	491	29.3	(19.6–40.6)	491	12.3*	(8.9–16.3)
County group D	1,498	36.4*	(26.2–47.6)	1,498	17.4*	(9.1–28.8)
County group E	607	20.8	(13.0–30.6)	607	5.5†	(2.1–11.4)
Alameda	622	20.9	(12.4–31.9)	622	7.7†	(3.0–15.5)

(continued)

**Table 7-3. Prevalence of Ever and Current Use of Any Tobacco Products Among High School Respondents, by County Grouping (continued)**

Characteristic	N	Ever Use		N	Current Use	
		% (95% CI)			% (95% CI)	
Butte	815	33.2*	(24.3–43.2)	815	15.4*	(7.5–26.8)
Contra Costa	472	15.5*	(8.7–24.7)	472	2.8†*	(0.2–11.7)
Fresno	348	22.9	(19.4–26.7)	348	6.4†	(0.4–26.1)
Imperial	868	21.9	(18.5–25.7)	868	6.1	(4.6–7.9)
Kern	572	25.2*	(21.0–29.9)	572	7.1	(5.3–9.3)
Kings	947	23.9	(17.1–31.9)	947	7.3	(4.8–10.6)
Los Angeles	1,300	16.6*	(12.5–21.5)	1,300	5.0*	(3.2–7.5)
Madera	925	18.7*	(15.2–22.6)	925	4.2*	(2.4–6.6)
Merced	1,181	16.2*	(11.7–21.6)	1,181	4.5*	(2.4–7.6)
Orange	1,075	23.2	(17.0–30.4)	1,075	9.5	(5.7–14.7)
Placer	966	23.3	(17.8–29.6)	966	9.3	(6.8–12.4)
Riverside	725	24.1	(17.9–31.3)	725	7.3	(3.8–12.4)
Sacramento	1,434	19.1	(15.8–22.7)	1,434	5.6	(3.5–8.4)
San Bernardino	524	26.4	(19.8–33.8)	524	9.0	(5.8–13.1)
San Diego	1,100	24.1	(19.6–29.0)	1,100	9.0	(5.7–13.4)
San Francisco	212	21.6	(14.1–30.7)	212	6.0†	(0.1–34.3)
San Joaquin	907	23.1	(18.6–28.0)	907	8.1	(5.0–12.2)
San Luis Obispo	1,251	29.2*	(21.9–37.3)	1,251	12.4*	(8.5–17.2)
San Mateo	1,101	20.4	(12.7–30.1)	1,101	7.4†	(3.3–13.8)
Santa Barbara	1,786	20.9	(18.4–23.7)	1,786	6.0	(3.5–9.4)
Santa Clara	1,056	17.5	(12.2–23.8)	1,056	5.8	(3.4–9.1)
Santa Cruz	662	20.9†	(9.4–37.2)	662	9.2†	(2.6–22.1)
Shasta	1,022	41.2*	(35.1–47.5)	1,022	16.8*	(14.0–19.9)
Solano	568	28.5*	(21.9–35.7)	568	8.8	(6.0–12.3)
Sonoma	168	26.5	(21.7–31.7)	168	10.5†	(0.2–49.2)
Stanislaus	1,131	24.8	(20.4–29.6)	1,131	7.9	(5.3–11.3)
Tulare	962	15.0*	(10.8–20.2)	962	4.2*	(2.6–6.5)
Ventura	909	21.2	(13.6–30.6)	909	7.9†	(3.6–14.7)
Yolo	825	21.2	(15.7–27.6)	825	7.3	(5.9–9.0)

Note. County group A includes Del Norte, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties. County group B includes Colusa, Glenn, Sutter, and Yuba counties. County group C includes Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Sierra, and Tuolumne counties. County group D includes Marin and Napa counties. County Group E includes Monterey and San Benito counties. CI = confidence interval.

† 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  $\geq 0.30$  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.

\*  $p < 0.05$ . P-values compare the estimate for each individual county or county grouping with the state average prevalence for that outcome, using independent two sample t-tests with unequal variance.

For current use of any tobacco, the five counties with the highest prevalence were county group D (17.4%), Shasta (16.8%), county group A (16.4%), Butte (15.4%), and San Luis Obispo (12.4%). The five counties with the lowest current use prevalence were Contra Costa (2.8%), Tulare (4.2%), Madera (4.2%), Merced (4.5%), and county group E (5.5%). Estimates for Contra Costa and county group E should be interpreted with caution due to small sample sizes.

In addition to conducting analyses for any tobacco use, we also examined current use of all products included in the survey by county or county group. Tables 7-4a, 7-4b, and 7-4c present these estimates. Butte County (13.9%) had the highest prevalence of current vaping, and Contra Costa County (2.5%) had the lowest prevalence of current vaping, but both estimates should be interpreted with caution given limited precision (Table 7-4a).

For current cigarette smoking, county group D (6.0%) had the highest prevalence, and Tulare and Sacramento (both 0.4%) had the lowest prevalence of cigarette smoking. For current LCC use, San Francisco County (3.2%) had the highest prevalence of current use, and Santa Barbara (0.1%) had the lowest prevalence. For cigars, San Francisco County had the highest current use estimate (3.2%), but this estimate should be interpreted with caution given limited precision (Table 7-4b). Tulare had the lowest prevalence (0.2%).

For hookah, county group C (2.0%) had the highest current use prevalence, and Madera, Yolo, Merced, and Solano had the lowest prevalence (0.1%). For smokeless tobacco use, county group A (2.1%) had the highest current prevalence, and Kings County (0.1%) had the lowest prevalence of use. For HTP use (Table 7-4c), county group A (1.5%) had the highest prevalence of current use, and Madera, Kings, Santa Cruz, Ventura, and Contra Costa had the lowest prevalence (0.1%).

**Table 7-4a. Prevalence of Current Use of Vapes, Cigarettes, and LCCs Among High School Respondents, by County Grouping**

Characteristic	Vapes			Cigarettes			LCCs		
	N	%	(95% CI)	N	%	(95% CI)	N	%	(95% CI)
Overall	30,930	5.9	(5.3–6.5)	30,943	1.2	(0.9–1.5)	30,951	0.6	(0.5–0.8)
County Group									
County group A	810	13.3*	(10.7–16.4)	810	2.7*	(1.3–4.9)	810	2.1*	(1.1–3.5)
County group B	1,124	9.4	(5.6–14.6)	1,124	1.9	(0.7–4.0)	1,125	1.8*	(0.7–3.7)
County group C	491	9.7*	(5.7–15.2)	490	2.1	(0.6–5.3)	490	0.9	(0.0–4.7)
County group D	1,497	12.8†*	(6.0–23.0)	1,496	6.0†*	(2.6–11.6)	1,496	1.0	(0.4–2.1)
County group E	607	4.6†	(1.5–10.7)	607	0.5*	(0.1–1.5)	607	0.9	(0.2–2.8)
Alameda	622	6.5†	(2.5–13.1)	622	2.1†	(0.5–5.6)	622	0.9	(0.2–2.9)
Butte	815	13.9†*	(5.7–26.7)	815	2.7†	(0.7–6.7)	814	0.6	(0.1–1.9)
Contra Costa	471	2.5†	(0.1–12.9)	472	0.5*	(0.0–2.3)	472	—	—
Fresno	347	5.1†	(0.5–18.8)	347	1.0	(0.3–2.3)	348	1.7†	(0.2–6.1)
Imperial	868	5.7	(4.7–6.8)	868	0.7	(0.1–2.2)	868	0.2	(0.0–2.1)
Kern	572	5.8	(4.7–7.2)	572	1.3†	(0.1–5.9)	572	1.3†	(0.1–5.3)
Kings	945	5.9	(3.6–8.9)	946	0.6*	(0.1–1.7)	945	0.8	(0.2–1.9)
Los Angeles	1,298	3.5*	(2.2–5.3)	1,297	0.5*	(0.1–1.3)	1,299	0.2*	(0.0–0.6)
Madera	922	3.1†*	(1.1–6.8)	924	0.7†	(0.0–8.0)	925	0.5	(0.1–1.4)
Merced	1,180	3.2*	(1.8–5.4)	1,180	1.1	(0.3–2.9)	1,180	1.2	(0.5–2.4)
Orange	1,072	7.2	(4.1–11.5)	1,074	2.2	(1.0–4.1)	1,075	1.0*	(0.6–1.6)
Placer	964	7.8	(5.2–11.1)	963	1.7	(0.9–2.9)	964	0.9	(0.5–1.5)
Riverside	722	6.2	(3.1–10.7)	724	0.5*	(0.1–1.3)	724	0.4	(0.1–1.3)
Sacramento	1,434	4.8	(2.8–7.5)	1,433	0.4*	(0.2–0.7)	1,434	0.4	(0.2–0.8)
San Bernardino	524	7.6	(5.3–10.5)	524	2.3†	(0.5–6.2)	524	0.7	(0.1–2.5)
San Diego	1,100	7.8	(4.9–11.6)	1,100	1.2	(0.3–2.8)	1,100	0.5	(0.1–1.4)
San Francisco	212	3.7†	(0.0–25.5)	212	2.7†	(0.0–18.7)	212	3.2†	(0.0–38.4)
San Joaquin	904	6.1	(3.8–9.1)	907	0.8	(0.3–1.5)	907	0.6	(0.2–1.6)
San Luis Obispo	1,248	10.0*	(6.8–13.9)	1,250	2.0*	(1.4–2.8)	1,251	1.4*	(0.8–2.1)
San Mateo	1,101	6.7†	(2.9–12.9)	1,101	1.6	(0.4–4.1)	1,101	0.3*	(0.1–0.8)
Santa Barbara	1,784	4.2*	(2.7–6.1)	1,784	1.1	(0.2–3.2)	1,785	0.1*	(0.0–0.3)
Santa Clara	1,056	5.2	(3.1–8.3)	1,056	0.6*	(0.2–1.5)	1,056	0.4	(0.1–1.2)
Santa Cruz	659	6.5†	(1.8–15.8)	661	3.0†	(0.3–11.7)	662	0.4	(0.1–1.5)
Shasta	1,021	14.8*	(11.7–18.3)	1,022	2.6*	(1.5–4.0)	1,022	1.9*	(1.1–3.0)
Solano	568	7.7	(5.4–10.7)	568	1.0	(0.2–3.3)	567	0.4	(0.1–1.4)
Sonoma	168	10.0†*	(0.8–35.3)	168	2.3*	(1.2–4.1)	168	0.3†	(0.0–31.9)
Stanislaus	1,128	7.1	(4.9–9.8)	1,131	1.0	(0.4–2.0)	1,130	0.2*	(0.0–0.7)
Tulare	962	3.4*	(1.9–5.7)	961	0.4*	(0.1–1.1)	962	0.2*	(0.0–0.9)
Ventura	909	6.2†	(2.5–12.5)	909	1.2	(0.5–2.2)	909	0.9	(0.3–2.1)
Yolo	825	5.5	(3.9–7.5)	825	1.8	(0.6–4.1)	825	1.5*	(0.7–2.7)

Note. LCCs = little cigars or cigarillos. County group A includes Del Norte, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties. County group B includes Colusa, Glenn, Sutter, and Yuba counties. County group C includes Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Sierra, and Tuolumne counties. County group D includes Marin and Napa counties. County Group E includes Monterey and San Benito counties. CI = confidence interval.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  OR (b) the absolute width of the Korn-Graubard confidence interval is  $< 0.30$  and  $> 0.05$ .

\* $p < 0.05$ . P-values compare the estimate for each individual county or county grouping with the state average prevalence for that outcome, using independent two sample t-tests with unequal variance.

**Table 7-4b. Prevalence of Current Use of Cigars, Hookah, and Smokeless Tobacco Among High School Respondents, by County Grouping**

Characteristic	Cigars			Hookah			Smokeless		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	30,947	0.8	(0.7–1.0)	30,966	0.7	(0.5–1.0)	30,966	0.5	(0.4–0.7)
County Group									
County group A	810	2.3	(0.9–4.8)	810	1.4	(0.5–3.2)	810	2.1*	(1.0–3.7)
County group B	1,126	1.8	(0.8–3.6)	1,126	0.7	(0.1–1.9)	1,126	1.7*	(0.6–3.7)
County group C	491	1.3	(0.5–2.6)	491	2.0*	(0.9–3.8)	491	1.5	(0.5–3.6)
County group D	1,496	1.2	(0.6–2.0)	1,498	1.1	(0.6–1.8)	1,498	1.3	(0.3–3.7)
County group E	606	0.9	(0.1–3.8)	607	0.6	(0.3–1.1)	607	0.2	(0.0–1.8)
Alameda	621	0.9	(0.2–2.3)	622	0.6	(0.1–1.7)	622	0.3	(0.0–1.1)
Butte	815	0.6	(0.1–1.8)	815	0.9	(0.6–1.3)	815	1.1	(0.1–4.5)
Contra Costa	472	0.2*	(0.0–1.9)	472	—	—	472	0.4	(0.0–1.6)
Fresno	348	1.4	(0.2–4.6)	348	0.5†	(0.0–11.5)	348	0.5†	(0.0–11.5)
Imperial	868	0.3*	(0.0–1.5)	868	0.3	(0.0–3.1)	868	—	—
Kern	571	1.5†	(0.1–5.9)	572	1.0†	(0.0–5.8)	572	0.9†	(0.0–6.0)
Kings	946	0.9	(0.3–2.0)	947	0.4	(0.0–1.9)	947	0.1*	(0.0–0.6)
Los Angeles	1,298	0.4*	(0.1–0.9)	1,300	1.0	(0.3–2.5)	1,300	0.3	(0.1–1.1)
Madera	925	0.3*	(0.0–1.5)	925	0.1*	(0.0–0.6)	925	0.2	(0.0–3.2)
Merced	1,180	1.3	(0.4–3.0)	1,181	0.1*	(0.0–0.3)	1,181	0.3	(0.1–1.0)
Orange	1,075	1.0	(0.3–2.2)	1,075	0.7	(0.3–1.6)	1,075	0.6	(0.1–1.5)
Placer	964	1.7*	(1.3–2.3)	966	1.4*	(0.8–2.3)	966	1.4*	(1.0–2.0)
Riverside	724	0.6	(0.1–2.3)	725	1.0	(0.1–3.5)	725	0.7	(0.1–2.7)
Sacramento	1,434	0.5*	(0.2–0.9)	1,434	0.2*	(0.1–0.6)	1,434	0.2*	(0.0–0.5)
San Bernardino	524	1.1	(0.1–3.6)	524	0.9	(0.1–3.8)	524	0.9	(0.1–3.8)
San Diego	1,100	0.8	(0.3–1.9)	1,100	0.8	(0.1–2.8)	1,100	0.2*	(0.0–0.7)
San Francisco	211	3.2†	(0.0–38.3)	212	—	—	212	—	—
San Joaquin	907	0.2*	(0.0–0.9)	907	0.8	(0.3–1.7)	907	0.2	(0.0–1.6)
San Luis Obispo	1,249	2.1*	(1.1–3.5)	1,251	0.6	(0.2–1.2)	1,251	0.6	(0.2–1.2)
San Mateo	1,101	0.8	(0.4–1.6)	1,101	0.6	(0.2–1.4)	1,101	0.3	(0.0–0.9)
Santa Barbara	1,784	0.6	(0.2–1.5)	1,786	0.2*	(0.1–0.6)	1,786	0.4	(0.2–0.7)
Santa Clara	1,056	0.7	(0.1–2.2)	1,056	0.5	(0.1–1.5)	1,056	0.5	(0.1–1.2)
Santa Cruz	661	0.8	(0.1–2.9)	662	0.2	(0.0–2.0)	662	0.4	(0.0–2.0)
Shasta	1,022	1.9	(0.6–4.3)	1,022	1.0	(0.6–1.5)	1,022	1.9*	(0.7–4.3)
Solano	568	0.8	(0.2–1.9)	568	0.1*	(0.0–1.2)	568	0.4	(0.0–1.6)
Sonoma	168	1.6†	(0.0–89.6)	168	—	—	168	0.3†	(0.0–38.1)
Stanislaus	1,131	1.1	(0.3–2.7)	1,131	0.4	(0.1–1.2)	1,131	0.5	(0.2–1.0)
Tulare	961	0.2*	(0.0–1.4)	962	0.3	(0.1–1.0)	962	0.2*	(0.0–0.8)
Ventura	909	1.3	(0.5–2.9)	909	0.4	(0.0–1.3)	909	—	—
Yolo	825	1.3*	(0.8–1.8)	825	1.1	(0.6–1.8)	825	0.6	(0.1–2.3)

Note. County group A includes Del Norte, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties. County group B includes Colusa, Glenn, Sutter, and Yuba counties. County group C includes Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Sierra, and Tuolumne counties. County group D includes Marin and Napa counties. County Group E includes Monterey and San Benito counties. CI = confidence interval.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

**Table 7-4c. Prevalence of Current Use of Heated Tobacco Products and Nicotine Pouches Among High School Respondents, by County Grouping**

Characteristic	HTPs			Nicotine Pouches		
	N	% (95% CI)		N	% (95% CI)	
Overall	30,966	0.5	(0.3–0.7)	30,966	1.1	(0.9–1.3)
County Group						
County group A	810	1.5*	(0.7–2.9)	810	3.3*	(1.4–6.2)
County group B	1,126	0.9	(0.3–1.8)	1,126	2.6*	(1.1–5.0)
County group C	491	0.5	(0.0–2.3)	491	2.7*	(1.4–4.8)
County group D	1,498	1.2*	(0.7–1.7)	1,498	4.8*	(2.5–8.4)
County group E	607	0.5	(0.0–2.6)	607	0.8	(0.2–2.2)
Alameda	622	0.9	(0.3–2.2)	622	0.6	(0.2–1.5)
Butte	815	0.5	(0.1–1.5)	815	1.3	(0.1–5.1)
Contra Costa	472	0.1*	(0.0–1.4)	472	0.1*	(0.0–1.0)
Fresno	348	—	—	348	1.0	(0.3–2.4)
Imperial	868	0.2	(0.0–1.9)	868	0.8	(0.2–2.3)
Kern	572	0.9+	(0.0–6.0)	572	1.7	(0.5–4.3)
Kings	947	0.1*	(0.0–0.8)	947	0.9	(0.3–2.3)
Los Angeles	1,300	0.6	(0.2–1.3)	1,300	0.8	(0.3–1.8)
Madera	925	0.1*	(0.0–0.4)	925	0.4*	(0.0–3.4)
Merced	1,181	0.2*	(0.0–0.5)	1,181	0.4*	(0.2–0.9)
Orange	1,075	0.6	(0.2–1.4)	1,075	1.6	(0.8–3.0)
Placer	966	0.8	(0.5–1.3)	966	2.5*	(1.4–4.1)
Riverside	725	1.0	(0.1–3.6)	725	1.2	(0.4–2.9)
Sacramento	1,434	0.2	(0.0–0.7)	1,434	0.3*	(0.0–1.2)
San Bernardino	524	0.2	(0.0–1.5)	524	0.8	(0.2–2.2)
San Diego	1,100	0.2	(0.0–0.7)	1,100	0.8	(0.3–1.8)
San Francisco	212	1.3†	(0.0–27.2)	212	0.7	(0.0–3.3)
San Joaquin	907	0.3	(0.0–1.0)	907	1.4	(0.2–5.1)
San Luis Obispo	1,251	0.5	(0.1–1.3)	1,251	2.0	(1.0–3.6)
San Mateo	1,101	0.2*	(0.0–0.6)	1,101	0.9	(0.6–1.3)
Santa Barbara	1,786	0.2*	(0.1–0.4)	1,786	0.7	(0.2–1.6)
Santa Clara	1,056	0.3	(0.0–1.1)	1,056	0.7	(0.2–1.8)
Santa Cruz	662	0.1*	(0.0–0.9)	662	1.3	(0.1–5.1)
Shasta	1,022	0.6	(0.2–1.6)	1,022	4.1†*	(1.9–7.4)
Solano	568	0.4	(0.0–1.5)	568	1.3	(0.2–4.3)
Sonoma	168	0.4†	(0.0–31.1)	168	2.1†	(0.0–81.6)
Stanislaus	1,131	0.4	(0.1–1.0)	1,131	0.6*	(0.3–1.1)
Tulare	962	—	—	962	0.6	(0.2–1.4)
Ventura	909	0.1*	(0.0–0.8)	909	0.8	(0.2–2.1)
Yolo	825	1.1*	(0.6–1.7)	825	1.7	(0.7–3.5)

Note. HTPs = heated tobacco products; LCCs = little cigars or cigarillos. County group A includes Del Norte, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties. County group B includes Colusa, Glenn, Sutter, and Yuba counties. County group C includes Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Sierra, and Tuolumne counties. County group D includes Marin and Napa counties. County Group E includes Monterey and San Benito counties. CI = confidence interval.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.



For nicotine pouches, county group D (4.8%) had the highest prevalence of current use, while Sacramento had the lowest use (0.3%).

### 7.3 Region

In addition to county-level estimates, we calculated regional estimates for ever and current any tobacco use. Table 7-5 presents these estimates. For ever use, the Northern region had the highest prevalence estimate (25.0%), and the Greater Bay Area had the lowest prevalence (20.9%). In terms of current use, the Northern region had the highest prevalence estimate (9.6%), and the Central region had the lowest estimate (6.4%).

**Table 7-5. Prevalence of Ever and Current Use of Any Tobacco Products Among High School Respondents, by Region**

Characteristic	Ever Use			Current Use		
	N	% (95% CI)		N	% (95% CI)	
Overall	30,966	21.6	(20.3–22.9)	30,966	7.3	(6.5–8.1)
Region						
Northern	7,424	25.0	(22.7–27.4)	7,424	9.6	(7.9–11.5)
Central	6,131	22.3	(20.7–24.1)	6,131	6.4	(5.0–8.0)
Greater Bay	7,873	20.9	(18.9–23.2)	7,873	7.0	(5.7–8.5)
Southern	9,538	21.1	(19.0–23.3)	9,538	7.2	(6.0–8.5)

*Note.* The Northern region of California includes the following counties: Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Tuolumne, Trinity, Yolo, and Yuba. The Central region includes the following counties: Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Mono, Stanislaus, and Tulare. The Greater Bay Area includes Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, and Solano, Sonoma. The Southern region includes the following counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura. CI = confidence interval.

Table 7-6 presents current tobacco prevalence estimates for the tobacco products included in the 2023 CYTS, by region. For vaping, the Northern region (8.1%) had the highest prevalence estimate, and the Central region (5.1%) had the lowest prevalence estimate. The prevalence estimates for the remaining tobacco products varied little by region.

**Table 7-6. Prevalence of Current Use of Tobacco Products Among High School Respondents, by Region**

Characteristic	Vapes			Cigarettes			LCCs			Cigars		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	30,930	5.9	(5.3–6.5)	30,943	1.2	(0.9–1.5)	30,951	0.6	(0.5–0.8)	30,947	0.8	(0.7–1.0)
Region												
Northern	7,419	8.1	(6.6–9.8)	7,418	1.4	(1.0–1.9)	7,419	0.9	(0.6–1.2)	7,422	1.1	(0.9–1.5)
Central	6,121	5.1	(4.1–6.4)	6,125	1.0	(0.5–1.6)	6,127	1.1	(0.6–1.8)	6,127	1.1	(0.6–1.9)
Greater Bay	7,865	5.9	(4.7–7.2)	7,870	1.4	(1.0–2.0)	7,870	0.7	(0.4–1.1)	7,867	0.9	(0.5–1.3)
Southern	9,525	5.6	(4.7–6.7)	9,530	1.1	(0.7–1.6)	9,535	0.5	(0.3–0.7)	9,531	0.7	(0.5–1.0)
Characteristic	Hookah			Smokeless			HTPs			Nicotine Pouches		
	N	% (95% CI)		N	% (95% CI)		N	% (95% CI)		N	% (95% CI)	
Overall	30,966	0.7	(0.5–1.0)	30,966	0.5	(0.4–0.7)	30,966	0.5	(0.3–0.7)	30,966	1.1	(0.9–1.3)
Region												
Northern	7,424	0.9	(0.6–1.2)	7,424	1.0	(0.7–1.3)	7,424	0.6	(0.5–0.8)	7,424	1.7	(1.2–2.3)
Central	6,131	0.6	(0.2–1.4)	6,131	0.5	(0.1–1.4)	6,131	0.3	(0.0–1.1)	6,131	1.0	(0.6–1.4)
Greater Bay	7,873	0.4	(0.3–0.6)	7,873	0.4	(0.2–0.5)	7,873	0.5	(0.3–0.8)	7,873	1.0	(0.7–1.4)
Southern	9,538	0.8	(0.5–1.4)	9,538	0.5	(0.2–0.8)	9,538	0.5	(0.3–0.8)	9,538	1.0	(0.7–1.4)

*Note.* HTPs = heated tobacco products; LCCs = little cigars or cigarillos. The Northern region of California includes the following counties: Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Tuolumne, Trinity, Yolo, and Yuba. The Central region includes the following counties: Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Mono, Stanislaus, and Tulare. The Greater Bay Area includes Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, and Solano, Sonoma. The Southern region includes the following counties: Imperial, Los Angeles, Orange. CI = confidence interval.

## **7.4 Summary**

We compared tobacco prevalence estimates by rurality, region, and county or county group for any tobacco use and the use of specific products. We found multiple differences. In general, towns and rural settings tended to have higher tobacco use in comparison to cities and suburban areas. Estimates varied by county. Estimates for specific products were consistent across regions, with the exception of vaping, which was higher in the Northern region of the state.

## 8. Marijuana Use

This chapter presents data on the prevalence of ever and current marijuana use across demographic characteristics, the usual mode of marijuana use among respondents who reported using more than one mode of administration, and marijuana and tobacco co-use. Finally, this chapter presents data on secondhand exposure to marijuana smoke by demographics and how respondents acquired marijuana. Measuring marijuana use in the CYTS is important given high levels of marijuana use among respondents who use tobacco and the use of some tobacco products to consume marijuana (e.g., LCCs).

### 8.1 Marijuana Use

Table 8-1 presents the prevalence of ever and current marijuana use among high school respondents by demographic characteristics. The rates of ever using marijuana (23.0%) and currently using marijuana (10.4%) were higher than the rates of ever and currently using tobacco (21.6% and 7.3%, respectively).

**Table 8-1. Prevalence of Marijuana Use Among High School Respondents, by Gender Identity, Race/Ethnicity, Grade, and LGBTQ+ Status**

Characteristic	Ever Use			Current Use		
	N	% (95% CI)		N	% (95% CI)	
Overall	30,928	23.0	(21.7–24.4)	30,920	10.4	(9.4–11.5)
Gender identity						
Male	13,742	20.9	(19.1–22.7)	13,739	9.3	(8.3–10.5)
Female	13,513	24.2	(22.8–25.7)	13,509	10.6	(9.3–12.1)
Identified in another way	1,764	27.7	(23.7–32.0)	1,764	14.1	(11.3–17.3)
Declined to answer	197	24.8	(16.5–34.6)	197	12.6	(6.4–21.4)
Race/ethnicity*						
White	7,377	29.2	(27.1–31.4)	7,375	14.9	(13.3–16.5)
African American or Black	687	30.8	(25.8–36.3)	687	18.1	(13.2–23.8)
Hispanic	16,672	21.9	(20.5–23.3)	16,667	8.9	(7.8–10.0)
Asian	3,171	9.0	(7.2–11.1)	3,171	3.4	(2.4–4.5)
Other	785	17.3	(13.7–21.3)	785	9.2	(6.6–12.2)
Multiracial	2,166	29.2	(26.2–32.2)	2,165	13.9	(11.7–16.3)
Grade						
10	16,229	17.7	(16.2–19.2)	16,226	7.2	(6.3–8.2)
12	14,699	28.9	(27.0–31.0)	14,694	14.0	(12.4–15.6)
LGBTQ+ status						
LGBTQ+	5,141	34.6	(32.0–37.3)	5,140	18.0	(15.8–20.4)
Non-LGBTQ+	21,334	21.0	(19.7–22.4)	21,329	8.9	(7.9–10.0)
Unclear LGBTQ+ status	2,413	15.2	(12.7–17.9)	2,413	6.4	(5.0–8.0)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

We observed differences in marijuana use by demographics. Respondents who identified their gender in another way (14.1%) and respondents who declined to answer gender identity questions (12.6%) had a higher prevalence of current marijuana use than respondents who identified as female (10.6%) or male (9.3%). African American or Black respondents (18.1%) had the highest prevalence of current use of marijuana. Asian respondents had the lowest rate of marijuana use (3.4%). The prevalence of current marijuana use among 12th-grade respondents was almost twice that of 10th-grade respondents (14.0% vs. 7.2%, respectively). Prevalence of current use among LGBTQ+ respondents was more than double (18.0%) that of non-LGBTQ+ respondents (8.9%) and respondents of unclear LGBTQ+ status (6.4%).

The CYTS included questions designed to determine methods of using marijuana. Respondents who reported ever using marijuana were asked how they had used it. Those who endorsed ever using more than one type of marijuana product were asked, "During the last 30 days, how did you usually use marijuana?" Table 8-2 presents the usual mode of marijuana use among these respondents. Smoking (49.0%) was the most common mode of use, followed by vaping (37.9%).

**Table 8-2. Usual Mode of Marijuana Use Among High School Respondents Who Reported Currently Using Multiple Marijuana Products**

Mode of Use	Usual Mode of Use N = 3,444 % (95% CI)	
Smoked	49.0	(45.4–52.6)
Ate	9.2	(7.7–10.9)
Drank	0.2	(0.1–0.5)
Dabbed	2.7	(1.7–3.9)
Vaped	37.9	(34.4–41.4)
Used in some other way	1.1	(0.5–2.0)

Note. CI = confidence interval.

## 8.2 Marijuana Use and Tobacco Co-use

Table 8-3 further categorizes current marijuana use into current co-use of marijuana and any tobacco product or current use of marijuana only. Overall, the prevalence for current use of marijuana only (5.5%) was higher than current use of both marijuana and tobacco (4.9%). When looking by gender identity, race/ethnicity and grade, this pattern generally remained, but there were several exceptions. Respondents who identified their gender in another way and those who declined to answer the gender question reported higher co-use than use of marijuana only. The same was true for Asian respondents and those in the other race category.

**Table 8-3. Prevalence of Current Marijuana-Only Use and Current Co-Use of Marijuana and Any Tobacco Product Among High School Respondents, by Gender Identity, Race/Ethnicity, and Grade**

Characteristic	N	Use of Marijuana Only		Co-Use of Marijuana and Any Tobacco Product	
		%	(95% CI)	%	(95% CI)
Overall	30,920	5.5	(4.9–6.3)	4.9	(4.3–5.5)
Gender identity					
Male	13,739	4.9	(4.3–5.7)	4.4	(3.7–5.1)
Female	13,509	6.0	(5.0–7.2)	4.6	(3.9–5.4)
Identified in another way	1,764	5.1	(3.5–7.2)	9.0	(6.6–11.9)
Declined to answer	197	3.2†	(0.8–8.2)	9.4†	(4.0–17.9)
Race/ethnicity*					
White	7,375	7.7	(6.7–8.8)	7.2	(6.1–8.3)
African American or Black	687	11.7	(7.4–17.3)	6.4	(4.1–9.4)
Hispanic	16,667	4.7	(4.1–5.5)	4.1	(3.5–4.9)
Asian	3,171	1.6	(1.0–2.4)	1.7	(1.1–2.6)
Other	785	3.7	(2.0–6.0)	5.5	(3.1–8.9)
Multiracial	2,165	7.2	(5.6–9.2)	6.6	(5.0–8.6)
Grade					
10	16,226	3.7	(3.0–4.6)	3.5	(2.9–4.1)
12	14,694	7.5	(6.7–8.4)	6.4	(5.5–7.5)
LGBTQ+ status					
LGBTQ+	5,140	9.7	(7.9–11.9)	8.3	(6.7–10.1)
Non-LGBTQ+	21,329	4.8	(4.1–5.4)	4.2	(3.6–4.8)
Unclear LGBTQ+ status	2,413	3.0	(2.1–4.2)	3.4	(2.4–4.6)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

† 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  $\geq 0.30$  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.

Table 8-3 also compares co-use of marijuana and tobacco and marijuana-only use across demographics. Among all gender identity categories, co-use was highest among respondents who declined to answer the gender question (9.4%) or identified their gender in another way (9.0%). In terms of race/ethnicity, co-use of marijuana and tobacco was highest among White respondents (7.2%) compared to all other race/ethnicity categories. Co-use was higher among 12th graders (6.4%) than among 10th graders (3.5%). Use of

marijuana only was also higher for 12th graders (7.5%) than 10th graders (3.7%). Marijuana-only use and co-use were both higher among LGBTQ+ respondents (9.7% and 8.3%, respectively) than non-LGBTQ+ respondents (4.8% and 4.2%, respectively) or respondents of unclear LGBTQ+ status (3.0% and 3.4%, respectively).

Table 8-4 presents the prevalence of use of vapes, cigarettes, and LCCs among respondents who reported current marijuana use. Among respondents currently using marijuana, 39.1% reported currently vaping, 8.6% reported currently smoking cigarettes, and 5.2% reported currently smoking LCCs.

**Table 8-4. Prevalence of Current Co-Use of Marijuana and Tobacco Among High School Respondents Currently Using Marijuana, by Tobacco Product Currently Used**

Tobacco Product	N	Co-Use of Marijuana and Tobacco % (95% CI)	
Vapes	3,450	39.1	(35.4–43.0)
Cigarettes	3,450	8.6	(6.8–10.8)
LCCs	3,450	5.2	(4.1–6.6)

*Note.* LCCs = little cigars or cigarillos; CI = confidence interval.

### 8.3 Exposure to Secondhand Marijuana Smoke in Last 2 Weeks

The 2023 CYTS asked about high school respondents' exposure to secondhand marijuana smoke in a car or room in the last 2 weeks. The survey also asked about exposure to marijuana smoke outside, which includes being near someone who was smoking marijuana outside of a restaurant, outside of a store, on a sidewalk, or at a park, playground, or beach in the last 2 weeks.

Table 8-5 presents exposure to secondhand marijuana smoke by race/ethnicity. Overall, 21.3% of respondents reported being exposed to marijuana smoke in a car or room, and 26.6% of respondents reported exposure outside in the last 2 weeks. Rates of exposure to marijuana smoke in a car or room were highest among African American or Black respondents (31.3%) and lowest for Asian respondents (9.0%). The rate of exposure to secondhand marijuana smoke outside was highest among White respondents (34.8%) and lowest for Asian respondents (18.6%).

**Table 8-5. Prevalence of Last-2-Week Exposure to Marijuana Smoke in Car or Room or Outside Among High School Respondents, by Race/Ethnicity**

Characteristic	Exposure in Car or Room			Exposure Outside		
	N	% (95% CI)		N	% (95% CI)	
Overall	30,880	21.3	(19.8–22.9)	30,606	31.1	(29.4–32.8)
Race/ethnicity*						
White	7,371	29.2	(27.2–31.3)	7,300	34.8	(32.1–37.6)
African American or Black	687	31.3	(26.8–36.1)	678	30.5	(23.2–38.6)
Hispanic	16,639	18.8	(17.2–20.5)	16,491	31.7	(29.4–34.0)
Asian	3,171	9.0	(7.2–11.1)	3,155	18.6	(16.2–21.1)
Other	780	19.2	(14.9–24.1)	773	30.2	(23.1–38.1)
Multiracial	2,162	27.8	(24.9–30.9)	2,142	34.0	(30.4–37.9)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

Table 8-6 presents data on secondhand exposure to marijuana smoke in a car or room by race/ethnicity and marijuana user status. Respondents who reported current users of marijuana also reported greater exposure in a car or room (77.9%), relative to respondents who reported former (38.0%) and never (11.0%) use. Patterns observed by user status were consistent across race/ethnicity categories.

**Table 8-6. Prevalence of Last-2-Week Exposure to Marijuana Smoke in Car or Room Among High School Respondents, by Race/Ethnicity and Marijuana Use Status**

Characteristic	Never Use		Former Use		Current Use	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	23,133	11.0 (10.0–12.0)	4,303	38.0 (34.3–41.8)	3,444	77.9 (75.0–80.7)
Race/ethnicity*						
White	4,975	15.3 (13.4–17.3)	1,140	41.5 (36.9–46.1)	1,256	84.0 (80.2–87.3)
African American or Black	449	15.3 (10.6–21.1)	125	51.5 (36.7–66.1)	113	78.2 (70.6–84.6)
Hispanic	12,700	9.9 (8.7–11.1)	2,390	35.4 (30.4–40.7)	1,549	73.7 (68.8–78.3)
Asian	2,824	5.1 (3.7–6.8)	223	35.3 (27.1–44.1)	124	71.0 (56.2–83.2)
Other	624	10.3 (6.5–15.3)	83	38.1† (21.7–56.8)	73	—
Multiracial	1,499	15.6 (12.9–18.5)	338	38.8 (30.0–48.1)	325	78.6 (70.0–85.8)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.



Table 8-7 presents data on secondhand exposure to marijuana smoke outside in the last 2 weeks by race/ethnicity and marijuana use status. Respondents who were currently using marijuana reported higher exposure to marijuana smoke outside (64.8%) than those who reported former (42.8%) or never (24.6%) use. Patterns observed by user status were consistent across race/ethnicity categories.

**Table 8-7. Prevalence of Last-2-Week Exposure to Marijuana Smoke Outside Among High School Respondents, by Race/Ethnicity and Marijuana Use Status**

Characteristic	Never Use		Former Use		Current Use	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Overall	22,952	24.6 (22.9–26.4)	4,253	42.8 (39.3–46.3)	3,398	64.8 (60.2–69.3)
Race/ethnicity*						
White	4,938	26.4 (24.0–29.0)	1,126	42.7 (36.5–49.1)	1,233	67.4 (63.1–71.5)
African American or Black	442	25.8 (19.4–33.1)	123	40.5+ (25.9–56.4)	113	— —
Hispanic	12,600	25.7 (23.3–28.2)	2,362	43.4 (38.1–48.8)	1,529	67.1 (62.5–71.5)
Asian	2,809	15.8 (13.6–18.1)	222	40.0 (30.4–50.3)	124	57.8 (45.6–69.2)
Other	616	23.6 (16.2–32.5)	82	45.3+ (29.6–61.7)	75	76.1 (60.3–88.0)
Multiracial	1,487	25.9 (21.7–30.5)	334	41.7 (32.8–51.0)	321	67.4 (58.7–75.2)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

## 8.4 Acquisition of Marijuana

Table 8-8 presents how respondents who were currently using marijuana reported acquiring marijuana. The most common method was buying it themselves (38.2%), followed by someone giving it to them (27.0%). Of those who reported buying it themselves, the most common method of buying it was from another person (44.9%) or from a store or dispensary (38.3%).

**Table 8-8. Method of Acquiring Marijuana Among High School Respondents Currently Using Marijuana**

Method	Overall N = 3,417 % (95% CI)	
I ask someone to buy it for me	14.4	(12.4–16.5)
Someone gives it to me	27.0	(24.4–29.7)
I ask someone for it	7.4	(6.0–9.0)
I take it from someone	2.9	(1.8–4.5)
I grow my own	3.2	(2.1–4.8)
I get it some other way	6.8	(5.4–8.5)
I buy it myself*	38.2	(35.1–41.4)
From a store or dispensary	38.3	(32.5–44.5)
On the internet (including apps)	4.2	(2.2–7.1)
From a delivery service	5.6	(3.1–9.4)
From someone	44.9	(39.4–50.4)
Some other way	7.0	(4.7–10.0)

Note. CI = confidence interval.

\* Numbers below this row represent the percentage of respondents endorsing each location among those who reported buying their own marijuana.

## 8.5 Summary

Current use of marijuana was higher than current use of tobacco products. Current marijuana use was highest among respondents who declined to answer gender questions or identified their gender in another way. African American or Black respondents reported the highest use among race/ethnicity categories, and 12th-grade respondents reported higher use than respondents in 10th grade. LGBTQ+ respondents had the highest prevalence of current use. The two most common modes of marijuana use were smoking and vaping.

The prevalence of current use of marijuana only was slightly higher than co-use of tobacco and marijuana. Co-use was highest among White respondents, respondents who declined to answer questions about gender identity, 12th graders, and LGBTQ+ respondents. Vaping was the most common form of tobacco use among respondents co-using marijuana and tobacco, followed by cigarettes and LCCs.

Exposure to marijuana smoke was higher outside than in a car or room and was highest for respondents currently using marijuana. Exposure to secondhand marijuana smoke in a car or room was highest among African American or Black respondents, and exposure outside was highest among multiracial respondents. Among respondents currently using marijuana, the most common method of obtaining marijuana among high school respondents was buying it for themselves and, among those who purchased it, the most popular purchasing source was from someone else.

## 9. Changes in Tobacco Use Between 2022 and 2023

This chapter compares the prevalence of current tobacco use for high school students between the 2022 and 2023 CYTS. When making comparisons, the reader should note that COVID-19 resulted in fewer responding students than expected in 2022. As a result, the confidence intervals for 2022 estimates tend to be wider than the confidence intervals for 2023 due to the differences in sample size. This hindered our ability to detect significant changes between 2022 and 2023. There were no changes in question wording or other aspects of the instrument that would affect the ability to compare responses to survey items between 2022 and 2023.

### 9.1 Tobacco Product Use

Table 9-1 presents the prevalence of ever and current use for any tobacco use and all tobacco products measured in both surveys. Current use of hookah increased, and ever and current use of nicotine pouches increased.

**Table 9-1. Prevalence of Ever and Current Tobacco Product Use by Year Among High School Students**

Tobacco Product	Ever Use		Current Use	
	2022 N = 8,909 % (95% CI)	2023 N = 30,966 % (95% CI)	2022 N = 8,909 % (95% CI)	2023 N = 30,966 % (95% CI)
Any tobacco use	20.3 (18.4–22.2)	21.6 (20.3–22.9)	6.6 (5.4–8.1)	7.3 (6.5–8.1)
Vapes	17.6 (15.9–19.4)	18.3 (17.2–19.5)	5.6 (4.5–6.9)	5.9 (5.3–6.5)
Cigarettes	5.3 (4.3–6.6)	5.6 (4.9–6.5)	1.2 (0.7–2.0)	1.2 (0.9–1.5)
LCCs	2.1 (1.7–2.6)	2.3 (2.0–2.6)	0.6 (0.4–0.8)	0.6 (0.5–0.8)
Cigars	3.1 (2.4–3.9)	3.3 (2.9–3.7)	0.6 (0.4–0.8)	0.8 (0.7–1.0)
Hookah	2.2 (1.8–2.6)	2.5 (2.0–3.0)	0.4 (0.3–0.6)*	0.7 (0.5–1.0)*
Smokeless	1.3 (0.9–1.8)	1.5 (1.3–1.7)	0.3 (0.2–0.5)	0.5 (0.4–0.7)
HTPs	0.9 (0.6–1.2)	1.2 (1.0–1.4)	0.3 (0.2–0.5)	0.5 (0.3–0.7)
Nicotine pouches	2.4 (1.9–2.9)*	3.1 (2.7–3.5)*	0.6 (0.4–0.9)*	1.1 (0.9–1.3)*

*Note.* HTPs = heated tobacco products; LCCs = little cigars or cigarillos; CI = confidence interval.

\* p < 0.05 for comparisons between 2022 and 2023.

### 9.2 Flavored Tobacco Product Use

Table 9-2 presents the prevalence of flavored tobacco use among high school respondents who reported currently using each tobacco product. For cigarettes, flavored use refers to using menthol cigarettes in the last 30 days. For all other products, flavored use refers to identifying a flavor other than tobacco or unflavored as the most commonly used flavor. The survey asked questions about flavored tobacco use for all products except nicotine pouches.

For products with sufficient sample sizes, the table presents analyses for both 2022 and 2023. There were no significant changes in flavored use of tobacco overall or for any specific product between 2022 and 2023.

**Table 9-2. Prevalence of Flavored Tobacco Product Use by Year Among High School Students Who Were Currently Using Each Product**

Tobacco Product	2022		2023	
	N*	% (95% CI)	N*	% (95% CI)
Any flavored tobacco use*	619	86.3 (82.3–89.7)	2,464	85.6 (82.6–88.2)
Vapes	529	91.7 (88.9–93.9)	2,070	89.1 (85.8–91.9)
Cigarettes**	124	32.1 (19.2–47.3)	457	45.0 (36.4–53.9)
LCCs	55	55.2 (40.0–69.8)	232	50.1 (38.5–61.7)
Cigars	53	37.0† (22.5–53.3)	294	49.9 (38.1–61.6)
Hookah	47	76.9† (59.4–89.5)	195	77.2 (60.8–89.2)

Note. LCCs = little cigars or cigarillos. Heated tobacco products, smokeless tobacco, and nicotine pouches were excluded from this table due to the small proportion of respondents who endorsed current use of these products in 2022 and/or 2023. CI = confidence interval.

\* Includes use of vapes, cigarettes, LCCs, cigars, hookah, smokeless tobacco, and/or HTPs.

\*\* Menthol was the only available flavor for cigarettes.

† 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  $\geq 0.30$  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.

### 9.3 Current Tobacco Use by Demographics

Table 9-3 shows changes in prevalence of current any tobacco use by year and gender identity. There were no changes over time in any tobacco use.

**Table 9-3. Prevalence of Current Any Tobacco Use by Year and by Gender Identity Among High School Students**

Gender identity	2022		2023	
	N	% (95% CI)	N	% (95% CI)
Overall	8,909	6.6 (5.4–8.1)	30,966	7.3 (6.5–8.1)
Male	3,951	6.1 (4.8–7.6)	13,750	6.5 (5.7–7.5)
Female	3,841	5.9 (4.5–7.6)	13,537	7.0 (6.1–8.0)
Identified in another way	533	10.1 (6.7–14.4)	1,767	12.5 (9.8–15.5)
Declined to answer	55	9.4† (3.7–18.9)	198	15.6 (8.4–25.5)

Note. CI = confidence interval.

† 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  $\geq 0.30$  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.

Table 9-4 shows the prevalence of current vaping, cigarette smoking, and LCC smoking by year and gender identity. There were no significant changes over time in current vaping, cigarette smoking, or LCC use.

**Table 9-4. Prevalence of Current Vaping, Cigarette Smoking, and LCC Smoking by Year and by Gender Identity Among High School Students**

Gender Identity	Vapes		Cigarettes		LCCs	
	2022	2023	2022	2023	2022	2023
Male	5.2 (4.2–6.5)	5.1 (4.4–5.8)	1.0 (0.5–1.7)	1.1 (0.8–1.5)	0.6 (0.3–0.9)	0.5 (0.4–0.7)
Female	5.1 (3.8–6.7)	6.0 (5.1–6.9)	1.0 (0.5–2.0)	0.7 (0.5–1.1)	0.3 (0.1–0.6)	0.3 (0.2–0.5)
Identified in Another Way	7.3 (4.5–10.9)	8.6 (6.8–10.8)	3.6 (2.0–5.9)	5.2 (3.6–7.2)	2.4 (1.2–4.3)	3.9 (2.5–5.6)
Declined to Answer	5.9† (1.8–13.6)	2.3+ (5.8–21.9)	3.8† (0.5–12.6)	1.5 (0.2–5.1)	—	0.7 (0.2–1.8)

Note. LCCs = little cigars or cigarillos. CI = confidence interval.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

Table 9-5 shows changes in current any tobacco use across all race/ethnicity groups between 2022 and 2023. From 2022 to 2023, there were no significant changes in the prevalence of current any tobacco use by race and ethnicity.

**Table 9-5. Prevalence of Current Any Tobacco Use by Year and by Race/Ethnicity Among High School Students**

Race/Ethnicity*	2022		2023	
	N	% (95% CI)	N	% (95% CI)
Overall	8,909	6.6 (5.4–8.1)	30,966	7.3 (6.5–8.1)
White	1,935	10.2 (7.0–14.1)	7,386	10.7 (9.4–12.2)
African American/Black	396	5.8 (3.1–9.8)	688	7.9 (5.4–11.1)
Hispanic	5,014	5.6 (4.6–6.7)	16,691	6.3 (5.5–7.1)
Asian	705	3.5 (1.9–5.9)	3,172	3.3 (2.5–4.2)
Other	231	7.4 (4.0–12.2)	786	8.4 (5.2–12.8)
Multiracial	617	7.3 (4.6–10.8)	2,168	9.5 (7.7–11.7)

Note. CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey. The table also shows the individual categories that make up "other" race. American Indian or Alaska Native respondents are not shown due to a small sample size.

Table 9-6 displays changes over time in the prevalence of current vaping, cigarette smoking, and LCC smoking by race and ethnicity. We did not find any significant increases by race/ethnicity for these products, with one exception. There was a significant increase in cigarette smoking among high school students who identified as being of some other race not listed in the survey between 2022 and 2023.

**Table 9-6. Prevalence of Current Vaping, Cigarette Smoking, and LCC Smoking by Year and Race/Ethnicity Among High School Students**

Race/ Ethnicity	Vapes		Cigarettes		LCCs	
	2022	2023	2022	2023	2022	2023
White	9.1 (6.4–12.5)	8.7 (7.6–9.9)	2.6 (1.2–5.0)	2.3 (1.6–3.1)	0.5 (0.2–1.0)	0.6 (0.3–0.9)
African American/ Black	5.2 (3.0–8.5)	5.4 (2.9–9.0)	1.7 (0.5–4.3)	1.4 (0.2–4.5)	1.2 (0.3–3.3)	0.7 (0.1–1.9)
Hispanic	4.6 (3.7–5.6)	5.1 (4.4–5.9)	0.7 (0.5–1.1)	0.7 (0.5–0.9)	0.6 (0.3–0.9)	0.7 (0.5–0.9)
Asian	3.2 (1.7–5.5)	2.7 (2.1–3.4)	0.4 (0.1–1.3)	0.6 (0.3–1.2)	0.1 (0.0–0.6)	0.4 (0.1–0.9)
Other	5.7† (2.7–10.4)	6.1 (3.1–10.5)	0.1 (0.0–0.7)*	1.8 (0.7–3.8)*	0.6 (0.1–2.5)	0.7 (0.1–1.9)
Multiracial	5.4 (3.5–8.0)	7.6 (5.9–9.6)	2.0 (0.9–3.8)	2.1 (1.3–3.3)	0.9 (0.3–2.3)	0.8 (0.3–1.7)

Note. LCCs = little cigars or cigarillos.

\* p < 0.05 for comparisons between 2022 and 2023.

With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey. The table also shows the individual categories that make up “other” race. American Indian or Alaska Native respondents are not shown due to a small sample size.

† 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  $\geq 0.30$  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.

Table 9-7 shows changes over time in any tobacco use and the use of specific tobacco products by grade. For specific products, there was significant increase in hookah use among 12th graders. For 10th graders, there was a significant increase in use of smokeless tobacco. Current use of nicotine pouches increased over time among both 10th and 12th graders.

**Table 9-7. Prevalence of Current Tobacco Use by Year and by Grade Among High School Students**

Tobacco Product	Grade 10		Grade 12	
	2022 N = 5,002 % (95% CI)	2023 N = 16,255 % (95% CI)	2022 N = 3,907 % (95% CI)	2023 N = 14,711 % (95% CI)
Any tobacco use	5.1 (3.9–6.5)	5.3 (4.6–6.2)	8.3 (6.5–10.4)	9.4 (8.2–10.8)
Vapes	4.2 (3.2–5.4)	4.3 (3.7–5.0)	7.2 (5.6–9.1)	7.6 (6.6–8.6)
Cigarettes	0.9 (0.5–1.5)	0.8 (0.5–1.1)	1.6 (0.9–2.7)	1.6 (1.2–2.1)
LCCs	0.6 (0.3–1.0)	0.6 (0.4–0.8)	0.6 (0.3–0.9)	0.7 (0.5–0.9)
Cigars	0.5 (0.2–0.9)	0.7 (0.5–1.0)	0.7 (0.4–1.0)	1.0 (0.7–1.3)
Hookah	0.4 (0.2–0.6)	0.4 (0.3–0.6)	0.5 (0.2–0.8)*	1.0 (0.6–1.6)*
Smokeless	0.2 (0.1–0.4)*	0.6 (0.4–0.9)*	0.4 (0.2–0.7)	0.4 (0.2–0.6)
HTPs	0.3 (0.1–0.7)	0.5 (0.3–0.7)	0.2 (0.1–0.5)	0.5 (0.3–0.9)
Nicotine pouches	0.5 (0.3–0.7)*	0.9 (0.7–1.2)*	0.7 (0.4–1.1)*	1.2 (0.9–1.5)*

Note: HTPs = heated tobacco products; LCCs = little cigars or cigarillos; CI = confidence interval.

\*p < 0.05 for comparisons between 2022 and 2023.

Table 9-8 shows changes over time in any tobacco use by LGBTQ+ status. There was no significant increase in any tobacco use by LGBTQ+ status over time.

**Table 9-8. Prevalence of Current Any Tobacco Use by Year and by LGBTQ+ Status Among High School Students**

LGBTQ+ Status*	2022		2023	
	N	% (95% CI)	N	% (95% CI)
Overall	8,909	6.6 (5.4–8.1)	30,966	7.3 (6.5–8.1)
LGBTQ+	1,513	10.8 (7.9–14.2)	5,146	11.4 (9.5–13.6)
Non-LGBTQ+	6,084	5.2 (4.1–6.4)	21,360	6.4 (5.6–7.2)
Unclear LGBTQ+ Status	688	6.3 (4.0–9.5)	2,414	5.3 (4.0–6.8)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* Respondents who reported (a) their gender identity as transgender or “something else” and/or (b) identified their sexual orientation as gay or lesbian, bisexual, “something else,” or “don’t know what this question means” were considered LGBTQ+. Respondents who identified as female or male and straight (that is, not gay or lesbian) were considered non-LGBTQ+. Respondents who responded (a) unsure for gender identity and straight for sexual orientation or (b) male, female, or unsure for gender identity and unsure or “don’t know” for sexual orientation were considered to have unclear LGBTQ+ status.

Table 9-9 shows changes over time in vaping, cigarettes smoking, and LCC smoking by LGBTQ+ status. There were no significant changes over time.

**Table 9-9. Prevalence of Current Vaping, Cigarette Smoking, and LCC Smoking by Year and LGBTQ+ Status Among High School Students**

LGBTQ+ Status	Vapes		Cigarettes		LCCs	
	2022	2023	2022	2023	2022	2023
LGBTQ+	8.2 (5.8–11.2)	9.1 (7.7–10.7)	3.0 (1.7–4.9)	2.5 (1.8–3.3)	1.1 (0.6–1.8)	1.6 (1.1–2.2)
Non-LGBTQ+	4.6 (3.7–5.8)	5.1 (4.5–5.9)	0.6 (0.3–1.1)	0.9 (0.6–1.2)	0.3 (0.2–0.5)	0.4 (0.3–0.5)
Unclear LGBTQ+ Status	4.8 (2.9–7.5)	4.0 (2.8–5.4)	2.2 (0.9–4.2)	1.1 (0.6–1.8)	1.4 (0.4–3.6)	0.4 (0.2–0.8)

Note. LCCs = little cigars or cigarillos.

Table 9-10 shows changes over time in any tobacco use by general mental health status. There was no significant change in any tobacco use by mental health status over time.

**Table 9-10. Prevalence of Current Any Tobacco Use by Year and by General Mental Health Among High School Students**

General mental health	2022		2023	
	N	% (95% CI)	N	% (95% CI)
Overall	8,909	6.6 (5.4–8.1)	30,966	7.3 (6.5–8.1)
Good to excellent	5,429	5.0 (4.0–6.3)	19,149	5.9 (5.1–6.7)
Fair	2,014	6.8 (5.0–9.1)	7,155	7.2 (6.0–8.7)
Poor	1,019	12.6 (9.9–15.8)	3,107	14.8 (12.3–17.6)

Note. CI = confidence interval.

Table 9-11 shows changes over time in current any tobacco use by rurality. We did not find any significant changes for any tobacco use by rurality over time.

**Table 9-11. Prevalence of Current Any Tobacco Use By Year and Rurality Among High School Students**

Rurality	2022		2023	
	N	% (95% CI)	N	% (95% CI)
Overall	8,909	6.6 (5.4–8.1)	30,966	7.3 (6.5–8.1)
City	4,178	6.6 (5.0–8.6)	11,637	6.9 (5.9–8.0)
Suburban	3,852	6.1 (4.3–8.4)	12,853	6.8 (5.6–8.3)
Town or rural	1,887	9.1† (2.8–20.6)	6,476	9.6 (7.5–12.0)

Note. CI = confidence interval. Cities are defined as large territories located inside urbanized areas and principal cities. Suburbs are territories outside of principal cities but inside urbanized areas. Towns or rural areas are territories inside an urban cluster or rural territories. See Appendix A for additional information.

† 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  $\geq 0.30$  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.



## 9.4 Marijuana Use and Marijuana Tobacco Co-use

Table 9-12 presents marijuana use and marijuana/tobacco co-use estimates over time. There were no significant changes in ever marijuana use, current marijuana use, current marijuana-only use (current use of marijuana but not reporting current use of any tobacco product), or current co-use of marijuana and tobacco (reporting current use of marijuana and one or more tobacco products).

**Table 9-12. Prevalence of Ever and Current Marijuana Use and Marijuana Co-Use by Year Among High School Students**

Marijuana Use Category	2022		2023	
	N	% (95% CI)	N	% (95% CI)
Marijuana use				
Ever marijuana use	8,904	21.4 (19.0–23.9)	30,928	23.0 (21.7–24.4)
Current marijuana use	8,904	8.8 (7.2–10.5)	30,920	10.4 (9.4–11.5)
Marijuana/ tobacco co-use				
Use of marijuana only	8,905	4.5 (3.8–5.4)	30,920	5.5 (4.9–6.3)
Co-use of marijuana and any tobacco	8,905	4.2 (3.3–5.4)	30,920	4.9 (4.3–5.5)

Note. CI = confidence interval.

## 9.5 Summary

We found a few changes in specific types of tobacco product use in certain groups. We found an increase in current cigarette smoking over time among students who identified as non-Hispanic other race. We found an increase in current hookah use among 12th graders, current smokeless tobacco use among 10th graders, and current nicotine pouch use for students in both grades. However, due to the effects of COVID-19 on the 2022 CYTS data collection and changes in methodology between 2022 and 2023, we recommend interpreting these differences with caution. Findings for flavored tobacco use over time should be interpreted with particular caution, given that the 2023 CYTS asked about “most commonly used” flavor, as opposed to all flavors used in the past 30 days, for all products except cigarettes. For interpretations of comparisons of flavored tobacco use between 2022 and 2023 within the context of SB 793, please see the Conclusions section of the report.

## 10. 8th-Grade Tobacco Use

The following chapter summarizes key tobacco use data for 8th-grade respondents. Due to differences in the prevalence of use of tobacco products and the sampling approach between middle and high schools (8th-grade respondents were undersampled), data for 8th-grade respondents are presented separately.

### 10.1 Tobacco Use among 8th-Grade Respondents

Table 10-1 presents the prevalence of ever and current use of tobacco among 8th-grade respondents. The prevalence of current tobacco use was lower for 8th-grade respondents (3.2%) than high school respondents (7.3%). As with high school respondents, among 8th-grade respondents, current vaping was the most common form of current tobacco use (2.5% of 8th-grade respondents), followed by nicotine pouches (0.6%) and cigarettes and cigars (both 0.4%).

**Table 10-1. Prevalence of Tobacco Use Among 8th-Grade Respondents**

Tobacco Product	<i>N</i>	Ever Use % (95% CI)	<i>N</i>	Current Use % (95% CI)
Any tobacco use	10,789	11.4 (9.9–13.1)	10,789	3.2 (2.5–3.9)
Vapes	10,778	9.3 (7.9–10.8)	10,777	2.5 (1.9–3.3)
Cigarettes	10,785	2.4 (1.9–3.0)	10,784	0.4 (0.3–0.5)
LCCs	10,785	1.0 (0.8–1.3)	10,784	0.3 (0.2–0.4)
Cigars	10,785	1.3 (0.9–1.8)	10,785	0.4 (0.2–0.5)
Hookah	10,789	1.3 (0.7–2.1)	10,789	0.3 (0.2–0.5)
Smokeless	10,789	1.0 (0.8–1.3)	10,789	0.3 (0.2–0.5)
HTPs	10,789	0.9 (0.6–1.4)	10,789	0.2 (0.1–0.4)
Nicotine pouches	10,789	1.8 (1.4–2.5)	10,789	0.6 (0.4–0.8)

*Note.* HTPs = heated tobacco products; LCCs = little cigars or cigarillos. CI = confidence interval.

Table 10-2 presents current tobacco use prevalence among 8th-grade respondents by demographics. Current tobacco use was highest among 8th-grade respondents who identified their gender in another way (6.8%). Among race/ethnicity categories, multiracial respondents reported the highest current use (5.9%), and Asian respondents reported the lowest (0.7%). LGBTQ+ respondents reported the highest current use (6.9%), followed by respondents of unclear LGBTQ+ status (2.5%) and non-LGBTQ+ respondents (2.4%). Respondents who rated their mental health status as poor reported higher current use (9.7%) than those who rated their mental health fair (3.4%) or good to excellent (2.0%).

**Table 10-2. Prevalence of Current Use of Any Tobacco Among 8th-Grade Respondents, by Gender Identity, Race/Ethnicity, LGBTQ+ Status, and Mental Health Status**

Characteristic	Current Use		
	N	% (95% CI)	
Overall	10,789	3.2	(2.5–3.9)
Gender identity			
Male	4,854	2.1	(1.6–2.9)
Female	4,357	3.6	(2.7–4.7)
Identified in another way	722	6.8	(3.5–11.8)
Declined to answer	109	4.3†	(1.0–11.5)
Race/ethnicity*			
White	2,355	3.2	(1.8–5.1)
African American or Black	267	1.3	(0.4–3.1)
Hispanic	5,683	3.5	(2.7–4.6)
Asian	1,142	0.7	(0.2–1.7)
Other	420	2.3	(0.7–5.5)
Multiracial	870	5.9	(3.5–9.2)
LGBTQ+ status			
LGBTQ+	1,548	6.9	(4.6–10.0)
Non-LGBTQ+	7,251	2.4	(1.8–3.1)
Unclear LGBTQ+ status	1,069	2.5	(1.3–4.3)
Mental health status			
Good to excellent	6,966	2.0	(1.4–2.6)
Fair	2,027	3.4	(2.4–4.7)
Poor	1,100	9.7	(7.0–13.0)

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, queer or questioning; CI = confidence interval.

\* With the exception of Hispanic, all ethnicities are classified as non-Hispanic. The following groups are included in the other race category: American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and any race not captured by the survey. The table also shows the individual categories that make up "other" race.

† 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  $\geq 0.30$  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.

## 10.2 Flavored Tobacco Use among 8th-Grade Respondents

Table 10-3 presents the prevalence of flavored tobacco use among current vapers. Consistent with the findings for high school respondents (Chapter 2), the use of flavored vapes (91.9%) was prevalent among 8th-grade respondents who currently vaped.

**Table 10-3. Prevalence of Flavored Tobacco Use Among 8th-Grade Respondents Currently Using Each Tobacco Product**

Tobacco Product	Flavored Product Use		
	N	% (95% CI)	
Any of the below*	430	89.4	(83.4–93.7)
Vapes	375	91.9	(88.2–94.8)
Cigarettes**	65	68.5†	(51.5–82.5)
LCCs	44	68.4	(56.0–79.1)
Cigars	44	54.6	(41.1–67.6)
Hookah	42	83.0	(68.2–92.8)
Smokeless	33	51.8	(42.0–61.6)
HTPs	36	—	—

*Note.* HTPs = heated tobacco products; LCCs = little cigars or cigarillos; CI = confidence interval.

\* As the sample size for the subgroup for each product varies, estimates for each product may be greater than that of “any of the below.”

\*\* Menthol was the only available flavor for cigarettes.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

### 10.3 Exposure to Secondhand Vapor and Tobacco Smoke in Last 2 Weeks Among 8th-Grade Respondents

Table 10-4 reports 8th-grade respondents’ exposure to secondhand vapor and tobacco smoke in a car or room, outside, and in MUH. Among 8th-grade respondents, 20.3% had been exposed to vapor in a car or room, and 31.8% had been exposed to vapor outside in the last 2 weeks. Exposure to tobacco smoke in a car or room was lower (15.2%) than exposure to vaping in a car or room, but exposure to tobacco smoke outside was higher (54.3%) than outside exposure to vapor. Of the 35.3% of 8th-grade respondents who lived in MUH, 49.2% reported smoke intruding into their unit rarely or more often in the last 6 months.

**Table 10-4. Prevalence of Last-2-Week Exposure to Vapor and Tobacco Smoke in Car or Room, Outside, or Multiunit Housing Among 8th-Grade Respondents Living in Multiunit Housing**

Location of Exposure	Vapor Exposure			Tobacco Smoke Exposure		
	N	% (95% CI)		N	% (95% CI)	
In a car or room	10,765	20.3	(18.2–22.6)	10,771	15.2	(13.0–17.7)
Outside	10,634	31.8	(28.9–34.8)	10,634	54.3	(50.1–58.4)
In multiunit housing*	N/A	N/A	N/A	3,038	49.2	(45.3–53.1)

*Note.* CI = confidence interval. This question was not asked for vapor exposure, so those cells are marked not applicable or N/A.

\* Only asked of respondents who reported living in a home attached to one or more other homes or a building with two or more apartments. Exposure is defined as reporting smoke intrusion rarely, sometimes, often, or most of the time in the last 6 months.

Eighth-grade respondents had lower rates of exposure to vapor in a car or room (20.3%) and outside (31.8%) compared with high school respondents (29.0% and 36.5%, respectively; see Chapter 4). Eighth-grade respondents' exposure to secondhand tobacco smoke in a car or room (15.2%), outside (54.3%), or in MUH (49.2%) was similar to that of high school respondents (14.1%, 51.1%, and 48.8%, respectively; see Chapter 4).

#### 10.4 Access to Vapes and Cigarettes Among 8th-Grade Respondents

Table 10-5 shows methods of obtaining vapes (or pods or e-liquid) among 8th-grade respondents reporting current vaping. The most commonly reported sources were buying their own (26.2%) and being given a vape by someone else (22.2%). Of those who bought their own, the most common purchasing source was from another person (45.1%).

Table 10-6 presents how 8th-grade respondents who were currently using cigarettes reported obtaining them. Small sample sizes for some categories limit interpretation, but of the methods available, the most commonly reported sources were someone giving them to the respondent (38.6%), followed by the respondents buying their own (26.3%). Methods of the respondent "buying them myself" were excluded from the table due to estimates being suppressed, imprecise, or respondents not endorsing the response option.

**Table 10-5. Method of Accessing Vapes (or Pods or e-Liquid) Among 8th-Grade Respondents Who Were Currently Vaping**

Method	Overall N = 366 % (95% CI)	
I ask someone to buy them for me	15.1	(11.2–19.8)
Someone gives them to me	22.2	(18.1–26.7)

(continued)

**Table 10-5. Method of Accessing Vapes (or Pods or e-Liquid) Among 8th-Grade Respondents Who Were Currently Vaping (continued)**

Method	Overall N = 366 % (95% CI)	
I ask someone for them	15.5	(11.8–19.9)
I take them from someone	6.6	(3.2–11.7)
I get them some other way	14.4	(10.3–19.3)
I buy them myself*	26.2	(20.2–32.9)
From a gas station or convenience store	10.9†	(4.9–20.2)
From a grocery store	0.3	(0.0–1.8)
From a drugstore or pharmacy	4.5+	(0.7–14.2)
From a liquor store	0.3	(0.2–0.4)
From a tobacco or smoke shop	9.9†	(3.1–22.4)
From a vape shop	0.2	(0.0–0.9)
From a mall or shopping center kiosk/ stand	0.0	N/A
On the internet (including apps)	18.8	(11.5–28.0)
From someone	45.1†	(30.2–60.8)
Some other way	10.0†	(3.6–21.2)

Note. CI = confidence interval. N/A is used because a value of 0 does not have a confidence interval. The value of 0 indicates that no participant endorsed that response option.

\* Numbers below this row represent the percentage of respondents endorsing each location among those who reported buying their own vapes.

† 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  $\geq 0.30$  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.

**Table 10-6. Methods of Accessing Cigarettes Among 8th-Grade Respondents Who Were Currently Smoking Cigarettes**

Method	Overall N = 64 % (95% CI)	
I ask someone to buy them for me	3.4†	(0.4–12.0)
Someone gives them to me	38.6	(28.1–50.0)
I ask someone for them	6.4†	(2.8–12.2)
I take them from someone	13.3	(9.0–18.8)

(continued)

**Table 10-6. Methods of Accessing Cigarettes Among 8th-Grade Respondents Who Were Currently Smoking Cigarettes (continued)**

Method	Overall N = 64 % (95% CI)	
I get them some other way	—	—
I buy them myself	26.3	(18.8–35.0)

Note. CI = confidence interval.

— The estimate has been suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of nominal and effective sample size, see Appendix A.

† 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  $\geq 0.30$  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.

## 10.5 Marijuana Use Among 8th-Grade Respondents

Table 10-7 presents the prevalence of ever and current marijuana use among 8th-grade respondents. The rates of ever using marijuana (8.5%) and currently using marijuana (3.1%) were lower than rates reported by high school respondents (23.0% and 10.4%, respectively; see Chapter 8).

**Table 10-7. Prevalence of Marijuana Use Among 8th-Grade Respondents**

Marijuana Use	Overall		
	N	% (95% CI)	
Ever use	10,781	8.5	(7.1–10.1)
Current use	10,778	3.1	(2.2–4.1)

Note. CI = confidence interval.

## 10.6 Exposure to Secondhand Marijuana Smoke in Last 2 Weeks

Table 10-8 reports 8th-grade respondents' exposure to secondhand marijuana smoke in a car or room and outside in the last 2 weeks. Respondents were considered exposed outside if they reported having been near someone who was smoking marijuana outside of a restaurant, outside of a store, on a sidewalk, or at a park, playground, or beach in the last 2 weeks.

**Table 10-8. Prevalence of Last-2-Week Exposure to Marijuana Smoke in Car or Room or Outside Among 8th-Grade Respondents**

Exposure	Overall		
	N	% (95% CI)	
Exposure in car or room	10,764	11.0	(10.0-12.1)
Exposure outside	10,628	24.0	(20.7-27.6)

Note. CI = confidence interval.

Overall, 11.0% of 8th-grade respondents reported being exposed to marijuana smoke in a car or room within the last 2 weeks. Fewer 8th-grade respondents reported exposure in a car or room than high school respondents (21.3%; see Chapter 8). Less than a quarter of 8th-grade respondents (24.0%) reported being exposed outside; this figure was lower than that reported for high school respondents (31.1%; see Chapter 8).

## 10.7 Summary

The prevalence of current tobacco use was lower for 8th-grade respondents than high school respondents. Vaping was the most common form of use. Current tobacco use was highest among 8th-grade respondents who identified their gender in another way and were multiracial. Flavored tobacco use was high among respondents currently using tobacco products, similarly to high school respondents. Among 8th-grade respondents, exposure to secondhand vapor and smoke in a car or room and outside was lower than that of high school respondents, but exposure to secondhand tobacco smoke was similar in a car or room, outside, and in MUH. Respondents who vaped most frequently reported purchasing their own vapes as their most common method of obtaining them. Eighth-grade respondents who smoked cigarettes most commonly obtained them by being given them by someone else. The prevalence of marijuana use among 8th-grade respondents was lower than that of high school respondents, as was exposure to secondhand marijuana smoke.



## 11. Conclusion

Overall, tobacco use among high school respondents remains low, with 7.3% reporting having used any tobacco product in the last 30 days. Vapes continue to be the most commonly used tobacco product, with 5.9% of high school respondents reporting using them in the last 30 days.

Differences in tobacco use were observed when looking at gender identity, LGBTQ+ status, race/ethnicity, general mental health, and experiences of discrimination. Polytobacco use was highest among LGBTQ+ respondents and those who identified their gender in another way. Two-thirds of high school respondents experienced one or more types of discrimination in the last month, and experiences of discrimination were more commonly reported by respondents who were currently using tobacco than those who weren't.

Quit attempts and intention to quit also varied by demographics. A higher proportion of respondents with fair or good to excellent mental health status had attempted to quit in the past year, and they also had higher intention to quit vaping in the next 30 days, compared to those with poor mental health.

Flavored tobacco use remains high, with most respondents who were currently using tobacco reporting flavored product use across gender identity, race/ethnicity, and grade. The popularity of flavor types varied by product. Fruit was the most popular flavor for vapes and almost half of cigarette smokers used menthol cigarettes.

The minimum legal age to purchase tobacco products, including vapes, in California is 21 years old, but many youth who reported current vaping also reported buying their own vapes. Respondents reported buying vapes from other people, tobacco or smoke shops, vape shops, and gas stations or convenience stores. Cigarette smokers also purchased their cigarettes from gas station or convenience stores, tobacco or smoke shops, and from other people. Of vapes, cigarettes, and flavored tobacco products, respondents perceived that it was easiest to obtain vapes. Perceived access varied by location, with respondents reporting that it was more difficult to obtain vapes, cigarettes, and flavored tobacco products from stores than from the internet or another person. For vapes and cigarettes, perceived access varied by respondents' vaping and smoking status.

Most high school respondents lived in homes with a complete ban on tobacco smoking and vaping. About half of respondents who lived in MUH reported exposure to tobacco smoke in their home in the last 6 months. Exposure to tobacco smoke and vapor was highest among current smokers and vapers. When it came to exposure on social media, most respondents did not have a favorite vaping ad and over half did not pay attention to these posts. Exposure varied by smoking status.

Susceptibility to future tobacco use varied by demographics and poor mental health was associated with greater susceptibility. Susceptibility also appeared to be correlated with peer tobacco use. The most commonly reported reason for vaping was to relax or relieve stress and anxiety.

Overall, most high school respondents believed that adults would disapprove of them vaping or smoking, and about half believed peers would disapprove. This varied by vaping and smoking status, with a larger proportion of respondents who had never vaped or smoked endorsing this belief. Over two-thirds of respondents supported tobacco endgame policies, although this also varied by vaping and smoking status. Support was highest among respondents who had never vaped or smoked.

Towns and rural settings tended to have higher tobacco use compared to cities and suburban areas. Tobacco use outcomes varied widely across counties and county groups for any tobacco use and the use of specific products. Estimates for specific products were consistent across regions, with the exception of vaping, which was higher in the Northern region of the state.

Current use of marijuana was more common than current use of tobacco, and use varied by demographic categories. The usual mode of using marijuana was smoking, followed by vaping. Among respondents currently using tobacco, the most commonly used tobacco product was the vape. Respondents currently using marijuana most commonly obtained the product by buying it themselves.

Results from 2023 were compared to 2022, and only a few significant differences were found for specific tobacco products among members of specific racial/ethnic groups (non-Hispanic other race) and for specific grades. These differences should be interpreted with caution, given the impact of COVID-19 on the 2022 CYTS and changes in the methodology of the CYTS between 2022 and 2023.

Finally, 8th-grade respondents were summarized separately. The prevalence of current tobacco and marijuana use was lower for 8th-grade respondents than high school respondents. Like high school students, vaping was the most common form of tobacco use, and flavored product use was high among middle school students. Eighth-grade respondents most commonly obtained vapes by purchasing them.

### **11.1 Implications**

The results of the 2023 CYTS are in line with results from 2022. Rates of youth tobacco use in California are generally low, but youth continue to vape. Marijuana use remains more common than tobacco use. Exposure to secondhand smoke, vapor, and marijuana continues to occur. This year, we examined differences in use, exposure, and beliefs across vaping and smoking status, and found that differences exist.

We did not find differences in tobacco use when comparing 2022 and 2023 data. Continued monitoring of trends over time is recommended.

Effective December 21, 2022, California SB 793 prohibits retailers from selling flavored tobacco products, including mint and menthol flavors, in the state of California.<sup>11</sup> This flavor ban may affect use of these products in the future, but it did not appear to do so in 2023: flavored tobacco use remains high (89.1% of vapers). One explanation for this finding is that, with the exception of cigarettes, for each tobacco product, the survey asked about the most commonly used flavor. We used that most commonly used flavor to categorize tobacco use as flavored or unflavored. However, many of the participants who reported they most often used unflavored tobacco likely also used flavored tobacco products in the past 30 days, resulting in potential miscategorization. However, it was important to keep the wording of this question over time to allow comparison across multiple years. Another possible explanation is that the effects of tobacco control and other public health policies on behavior may take up to 2 years to observe.<sup>12,13,14</sup> Since SB 793 went into effect in December 2022, and the 2023 CYTS data collection began in January 2023, future years of CYTS data collection should continue to examine changes in flavored tobacco use over time to fully capture any effects of this policy change. Also of note, the policy contains some exemptions for hookah and shisha, pipe tobacco, and premium cigars, and does not include concept flavors (e.g., “jazz”)

About one-third of vapers and one-quarter of cigarette smokers reported buying their own product, and gas stations/convenience stores, tobacco or smoke shops, and vape shops were endorsed points of sale. Similarly, stores or dispensaries were endorsed as points of sale for marijuana. Additional monitoring of underage sales and enforcement of ID checks may be warranted.

Although tobacco use is relatively low, youth remain susceptible to future use and perceived ease of access is high. Use, exposure, and susceptibility varied by demographics, mental health status, and vaping/smoking status. Tobacco prevention and cessation programs may benefit from being tailored to disproportionately affected populations.

This report found sufficient variation in county-level prevalence of tobacco use to warrant further investigation. Of particular importance is determining the reasons why some

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<sup>11</sup> California Tobacco Control Branch. (2023, March 27). *Frequently asked questions: California’s statewide flavored tobacco sales law*. California Department of Public Health. [https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/CTCB/CDPH%20Document%20Library/Policy/FlavoredTobaccoAndMenthol/SB\\_793\\_FAQ\\_2\\_0\\_final2.pdf](https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/CTCB/CDPH%20Document%20Library/Policy/FlavoredTobaccoAndMenthol/SB_793_FAQ_2_0_final2.pdf)

<sup>12</sup> Dutra, L.M., Glantz, S.A., Arrazola, R.A., King, B.A. (2017). Impact of e-cigarette minimum legal sale age laws on current cigarette smoking. *Journal of Adolescent Health* 62(5), 532–538.

<sup>13</sup> Song, A.V., Dutra, L.M., Neilands, T.B., Glantz, S.A. (2015). Association of smoke-free laws with lower percentages of new and current smokers among adolescents and young adults: An 11-year longitudinal study. *JAMA Pediatrics*, 169(9), e152285.

<sup>14</sup> Dutra, L. M., Farrelly, M., Gourdet, C., & Bradfield, B. (2022). Cannabis legalization and driving under the influence of cannabis in a national US Sample. *Preventive Medicine Reports*, 27, 101799.

counties have significantly lower ever and current tobacco use outcomes in comparison to the state overall. Towns and rural areas continue to need tobacco control efforts, given higher tobacco use prevalence estimates for these areas of the state.

## Appendix A: List of Terms

### Tobacco Products and Marijuana Definitions

**Any tobacco use:** Use of one or more of the following products: vapes, cigarettes, little cigars or cigarillos, cigars, hookah, smokeless tobacco, heated tobacco products, or nicotine pouches.

**Cigarettes:** Definition from survey: "Cigarettes are sold in packs and cartons. Popular brands include Marlboro, Newport, Pall Mall, Camel, and Winston."

**Cigars:** Definition from survey: "Big cigars, also called traditional, regular, or premium cigars, are tobacco wrapped in a tobacco leaf. Popular brands are Macanudo, Romeo Y Julieta, Arturo Fuente, Cohiba, Davidoff, and Ashton, but there are many others."

**Heated tobacco products (HTPs):** For example, IQOS; also called heat-not-burn products.

**Hookah:** Also called waterpipe or shisha.

**Little cigars or cigarillos (LCCs):** Definition from survey: "Little cigars, cigarillos, and filtered cigars are wrapped in tobacco leaf or brown paper containing tobacco. They are smaller than big cigars and may be flavored. Popular brands include Swisher Sweets, Backwoods, Dutch Masters, Captain Black, Prime Time, White Owl, Black & Mild, Phillies Blunts, Zig Zag, and Cheyenne."

**Marijuana:** Definition from survey: "Marijuana (including joints, blunts, vapes, and edibles) is commonly known as cannabis, weed, pot, hash, grass, THC, or CBD. It can be smoked (joint, blunt, bong), vaped in a wax pen, eaten (baked goods, candies), drunk (tea, cola, alcohol), or dabbed." The term marijuana (instead of cannabis) is used throughout this report, as youth were asked specifically about their marijuana use in the survey instrument.

**Nicotine pouches:** Products like Zyn, On, or Velo.

**Smokeless tobacco:** Chewing tobacco, snuff, snus, dip, or dissolvable tobacco.

**Tobacco smoker:** This term was used to examine exposure to smoked tobacco (cigarettes or LCCs) by tobacco smoker (cigarettes or LCCs) status. For this variable, respondents who reported current use of cigarettes or LCCs were classified as current tobacco smokers. Respondents who reported ever use of either of these products but using neither product in the last 30 days were considered former tobacco smokers. Respondents who reported never use of both cigarettes and LCCs were considered never tobacco smokers.

**Vapes:** Definition from survey: “These products are sometimes called by their brand names (e.g., Puff Bar, Bang Bar, JUUL) or by terms such as e-cigarettes, vape pens, personal vaporizers and mods, e-cigars, e-pipes, e-hookahs, and hookah pens.”

## Product Use Definitions

**Current use:** Use of a product within the last 30 days.

**Ever use:** Response of “yes” to a question about ever using a product.

**Flavored tobacco use:** Use of tobacco products that tasted like menthol or mint; cooling, ice, or frosty; clove or spice; fruit; an alcoholic drink (such as wine, cognac, margarita, or other cocktails), a nonalcoholic drink (such as coffee, soda, energy drinks, or other beverages); candy, chocolate, desserts or other sweets. See separate definition for cigarettes.

**Former tobacco use:** Use of a tobacco product, but not within the last 30 days.

**Intention to quit vaping:** Plan to quit using vapes in the next 30 days.

**Menthol cigarette use:** Response of “yes” to the following survey item: “Menthol cigarettes are cigarettes that taste like mint. Common brands include Newport, Salem, and Kool. Were any of the cigarettes you smoked in the last 30 days flavored, such as menthol?”

**Never tobacco use:** Response of “no” to ever using any tobacco products.

**Polytobacco use:** Use of two or more tobacco products within the last 30 days.

**Quit attempt for vaping:** One or more attempts to completely stop using vapes in the last 12 months.

**Tobacco-marijuana co-use:** Use of marijuana and at least one tobacco product within the last 30 days.

## Created Variables and Other Definitions

### ***Race/Ethnicity***

**Hispanic:** Response of “yes” to the question “Are you of Hispanic or Latino/Latina origin,” regardless of race(s) reported.

**Non-Hispanic single race (African American or Black, Asian, White):** Response of “no” to the Hispanic ethnicity question and report of African American or Black, Asian, or White when asked “How do you describe yourself?”

**Non-Hispanic multiracial:** Response of “no” to the Hispanic ethnicity question and report of two or more races.

**Non-Hispanic other race:** Response of “no” to the Hispanic ethnicity question and report of one of the following: some other race (i.e., a race not listed), American Indian or Alaska

Native (AI/AN), or Native Hawaiian or other Pacific Islander (NHOPI). AI/AN and NHOPI respondents were included in this category due to small sample sizes for these two groups. When possible, values were displayed for these groups individually (separate from respondents who endorsed other race).

### **Gender Identity**

**Gender:** Options for gender identity in the survey were “male,” “female,” “transgender,” “something else,” and “I’m not sure yet.” Responses were recoded so that “transgender,” “something else,” and “I’m not sure yet” were collapsed into a single category called “identified in another way.” A fourth category, “declined to answer,” was created for respondents who skipped this question. Respondents who did not reach this question were assigned a value of missing for this variable.

**Sexual orientation:** Options for sexual orientation in the survey 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.”

**LGBTQ+ status:** This variable was defined by combining responses to survey items about gender identity and sexual orientation (see response options above). Respondents who did not provide enough information to be included in any of the below categories were assigned a value of missing for LGBTQ+ status.

**LGBTQ+:** Respondents who reported their gender identity as transgender or “something else” and/or selected one of the following responses for their sexual orientation:

- Gay or lesbian
- Bisexual
- “Something else”
- “Don’t know what this question means”

**Non-LGBTQ+:** Respondents who reported”

- their gender identity as male or female; and
- their sexual orientation as “straight, that is, not gay or lesbian.”

**Unclear LGBTQ+ status:** Respondents who did not provide enough information about their gender identity and/or sexual orientation to classify their LGBTQ+ status. This included those who selected

- “I’m not sure yet” for gender identity and reported their sexual orientation as “straight, that is, not gay or lesbian;” or
- male, female, or “I’m not sure yet” for gender identity and responded “I’m not sure yet” or “don’t know what this question means” for sexual orientation.

### **Rurality**

We used the National Center for Education Statistics (NCES) definition of rurality to code all respondents based on the rurality of their school’s location. NCES divides school locations

into 12 categories.<sup>15</sup> We collapsed these 12 categories into three categories: city, suburb, and town or rural area.

**City:** Respondent's school is in an area classified by NCES as a small, midsize, or large city. City is defined as a territory inside an urbanized area and inside a principal city, and size is determined by population.

**Suburb:** Respondent's school is in an area classified by NCES as a small, midsize, or large suburb. Suburb is a territory outside of a principal city and inside an urbanized area, and size is determined by population.

**Town or rural area:** Respondent's school is in a fringe, distant, or remote town or rural area. Town is defined as a territory inside of an urban cluster, and the type of town is based on distance from an urbanized territory. Rural area is defined as a census-defined rural territory, and the type of rural area is based on distances from urbanized areas and urban clusters.

### **Other**

**Adult disapproval of smoking:** Respondent's indication that adults important to them would feel negatively (negative and very negative as opposed to positive or very positive) about the respondent smoking.

**Adult disapproval of vaping:** Respondent's indication that adults important to them would feel negatively (negative and very negative as opposed to positive or very positive) about the respondent vaping.

**Peer disapproval of smoking:** Respondent's indication that other respondents at their school would view smoking cigarettes negatively (negative and very negative as opposed to positive or very positive).

**Peer disapproval of vaping:** Respondent's indication that other respondents at their school would view vaping negatively (negative and very negative as opposed to positive or very positive).

**Complete home ban on vaping:** Response of "vaping is not allowed anywhere or at any time inside my home" when asked about rules about vaping inside the home.

**Complete home ban on tobacco smoking:** Response of "smoking cigarettes or other tobacco products is not allowed anywhere or at any time inside my home" when asked about rules about smoking cigarettes or other tobacco products inside the home.

**Discrimination:** This variable measures experiences of discrimination in the last month. Response options were "almost every day," "at least once a week," "a few times," or

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<sup>15</sup> National Center for Education Statistics. (n.d.). *Education demographic and geographic estimates*. Retrieved March 1, 2023, from <https://nces.ed.gov/programs/edge/Geographic/LocaleBoundaries>



“not at all.” The individual items were modified for youth from the Everyday Discrimination Scale.<sup>16</sup> The original scale does not specify a period for experiences, but we added one based on confusion about the original wording of the item during cognitive testing. Although these items are traditionally analyzed as a scale, to characterize experiences of youth in the sample in depth, we included responses to individual items in this report. Respondents who endorsed any listed experience of discrimination, consistent with the original scale, were asked to attribute their experiences to one or more factors. Respondents were coded as attributing the discrimination to a specific characteristic if they endorsed that characteristic, regardless of whether they also endorsed other characteristics.

**Secondhand smoke:** Smoke released from smoking a cigarettes, little cigar, or cigarillo.

**Exposure to secondhand tobacco smoke in a car or room:** Being in a car or room when someone was smoking a cigarette, little cigar, or cigarillo in the last 2 weeks.

**Exposure to secondhand tobacco smoke outside:** Being near someone who was smoking a cigarette, little cigar, or cigarillo outside of a restaurant; outside of a store; at a park, playground, or beach; or on a sidewalk in the last 2 weeks.

**Exposure to secondhand tobacco smoke in multiunit housing:** Among respondents who indicated living in multiunit housing, answering “rarely,” “sometimes,” “often,” or “most of the time” (as opposed to “never”) to the question “In the past 6 months, how often has tobacco smoke from somewhere else in and around the building you live in come into your unit?”

**Secondhand vapor:** Aerosol released from using an e-cigarette or other vaping device.

**Exposure to secondhand vapor in a car or room:** Being in a car or room when someone was using a vape in the last 2 weeks.

**Exposure to secondhand vapor outside:** Being near someone who was using a vape outside of a restaurant, outside of a store, on a sidewalk, or at a park, playground, or beach in the last 2 weeks.

**General mental health:** Assessed by asking, “In general, how would you rate your mental health?” Response options were coded as good to excellent (“good,” “very good,” or “excellent”) versus fair or poor.

**Living in multiunit housing:** Response of “a one-family house attached to one or more houses,” “a building with two apartments,” or “a building with three or more apartments” to the question, “Which of the following options best describes where you live most of the time?” Other response options were “a mobile home,” “a one-family house detached from any other house,” “a boat, RV, van, etc.,” or “I do not have permanent housing.”

<sup>16</sup> Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socioeconomic status, stress, and discrimination. *Journal of Health Psychology, 2*(3), 335–351.

**Perceived ease of access:** Respondents were coded as perceiving easy access to cigarettes, vapes, marijuana, and alcohol if they responded “somewhat easy” or “very easy” (as opposed to “somewhat difficult” or “very difficult”) when asked, “If you wanted to get the following products from a store, how easy or difficult would it be?” This coding scheme was also applied to responses to the same questions that were asked about access from the internet or someone else.

**Susceptible to future tobacco use (three-item measure):** Response of “definitely yes,” “probably yes,” or “probably not” to all three of these questions: “If one of your best friends offered you [a tobacco product never used by the respondent], would you use it?”; “Do you think you will try [a tobacco product never used by the respondent] soon?”; and “Do you think you will use [a tobacco product never used by the respondent] in the next year?”

**Not susceptible to future tobacco use (three-item measure):** Response of “definitely not” to all three of these questions “If one of your best friends offered you [a tobacco product never used by the respondent], would you use it?”; “Do you think you will try [a tobacco product never used by the respondent] soon?”; and “Do you think you will use [a tobacco product never used by the respondent] in the next year?”

## Definitions for Analytic Terms

**Korn-Graubard confidence interval:** Unlike Wald confidence intervals, Korn-Graubard confidence intervals do not assume that the confidence interval is linear; this assumption tends to be violated for very small and very large prevalence estimates. As a result, Korn-Graubard confidence intervals are more accurate than Wald (“linear”) confidence intervals for small and large estimates. Korn-Graubard confidence intervals are commonly used for small prevalence estimates produced by survey data.<sup>17,18</sup>

**Nominal sample size:** The number of observations in the sample.

**Effective sample size:** Effective sample size is calculated as  $\frac{p \times (1-p)}{se^2}$  where  $p$  is the prevalence estimate and  $se$  is the standard error of the prevalence estimate.

<sup>17</sup> Brown, L., Cai, T., & DasGupta, A. (2001). Interval estimation for a binomial proportion. *Statistical Science*, 16(2), 101 – 133.

<sup>18</sup> Korn, E. L. & Graubard, B. I. (1998). Confidence intervals for proportions with small expected number of positive counts estimated from survey data. *Survey Methodology*, 24(2), 193-201.

## **Appendix B:**

# **Survey Methodology of 2023 California Youth Tobacco Survey**

### **Survey Administration**

The California Youth Tobacco Survey (CYTS), formerly the California Student Tobacco Survey (CSTS), was conducted every 2 years between 2001 and 2020, excluding 2013 and 2014. RTI International is conducting the CYTS annually between 2022 and 2024. After the 2024 data collection, the survey will return to a biennial schedule. The methodology used to obtain the CSTS and CYTS are very similar, with one exception. In 2022, RTI opted to add private school students to the CYTS population in order to increase representation of all 8th-, 10th-, and 12th-grade students in the state of California in the CYTS. As a result, the CYTS samples both private and public school students.

The 2023 CTYS was designed to produce state- and county group-level estimates for tobacco use. The 2022 and 2024 CYTS were designed to produce state-level estimates for various tobacco use outcomes. In 2023, there were 35 counties and county groups; 30 individual counties had a sufficient student and school population that they did not need to be combined with other counties. The remaining 28 counties were smaller and were combined to form the remaining five county groups.

This appendix provides a brief overview of survey methodology for the 2023 CYTS. Additional detail on survey methods can be found in the Technical Report on Analytic Methods and Approaches Used in the California Youth Tobacco Survey 2023 by Russell et al.<sup>19</sup>

### **Sampling Strategy**

RTI implemented a probability-based study design to produce a set of respondents who were representative of California's racially, ethnically, culturally, and geographically diverse student population. The sample was a stratified two-stage design. The primary sampling units were schools; the secondary sampling units were classrooms. All students in selected classrooms were invited to participate. The sampling methodology is based on procedures developed by the Centers for Disease Control and Prevention (CDC) for the Youth Risk Behavior Survey and state Youth Tobacco Surveys. Some text in this document, starting with the section "Description of Sampling Methodology," was adapted from the Youth Tobacco Survey Methodology Report prepared for the CDC Office on Smoking and Health.<sup>20</sup>

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<sup>19</sup> See Russell et al., 2023.

<sup>20</sup> Office on Smoking and Health. (2018). *State Youth Tobacco Survey methodology report*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

Thirty-five county groups were formed. Counties with fewer than 15 high schools and middle schools were grouped with other smaller counties. Thirty of the 35 county groups are individual counties.

The sample was designed to yield an analytical dataset that could be used to make county group-level population estimates with adequate precision for high school (10th and 12th grade), and state-level population estimates, with adequate precision, for the following groups: high school (10th and 12th grade) and middle school (8th grade) students, each grade individually, and Asian American, Black, Hispanic, and White students.

The 2023 CYTS sample was designed to collect data from 375 schools and 42,676 students, and to have a minimum of 10 schools in each county group. The sample goals were based on assumed school response rate, student response rate, and school eligibility rate. We collected data from 356 schools and 41,755 students. Nineteen of the 35 county groups had 10 or more responding schools. Thirty of the 35 county groups had eight or more responding schools. The sampling methodology used for the 2023 CYTS and the 2022 CYTS is similar, with the exception of the county-level sampling components, which were not present in the 2022 design.

## Participation

To promote participation in CYTS, schools were given a \$500 gift card for administering the survey. Teachers primarily acted as proctors for the survey. In some cases, other school staff proctored. Proctors were provided with directions for administering the survey. RTI staff were available to answer questions from proctors.

The 2023 CYTS was administered online during the school day. The online survey included programmed skip logic to reduce respondent burden and took a median of 18.8 minutes to complete. A few questions in the survey were mandatory; these asked about respondents' willingness to participate in the survey and grade level. The remaining survey questions were not mandatory, although a message appeared if the question was unanswered. The respondent could move forward and skip the question after encountering the message.

Respondent participation was voluntary and anonymous. Consent procedures were consistent with school district guidelines. With approval of the institutional review board, we used passive consent for all schools. Parent consent forms were distributed to respondents (to take home) 1 week before the survey. Forms were available in Spanish and additional languages, as needed. Respondents were also asked to give their assent to participate in the survey.

## Survey Sample of 2023 CYTS

Table B-1 provides information about the number of schools and respondents who participated in the 2023 survey for middle and high school respondents. Of the 563 public

and private schools sampled, 542 were eligible to participate. These eligible schools were composed of 506 public schools and 36 private schools. A total of 359 private and public schools participated. The small number of private schools affected our ability to make county-level analyses, so we dropped them from the dataset. The remaining 356 public schools had one or more responding students. Dividing this number by the 506 eligible public schools resulted in a 70.4% school response rate. Of the 508 schools, 96 included 8th grade but not 10th or 12th grade (i.e., middle schools), 246 contained grades 10 and 12 but not grade 8 (i.e., high schools), and 14 contained all three grades (i.e., combined middle and high schools).

**Table B-1. Numbers of Schools and Respondents, Middle School vs. High School, Participating in 2023 CYTS\***

Number	Middle School Only (8th Grade)	High School Only (10th and 12th Grades)	Middle and High School (8th, 10th, and 12th Grades)	Total
Number of schools	96	246	14	356
Number of respondents	10,789	30,966	N/A	41,755

\* Only includes public school respondents in the analytic sample (who consented to participate in the survey and had valid responses).

The 2023 CYTS sample included 49,805 students. Because some schools opted to perform a census, 49,818 students started the survey. Of these students, 2,406 declined to consent. Of the remaining 47,412 cases, 4,728 students were dropped because they completed less than 50% of the items in the survey that could not be skipped (i.e., items not subject to skip patterns), and 750 were dropped because they provided low-quality responses (three or more of the following: reported that they had not been honest in their responses, reported that they often provided funny and fake responses in surveys, missed one or both attention checks, and selected “prefer not to answer” for 25% of their responses). After excluding these participants, 41,934 valid responses remained. After dropping 179 private school students, 41,755 surveys remained; the student response rate was therefore 83.8%. The overall response rate was 59.0% (70.4%\*83.8%). Of the 41,755 surveys, 10,789 were obtained from 8th-grade students, 16,255 were obtained from 10th-grade students, and 14,711 were obtained from 12th-grade students. Less than 2% (1.5%) of participants in the analytic sample opted to complete the survey in Spanish rather than English.

## Survey Content

RTI designed the 2023 survey to provide consistent wording with the 2022 CYTS, much of which was consistent with the prior rounds of the CSTS. Such consistency allows for comparable prevalence estimates of tobacco use among youth in California over time. The final survey, which was created in English and translated by professional translators into

Spanish, included the following categories of items: consent and basic demographics, vaping, cigarettes, cigars and little cigars or cigarillos, other tobacco products, marijuana, alcohol, tobacco cessation, the behaviors of influential others, influences at school, personal opinions, exposure to social media, mental health (including experiences of discrimination), and more sensitive demographic questions. Accounting for the skip logic built into the survey, the 2023 survey consisted of a maximum of 182 items and a minimum of 77 items. Surveys were available in English and Spanish.


When updating the survey for 2023 data collection, RTI made slight modifications to guide survey flow and improve user experience. These changes included prompts to ensure only students in the intended grades completed the survey and guidance for questions about both Hispanic origin and race. Such changes were in response to, respectively, feedback from survey proctors and open text responses received for questions on race in the 2022 survey. Exit-screen language was also slightly adjusted. RTI also updated vaping brands listed based on trends in use and updated some product descriptions to ensure consistency between CTPP data collection efforts such as the Teens, Nicotine, and Tobacco survey (e.g., adding “tightly rolled” to the description of cigars).

At CTPP’s request, RTI added items to collect details on Native Hawaiian or other Pacific Islander origin, five additional locations where respondents encountered secondhand smoke and vapor (asked for each of tobacco products, vapes, and marijuana products), and tobacco cessation method used during the most recent quit attempt. To capture more detail on vaping dependence, RTI added the four-item PROMIS-E dependence scale.<sup>21</sup> In addition to a measure asking product users about the vape brand they use most often, RTI added a measure to collect all vape brand names that respondents note as currently popular, regardless of vaping user status. The survey also now includes an additional question about perceived peer usage of tobacco products.

In light of the passage of California Senate Bill 793 (SB 793), the CYTS 2023 wanted to track change in flavored product access by California youth. Thus, RTI added flavored tobacco products to existing items about the perceived ease of access to specific products from, respectively, a store, the internet, or someone else. To minimize participant burden and match CTPP’s priorities, these items replaced questions about alcohol access that had been included in the 2022 CYTS.

Four questions were removed between the 2022 and 2023 administrations of the CYTS. RTI removed an item about how often respondents attended school in the last 30 days. This item added to track asynchronous learning due to COVID-19 but is no longer needed. A two-series question on asthma status was also removed to reduce participant burden. Due

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<sup>21</sup> Morean, M., Krishnan-Sarin, S., & O'Malley, S. S. (2018). Comparing cigarette and e-cigarette dependence and predicting frequency of smoking and e-cigarette use in dual-users of cigarettes and e-cigarettes. *Addictive Behaviors*, 87, 92–96. <https://doi.org/10.1016/j.addbeh.2018.06.027> 

to changes in California policies about reduced and free lunch (all students were offered free lunch regardless of income in 2023), RTI also removed the question on receipt of a free or reduced cost school lunch as a measure of socioeconomic status.

## Analysis

The data are weighted. The statistician created the weights based on nonresponse probability (namely, differences between those who responded and those who did not) and the degree to which the sample reflects the demographic makeup of California. These weights enabled us to adjust analyses for nonresponse and to create accurate state and county estimates. The weighting procedure is described in the *Technical Report for the California Youth Tobacco Survey 2023*. This report includes weighted prevalence estimates with 95% confidence intervals.

The technical report also contains information on the criteria that we used to determine whether we labeled specific estimates as imprecise or suppressed them entirely. Estimates were labeled as imprecise if they met one or both of the following criteria: (a) the absolute width of the Korn-Graubard confidence interval for the estimate is  $\geq 0.30$  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. Some estimates were suppressed due to small sample sizes, specifically, a nominal or effective sample size less than 30. For definitions of Korn-Graubard confidence intervals and nominal and effective sample size, see Appendix A.

When comparing 2023 and 2022 CYTS data, it is important to note that the COVID-19 pandemic negatively affected 2022 student-level response rates, which affected the ability to make some estimates with sufficient precision in 2022. In 2023, the survey methodology was updated to enable the production of county-level estimates.

## Race/Ethnicity

To measure the ability of the 2023 CYTS to sample the racial/ethnic makeup of the state of California, we compared the racial/ethnic makeup of the CYTS sample to the corresponding race/ethnicity data provided by the California Department of Education (CDE).

Race/ethnicity categories of CYTS are similar to those used by CDE.

In CYTS, the racial/ethnic background of respondents was determined using two primary questions. The first asked about Hispanic or Latino/Latina origin (i.e., ethnicity) and the second asked respondents to indicate how they describe themselves (i.e., race) by marking all that apply: African American or Black, American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, White, or Other. The “other” category included a text box for entering a free-text response. We imputed race using respondents’ free-text responses, based on the U.S. Census’s definition of which groups fall into each racial category.

We matched categories used by CDE, with one exception—CDE did not include the category non-Hispanic other race. Because we dropped private schools from the analytic sample, we did not include them in Table B-2. Table B-2 lists the categories provided by CDE and the corresponding categories for the 2023 CYTS, when available (with the exception of non-Hispanic other race).

**Table B-2. Percentage of Race/Ethnicity Categories in CYTS and CDE Enrollment Data for Public School Students Included in the 2023 CYTS Samples**

Control of School	Race/Ethnicity Category	CDE Totals		CYTS Respondents	
		N	(%)	N	(%)
Public	African American not Hispanic	69,695	5.1	956	2.3
	American Indian or Alaska Native	6,448	0.5	240	0.6
	Asian*	131,441	9.6	3,578	8.6
	Filipino	36,087	2.6	738	1.8
	Hispanic or Latino	750,125	55.0	22,374	53.6
	Pacific Islander**	6,203	0.5	156	0.4
	White not Hispanic	303,718	22.3	9,760	23.4
	Two or more races not Hispanic	50,684	3.7	3,046	7.3
	Not reported or other race,*** not Hispanic	8,682	0.6	907	2.2
Total		1,363,084	100.0	41,755	100.0

*Note.* CDE = California Department of Education; CYTS = California Youth Tobacco Survey. CDE enrollment data were restricted to schools that were considered eligible to participate in CYTS. Race/ethnicity data are unweighted and should not be compared with weighted estimates throughout this report.

\* Does not include respondents who identified as Filipino.

\*\* Includes Pacific Islanders for CDE and Native Hawaiians or other Pacific Islanders for CYTS.

\*\*\* "Not reported or other race" is terminology from CDE. For the CYTS data in the table, this category only includes respondents who reported non-Hispanic other race (i.e., race not captured by the survey). For purposes of this table, these groups are considered equivalent, even though CYTS respondents who did not report their race or ethnicity are excluded from the table.

The estimates included are unweighted. The percentage of each race/ethnicity was similar between CYTS and CDE enrollment data for all categories. In terms of differences, fewer non-Hispanic African American students (2.3%) participated in the CYTS than are represented in CDE enrollment statistics (5.1%). Compared to CDE enrollment figures, the CYTS contains a larger percentage of students who identified as not Hispanic and reported being a race not listed in the survey or identifying with two or more races.

The method of classifying race/ethnicity that was used in the 2023 CYTS has limitations. To provide a greater understanding of the impact of CYTS's classification of race/ethnicity,



Table B-3 compares how individuals were labeled using CYTS’s race/ethnicity definition and how they responded to individual questions about Hispanic ethnicity and race in the survey.

**Table B-3. Percentage of Labeled and Endorsed Race/Ethnicity**

Race/Ethnicity Category Labeled			Race/Ethnicity Category Endorsed		
	<b>N = 41,628</b>	<b>(%)</b>		<b>N = 41,755</b>	<b>(%)</b>
White	22.3	(19.1–25.7)	White	43.2	(40.1–46.3)
African American or Black	5.1	(4.0–6.4)	African American or Black	9.6	(8.2–11.1)
Hispanic	55.0	(50.4–59.5)	Hispanic	54.9	(50.3–59.4)
Asian	9.7	(7.7–11.9)	Asian	14.8	(12.5–17.3)
Other*	2.5	(1.8–3.4)	Other	33.3	(30.9–35.6)
Multiracial	5.4	(4.9–6.0)	American Indian or Alaska Native	6.3	(5.3–7.4)
			Native Hawaiian or other Pacific Islander	2.6	(2.3–2.8)

*Note.* The percentage in endorsed does not add up to 100% because respondents could select more than one response. Race/ethnicity data are unweighted and should not be compared with weighted estimates throughout this report.

\* Participants who reported being non-Hispanic and only one of the following races were combined into a category labeled “other” due to small sample sizes: American Indian or Native American ( $n = 35$ , 0.3%), Native Hawaiian or other Pacific Islander ( $n = 50$ , 0.4%), and a race not listed in the survey ( $n = 329$ , 2.1%).

Notably, CYTS assigns each respondent to one combined racial/ethnic category, while respondents can endorse Hispanic ethnicity or not and can endorse more than one response option for the question about race. For example, a large portion of respondents who endorsed White or a race not listed in the survey also reported being Hispanic. Due to small sample sizes, except for in Table 1-4b, respondents who reported being American Indian or Alaska Native or Native Hawaiian or other Pacific Islander were combined with respondents who endorsed a race that was not listed in the survey.

One benefit of the categorization used by CYTS is that the racial/ethnic category of all individuals who endorse being Hispanic is Hispanic. This approach is helpful because many of the individuals who identified as Hispanic selected “other” race and entered a free-text response indicating that they are Hispanic, as evidenced by 2.5% of respondents being categorized as non-Hispanic other race in the analysis but 33.3% of respondents selecting “other” for their race in the survey.