

# **Marijuana Use Among California Secondary Students, 2017/19:**

## **Volume 1: Trends and Patterns of Marijuana Use**

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To download: [https://calschls.org/docs/Marijuana\\_Use\\_Vol\\_1](https://calschls.org/docs/Marijuana_Use_Vol_1)

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This report summarizes the results related to marijuana use reported by students in grades seven, nine, and eleven on the 2017/19 Biennial State California Healthy Kids Survey (CHKS), the seventeenth administration of this survey that began in 1985.<sup>1</sup> A full set of tables with the results is provided in Appendix A. Gaining a better understanding of the current scope and nature of adolescent marijuana use is particularly important at this time in light of the legalization of adult recreational use in November 2016 by California voters, approximately one year before survey data collection began. The 2017/19 survey results suggest that the decline in marijuana use that had been occurring between 2011/13 and 2015/17 may have leveled off. Three factors may have contributed to this: a weakening of negative attitudes toward marijuana use; a leveling-off in declines in marijuana availability since 2015/17; and the rise of more diverse methods of administration such as inhalation through vaping devices such as electronic vaping devices and oral ingestion of edibles and liquids. A second companion report examines the characteristics of current marijuana users in more detail among 11<sup>th</sup> grade students. It focuses on how results differ by frequency of use, and what strategies might help to reduce use and meet the needs of users.

## The Survey

The survey was administered to a randomly selected, representative state sample of secondary students in grades seven, nine, and eleven between Fall 2017 and Spring 2019. The important work of regularly collecting needs-related data from a representative state sample of secondary students began in 1985 with the California Student Survey of Substance Use and Other Risk Behaviors. In 1991, the California Legislature mandated this biennial administration (HSC, Section 11605) and in 1997 the California Department of Education launched the California Healthy Kids Survey as a companion for local data collection. In 2011, the sponsoring state agencies made the decision to fully integrate the Biennial State CHKS with local CHKS data collection in order to reduce the survey burden on schools, improve survey participation, and ensure valid, representative state results in compliance with the legislative mandate that could be compared to local CHKS results.

Because most districts administer the survey every other year, the decision to embed data collection for the state sample within local district data collection meant that state data collection had to be extended from one year to two. Thus, prior to 2011, surveys were identified by a single school year (e.g., 2009/10, the last of the old method). After 2011, they are identified by two school years (2011/13).

The CHKS is a modular survey with a Core Module of key indicators that all participating school districts must administer plus a series of supplementary modules that they could choose to administer along with the Core. The local CHKS is part of the California Department of Education's California School Climate, Health, and Learning Surveys (CalSCHLS) system. The Biennial State CHKS consists of the Core Module and the supplemental Alcohol and Other Drugs (AOD) Module. Combined, these two modules replicate the original state survey.

The Core Module includes a broad range of key indicators that an expert advisory panel determined are important to: (1) guide state and local efforts to improve schools and academic achievement particularly in creating safe, supportive, and engaging school environments; (2) reduce and prevent student substance use and other risk behaviors (e.g., violence and bullying);

and (3) foster resilience, mental health, and overall well-being. The great majority of Core questions are school-specific. The AOD Module provides additional information on patterns of substance use, factors that may be influencing it (correlates), and adverse consequences.

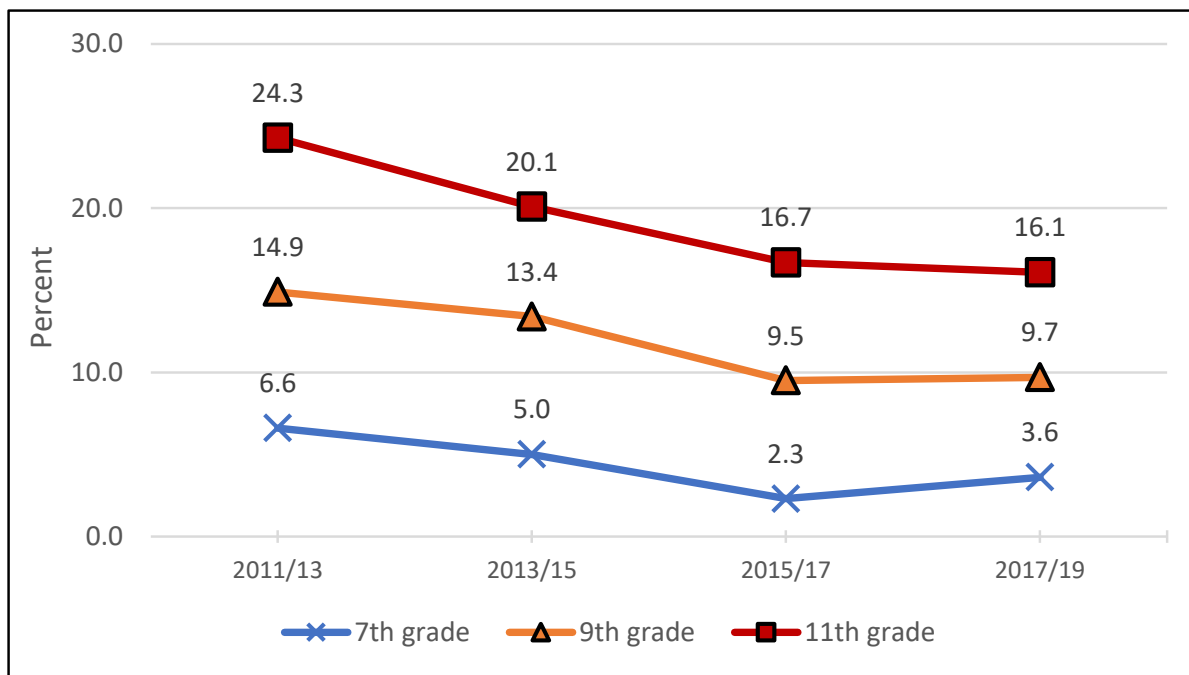
A total of 45,848 secondary students completed the Core Module and 33,621 completed the AOD Module, with roughly even numbers across grades.<sup>2</sup> Because different samples of schools administered the Core and AOD modules, the tables with the full results from the two modules are presented separately in Appendix A and we note which results are from the AOD Module in this report.

A complete discussion of the survey methods and the sample is contained in the main report of Seventeenth Biennial State CHKS, which can be downloaded at [CalSCHLS.org](http://CalSCHLS.org). The survey was conducted under conditions of strict anonymity and confidentiality. Participation by school districts, schools, and students was voluntary, and parental consent was required. The state's Committee for the Protection of Human Subjects, Office of Statewide Health Planning and Development, approved the protocol.

## Use Prevalence and Level

As shown in Exhibits 1 and 2, a pronounced decline in use is evident between 2011/13 and 2015/17. For 2017/19, most use indicators changed little and there were even slight increases in current and lifetime prevalence among 7<sup>th</sup> graders. However, as discussed in the Conclusion, interpreting these two-year trends is complicated by a change in the wording of the survey questions from asking just about smoking marijuana, or using it in general, to more specifically asking about smoking, vaping, eating, or drinking it.



**Marijuana Use (30-day) by Survey Year**

Source: Biennial State California Healthy Kids Survey Data, 2011/13 to 2017/19

Question HS A.72/MS A.66: During the past 30 days, on how many days did you use marijuana (smoke, vape, eat, or drink)?

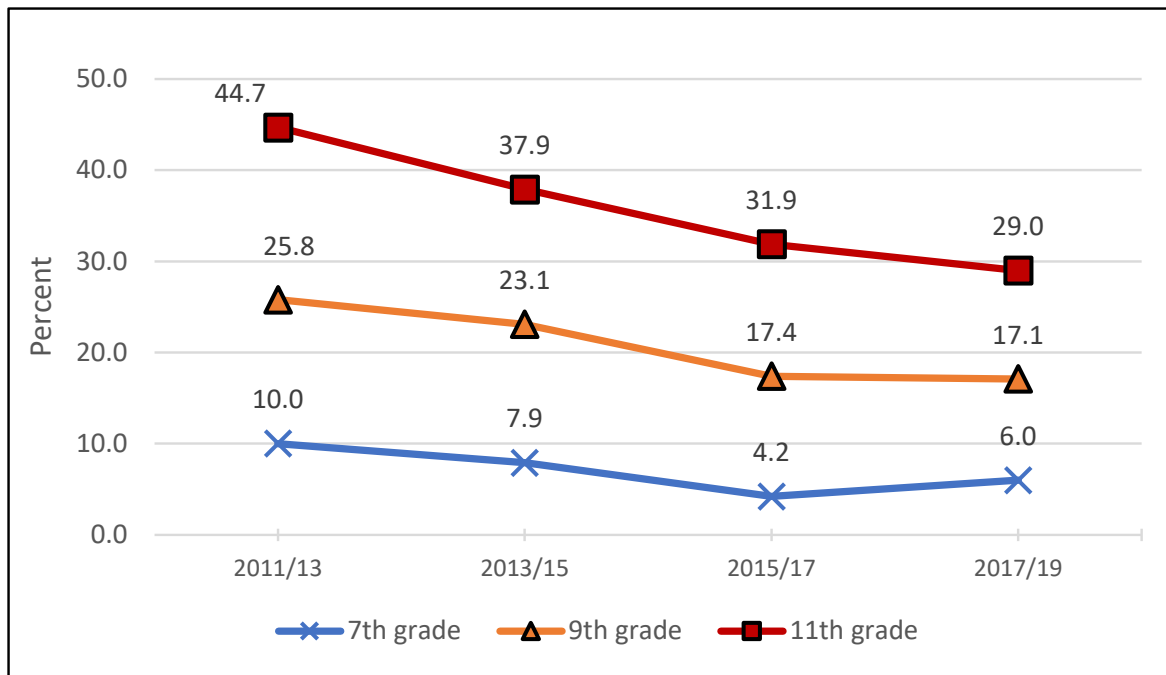
**Lifetime and Current Use Prevalence**

- **Any current use** (past 30 days) remained stable over the past two survey administrations at 10% in 9<sup>th</sup> grade and 16% in 11<sup>th</sup> in 2017/19. It increased only one percentage point in 7<sup>th</sup> grade. (Tables 3.4 and 3.5)
- Trends for **any lifetime use** (ever) were mixed: up two percentage points from 2015/17 in 7<sup>th</sup> grade to 6%, stable in 9<sup>th</sup> at 17%, and down almost three percentage points in 11<sup>th</sup> to 29%, the only overall prevalence indicator to decline. (Table 3.1)

In contrast, between 2011/13 and 2015/17, current use dropped by four percentage points in grade 7, five percentage points in grade 9, and eight percentage points in grade 11. Lifetime use declined six, eight, and thirteen percentage points by ascending grade during this period. These were declines of about one-third among high school students and by over half among 7<sup>th</sup> graders (a 71% decline in current use and 60% in lifetime).

Trends in reported age of onset of marijuana use are similar to trends for lifetime use. Initiating marijuana use at age 12 or earlier was highest in 2011/13 (at 7%-8% across grades) and declined through 2015/17. In 2017/19, trends by grade were mixed. It increased in 7<sup>th</sup> grade by two percentage points to 5%, stayed level at 5% in 9<sup>th</sup>, and slightly declined by one percentage point to 4% in 11<sup>th</sup>. (Table 3.2)

## Marijuana Use (Lifetime) by Survey Year



Source: Biennial State California Healthy Kids Survey Data, 2011/13 to 2017/19

Question HS A.50/MS A.51: During your life, how many times have you used the following?... Marijuana (smoke, vape, eat, or drink).

## Heavy Involvement

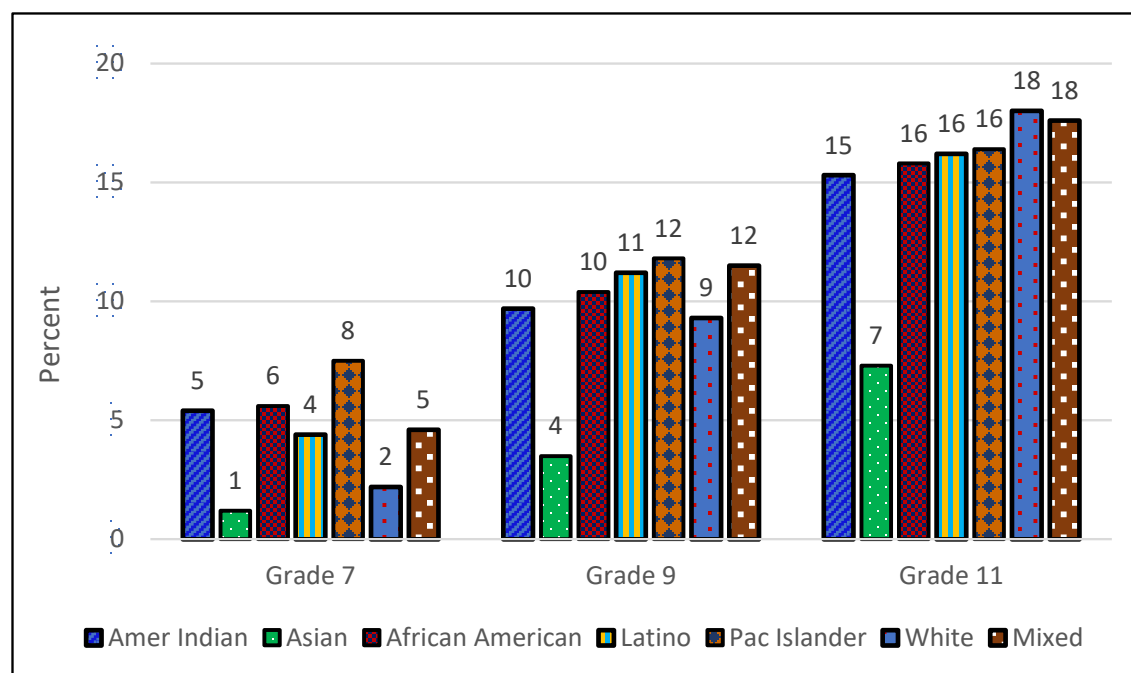
- There was little change in **current weekly use**, defined as using on three or more of the past 30 days, or in **current daily use**, defined as using 20 or more days. About 1% of 7<sup>th</sup> graders, 5% of 9<sup>th</sup> graders, and 9% of 11<sup>th</sup> graders reported using marijuana weekly in 2017/19, indicating that over half of current users in high school used weekly. Daily use was at 2% and 4% among 9<sup>th</sup> and 11<sup>th</sup> graders. Although weekly use remained stable in 2017/19, between 2011/13 and 2015/17 it had dropped two percentage points in 7<sup>th</sup> grade, four percentage points in 9<sup>th</sup>, and seven percentage points in 11<sup>th</sup>. However, the proportion of weekly users among all current users has remained about the same or decreased slightly over this entire period. (Table 3.5)
- **Current use on school property**, an indicator of both heavy involvement and school disengagement, increased by about one percentage point in 2017/19 in all grades to 2%, 5%, and 6%. About half of current users had used marijuana on school property in 7<sup>th</sup> and 9<sup>th</sup> grades, compared to 38% in 11<sup>th</sup> grade, suggesting that the earlier a student becomes a current user the more likely they are to be disengaged from school and engage in risky patterns of use. (Table 3.8)
- As an indicator of **heavy use**, 5% of 9<sup>th</sup> graders and 8% of 11<sup>th</sup> reported that they liked to use “marijuana or other drugs” until they felt it a lot or got really high, little changed from 2015/17.<sup>3</sup> (Table 3.9. This question is not asked of 7<sup>th</sup> graders)

## Demographic Differences in Current Use

Tables 3.6 and 3.7 show current use by race/ethnicity and gender. The lowest rates are consistently reported by Asian Americans and differences among other groups were relatively small (see Exhibit 3). Among 11<sup>th</sup> graders, there is very little variation across racial/ethnic groups (16%-18%), with the exception of Asians, who reported current use at about half the level of other groups (7%). Racial/ethnic differences were greater among 7<sup>th</sup> graders, with the highest rate among Native Hawaiian/Pacific Islanders at 8%, followed by Hispanics/Latinos, American Indians/Alaska Native, African Americans, and Mixed at 4.4%-5.6%, and Whites at 2% and Asians at 1%. The biggest difference by grade was among Whites, who reported the second lowest rates in 7<sup>th</sup> grade (2%) and the highest rate in 11<sup>th</sup> grade (18%).

EXHIBIT 3.

### Marijuana Use (30-day) by Race/Ethnicity and Grade, 2017/19



Source: Biennial State California Healthy Kids Survey Data, 2017/19

Question HS A.72/MS A.66: During the past 30 days, on how many days did you use marijuana (smoke, vape, eat, or drink)?

Among high school students, there was little change among Latinos, Asians, Whites, and Mixed between 2015/17 and 2017/19. Declines were reported by African Americans and American Indians, by five and six percentage points, respectively, in 11<sup>th</sup> grade. Current rates for these two groups are about half those of 2011/13. (Table 3.6)

Gender differences have been small in the last two surveys, with females only slightly higher in 9<sup>th</sup> grade and males slightly higher in 11<sup>th</sup> grade. Between 2011/13 and 2013/15, gender differences were also relatively small in 7<sup>th</sup> and 9<sup>th</sup> grades, but there has been a marked drop in gender differences among 11<sup>th</sup> graders since 2011/13 because use has declined more among males than females. Over the last four surveys, it has declined five percentage points among

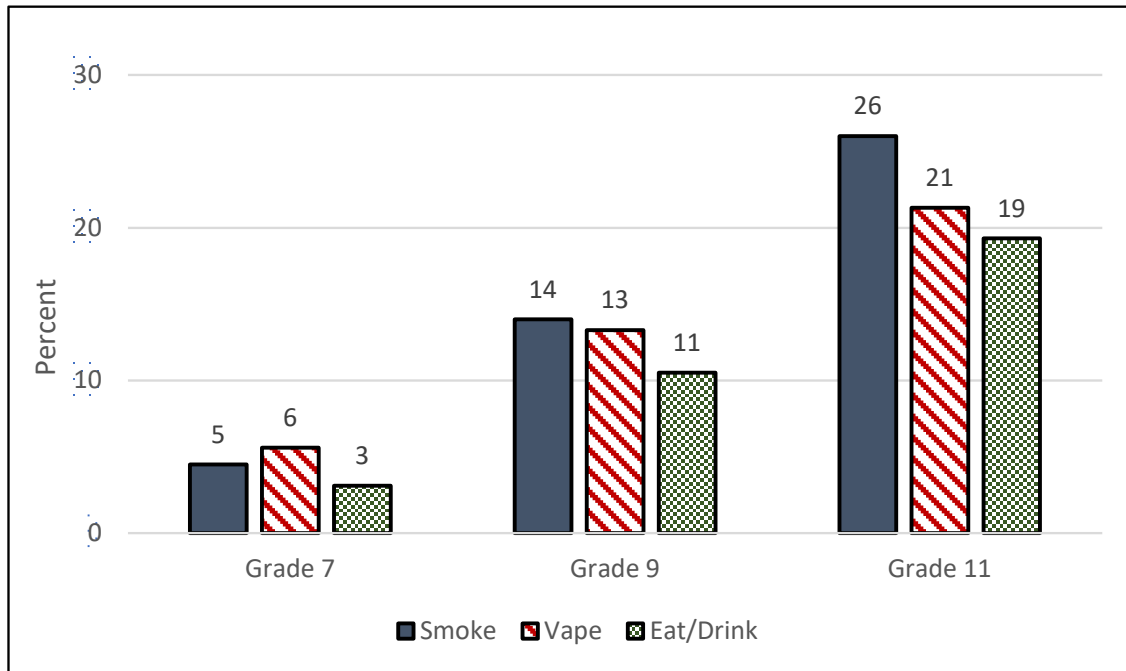
females (from 20% to 15%), whereas it has declined almost thirteen percentage points among males (from 29% to 16%). (Table 3.7)

### Cessation Efforts

Among high school students, 6% of 9<sup>th</sup> graders and 9% of 11<sup>th</sup> reported making at least one attempt to quit or stop using marijuana, with about half of these respondents making two or more attempts. These results have been consistent for the past three surveys, with 45% of users in 9<sup>th</sup> grade and 40% of users in 11<sup>th</sup> grade reporting any attempts to stop using marijuana. The results continue to show that a substantial minority of users have tried to quit using marijuana. (Table 3.10)

EXHIBIT 4.

### Marijuana Use (Lifetime) by Mode of Consumption and Grade, 2017/19



Source: Biennial State California Healthy Kids Survey Data, 2017/19

Questions HS A.64-66/MS A.58-60: During your life, how many times have you used marijuana in any of the following ways... Smoke it?... In an electronic or e-cigarette or other vaping device?... Eat or drink it in products made with marijuana?

### Methods of Consumption

A new question added in 2017 asks about the frequency of ever consuming marijuana using three methods: smoking, through a vaping device (e-cigarette), or oral ingestion (eat/drink). Although the availability of noncombustible products is relatively new, all three methods are popular among marijuana users. Among high school students, smoking is still the most common method of administration, but the differences between rates for smoking and for vaping and oral consumption are relatively small, especially in 9<sup>th</sup> grade. Among 7<sup>th</sup> graders, vaping even slightly exceeds smoking. (Exhibit 4 and Table 3.3).

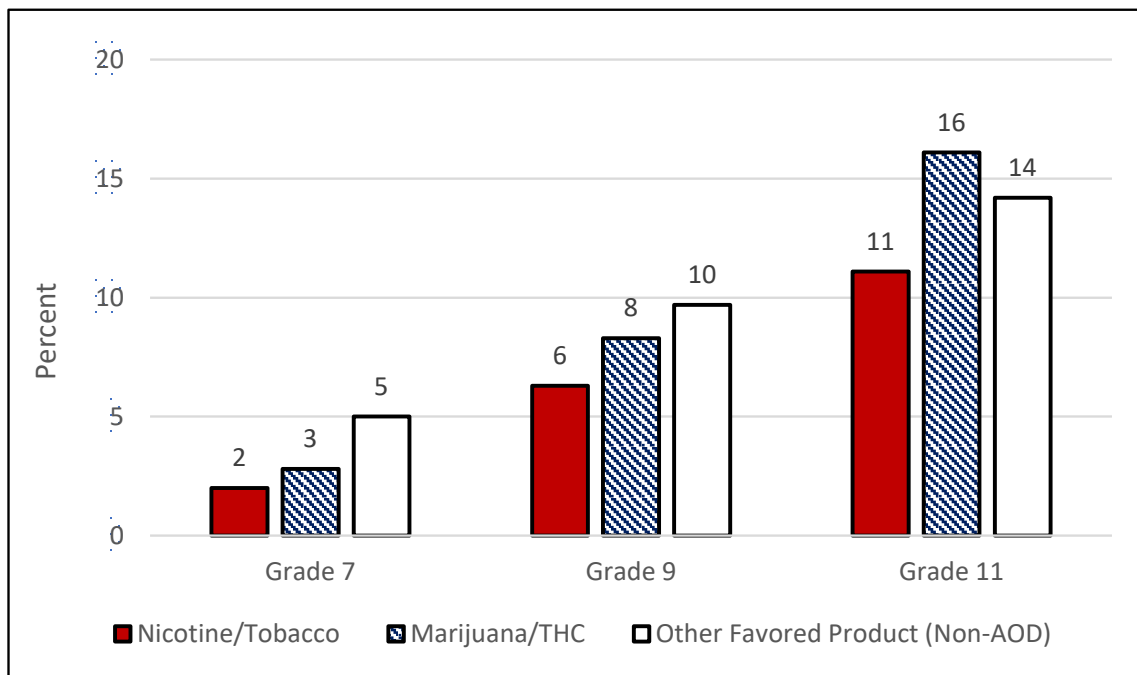
- Seventh graders were more likely to have vaped marijuana (6%) or smoked it (5%) than to orally ingested it (3%).
- Among 9<sup>th</sup> graders, smoking (14%) was only one percentage point higher than vaping (13%) and three percentage points higher than oral ingestion (11%).
- Among 11<sup>th</sup> graders, smoking was reported by 26%, five percentage points higher than vaping (21%) and seven percentage points higher than oral ingestion (19%).

Although policy makers and practitioners have paid a great deal of attention to vaping nicotine and/or tobacco substitutes, these Biennial results indicate that 60% of lifetime marijuana users in 7<sup>th</sup> grade and about two-thirds in high school have vaped it.

Consuming marijuana all three ways was reported by 2% of 7<sup>th</sup> graders, 7% of 9<sup>th</sup>, and 13% of 11<sup>th</sup>. These students constitute 28% of 7<sup>th</sup> graders who had ever tried marijuana, 39% in 9<sup>th</sup> grade, and 45% in 11<sup>th</sup> grade. More than half of the high school students who had ever smoked marijuana had also vaped and ingested it orally.

EXHIBIT 5.

**Vaping/E-Cigarette (Lifetime) by Product Consumed and Grade, 2017/19**



Source: Biennial State California Healthy Kids Survey Data, 2017/19

Question HS B.30/MS B.24: Have you ever used an e-cigarette or vaping device to consume any of the following? (Mark All That Apply.)

Another new question on the AOD Module asks what substances were consumed via vaping devices. It yielded lower rates for vaping marijuana than the Core Module question asking about lifetime frequency of vaping marijuana.<sup>4</sup> But it also revealed that marijuana was the most popular substance for vaping among 11<sup>th</sup> graders and exceeded use of nicotine or a tobacco product in all grades. (Exhibit 5 and Table 6.3)

- Ever consuming marijuana in a vaping device was reported by 3% in 7<sup>th</sup> grade, 8% in 9<sup>th</sup>, and 16% in 11<sup>th</sup>.
- Vaping of nicotine or a tobacco product was lower at 2%, 6%, and 11%, respectively.
- Marijuana was the most frequently-vaped substance among 11<sup>th</sup> graders (16%), followed by a flavored product without nicotine or other drug (14%) and nicotine/tobacco (11%). Among 7<sup>th</sup> and 9<sup>th</sup> graders, flavored products without nicotine or other drugs was the most frequently-vaped substance (5% and 10%), followed by marijuana or THC (3% and 8%) and tobacco/nicotine (2% and (6%).

## Use Attitudes and Perceptions

A weakening of negative attitudes towards marijuana and perceptions of parental and peer disapproval appears to have occurred.

### Perceived Harm

Students were asked to indicate “how much people risk harming themselves physically and in other ways” from using marijuana occasionally and daily (smoke, vape, eat, or drink). Perceived risk of great harm seems to be fairly well established by 7<sup>th</sup> grade. Although the percentages for both occasional use and daily use decline with age, the decline by 11<sup>th</sup> grade is only six percentage points. For occasional use, there were no major changes compared to 2015/17 but some evidence that perceptions of harmfulness declined among 7<sup>th</sup> and 9<sup>th</sup> graders, especially in regard to no harm. Over one-fifth of high school students thought there was no harm from daily use.

### *Occasional Marijuana Use*

The percentages perceiving great harm from occasional use ranged from 38% in 7<sup>th</sup> grade to 32% in 11<sup>th</sup>. Seventh graders, overall, had the most divergent attitudes. They had higher rates for both great harm and for no harm compared to 11<sup>th</sup>. Two-year trend results were mixed, with declines in perceptions of harmfulness among 7<sup>th</sup> and 9<sup>th</sup> graders, and slight increases among 11<sup>th</sup> graders. (Table 4.1 and Exhibit 6)

- The percentage of 7<sup>th</sup> graders selecting great harm declined by four percentage points to 38% between 2015/17 and 2017/19, and for no harm it rose seven percentage points to 33%.
- For 9<sup>th</sup> graders, great harm declined by one percentage point to 35% and no harm rose three percentage points, to 25%. Harm perceptions have been weakening consistently among 9<sup>th</sup> graders since 2013/15.
- For 11<sup>th</sup> graders, results were mixed. There was a two-point increase in perceptions of great harm after 2015/17, to 32%. However, this may be just a momentary fluctuation as great-harm levels have been steady at around three-in-ten 11<sup>th</sup> graders for the past decade. The no-harm rate was unchanged at 27%.

### *Daily Marijuana Use*

- About half of students in each grade reported that daily marijuana use involved great harm (54%, 54%, and 48%). The percentages for no harm were 33%, 22%, and 22%, a much greater decline between middle and high school than was evident for great harm. Whereas the great-harm percentages are much higher for daily-use than for occasional use, the no-harm percentages are similar. Prior comparison data are not available. (Table 4.1)

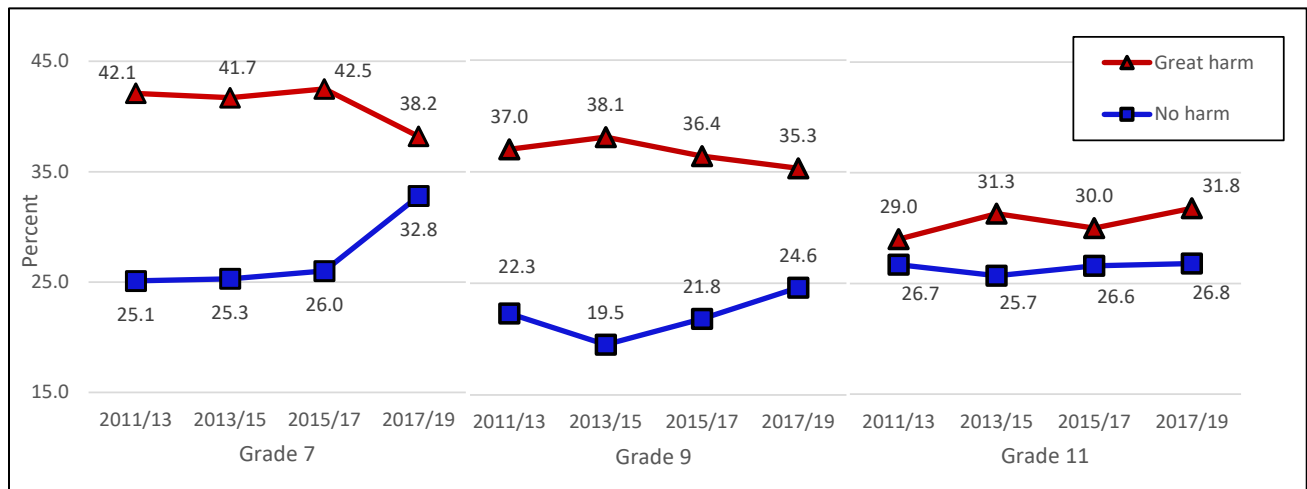
### Comparison to Alcohol

As students age, their perceptions of harm from occasional use of marijuana compared to alcohol diverge, with 7<sup>th</sup> graders reporting that occasional marijuana use is more harmful than occasional alcohol use and 11<sup>th</sup> graders reporting that marijuana use is less harmful than alcohol use.

- Seventh graders report that occasional marijuana use is more harmful than occasional alcohol use, with higher percentages indicating that it poses great harm (38% vs. 28%), and similar percentages reporting no harm (33%).
- Among 11<sup>th</sup> graders, there was no difference in the percentage reporting great harm from occasional use of alcohol and marijuana, both at about 32%. Greater percentages report that occasional marijuana use poses no harm than is the case for occasional alcohol use (27% vs. 18%). (Table 4.1)

EXHIBIT 6.

### Perceived Harm (“Great harm” and “No harm”) of Occasional Marijuana Use by Survey Year



Source: Biennial State California Healthy Kids Survey Data, 2011/13 to 2017/19

Questions HS A.89-90/MS A.81-82: How much do people risk harming themselves physically and in other ways when they do the following?... Use marijuana occasionally (smoke, vape, eat, or drink) ... Use marijuana daily.

### Disapproval of Use

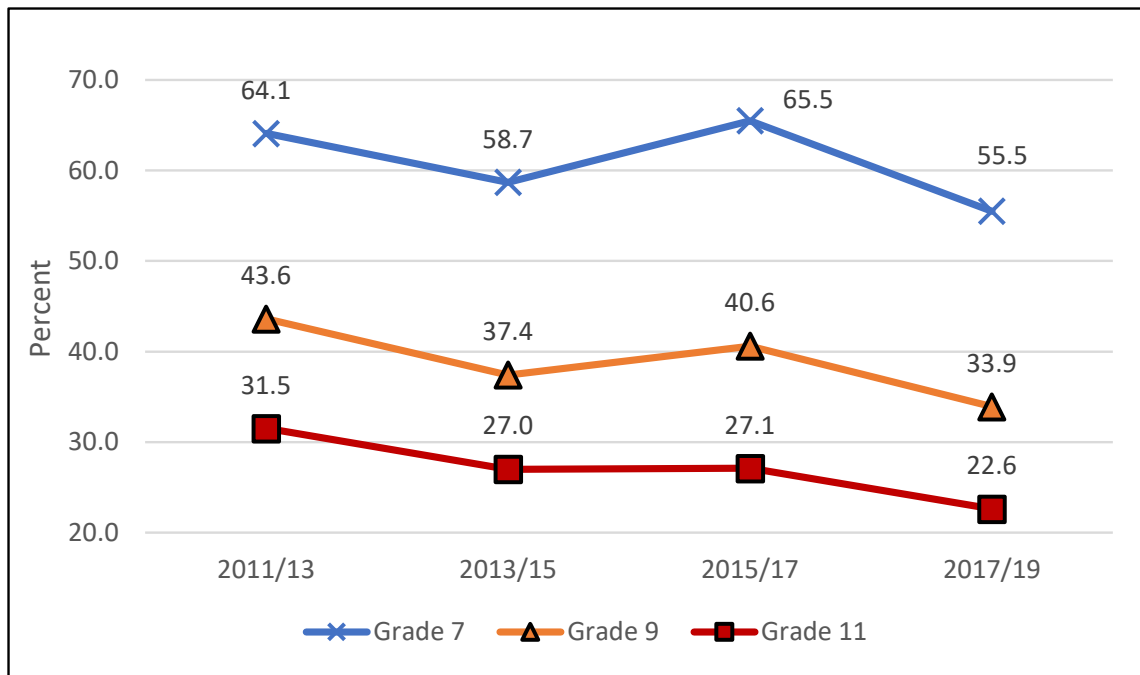
Data from the supplementary AOD Use Module shows that all indicators of disapproval of use (personal, parental, and peer) declined markedly as students aged. Among 11<sup>th</sup> graders, less than one-fourth strongly disapproved of trying marijuana and almost less than one-third strongly disapproved of regular use.

Personal, parental, and peer disapproval of marijuana use increased between 2013/15 and 2015/17 but either declined or remained stable in 2017/19. The greatest declines in perceived disapproval occurred among 7<sup>th</sup> graders, consistent with the greater decline in perceived harm from occasional use in that grade.

### ***Personal Disapproval***

- The great majority of high school students and about half of 7<sup>th</sup> graders do not strongly disapprove of experimenting with marijuana. Strong personal disapproval of “someone your age” using once or twice dropped by half across grades, from 56% in 7<sup>th</sup> grade to 34% in 9<sup>th</sup> and only 23% in 11<sup>th</sup>.
- Compared to 2015/17 (when rates increased in 7<sup>th</sup> and 9<sup>th</sup> grades), in all grades a pronounced decline occurred on disapproval of marijuana experimentation, though the decline got smaller by ascending grade, by ten percentage points in 7<sup>th</sup>, seven percentage points in 9<sup>th</sup>, and five percentage points in 11<sup>th</sup>. These are the biggest declines for any disapproval indicator and the lowest rates in the past four surveys.<sup>5</sup>
- Strong personal disapproval of a peer using once a month or more regularly were only about ten percentage points higher than for experimenting, at 63%, 45%, and 32%, by ascending grade. Trends were mixed: down three percentage points in 7<sup>th</sup> grade, stable in 9<sup>th</sup>, and up two percentage points in 11<sup>th</sup>.<sup>6</sup> (Table 4.2 and Exhibit 7)



**Strong Personal Disapproval of Experimental Marijuana Use by Survey Year**

Source: Biennial State California Healthy Kids Survey Data, 2011/13 to 2017/19.

Question HS B.18-19/MS B.12-13: How do you feel about someone your age doing the following?... Trying marijuana once or twice... Using marijuana once a month or more regularly.

**Peer Disapproval**

- Perceived disapproval (very wrong) by close friends of marijuana use (smoke, vape, ingest) dropped six percentage points in 7<sup>th</sup> grade to 73%, but was stable in high school at 56% and 43%. This reversed the previous increases reported in 2015/17 (by seven percentage points in 7<sup>th</sup> grade, four points in 9<sup>th</sup>, and three points in 11<sup>th</sup>). (Table 4.4)

**Parental Disapproval**

- Large majorities reported their parents would think it “very wrong” if they (respondent) used marijuana (smoke, vape, ingest): fully 91% in 7<sup>th</sup> grade but then declining to 83% in 9<sup>th</sup> and 76% in 11<sup>th</sup>. Compared to 2015/17, these results are lower by 1.5 to 3 percentage points depending on grade. This contrasts to marked increases of about 5 percentage points per grade between 2013/15 and 2015/17. (Table 4.3)

## Availability

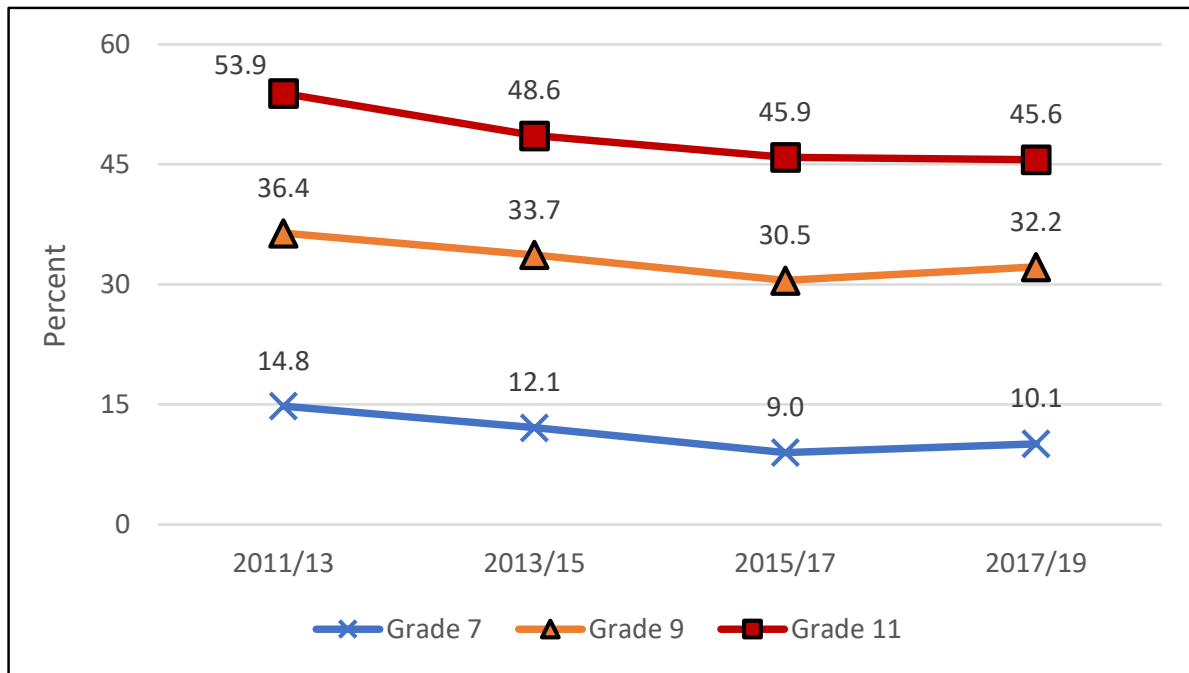
Marijuana remains readily available, with almost half of 11<sup>th</sup> graders reporting it is very easy to get, easier than alcohol. The previous decline in perceived availability stalled. Although the major usual sources for obtaining it were peer networks, one-fifth of 11<sup>th</sup> graders identified marijuana dispensaries and one-quarter their home and an adult acquaintance.

## Ease of Obtaining

- The percentages in all grades reporting that marijuana was **very easy** to obtain leveled off in 2017/19 at 10%, 32%, and 46%, after having declined in all grades between 2011/13 and 2015/17.
- About half of 9<sup>th</sup> graders and two-thirds of 11<sup>th</sup> graders found it **fairly or very easy** to obtain, as was true in 2015/17. Results for being very difficult to obtain were similarly stable, as were the percentages responding “don’t know.”
- As in the past, high school students are more likely to report that marijuana is very easy to obtain than alcohol (e.g., 46% vs 39%, respectively, among 11<sup>th</sup> graders). (Table 5.2)

EXHIBIT 8.

### Ease of Obtaining Marijuana (“Very easy”), 2017/19



Source: Biennial State California Healthy Kids Survey Data, 2017/19.

Question HS A.93, 94/MS A.85, 86: How difficult is it for students in your grade to get any of the following if they really want them?... Marijuana.

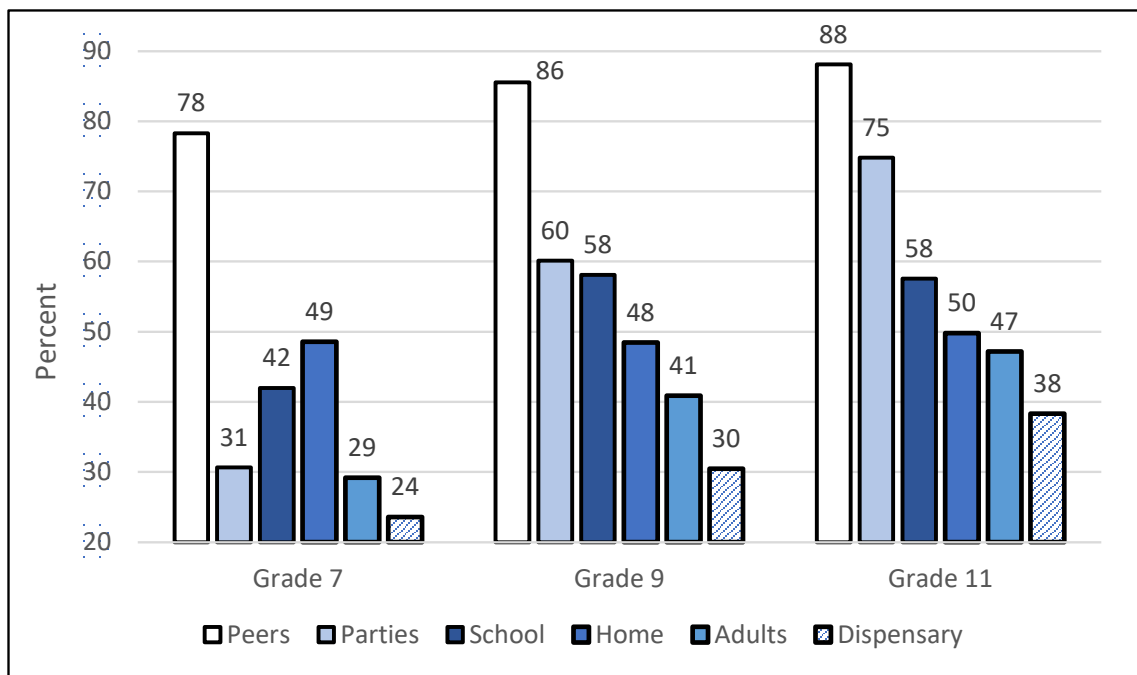
## Sources of Marijuana

A new question was added to the AOD Module that asked students where “most kids at your school who use marijuana usually get it? (Mark all that apply).” They were provided a list of ten options, including “buy it at a marijuana dispensary.”<sup>7</sup>

- High school students obtain marijuana from a variety of sources, but peer social networks were the most common. In order of magnitude, 11<sup>th</sup> graders selected: Friends/peers (44%), parties (38%), school (29%), own home (25%), adult acquaintance (24%), marijuana dispensary (19%), and concerts/social events (19%). The order was similar among 9<sup>th</sup> graders, at lower percentages.
- Among 7<sup>th</sup> graders a slightly different pattern for sources emerged. Friends still took first place (at 17%), but the second and third most-selected sources were home (10%) and school (9%). A grouping of adult acquaintances, parties, and marijuana dispensaries were identified by 5%-6%. (Table 5.1)

EXHIBIT 9.

**Sources for Obtaining Marijuana among Students Knowledgeable about Sources, 2017/19**



Source: Biennial State California Healthy Kids Survey Data, 2017/19.

Question HS B.16/MS B.10: How do most kids at your school who use marijuana usually get it? (Mark All That Apply.)

## Discussion

Even though overall marijuana use among California secondary students is at or near a historic low, the findings warrant the attention of researchers and practitioners, especially in regard to the new evidence about vaping and ingesting marijuana.

Among 11<sup>th</sup> graders:

- Students reported using marijuana during the past 30 days just as frequently as using alcohol, with one-sixth of students reporting use.
- Almost half reported it is very easy to obtain it, easier than alcohol.
- Over half did not think there was great harm in using marijuana daily and 27% thought there was no harm in occasional use, nine percentage percentage points more than for no harm from occasional drinking.
- Only about one-third strongly disapproved of their peers regularly using it once a month or more often.
- One-quarter reported ever ingesting marijuana and vaping it.

Perhaps even more disconcerting are the following results for 7<sup>th</sup> graders:

- Although the overall prevalence of current use was low (4%), about 40% of current users were already weekly users and a relatively high proportion (49%) compared to 11<sup>th</sup> graders (30%) had used on school property in the past 30 days.
- African American and Latino youth exhibit rates of current use that are two to three times higher than White youth. By 11<sup>th</sup> grade, this racial/ethnic disparity has ended, with Whites even two percentage percentage points more likely to be current users than Latinos and African Americans.
- About one-fifth of 7<sup>th</sup> graders reported it was easy or very easy to get marijuana.
- Only just over half strongly disapproved of use and the percentage reporting there was no harm in occasional use was higher among them than among high school students (33% vs. 25% and 27%). Moreover, as discussed further below, the decline in negative attitudes toward marijuana was largest among 7<sup>th</sup> graders, possibly portending future increases in use.

## Assessing Trends

The pronounced decline in marijuana use in all grades that occurred between 2011/13 and 2015/17 was one of the most positive trends reported by students in the Biennial State CHKS over those four years. None of the major national adolescent behavioral surveys that assess substance use have reported a decline of similar magnitude, although none show any indication of an increase.

- Among high school students (grades 9-12) who participated in the Center for Disease Control's biennial national Youth Behavior Risk Survey, current marijuana use did decline three percentage points between 2013 and 2017, but the change was not considered significant. Lifetime use declined five percentage points.<sup>8</sup>

- On the annual Monitoring the Future Survey (MTF), current use among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders has been fairly stable from 2011 through 2019, varying by two to three percentage points with no clear trend beyond a small dip in use around 2015 and 2016.<sup>9</sup>
- According to the 2018 National Survey on Drug Use and Health, an annual report produced by the Substance Abuse and Mental Health Services Administration, past-year and past-month marijuana use among youth age 12-17 remained relatively stable from 2011 through 2017.<sup>10</sup> Past-year rates were around 14%-13% before dropping to 12% in 2016 and 2017.

Trends in CHKS questions related to attitudes provide no clear explanation for the decline in California. Perceived harm from occasional use changed little while use was declining. However, perceived availability did decline steadily and markedly in all grades consistent with a decline in use. The decline in marijuana use also could be related to the large declines in alcohol and cigarette smoking among CHKS respondents over this period. Declines in alcohol and cigarette use, which generally precede marijuana initiation and act as gateways to the use of other drugs, may have prevented larger increases in the era of liberalization of adult marijuana use.<sup>11,12</sup> Biennial State CHKS data shows that between 2011/13 and 2015/17, cigarette smoking declined by two-thirds in 7<sup>th</sup> grade and one-third in high school, and by 2017/19 alcohol use declined by half in 7<sup>th</sup> grade, 45% in 9<sup>th</sup>, and 41% in 11<sup>th</sup>.

The 2017/19 Biennial State CHKS results suggest that the previous four-year declining trend has ended. The only prevalence indicator to continue to decline was lifetime use in 11<sup>th</sup> grade and both lifetime and current use increased two percentage points in 7<sup>th</sup> grade. And there were slight one-point increases in use at school in all grades. The change in the question wording to specify vaping and oral ingestion of marijuana as well as smoking complicates interpretation of these survey results between 2015/17 and 2017/19. Do they reflect a change in behavior or are they a product of the item change? Given the high rates of vaping and ingesting marijuana, the change in the survey questions to specifying smoking, vaping, eating, or drinking may have led more students to report that they used marijuana, especially those who had vaped and ingested but did not smoke. This suggests that the previous declines in reported marijuana use might reflect that asking just about use in general was not capturing the rising number of users consuming marijuana via vaping or oral ingestion. While this is speculative, there are reasons to believe that the current question more accurately captures all users and should be considered as a baseline on which to assess use in the future.

But national survey data would indicate stability (NSDUH) or increases (YRBS, MTF) in use between 2017 and 2019 and the negative trends in correlates of use on the Biennial State CHKS, in contrast to positive trends in 2015/17, are consistent with a leveling-off of prevalence rates. The questions assessing perceived risk from occasional marijuana use, and peer and parental disapproval, were also changed to ask specifically about smoking, vaping, and ingesting marijuana. Because research has documented that students perceive that ingesting and vaping marijuana are less harmful than smoking it, this change in modes of marijuana consumption may be weakening negative attitudes. A clear negative trend is also evident in two use correlates that did not have this change in wording and that would be associated with possible increases in use: (1) the pronounced decline across grades in personal disapproval of marijuana use; and (2) the stalling of the previous decline in perceived availability.

Taken as a whole, current CHKS results on marijuana use, attitudes, and availability are troubling and suggestive of an end of the previous decline in use. Data now being collected for the Eighteenth Biennial will shed light on whether these results are a precursor to future increases in marijuana use. As discussed below, two other factors have implications for trends in marijuana use among youth and student learning, health, and well-being: the rise in vaping and ingesting marijuana and the legalization of adult recreational marijuana.

## **The Spread of Alternative Modes of Administration**

The survey questions asking about marijuana use were changed in 2017/18 to better capture the increasingly diverse modes for consuming marijuana. Although this change has complicated interpretation of trends across time, the results demonstrate the necessity of that change in providing much needed information on these behaviors and, as noted, likely more accurate prevalence estimates.

- One-quarter of 11<sup>th</sup> graders had ever vaped or ingested marijuana at least once, and 13% had consumed marijuana using all three modes (smoking, vaping, ingesting), almost half the lifetime marijuana use rate.
- Among 7<sup>th</sup> graders, vaping marijuana/THC (6%) is as common as smoking it (5%).
- And in all grades, vaping marijuana/THC is more common than vaping nicotine or tobacco substitutes.

Three perceived attributes of vaping and ingestion underlie the popularity of both methods among adolescents compared to smoking marijuana: (1) they are safer methods, (2) they are more socially acceptable, and (3) they are more discreet and make it easier to conceal and covertly use.<sup>13,14,15,16,17,18</sup> These perceived benefits of noncombustible marijuana products may be contributing to the observed decline in negative attitudes towards marijuana and the plateauing of trends in use prevalence on the Biennial State CHKS.

Critics warn that these attributes could result in earlier onset, more positive initial experiences, and higher use prevalence, especially among students who may be reluctant to smoke marijuana. The appeal of vaping devices in general may provide an alternative gateway to marijuana use among some students.<sup>19,20</sup> Existing research on adolescents indicates that use of e-cigarettes to vaporize marijuana is more common than among adults and that the practice increases the risk of later initiation and current use of marijuana. In a Connecticut study of high school students, e-cigarette users were over three times more likely to vape marijuana than the total sample.<sup>21</sup> MTF data indicates that e-cigarette users are more likely to be current marijuana users than youth who do not use e-cigarettes.<sup>22</sup> About one quarter of e-cigarette users were concurrent marijuana users and adolescent e-cigarette users who had never smoked conventional cigarettes were particularly more likely than non-e-cigarette users to be current marijuana users.

The Seventeenth Biennial State CHKS data cannot be used to determine the effect of vaping and ingesting on overall use or whether their popularity is expanding the prevalence of marijuana use. That the percentage for ever-using all three methods was almost half the percentage for ever-using marijuana suggests a diversification effect, in that many users vape and/or ingest in addition to smoking. But it is unclear whether youth who only use noncombustibles are substituting them for smoking or they represent a new user population. Research on how

noncombustible marijuana use affects overall prevalence is still limited. Trend analysis of national MTF data (2015-2018) for 12<sup>th</sup> graders showed that vaping and edible use increased as marijuana smoking decreased.<sup>23</sup> On the 2019 MTF, marijuana vaping increased significantly and substantially in 2019 in all grades.<sup>24</sup> Among 12<sup>th</sup> graders marijuana vaping exhibited the second largest absolute increase ever measured for any substance monitored by MTF. Yet overall marijuana use did not increase.<sup>25</sup> This suggests a substitution effect.

Little is known about the factors that influence vaping and ingesting marijuana among adolescents, the effects of these practices, and how prevention and treatment efforts may need to be adjusted to address the needs of youth who primarily, even exclusively, used these modes of consumption, especially oral ingestion. Methods other than smoking may carry differential risks for initiation and escalation of use as well as adverse effects.<sup>26</sup> The evidence that does exist suggests these noncombustible methods may increase the frequency and level of use and use-related problems. Onset of marijuana use is earlier, and lifetime and current use is higher among edible users than smokers.<sup>27</sup> Analysis of MTF data indicate that daily marijuana use is more common among students who vaped and ingested it in the past year than smokers and suggests that noncombustible marijuana use might be an identifier of heavy users.<sup>28</sup> Adolescents may use vaping to increase the frequency and intensity of use because it is easier to conceal in locations where smoking it would carry high risk of getting caught (such as in school).<sup>29</sup>

The ease to which edibles can be covertly used raises the question of what role they may have played in the one-point increase in marijuana use on school property in every grade on the 2017/19 Biennial State CHKS, after major declines between 2011/13 and 2015/17. Prior research has found that edible users are more likely to use, and use frequently, on school property than marijuana users who do not use edibles because it leaves no odor.<sup>30, 31</sup>

Gaining a better understanding of the scope and nature of vaping and ingesting marijuana is particularly important given their potential for adverse effects. Despite their reputation for safety, their availability raises numerous concerns regarding their potential for adverse effects and overdosing due to their delayed intoxicating effects, interactions with other drugs, variability in dosages, high potency, and lack of quality control and safety standards.<sup>32,33,34,35</sup> The reports that vaping marijuana can contribute to severe pulmonary injury, pneumonia, and acute respiratory failure has attracted the attention of the medical community.<sup>36</sup> Edible marijuana has been attributed as the reason for the majority of the increases in health care visits for marijuana intoxication following the enactment of Colorado's recreational marijuana law (RML).<sup>37,38</sup> In general, there is little understanding and guidance on how to safely use edibles.<sup>39</sup>

## **The role of Legalization of Adult Recreational Use**

Data collection on the Seventeenth Biennial State CHKS began one year following the passage in November 2016 of Proposition 64, the Adult Use of Marijuana Act (AUMA), officially the Control, Regulate and Tax Adult Use of Marijuana Act. Opponents of liberalization of adult marijuana use, particularly RMLs, have argued that it sends a wrong signal to youth that marijuana use is not dangerous (decreases perceptions of harm) and it increases access to it, thereby leading to increases in youth acceptance and use.<sup>40, 41,42</sup>

It is unclear whether AUMA contributed to the halt in the decline in youth marijuana use and correlates of use. This question cannot be answered with any certainty with CHKS cross-sectional data, particularly within such a short time-period since the legislation was enacted, although the long-running campaign for passage of AUMA could have influenced adolescent attitudes and behaviors before 2016. The findings are consistent with the observation that a weakening of negative attitudes toward marijuana related to RML would more likely occur among younger than older adolescents with more well-established attitudes.<sup>43</sup> Coupled with concerns that the perceived benefits of noncombustibles will lower the age of initiation, the results suggest that increases in marijuana use may be apparent for this cohort in 2019/21.

The data on availability is also suggestive regarding the consequences of AUMA. Almost half of 11<sup>th</sup> graders reported that marijuana is easily available, ending the previous decline on this indicator, and almost one-fifth reported that their peers usually get marijuana from dispensaries. This suggests that the expanding adult retail market may be influencing current and future use among adolescents. However, very little is known about the potential influence of adolescents' exposure to marijuana dispensaries, recreational outlets, and marketing, or the mechanisms through which such exposure may affect their marijuana use. Some studies have found positive associations between densities of medical marijuana dispensaries and marijuana use among adults.<sup>44,45</sup> Evidence regarding adolescents is inconclusive, with mixed results across studies.<sup>46,47,48,49</sup> Overall, research does not indicate that RML is associated with a major increase in adolescent marijuana use. State-specific research has occurred primarily in Colorado and Washington, the first two states to enact RML in 2012, and in Oregon, which enacted it in 2014. Most of the data from Colorado<sup>50,51</sup> and Washington<sup>52,53</sup> indicate no overall increase, although one study<sup>54</sup> did find grade-level differences with an increase among 12<sup>th</sup> graders and a decrease among 8<sup>th</sup> graders (see also Cerdá and colleagues research summarized below).

Studies in Oregon have had even more mixed results, one study finding an increase in adolescent use<sup>55</sup> and another finding no increase in the initiation of marijuana use but an increase among youth who were already using.<sup>56</sup> Another study found no increase in overall use in a sample of adolescents in an intervention program but higher rates of negative consequences of use among a post-RML sample.<sup>57</sup>

Cerdá et al. (2017) examined changes in past 30-day marijuana use before (2010–2012) vs. after (2013–2015) enactment of RMLs in Washington and Colorado using a difference-in-difference analysis of Monitoring the Future data.<sup>58</sup> They found a modest but statistically significant increase in use among 8<sup>th</sup> and 10<sup>th</sup> graders in Washington relative to those in non-RML states. Increases were not observed among Washington 12<sup>th</sup> graders nor among students in any grade level in Colorado.

Cerda and colleagues provide an explanation for the differences in results between the two states that may have relevance for California. They attribute the lack of any increase in Colorado, in contrast to Washington, to the prior effect on attitudes of established medical marijuana use. This might suggest that the effect of RML on adolescent marijuana use in California would be expected to be minimal due to the availability of medical marijuana 20 years prior to AUMA. But as shown in Exhibit 1, the passage of the Medical Marijuana Initiative (Proposition 215), in November 1996 was followed by a period of declining use.



RML and, prior to it, medical marijuana legalization (MML), may be a contributing factor in the rise in use of vaping devices and edibles among adolescents. One potential adverse effect of legalization is the proliferation of alternative products, particularly edibles, through the retail market. Research shows that use of alternative products is higher among youth in MML and RML states with expanded retail markets.<sup>59, 60,61,62</sup> Even before RML in California, high school students were obtaining edibles from other students who had a medical marijuana card and from dispensaries, as well as other students who made them. As noted, however, the impact of the spread of noncombustible use on overall marijuana use prevalence is still not clear.

Overall, little currently can be concluded with certainty at this time about the effects of RML in California or elsewhere. On-going monitoring of adolescent use, attitudes, and access is clearly needed, particularly in the context of the weakening in negative attitudes and stall in the decline in perceived availability found in this study. Research does indicate that the impact may be complex and that there is a need to study that impact on variations in use among students based on their age/grade, prior use, and prior conditions.<sup>63</sup>

## Conclusion

The Seventeenth Biennial State CHKS indicates that marijuana use among California secondary students is at an historic low but declines since 2011/13 appear to have leveled off in 2017/19. The survey questions asking about marijuana use were changed in 2017/18 to better capture the increasingly diverse ways of consuming marijuana (smoking, vaping, eating, or drinking). This change adds a degree of uncertainty to interpreting trends in marijuana use, but concomitant declines in perceived harmfulness and personal, parental, and peer disapproval of marijuana use are consistent with the diminution of the downward trend in use in 2017/19. Two inter-related factors may be contributing to these changes in attitudes and use: the rise in vaping and ingesting marijuana, as documented by this survey, and the legalization of adult recreational use.

The implications of the rise in vaping and consumption of ingestibles is still poorly understood, but evidence suggests their attributes and perceived benefits may be reducing perceived harmfulness and disapproval, lowering age of initiation, expanding the user population, and increasing use frequency and related problems. Future research should focus on assessing the etiology, user characteristics, and short- and long-term impacts of the different modes and combinations of consumption, and whether these alternative modes of use may require different approaches to prevention and intervention.

The legalization of adult recreational use and the expansion of the retail market, which itself has been identified as a factor in the rise of noncombustible products, may also be contributing to the decline in use disapproval, particularly by parents.

The cross-sectional data in this survey provides little guidance into how changes in use and changes in attitudes, availability, or other putative influences are related, or in the reasons why they change. Despite these uncertainties, the results overall paint a picture of adolescent marijuana use that has become more complex in ways that may have implications for prevention and intervention. How the adolescent marijuana culture is changing and whether these Biennial State CHKS results portend future increases in use require ongoing investigation at both the state

and local levels. Minimally, these results direct both the research and prevention communities to devote attention toward better understanding and addressing adolescent marijuana use.

This report's companion study examines how key Biennial State CHKS results vary based on levels of current marijuana use. It provides further insight into the characteristics of current users and the adverse use-related and other school, behavioral, and personal problems they experience. It includes a discussion of the prevention and intervention implications of survey results, including strategies schools might implement in collaboration with public health and community agencies.

## Appendix A: Tables of Results

### 1. Survey Samples

**Table 1.1**  
Student Sample Characteristics

	7 <sup>th</sup> 11/13	7 <sup>th</sup> 13/15	7 <sup>th</sup> 15/17	7 <sup>th</sup> 17/19	9 <sup>th</sup> 11/13	9 <sup>th</sup> 13/15	9 <sup>th</sup> 15/17	9 <sup>th</sup> 17/19	11 <sup>th</sup> 11/13	11 <sup>th</sup> 13/15	11 <sup>th</sup> 15/17	11 <sup>th</sup> 17/19
<i>Student Sample Size</i>												
Number of Districts	48	41	43	39	50	42	44	37	54	43	45	40
Number of Schools	49	48	51	50	53	52	53	53	60	57	60	62
Number of Students	11,286	7,763	13,451	11,536	14,563	14,951	16,826	17,551	13,087	13,859	14,987	16,761

**Table 1.2**  
Student Sample for AOD Module

	7 <sup>th</sup> 11/13	7 <sup>th</sup> 13/15	7 <sup>th</sup> 15/17	7 <sup>th</sup> 17/19	9 <sup>th</sup> 11/13	9 <sup>th</sup> 13/15	9 <sup>th</sup> 15/17	9 <sup>th</sup> 17/19	11 <sup>th</sup> 11/13	11 <sup>th</sup> 13/15	11 <sup>th</sup> 15/17	11 <sup>th</sup> 17/19
<i>Student Sample Size</i>												
Number of Districts	25	28	43	36	33	30	44	38	36	29	44	40
Number of Schools	25	30	50	49	34	36	54	52	39	39	60	59
Number of Students	4,610	3,890	9,535	8,968	8,055	8,456	12,907	12,900	7,488	7,249	11,797	11,753

## 2. Summary of Key Indicators

**Table 2.1**  
Key Marijuana Indicators, by Grade and Year

Indicator	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)
Lifetime use (ever)	10.0	7.9	4.2	6.3 <sup>A</sup>	25.8	23.1	17.4	17.1 <sup>A</sup>	44.7	37.9	31.9	29.2 <sup>A</sup>
Ever smoked	Na	na	na	4.5	na	na	na	14.0	na	na	na	26.0
Ever vaped	Na	na	na	5.6	na	na	na	13.3	na	na	na	21.3
Ever ingested orally (eat, drink)	Na	na	na	3.1	na	na	na	10.5	na	na	na	19.3
Smoked, vaped, and ingested (all three)	Na	na	na	1.7	na	na	na	6.7	na	na	na	13.2
Current use (past 30 days)	6.6	5.0	2.3	3.6 <sup>A</sup>	14.9	13.4	9.5	9.7 <sup>A</sup>	24.3	20.1	16.7	16.1 <sup>A</sup>
Current use on school property	4.2	2.8	1.1	2.4 <sup>A</sup>	6.8	5.9	4.3	5.1 <sup>A</sup>	8.2	6.7	4.7	6.2 <sup>A</sup>
Like to use until feel a lot or get really high <sup>§</sup>	Na	na	na	na	na	7.6	4.9	4.8	na	12.2	9.0	7.9
Tried to stop/quit use at least once	Na	na	na	na	na	8.0	5.7	6.3	na	7.1	8.2	8.5
Attitudes toward use												
Great harm occasional use	42.1	41.7	42.5	38.2	37.0	38.1	36.4	35.3	29.0	31.3	30.0	31.8
Great harm daily use	Nc	nc	nc	54.0	nc	nc	nc	54.1	nc	nc	nc	47.7
Strongly disapprove use once or twice	64.1	58.7	65.5	55.5	43.6	37.4	40.6	33.9	31.5	27.0	27.1	22.6
Strongly disapprove peer monthly use	65.9	60.4	66.8	63.2 <sup>A</sup>	47.7	39.3	44.1	44.5 <sup>A</sup>	35.7	28.9	29.8	31.6 <sup>A</sup>
Parental view use very wrong	Na	87.7	92.7	91.3 <sup>A</sup>	na	80.5	84.9	83.1 <sup>A</sup>	na	74.3	78.9	75.8 <sup>A</sup>
Marijuana easy to get	14.8	12.1	9.0	10.1	36.4	33.7	30.5	32.2	53.9	48.6	45.9	45.6

Notes: na—Not asked

nc—Not comparable

<sup>§</sup>Marijuana or other drug

<sup>A</sup>Question item changed and results may not be comparable to prior years.

### 3. Use Prevalence, Frequency, and Patterns

**Table 3.1**  
Frequency of Lifetime Marijuana, Alcohol, and Cigarette Use, by Grade and Year

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)
<b>Marijuana (smoke, vape, eat, or drink)</b>												
0 times	90.0	92.1	95.8	93.7 <sup>A</sup>	74.2	76.9	82.6	82.9 <sup>A</sup>	55.3	62.1	68.1	70.8 <sup>A</sup>
1 time	3.1	2.4	1.8	2.3 <sup>A</sup>	4.8	5.1	4.0	4.2 <sup>A</sup>	5.5	5.7	5.4	5.3 <sup>A</sup>
2 times	2.4	1.8	1.0	1.7 <sup>A</sup>	4.9	4.5	4.0	3.8 <sup>A</sup>	7.1	7.0	6.0	5.1 <sup>A</sup>
4 or more times	4.5	3.7	1.4	2.3 <sup>A</sup>	16.0	13.5	9.4	9.1 <sup>A</sup>	32.0	25.1	20.5	18.8 <sup>A</sup>
<b>Alcohol (one full drink)</b>												
0 times	80.6	86.7	90.7	89.8	62.0	67.7	73.5	78.6	39.0	48.3	57.1	64.4
1 time	7.1	5.2	4.8	5.4	8.6	7.9	7.4	6.9	6.8	7.6	7.4	7.1
2 to 3 times	5.8	3.9	2.6	2.8	10.3	9.0	7.5	6.3	12.1	11.1	9.9	9.1
4 or more times	6.4	4.3	1.9	2.0	19.0	15.4	11.6	8.3	42.0	33.0	25.6	19.4
<b>A whole cigarette</b>												
0 times	94.5	96.5	98.4	98.2	85.3	89.5	93.0	95.4	73.9	81.5	88.0	92.1
1 time	1.9	1.3	0.6	0.9	4.7	3.6	2.9	1.9	5.8	4.6	3.4	2.7
2 to 3 times	1.4	0.7	0.5	0.5	3.7	2.7	2.0	1.2	5.4	4.1	2.8	1.9
4 or more times	2.2	1.5	0.5	0.5	6.3	4.2	2.1	1.4	14.9	9.8	5.7	3.3

Question HS A.46, 49, 50/MS A.47, 50, 51: During your life, how many times have you used the following?... A whole cigarette... One full drink of alcohol (such as a can of beer, glass of wine, wine cooler, or shot of liquor)... Marijuana (smoke, vape, eat, or drink)...

Notes: na—Not asked

nc—Not comparable.

<sup>A</sup>Question item changed and results may not be comparable to prior years.

**Table 3.2****Age of Onset—Marijuana, Alcohol and Tobacco, by Grade and Year (AOD Module B)**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)
<b>Marijuana (smoke, eat, or drink)</b>												
Never	91.3	92.7	96.1	93.7 <sup>A</sup>	76.0	78.9	83.6	83.6 <sup>A</sup>	56.7	62.3	69.0	70.4 <sup>A</sup>
10 years or under	2.2	1.5	0.6	0.9 <sup>A</sup>	2.6	2.6	1.3	1.3 <sup>A</sup>	3.0	1.9	1.4	1.2 <sup>A</sup>
11/12 years old	4.7	4.1	2.4	4.3 <sup>A</sup>	5.6	3.9	3.7	3.4 <sup>A</sup>	5.2	4.2	3.3	2.5 <sup>A</sup>
13/14 years old	1.4	1.3	0.7	0.7 <sup>A</sup>	13.1	11.8	9.8	10.2 <sup>A</sup>	15.3	13.1	10.3	8.4 <sup>A</sup>
15/16 years old	0.1	0.1	0.0	0.1 <sup>A</sup>	2.1	2.1	1.4	1.2 <sup>A</sup>	18.3	16.4	14.8	16.1 <sup>A</sup>
17 years or older	0.3	0.2	0.2	0.3 <sup>A</sup>	0.5	0.6	0.2	0.3 <sup>A</sup>	1.6	2.1	1.2	1.3 <sup>A</sup>
<b>Any other illegal drug or pill to get “high”</b>												
Never	95.3	96.5	97.4	97.2	88.6	91.5	92.7	94.4	79.6	85.2	88.3	90.7
10 years or under	1.4	0.9	0.5	0.5	1.6	1.4	0.8	0.5	1.7	1.2	0.7	0.6
11/12 years old	2.3	1.7	1.3	1.6	2.5	1.4	1.4	1.2	2.5	1.4	1.2	0.8
13/14 years old	0.7	0.8	0.5	0.4	6.0	4.5	4.1	3.2	6.6	4.6	3.0	2.3
15/16 years old	0.1	0.1	0.0	0.0	1.1	0.8	0.8	0.4	8.8	6.7	6.2	4.9
17 years or older	0.2	0.1	0.2	0.3	0.3	0.4	0.2	0.3	0.8	0.9	0.6	0.7
<b>Alcohol (one full drink)</b>												
Never	75.2	78.8	83.6	81.2	56.3	61.1	67.7	71.2	35.7	42.6	52.1	56.8
10 years or under	11.0	9.0	8.2	9.5	9.7	8.5	7.5	7.3	8.1	6.5	6.2	6.5
11/12 years old	11.1	9.6	6.9	8.1	10.6	8.4	7.3	7.1	8.6	6.3	5.4	5.1
13/14 years old	2.1	2.4	1.1	0.8	20.3	18.0	15.0	12.8	19.6	16.5	13.8	10.5
15/16 years old	0.1	0.0	0.0	0.1	2.6	3.5	2.0	1.2	25.7	25.0	20.5	19.6
17 years or older	0.5	0.3	0.3	0.4	0.5	0.5	0.3	0.3	2.3	3.1	2.1	1.5

*Question HS/MS B.1, 4, 5: About how old were you the first time you tried any of these things?... A drink of an alcoholic beverage (other than a sip or two)... Marijuana (smoke, eat, or drink)... Any other illegal drug or pill to get “high.”*

*Note: <sup>A</sup>Question item changed and results may not be comparable to prior years.*

**Table 3.2**

Age of Onset—Marijuana, Alcohol and Tobacco, by Grade and Year (AOD Module B) - Continued

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)
<b>Smoked part or all of a cigarette</b>												
Never	90.1	93.5	95.8	95.7	81.6	87.0	90.3	92.9	68.8	77.6	84.2	88.0
10 years or under	3.8	2.1	1.7	1.7	3.9	2.9	2.2	1.7	4.1	2.7	2.3	2.1
11/12 years old	4.9	3.4	2.1	2.1	4.8	3.2	2.4	1.9	5.2	3.0	2.6	1.7
13/14 years old	0.8	0.8	0.2	0.3	8.3	5.6	4.3	3.0	9.1	6.5	4.2	3.1
15/16 years old	0.1	0.0	0.0	0.0	1.0	0.9	0.6	0.3	11.7	9.1	6.1	4.5
17 years or older	0.3	0.1	0.3	0.3	0.3	0.4	0.2	0.2	1.2	1.1	0.6	0.5
<b>Electronic cigarette</b>												
Never	na	na	na	90.8	na	na	na	81.5	na	na	na	71.8
10 years or under	na	na	na	1.8	na	na	na	1.3	na	na	na	0.9
11/12 years old	na	na	na	6.1	na	na	na	4.0	na	na	na	2.8
13/14 years old	na	na	na	1.0	na	na	na	11.8	na	na	na	8.4
15/16 years old	na	na	na	0.0	na	na	na	1.1	na	na	na	14.8
17 years or older	na	na	na	0.3	na	na	na	0.3	na	na	na	1.2

*Question HS/MS B.2, 3: About how old were you the first time you tried any of these things?... Part or all of a cigarette... An electronic cigarette (e-cigarette or vaping device).*

*Note: na—Not asked..*

**Table 3.3****Lifetime Marijuana Consumption by Mode of Administration, by Grade and Year**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b><i>During your life, how many times have you used marijuana in any of the following ways...</i></b>												
<b>Smoke it?</b>												
0 times	na	na	na	95.5	na	na	na	86.0	na	na	na	74.0
1 time	na	na	na	1.5	na	na	na	3.4	na	na	na	4.4
2 to 3 times	na	na	na	1.3	na	na	na	3.0	na	na	na	4.8
4 or more times	na	na	na	1.8	na	na	na	7.6	na	na	na	16.7
<b>In an electronic or e-cigarette or other vaping device?</b>												
0 times	na	na	na	94.4	na	na	na	86.7	na	na	na	78.7
1 time	na	na	na	2.4	na	na	na	3.8	na	na	na	4.3
2 to 3 times	na	na	na	1.4	na	na	na	3.3	na	na	na	4.1
4 or more times	na	na	na	1.9	na	na	na	6.2	na	na	na	12.9
<b>Eat or drink it in products made with marijuana?</b>												
0 times	na	na	na	96.9	na	na	na	89.5	na	na	na	80.7
1 time	na	na	na	1.4	na	na	na	3.9	na	na	na	5.8
2 to 3 times	na	na	na	0.9	na	na	na	2.9	na	na	na	5.4
4 or more times	na	na	na	0.8	na	na	na	3.6	na	na	na	8.0
<b><i>Ever used marijuana in all three ways</i></b>	na	na	na	1.7	na	na	na	6.7	na	na	na	13.2

*Question HS A.64-66/MS A.58-60: During your life, how many times have you used marijuana in any of the following ways... Smoke it?... In an electronic or e-cigarette or other vaping device?... Eat or drink it in products made with marijuana?*

*Note: na—Not asked.*



**Table 3.4**

Summary of Current ATOD Use, Past 30 Days, by Grade and Year

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)
Marijuana (smoke, vape, eat, or drink)	6.6	5.0	2.3	3.6 <sup>A</sup>	14.9	13.4	9.5	9.7 <sup>A</sup>	24.3	20.1	16.7	16.1 <sup>A</sup>
Alcohol (one or more drinks of alcohol)	11.2	8.2	5.1	4.2 <sup>A</sup>	20.2	18.6	14.6	9.3 <sup>A</sup>	33.0	29.1	22.5	16.0 <sup>A</sup>
Binge drinking (5 or more drinks in a row)	5.2	3.4	1.2	1.3	11.4	9.6	6.0	4.4	22.1	17.6	11.6	8.5
Current cigarette smoking	4.5	2.8	1.0	0.8	6.8	5.0	2.6	1.5	11.8	8.5	4.3	2.4
Inhalants	5.0	3.3	1.1	1.5	4.7	3.6	2.0	1.7	4.8	3.8	1.8	1.2
Prescription drugs to get “high” or for reasons other than prescribed	na	na	na	na	na	4.8	3.5	2.0	na	6.0	4.4	2.0
Other drug, pill, or medicine to get “high” or for reasons other than medical	nc	2.8	1.5	1.4	nc	4.2	2.9	2.0	nc	5.0	2.9	2.0
<b>Any drug use</b>	nc	6.8	3.7	4.6	nc	15.6	11.8	10.4	nc	21.9	18.6	16.6
<b>Heavy drug use*</b>	nc	4.1	1.8	2.0	nc	10.3	6.8	5.8	nc	14.8	11.3	10.1
<b>Any AOD use (excluding tobacco)</b>	nc	11.2	7.2	6.9	nc	24.3	19.7	14.6	nc	35.2	29.4	23.4
Two or more substances at the same time	na	na	na	na	6.6	5.7	3.3	2.7	11.6	9.5	6.1	4.7

Question HS A.70-76/MS A.64-68: During the past 30 days, on how many days did you use... one or more drinks of alcohol... five or more drinks of alcohol in a row, that is, within a couple of hours... marijuana (smoke, vape, eat, or drink)... inhalants (things you sniff, huff, or breathe to get “high”)... prescription drugs to get “high” or for reasons other than prescribed ... any other drug, pill, or medicine to get “high” or for reasons other than medical... two or more substances at the same time (for example, alcohol with marijuana, ecstasy with mushrooms)?

Notes: na—Not asked.

nc—Not comparable.

<sup>A</sup>Question item changed and results may not be comparable to prior years.

\*Heavy drug use was calculated based on pattern of combined current drug use on three or more days (marijuana, inhalants, prescription pain medicine to get “high” (high school only), or any other illegal drug/pill to get “high”).

**Table 3.5****Frequency of Current Marijuana and Alcohol Use, Past 30 Days, by Grade and Year**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Marijuana (smoke, vape, eat, or drink)</b>												
0 days	93.4	95.0	97.7	96.4 <sup>A</sup>	85.1	86.6	90.5	90.3 <sup>A</sup>	75.7	79.9	83.3	83.9 <sup>A</sup>
1 or 2 days	3.2	2.3	1.4	2.3 <sup>A</sup>	5.6	5.8	4.6	4.7 <sup>A</sup>	8.4	7.8	7.4	6.8 <sup>A</sup>
3 to 9 days	1.2	0.8	0.5	0.6 <sup>A</sup>	3.5	2.9	2.1	2.0 <sup>A</sup>	5.2	4.4	3.5	3.5 <sup>A</sup>
10 to 19 days	0.7	0.5	0.2	0.3 <sup>A</sup>	1.9	1.7	1.0	1.0 <sup>A</sup>	3.1	2.6	1.8	1.8 <sup>A</sup>
20 or more days	1.4	1.5	0.3	0.5 <sup>A</sup>	3.8	3.0	1.8	2.0 <sup>A</sup>	7.6	5.3	3.9	4.0 <sup>A</sup>
<b>Alcohol (one or more drinks)</b>												
0 days	88.8	91.8	94.9	95.8	79.8	81.4	85.4	90.7	67.0	70.9	77.5	84.0
1 or 2 days	7.7	5.5	4.4	3.4	11.6	11.7	10.6	6.7	17.2	16.6	14.8	10.4
3 to 9 days	1.5	1.0	0.5	0.6	4.3	3.6	2.4	1.7	9.7	7.8	5.3	3.5
10 to 19 days	0.7	0.5	0.1	0.1	1.8	1.5	0.8	0.5	3.0	2.2	1.4	1.0
20 or more days	1.3	1.2	0.2	0.1	2.6	1.8	0.8	0.4	3.1	2.5	1.1	1.0
<b>Binge drinking (5 or more drinks in a row)</b>												
0 days	94.8	96.6	98.8	98.7	88.6	90.4	94.0	95.6	77.9	82.4	88.4	91.5
1 or 2 days	2.9	1.7	0.9	1.0	6.1	5.0	3.9	2.8	11.0	9.5	6.8	4.9
3 to 9 days	0.9	0.5	0.2	0.2	2.3	2.2	1.1	0.9	6.3	4.8	3.1	2.2
10 to 19 days	0.5	0.4	0.1	0.1	1.0	1.0	0.5	0.3	2.3	1.4	0.9	0.6
20 or more days	1.0	0.8	0.1	0.0	1.9	1.4	0.5	0.3	2.5	1.9	0.8	0.7

Question HS A.70-72/MS A.64-66: During the past 30 days, on how many days did you use... one or more drinks of alcohol?... five or more drinks of alcohol in a row, that is, within a couple of hours?... marijuana (smoke, vape, eat, or drink)?

Note: <sup>A</sup>Question item changed and results may not be comparable to prior years.

**Table 3.6****Current Marijuana Use, Past 30 Days, by Race/Ethnicity, by Grade and Year**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Hispanic or Latino	9.1	6.6	3.2	4.4	17.5	15.8	11.6	11.2	25.5	21.0	17.2	16.2
American Indian or Alaska Native	9.6	6.9	3.6	5.4	16.1	18.6	12.3	9.7	30.2	20.1	20.8	15.3
Asian	3.4	2.7	0.9	1.2	6.3	3.7	2.4	3.5	10.8	7.1	6.4	7.3
Black or African American	9.3	8.8	5.6	5.6	22.6	19.6	12.2	10.4	32.7	27.1	21.0	15.8
Native Hawaiian or Pacific Islander	8.4	7.8	3.8	7.5	13.9	13.1	9.0	11.8	24.1	22.4	19.5	16.4
White	4.0	2.8	0.8	2.2	12.4	11.3	8.1	9.3	25.1	21.7	17.8	18.0
Mixed (two or more) races	8.0	6.4	3.2	4.6	17.6	16.1	12.4	11.5	26.3	22.6	18.8	17.6

*Question HS A.72/MS A.66: During the past 30 days, on how many days did you use... one or more drinks of alcohol?... marijuana (smoke, vape, eat, or drink)?*

**Table 3.7****Current Marijuana Use, Past 30 Days, by Gender, Grade, and Year**

	Female	Female	Female	Female	Male	Male	Male	Male
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Grade 7	5.4	4.6	2.2	3.7	7.6	5.4	2.4	3.5
Grade 9	14.4	13.1	10.2	10.5	15.1	13.5	8.9	8.9
Grade 11	20.3	17.8	15.4	15.4	28.5	22.3	17.8	16.3

*Question HS A.72/MS A.66: During the past 30 days, on how many days did you use... one or more drinks of alcohol?... marijuana (smoke, vape, eat, or drink)?*

**Table 3.8**  
**Current AOD Use on School Property, Past 30 Days, by Grade and Year**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Marijuana (smoke, vape, eat, or drink)</b>												
0 days	95.8	97.2	98.9	97.6 <sup>A</sup>	93.2	94.1	95.7	94.9 <sup>A</sup>	91.8	93.3	95.3	93.8 <sup>A</sup>
1 to 2 days	2.1	1.4	0.7	1.7 <sup>A</sup>	3.0	2.8	2.2	2.6 <sup>A</sup>	3.6	3.0	2.3	2.8 <sup>A</sup>
3 or more days	2.1	1.4	0.4	0.7 <sup>A</sup>	3.8	3.1	2.1	2.5 <sup>A</sup>	4.7	3.8	2.4	3.4 <sup>A</sup>
<b>Alcohol</b>												
0 days	94.8	96.8	98.3	97.9	93.4	94.3	95.8	96.5	93.3	94.4	96.2	96.5
1 to 2 days	3.3	2.2	1.3	1.6	3.9	3.4	2.9	2.5	3.7	3.2	2.7	2.4
3 or more days	1.8	1.0	0.4	0.5	2.8	2.3	1.3	1.0	3.0	2.5	1.1	1.1
<b>Any other drug, pill, or medicine to get “high” or for reasons other than medical</b>												
0 days	96.8	98.0	98.8	98.9	95.9	96.5	97.4	98.3	95.2	96.1	97.7	98.4
1 to 2 days	1.8	1.2	0.8	0.7	1.9	1.6	1.5	0.9	2.0	1.6	1.3	0.8
3 or more days	1.3	0.9	0.4	0.4	2.1	1.9	1.1	0.8	2.8	2.2	1.0	0.8
<b>Any of the Above</b>	7.4	4.9	2.8	3.9	10.0	8.5	7.1	6.8	11.4	9.3	7.0	7.8

*Question HS A.80-82/MS A.72-74: During the past 30 days, on how many days on school property did you use... at least one drink of alcohol?... marijuana (smoke, vape, eat, or drink)?... any other drug, pill, or medicine to get “high” or for reasons other than medical?*

*Note: <sup>A</sup>Question item changed and results may not be comparable to prior years.*

**Table 3.9****Usual Consumption Level of Marijuana or other Drugs, by Grade and Year (AOD Module B)**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)
I don't use drugs	na	na	na	na	na	81.3	85.3	86.4	na	69.7	74.7	76.2
Just enough to feel a little high	na	na	na	na	na	5.2	5.2	4.9	na	7.7	7.3	6.9
Enough to feel it moderately	na	na	na	na	na	5.8	4.6	3.8	na	10.3	9.0	9.0
Until I feel it a lot or get really high	na	na	na	na	na	7.6	4.9	4.8	na	12.2	9.0	7.9

*Question HS B.7: If you use marijuana or other drugs, how "high" (stoned, faded, wasted, trashed) do you usually like to get?*

*Note: na—Not asked.*

**Table 3.10****Cessation Attempts, by Grade and Year**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Marijuana – all respondents</b>												
Does not apply, don't use	na	na	na	na	na	82.3	86.1	86.1	na	72.3	77.9	78.7
0 times	na	na	na	na	na	9.6	8.1	7.6	na	16.6	13.9	12.9
1 time	na	na	na	na	na	3.9	2.7	3.1	na	5.9	4.3	4.2
2 to 3 times	na	na	na	na	na	2.2	1.7	1.6	na	3.2	2.1	2.4
4 or more times	na	na	na	na	na	1.9	1.3	1.6	na	2.0	1.8	1.9
<b>Marijuana – users</b>												
0 times	na	na	na	na	na	54.5	58.7	54.7	na	59.9	62.9	60.3
1 time	na	na	na	na	na	22.2	19.6	22.3	na	21.3	19.5	19.6
2 to 3 times	na	na	na	na	na	12.5	12.3	11.5	na	11.6	9.5	11.2
4 or more times	na	na	na	na	na	10.8	9.4	11.5	na	7.2	8.1	8.9
<b>Alcohol – all respondents</b>												
Does not apply, don't use	na	na	na	na	na	82.0	86.0	88.1	na	69.7	77.2	81.1
0 times	na	na	na	na	na	12.0	9.9	8.0	na	22.7	17.5	13.9
1 time	na	na	na	na	na	3.4	2.3	2.1	na	4.5	3.1	2.8
2 to 3 times	na	na	na	na	na	1.5	1.0	0.8	na	1.9	1.2	1.2
4 or more times	na	na	na	na	na	1.1	0.9	1.0	na	1.2	1.0	1.1
<b>Alcohol - users</b>												
0 times	na	na	na	na	na	66.7	70.2	67.2	na	74.9	76.8	73.2
1 time	na	na	na	na	na	18.9	16.3	17.6	na	14.9	13.6	14.7
2 to 3 times	na	na	na	na	na	8.3	7.1	6.7	na	6.3	5.3	6.3
4 or more times	na	na	na	na	na	6.1	6.4	8.4	na	4.0	4.4	5.8

Question HS A.96, 97: How many times have you tried to quit or stop using... alcohol?... marijuana?

Note: na—Not asked.

## 4. Attitudes: Perceived Harm and Disapproval

**Table 4.1**  
Perceived Harm of AOD Use, by Grade and Year

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)
<b>Marijuana - use occasionally</b>												
Great	42.1	41.7	42.5	38.2 <sup>A</sup>	37.0	38.1	36.4	35.3 <sup>A</sup>	29.0	31.3	30.0	31.8 <sup>A</sup>
Moderate	22.3	22.3	21.2	19.9 <sup>A</sup>	23.4	24.1	24.4	24.3 <sup>A</sup>	20.2	20.2	21.2	22.0 <sup>A</sup>
Slight	10.5	10.7	10.3	9.1 <sup>A</sup>	17.3	18.3	17.3	15.8 <sup>A</sup>	24.2	22.8	22.2	19.3 <sup>A</sup>
None	25.1	25.3	26.0	32.8 <sup>A</sup>	22.3	19.5	21.8	24.6 <sup>A</sup>	26.7	25.7	26.6	26.8 <sup>A</sup>
<b>Marijuana - use daily</b>												
Great	nc	nc	nc	54.0	nc	nc	nc	54.1	nc	nc	nc	47.7
Moderate	nc	nc	nc	7.8	nc	nc	nc	14.7	nc	nc	nc	18.2
Slight	nc	nc	nc	4.8	nc	nc	nc	8.8	nc	nc	nc	12.3
None	nc	nc	nc	33.4	nc	nc	nc	22.3	nc	nc	nc	21.7
<b>Alcohol - drink occasionally</b>												
Great	28.5	26.6	29.3	27.7	29.2	31.5	30.9	31.9	26.0	30.4	30.6	32.7
Moderate	22.3	23.7	24.2	21.0	23.8	27.0	27.4	24.9	23.9	25.7	27.7	26.6
Slight	23.2	23.5	20.7	18.2	27.5	26.2	24.1	21.8	32.4	29.5	25.8	22.7
None	25.9	26.2	25.9	33.1	19.5	15.3	17.6	21.4	17.7	14.4	15.9	18.0
<b>Alcohol - 5 or more drinks once or twice a week</b>												
Great	44.1	44.7	48.6	42.0	50.0	54.7	53.9	51.0	49.9	55.5	54.6	54.9
Moderate	22.2	21.6	18.7	17.6	24.2	24.2	22.4	21.3	26.4	25.5	24.9	22.0
Slight	9.6	9.9	7.7	7.9	10.1	9.5	8.8	7.9	11.6	10.0	9.3	8.2
None	24.2	23.9	24.9	32.5	15.7	11.5	14.9	19.7	12.1	8.9	11.2	14.9

Question HS A.87-90/MS A.79-82: How much do people risk harming themselves physically and in other ways when they do the following?... Drink alcohol (beer, wine, liquor ) occasionally... Have five or more drinks of alcohol once or twice a week... Use marijuana occasionally (smoke, vape, eat, or drink) ... Use marijuana daily.

Notes: nc—Not comparable; <sup>A</sup>Question item changed and results may not be comparable to prior years.

**Table 4.2****Personal Disapproval of AOD Use by Peers, by Grade and Year (AOD Module B)**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Trying marijuana once or twice</b>												
Neither approve nor disapproves	22.4	27.4	23.0	28.9 <sup>A</sup>	35.6	44.1	41.0	45.4 <sup>A</sup>	48.2	54.7	54.2	59.3 <sup>A</sup>
Somewhat disapprove	13.5	13.9	11.5	15.5 <sup>A</sup>	20.8	18.6	18.4	20.7 <sup>A</sup>	20.3	18.3	18.7	18.0 <sup>A</sup>
Strongly disapprove	64.1	58.7	65.5	55.5 <sup>A</sup>	43.6	37.4	40.6	33.9 <sup>A</sup>	31.5	27.0	27.1	22.6 <sup>A</sup>
<b>Using marijuana once a month or more regularly</b>												
Neither approve nor disapproves	22.1	26.4	23.1	26.5 <sup>A</sup>	34.3	42.7	39.7	39.0 <sup>A</sup>	45.5	52.5	52.8	51.2 <sup>A</sup>
Somewhat disapprove	12.1	13.2	10.1	10.3 <sup>A</sup>	17.9	18.0	16.2	16.5 <sup>A</sup>	18.8	18.7	17.4	17.2 <sup>A</sup>
Strongly disapprove	65.9	60.4	66.8	63.2 <sup>A</sup>	47.7	39.3	44.1	44.5 <sup>A</sup>	35.7	28.9	29.8	31.6 <sup>A</sup>
<b>Having one or two drinks of any alcoholic beverage nearly every day</b>												
Neither approve nor disapprove	20.7	25.1	22.8	26.7	24.6	34.8	34.0	33.6	25.8	36.1	38.4	36.9
Somewhat disapprove	12.9	16.4	11.9	12.9	19.7	20.1	18.0	17.3	21.4	23.1	20.5	19.3
Strongly disapprove	66.3	58.6	65.3	60.4	55.7	45.1	47.9	49.1	52.8	40.8	41.1	43.8

*Question HS B.17-19/MS B.11-13: How do you feel about someone your age doing the following?... Having one or two drinks of any alcoholic beverage nearly every day... Trying marijuana once or twice... Using marijuana once a month or more regularly.*

*Note: <sup>A</sup>Question item changed and results may not be comparable to prior years.*



**Table 4.3**  
**Parent Disapproval of Respondent Use, by Grade and Year (AOD Module B)**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)
<b>Use marijuana (smoke, eat, or drink)</b>												
Very wrong	na	87.7	92.7	91.3 <sup>A</sup>	na	80.5	84.9	83.1 <sup>A</sup>	na	74.3	78.9	75.8 <sup>A</sup>
Wrong	na	6.6	4.0	5.0 <sup>A</sup>	na	10.6	8.2	9.7 <sup>A</sup>	na	13.3	11.3	12.8 <sup>A</sup>
A little wrong	na	3.1	1.4	1.6 <sup>A</sup>	na	5.1	4.1	4.3 <sup>A</sup>	na	7.5	6.1	7.5 <sup>A</sup>
Not at all wrong	na	2.7	1.8	2.1 <sup>A</sup>	na	3.8	2.8	3.0 <sup>A</sup>	na	4.9	3.7	3.9 <sup>A</sup>
<b>Take one or two drinks of alcohol nearly every day</b>												
Very wrong	na	83.5	89.1	87.9	na	80.0	83.6	83.5	na	76.4	80.5	79.1
Wrong	na	10.2	6.7	7.7	na	12.3	10.4	10.6	na	14.4	12.1	13.6
A little wrong	na	3.6	2.4	2.3	na	4.8	3.9	3.6	na	5.7	4.8	4.8
Not at all wrong	na	2.7	1.8	2.1	na	3.0	2.2	2.3	na	3.5	2.6	2.6
<b>Smoke tobacco</b>												
Very wrong	na	88.7	93.5	92.4	na	85.0	89.1	88.0	na	81.5	87.1	86.1
Wrong	na	7.3	3.9	4.9	na	9.6	7.5	8.4	na	12.0	9.2	10.3
A little wrong	na	1.9	1.0	1.0	na	3.0	1.7	1.7	na	3.8	2.1	1.9
Not at all wrong	na	2.0	1.6	1.7	na	2.4	1.7	1.8	na	2.7	1.7	1.8

*Question HS B.22-24/MS B.16-18: How wrong do your parents or guardians feel it would be for you to do the following?... Take one or two drinks of alcohol nearly every day... Smoke tobacco... Use marijuana (smoke, eat, or drink).*

*Notes: na—Not asked.*

<sup>A</sup>*Question item changed and results may not be comparable to prior years.*

**Table 4.4**  
Peer Disapproval of Respondent Use, by Grade and Year (AOD Module B)

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Use marijuana (smoke, eat, or drink)</b>												
Very wrong	na	71.7	79.4	73.2 <sup>A</sup>	na	52.8	56.7	56.4 <sup>A</sup>	na	40.4	43.6	42.8 <sup>A</sup>
Wrong	na	13.8	11.7	14.0 <sup>A</sup>	na	19.0	18.6	17.9 <sup>A</sup>	na	17.8	17.4	17.7 <sup>A</sup>
A little wrong	na	7.7	4.8	6.9 <sup>A</sup>	na	14.3	12.8	12.9 <sup>A</sup>	na	17.4	17.4	16.9 <sup>A</sup>
Not at all wrong	na	6.7	4.1	6.0 <sup>A</sup>	na	13.9	11.8	12.8 <sup>A</sup>	na	24.4	21.6	22.6 <sup>A</sup>
<b>Take one or two drinks of alcohol nearly every day</b>												
Very wrong	na	68.2	75.9	70.6	na	54.6	57.8	59.4	na	47.3	50.6	52.0
Wrong	na	17.2	14.8	16.7	na	23.0	22.0	21.3	na	23.2	22.7	23.2
A little wrong	na	9.1	5.6	7.8	na	13.7	12.3	11.2	na	16.8	14.8	13.8
Not at all wrong	na	5.5	3.7	4.9	na	8.6	7.9	8.1	na	12.6	12.0	11.0
<b>Smoke tobacco</b>												
Very wrong	na	73.4	80.2	74.5	na	60.3	63.9	64.7	na	53.0	58.9	59.3
Wrong	na	15.7	13.0	15.9	na	22.5	21.3	19.9	na	23.2	21.7	22.6
A little wrong	na	6.3	3.7	5.5	na	10.4	9.0	9.1	na	13.5	10.9	10.2
Not at all wrong	na	4.7	3.1	4.2	na	6.8	5.8	6.3	na	10.2	8.5	7.9

*Question HS B.26-28/MS B.20-22: How wrong would your close friends feel it would be if you did the following?... Take one or two drinks of alcohol nearly every day... Smoke tobacco... Use marijuana (smoke, eat, or drink).*

*Notes: na—Not asked.*

<sup>A</sup>*Question item changed and results may not be comparable to prior years.*

## 5. Availability

**Table 5.1**  
Sources for Obtaining Marijuana, by Grade and Year (AOD Module B)

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>All Students</b>												
At school	na	na	na	8.9	na	na	na	22.9	na	na	na	29.0
At parties	na	na	na	6.5	na	na	na	23.7	na	na	na	37.7
At concerts or other social events	na	na	na	2.5	na	na	na	10.3	na	na	na	19.0
At their own home	na	na	na	10.3	na	na	na	19.1	na	na	na	25.1
From an adult acquaintance	na	na	na	6.2	na	na	na	16.1	na	na	na	23.8
From friends or another teenager	na	na	na	16.6	na	na	na	33.7	na	na	na	44.4
Buy it at a marijuana dispensary	na	na	na	5.0	na	na	na	12.0	na	na	na	19.3
At bars or clubs	na	na	na	1.2	na	na	na	3.3	na	na	na	5.0
Other	na	na	na	6.5	na	na	na	10.4	na	na	na	11.3
Don't know	na	na	na	78.8	na	na	na	60.6	na	na	na	49.6
<b>Students with Knowledge about Sources</b>												
At school	na	na	na	42.0	na	na	na	58.1	na	na	na	57.5
At parties	na	na	na	30.7	na	na	na	60.2	na	na	na	74.8
At concerts or other social events	na	na	na	11.8	na	na	na	26.1	na	na	na	37.7
At their own home	na	na	na	48.6	na	na	na	48.5	na	na	na	49.8
From an adult acquaintance	na	na	na	29.2	na	na	na	40.9	na	na	na	47.2
From friends or another teenager	na	na	na	78.3	na	na	na	85.5	na	na	na	88.1
Buy it at a marijuana dispensary	na	na	na	23.6	na	na	na	30.5	na	na	na	38.3
At bars or clubs	na	na	na	5.7	na	na	na	8.4	na	na	na	9.9
Other	na	na	na	30.7	na	na	na	26.4	na	na	na	22.4

*Question HS B.16/MS B.10: How do most kids at your school who use marijuana usually get it? (Mark All That Apply.)*

*Notes: na—Not asked. Total percentages may exceed 100% for “mark all that apply” items.*

**Table 5.2****Perceived Difficulty of Obtaining Marijuana, Alcohol, and Cigarettes, by Grade and Year**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Marijuana</b>												
Very difficult	18.9	19.3	23.0	22.3	7.8	8.7	8.8	8.2	4.9	5.0	5.6	6.4
Fairly difficult	9.6	9.6	10.2	9.3	7.0	7.7	8.0	7.1	3.8	4.4	4.8	4.7
Fairly easy	10.7	10.1	9.8	8.9	18.3	20.1	20.1	19.2	18.7	21.4	20.7	20.0
Very easy	14.8	12.1	9.0	10.1	36.4	33.7	30.5	32.2	53.9	48.6	45.9	45.6
Don't know	46.0	48.8	48.1	49.3	30.5	29.8	32.5	33.2	18.7	20.5	22.9	23.3
<b>Alcohol</b>												
Very difficult	13.5	13.7	16.5	17.8	6.6	7.4	7.7	8.2	4.8	4.9	6.0	6.9
Fairly difficult	11.0	10.3	12.2	9.6	8.3	8.6	8.5	8.4	6.5	7.1	6.6	7.2
Fairly easy	15.5	14.7	14.2	13.0	23.4	23.9	23.9	21.8	25.2	26.3	25.0	23.0
Very easy	15.6	14.2	10.9	12.3	33.4	31.7	28.7	28.1	46.7	42.5	40.2	38.6
Don't know	44.4	47.1	46.2	47.2	28.4	28.3	31.1	33.5	16.7	19.1	22.2	24.3
<b>Cigarettes</b>												
Very difficult	13.3	14.1	17.2	18.4	6.8	7.8	8.6	9.3	4.6	5.1	6.7	8.2
Fairly difficult	11.4	10.5	13.0	11.4	8.4	9.2	10.3	11.1	5.5	6.7	8.8	10.2
Fairly easy	14.6	15.1	13.2	12.6	23.6	24.7	24.3	22.3	24.4	26.0	23.5	23.4
Very easy	13.6	12.0	8.6	7.8	28.0	25.1	21.2	18.4	44.0	37.1	31.2	25.7
Don't know	47.1	48.3	47.9	49.8	33.2	33.2	35.7	38.9	21.6	25.0	29.8	32.5

*Question HS A.91, 93, 94/MS A.83, 85, 86: How difficult is it for students in your grade to get any of the following if they really want them?... Cigarettes... Alcohol... Marijuana.*

## 6. Use of Vaping Devices

**Table 6.1**  
Lifetime and Current use of Vaping Devices, by Grade and Year

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Lifetime Vaping (Ever)</b>												
0 times	na	86.8	91.9	91.1	na	74.3	76.8	81.4	na	67.6	68.3	73.7
1 time	na	4.4	3.7	3.7	na	6.7	6.8	5.5	na	6.5	7.1	6.3
2 to 3 times	na	3.0	2.2	2.4	na	6.0	6.4	4.8	na	7.4	8.3	5.8
4 or more times	na	5.8	2.2	2.8	na	13.0	10.0	8.2	na	18.5	16.3	14.2
<b>Current Vaping (Past 30 days)</b>												
Any	na	8.0	3.4	4.0	na	13.4	7.6	8.7	na	15.5	9.8	11.3
Daily (20 or more days)	na	1.4	0.3	0.3	na	2.1	0.8	1.3	na	2.5	1.3	2.3

*Question HS A.48, 69/MS A.49, 63: During your life/past 30 days, how many times/days have you used the following?... Electronic cigarettes, e-cigarettes, or other vaping device such as Juul, e-hookah, hookah pens, or vape pens.*

*Note: na—Not asked.*

**Table 6.2****Age of Onset—Vaping, by Grade and Year (AOD Module B)**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Never	na	na	na	90.8	na	na	na	81.5	na	na	na	71.8
10 years or under	na	na	na	1.8	na	na	na	1.3	na	na	na	0.9
11/12 years old	na	na	na	6.1	na	na	na	4.0	na	na	na	2.8
13/14 years old	na	na	na	1.0	na	na	na	11.8	na	na	na	8.4
15/16 years old	na	na	na	0.0	na	na	na	1.1	na	na	na	14.8
17 years or older	na	na	na	0.3	na	na	na	0.3	na	na	na	1.2

Question HS/MS B.3: About how old were you the first time you tried any of these things?... An electronic cigarette (e-cigarette or vaping device).

Note: na—Not asked.

**Table 6.3****E-Cigarette Consumption, by Product, Grade and Year (AOD Module B)**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19	11/13	13/15	15/17	17/19
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
I've never used an e-cigarette or vaping device.	na	na	na	91.8	na	na	na	83.2	na	na	na	73.5
Nicotine or tobacco substitute	na	na	na	2.0	na	na	na	6.3	na	na	na	11.1
Marijuana or THC	na	na	na	2.8	na	na	na	8.3	na	na	na	16.1
Amphetamines, cocaine, or heroin	na	na	na	0.5	na	na	na	0.8	na	na	na	1.0
Alcohol	na	na	na	1.5	na	na	na	2.0	na	na	na	2.4
A flavored product without nicotine, alcohol, or other drug	na	na	na	5.0	na	na	na	9.7	na	na	na	14.2
Any other product or substance	na	na	na	2.2	na	na	na	2.3	na	na	na	2.4

Question HS B.30/MS B.24: Have you ever used an e-cigarette or vaping device to consume any of the following? (Mark All That Apply.)

Notes: na—Not asked; Total percentages may exceed 100% for “mark all that apply” items.

**Table 6.4****Perceived Difficulty of Obtaining E-Cigarettes, by Grade and Year**

Item	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>
	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)	11/13 (%)	13/15 (%)	15/17 (%)	17/19 (%)
Very difficult	na	na	na	17.1	na	na	na	7.2	na	na	na	6.3
Fairly difficult	na	na	na	10.2	na	na	na	6.8	na	na	na	5.7
Fairly easy	na	na	na	13.5	na	na	na	21.7	na	na	na	22.6
Very easy	na	na	na	11.5	na	na	na	31.3	na	na	na	39.0
Don't know	na	na	na	47.7	na	na	na	33.0	na	na	na	26.4

*Question HS A. 92/MS A.84: How difficult is it for students in your grade to get any of the following if they really want them?... E-cigarettes (electronic) or vaping device*

*Note: na—Not asked.*

## Appendix B: Inventory of Marijuana-Specific Items

**Table B1**

**Marijuana-Specific CHKS items**

Content	Survey Item	Module
	HS A.72/MS A.66	
Current use	During the past 30 days, on how many days did you use marijuana (smoke, vape, eat, or drink)?  (0 days, 1 day, 2 days, 3-9 days, 10-19 days, 20-30 days)	Core
	HS A.81/MS A.73	
Current use on school property	During the past 30 days, on how many days on school property did you use marijuana (smoke, vape, eat, or drink)?  (0 times, 1 time, 2 times, 3 times, 4-6 times, 7 or more times)	
	HS A.50/MS A.51	
Lifetime use	During your life, how many times have you used the following?...  Marijuana (smoke, vape, eat, or drink).  (0 times, 1 time, 2 times, 3 times, 4-6 times, 7 or more times)	Core
	HS/MS B.4	
Age at first use	About how old were you the first time you tried any of these things?  Marijuana (smoke, eat, or drink)  (Never, 10 or under, 11, 12, 13, 14, 15, 16, 17, 18 or over)	AOD
	HS A.64-66/MS A.58-60	
Lifetime modes of consumption	During your life, how many times have you used marijuana in any of the following ways  Smoke it?  In an electronic or e-cigarette or other vaping device?  Eat or drink it in products made with marijuana?  (0 times, 1 time, 2 times, 3 times, 4-6 times, 7 or more times)	Core



Content	Survey Item	Module
Lifetime consumption of products via vaping device	<p>HS B.30/MS B.24</p> <p>Have you ever used an e-cigarette or vaping devices to consume any of the following? (Mark all that apply.)</p> <p>(I've never used an e-cigarette or vaping device; nicotine or tobacco substitute; marijuana or THC; amphetamines, cocaine, or heroin; alcohol; a flavored product without nicotine, alcohol, or other drug; any other product or substance)</p>	AOD
Consumption level of marijuana and other drugs	<p>HS B.7</p> <p>If you use marijuana or other drugs, how "high" (stoned, faded, wasted, trashed) do you usually like to get?</p> <p>(I don't use drugs, just enough to feel it a little, enough to feel it moderately, until I feel it a lot or get really high)</p>	AOD
Cessation attempts	<p>HS A.97</p> <p>How many times have you tried to quit or stop using marijuana?</p> <p>(Does not apply-don't use, 0 times, 1 time, 2-3 times, 4 or more times)</p>	Core
Perceived harm from marijuana use	<p>HS A89-90</p> <p>How much do people risk harming themselves physically and in other ways when they do the following?</p> <p>Use marijuana occasionally</p> <p>Use marijuana daily</p> <p>(great, moderate, slight, none)</p>	Core
Personal disapproval of marijuana use	<p>HS B.18-19/MS B.12-13</p> <p>How do you feel about someone your age doing the following?</p> <p>Trying marijuana once or twice.</p> <p>Using marijuana <u>once a month or more regularly.</u></p> <p>(neither approve nor disapprove, somewhat disapprove, strongly disapprove)</p>	AOD

Content	Survey Item	Module
	HS B.24/MS B.18	
Parent disapproval of marijuana use	How wrong do your parents or guardians feel it would be for you to do the following? Use marijuana (smoke, eat, or drink)  (very wrong, wrong, a little wrong, not at all wrong)	AOD
	HS B.28/MS B.22	
Peer disapproval of respondent marijuana use	How wrong would your close friends feel it would be if you did the following? Use marijuana (smoke, eat, drink)  (very wrong, wrong, a little wrong, not at all wrong)	AOD
	HS A.94/MS A.86	
Difficulty obtaining marijuana	How difficult is it for students in your grade to get any of the following if they really want them? Marijuana  (very difficult, fairly difficult, fairly easy, very easy, don't know)	Core
	HS B.16/MS B.10	
Sources of Marijuana	How do most kids at your school who use marijuana usually get it?  (at school, at parties, at concerts or other social events, at their own home, from an adult acquaintance, from friends or another teenager, buy it at a marijuana dispensary, at bars or clubs, other, don't know)	AOD

Source: California Healthy Kids Survey Data, Core and AOD Modules, 2018/19.

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## Endnotes

<sup>1</sup> The full Biennial State CHKS report may be downloaded from [calschls.org/reports](https://calschls.org/reports).

<sup>2</sup> The primary reasons for this modular difference in the sample size was because several large districts administered the Core Module in both survey years, and some of the schools that only administered the AOD Module were small. Data from schools that administered the Core Module two years in a row were weighted such that the weighted counts were equivalent to those obtained from one survey administration.

<sup>3</sup> Reports of liking to drink until students felt it a lot or got really drunk were much lower, at 2% in 9<sup>th</sup> grade and 5% in 11<sup>th</sup>.

<sup>4</sup> Although it is unclear why the AOD Module question resulted in lower rates of marijuana vaping than the Core Module question, the reason likely due to differences in question format. The question on the AOD Module asks which substances (e.g., nicotine or tobacco substitute, marijuana or THC, etc...) the respondent has ever consumed using an e-cigarette or vaping devices. A check-all-that-apply question format is used in which respondents are asked to select as many response options that apply to them. This type of question is known to be sensitive to primacy effects. On the Core Module, three questions (in matrix format) are included that ask how many times the respondent has used marijuana in her/his lifetime using different consumption methods: (1) smoking it, (2) in an electronic or e-cigarette or other vaping device, and (3) eating or drinking it. Sample differences are not likely to be responsible for the differences in marijuana vaping across the modules because estimates of lifetime marijuana use based on Core Module question are almost identical to those derived from the age of onset questions on the AOD Module.

<sup>5</sup> In 2017/19, the words “or hashish” were deleted from this question as being out-of-date. This might have resulted in some decline in reported disapproval, but not likely of the magnitude of the declines across grades.

<sup>6</sup> The word “regularly” was added to the item in 2017/19 to clarify the meaning of “using once a month or more.” Given the different trends across grades, the effect of this word addition is uncertain.

<sup>7</sup> Although this question does not provide data on where respondents themselves may have obtained marijuana, respondents had the option of marking “don’t know.” The responses therefore come from students who believe they have knowledge about where their peers obtain marijuana (21%, 39%, and 50% in 7<sup>th</sup>, 9<sup>th</sup>, and 11<sup>th</sup> grade, respectively).

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<sup>61</sup> Wang et al., 2016.

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<sup>63</sup> Regarding the legalization of medical marijuana use, the preponderance of recent research has shown no increase in use following enactment (Johnson et al. 2019, Martins et al. 2016, Cerdá et al. 2017). This was the case in California following passage of MML in November 1996. Biennial State CHKS data show that current marijuana use among 11<sup>th</sup> graders peaked at 26% in 1995 and 1997 and then dropped to 19% in 2005.

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