

Trends in Alcohol, Tobacco, and Other Drug Use in California – Key Findings from the Eighteenth Biennial State CHKS, 2019/21¹

The COVID-19 pandemic had deleterious consequences for youth. It reduced students' access to basic supports; disrupted interactions and relationships with peers, teachers, and school staff; and adversely affected students' mental health and wellness. Conversely, pandemic-related conditions likely had a positive effect on reducing substance use as it was associated with unprecedented declines in alcohol use, vaping, and marijuana use.

This factsheet describes trends in students' self-reported substance use in California between 2013-15 and 2019-21—the eight-year period that culminated in the onset of the COVID-19 pandemic. The analysis draws on data provided by representative state samples of students in grades 7, 9, and 11 that participated in the Biennial State California Healthy Kids Survey (CHKS).

Key Takeaways

- **Substance Use.** Rates of alcohol use, tobacco use, vaping, and other drug use among students have been steadily declining over the past decade.
- **Impacts of COVID-19.** The long-term declines in alcohol use, cigarette smoking, vaping, and marijuana use accelerated substantially in 2020-21 at the height of the pandemic.
- **Shifting Preferences.** A shift in substance use preferences from alcohol to marijuana has occurred since 2013-15, as declines in alcohol use have been greater than declines in marijuana use.

Trends

One of the most positive trends over the past decade has been the long-term decline in adolescent alcohol use, tobacco use, vaping, and marijuana use since 2013-15.

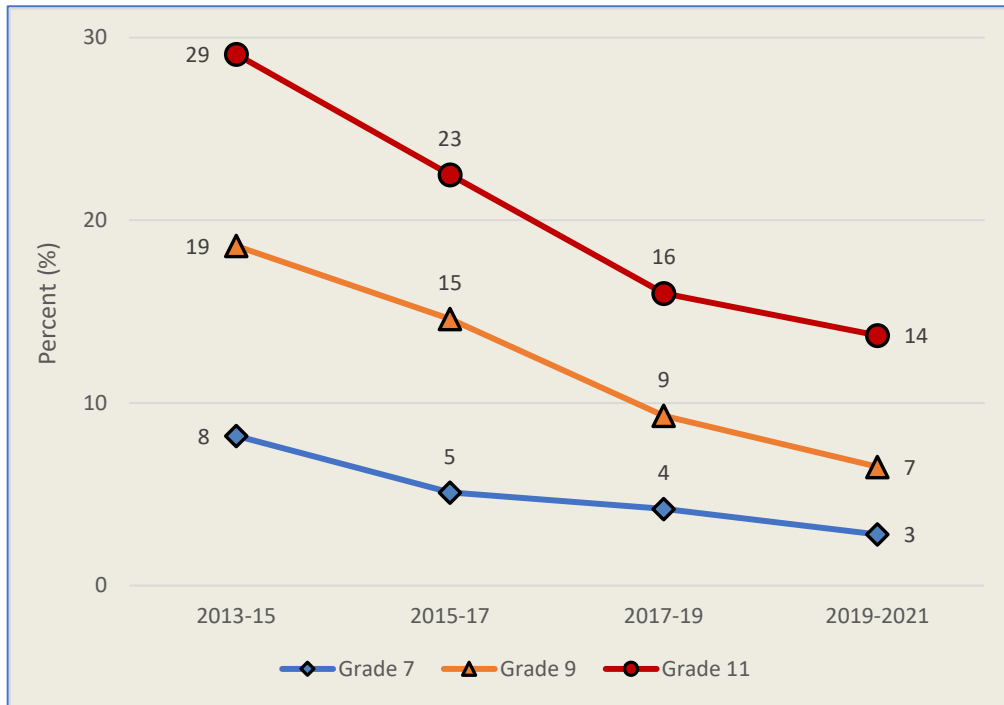
- **Current alcohol use** dropped by half among 11th graders (29% to 14%) and by about two-thirds among 9th graders (19% to 7%) and 7th graders (8% to 3%). (Exhibit 1)
- **Current cigarette smoking** was reported by less than 1% of 9th graders and by 2% of 11th graders, less than one-quarter of the 2013-15 rates (Exhibit 2). Daily smoking barely occurs at all among high school students (0.05% among 9th graders and 0.17% among 11th graders).
- **Current vaping** rates dropped substantially between 2013-15 and 2015-17, held steady in 2017-19, and then dropped moderately in 2019-21. Current vaping rates are now less than half those of 2013-15 among 7th graders (2% from 8%) and 9th graders (6% from 13%) and about 40% lower among 11th graders (10% from 16%). (Exhibit 3)

¹ The factsheet is based on Austin, G., Hanson, T., Bala, N., & Zheng, H. (2023). *Student engagement and well-being in California, 2019-21: Results of the Eighteenth Biennial State California Healthy Kids Survey, Grades 7, 9, and 11*. San Francisco, CA: WestEd. <https://calschls.org/docs/Biennial State 1921.pdf>

- After holding steady between 2015-17 and 2017-19, **current marijuana use** dropped significantly in 2019-21, from 4% to 2% among 7th graders, 10% to 6% among 9th graders, and from 16% to 12% among 11th graders. (Exhibit 4)
- **Marijuana use is as common as alcohol use**, as declines in the use of alcohol have been greater than declines in the use of marijuana. Marijuana use rates were much lower than alcohol use rates in 2013-15. (Exhibit 5)

EXHIBIT 1.

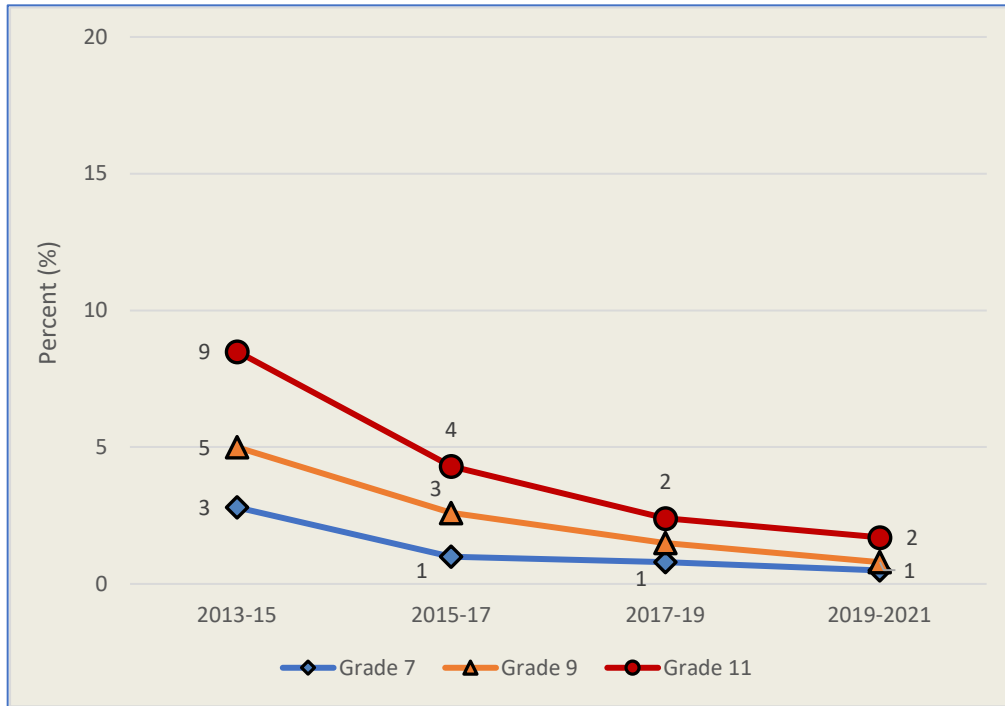
30-day Alcohol Use by Administration Period



Source: Eighteenth Biennial State California Healthy Kids Survey Data, 2013-15, 2015-17, 2017-19, and 2019-21

EXHIBIT 2.

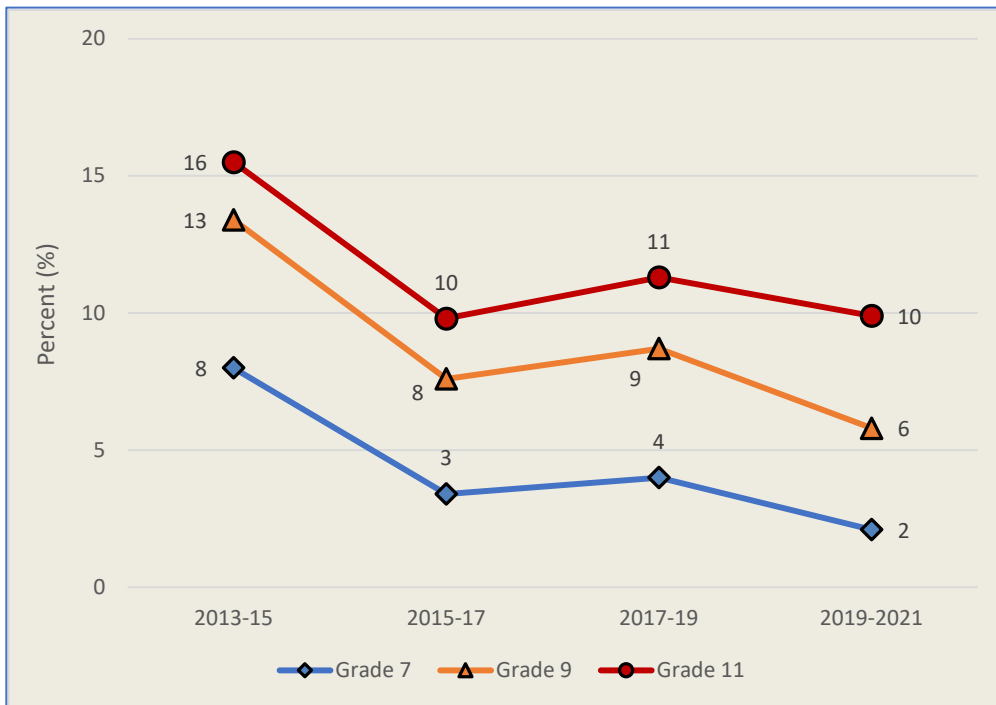
30-day Cigarette Smoking by Administration Period



Source: Eighteenth Biennial State California Healthy Kids Survey Data, 2013-15, 2015-17, 2017-19, and 2019-21

EXHIBIT 3.

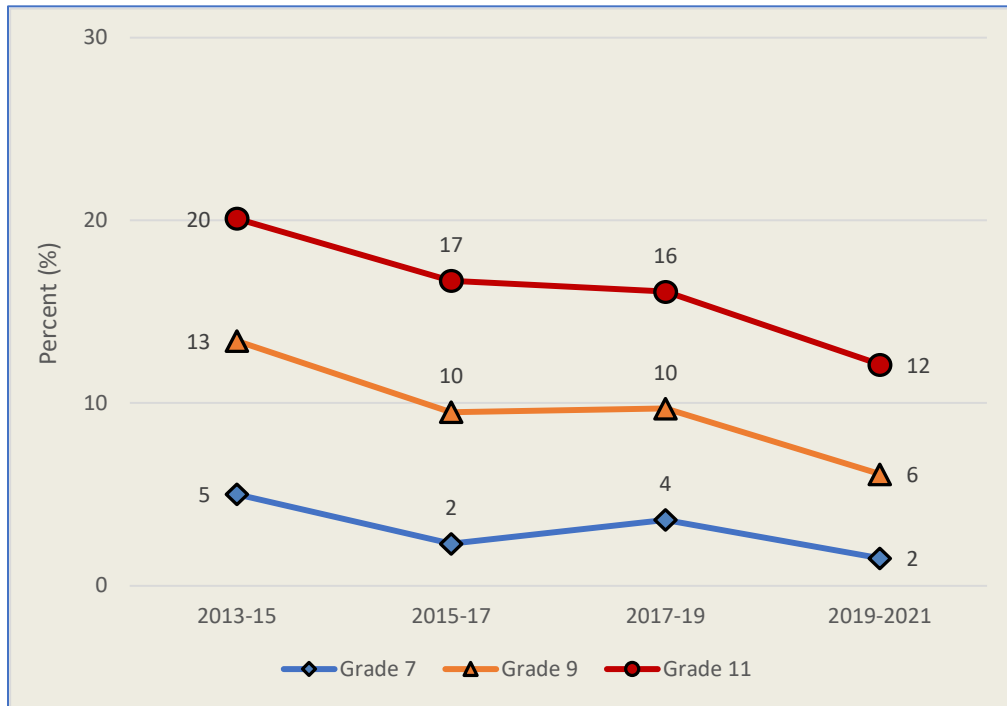
30-day Vaping by Administration Period



Source: Eighteenth Biennial State California Healthy Kids Survey Data, 2013-15, 2015-17, 2017-19, and 2019-21

EXHIBIT 4.

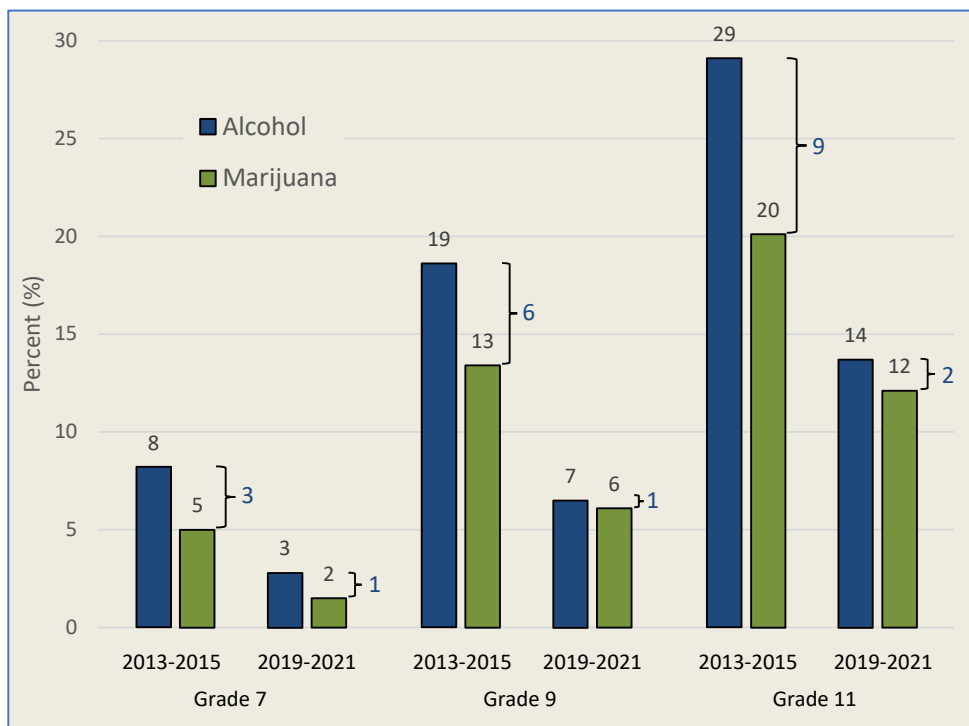
30-day Marijuana Use by Administration Period



Source: Eighteenth Biennial State California Healthy Kids Survey Data, 2013-15, 2015-17, 2017-19, and 2019-21

EXHIBIT 5.

Differences in 30-day Alcohol and Marijuana Use, 2013-15 and 2019-21



Source: Eighteenth Biennial State California Healthy Kids Survey Data, 2013-15 and 2019-21

Impacts of COVID-19 on Alcohol, Tobacco, and Other Drug Use

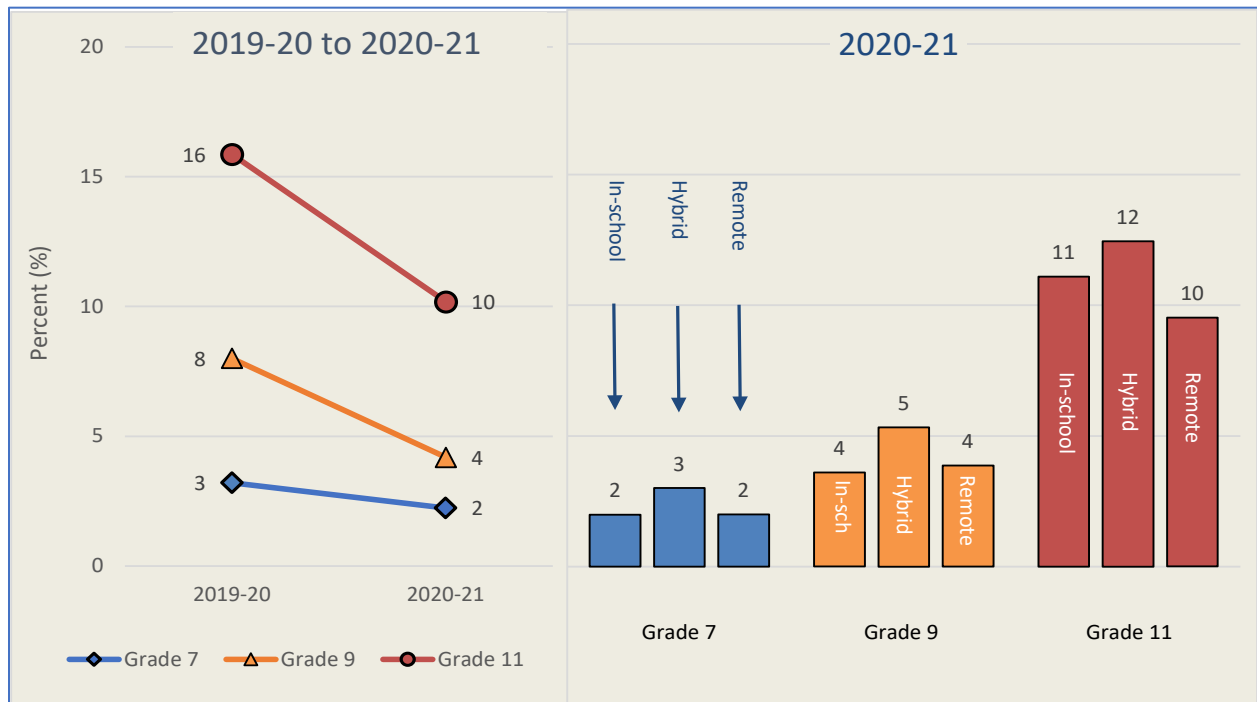
Although the Biennial State CHKS was designed to estimate prevalence rates over a two-year period, single-year estimates of 30-day alcohol, tobacco, vaping, and marijuana use are provided to ascertain potential effects of the pandemic on substance use. Between the 2019-21 period, the declines in alcohol use, vaping, and marijuana use accelerated substantially in 2020-21 at the height of the pandemic.

- **Current alcohol use** dropped substantially in the 2020-21 academic year (by one, four, and six points among 7th, 9th, and 11th graders). Although use rates were lower in 2020-21, students who attended school in-person, remotely, and both in-person and remotely (hybrid) reported similar levels of use. (Exhibit 6)
- **Current cigarette smoking** rates were so low in 2019-20 that there was little room for rates to drop further. Nevertheless, current cigarette use dropped from 2% to 1.2% among 11th graders in 2020-21 and was highest among students who attended school in-person and lowest among those who participated in school remotely. (Exhibit 7)
- **Current vaping** rates dropped substantially between 2019-20 and 2020-21 (by two, four, and six points among 7th, 9th, and 11th graders). Vaping rates also tended to be lowest among students who participated in school remotely. (Exhibit 8)
- **Current marijuana use** dropped significantly in 2020-21, from 2% to 1% among 7th graders, 8% to 4% among 9th graders, and from 14% to 9% among 11th graders. Students reported similar rates of current marijuana use across each instructional model. (Exhibit 9)

In summary, there were steep drops in current alcohol use, vaping, and marijuana during the onset of the pandemic in 2020-21.

EXHIBIT 6.

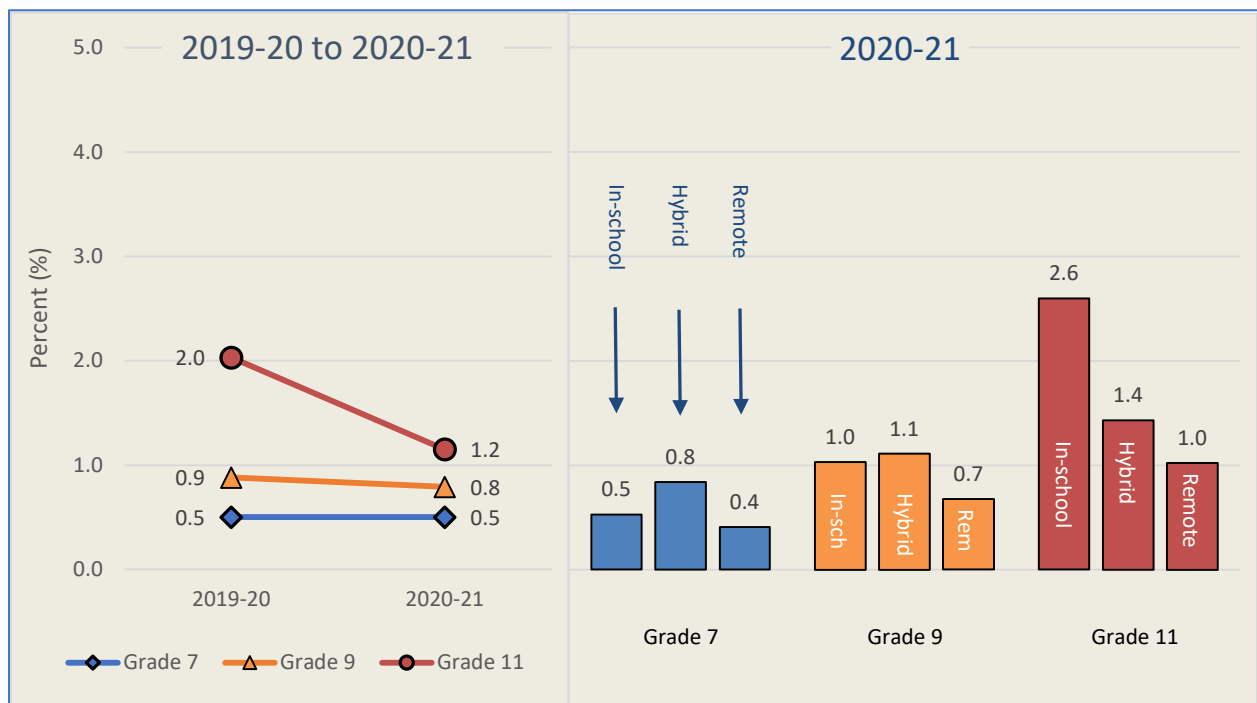
30-day Alcohol Use by Survey Year and Instructional Model, 2019-21



Source: Eighteenth Biennial State California Healthy Kids Survey Data, 2019-21

EXHIBIT 7.

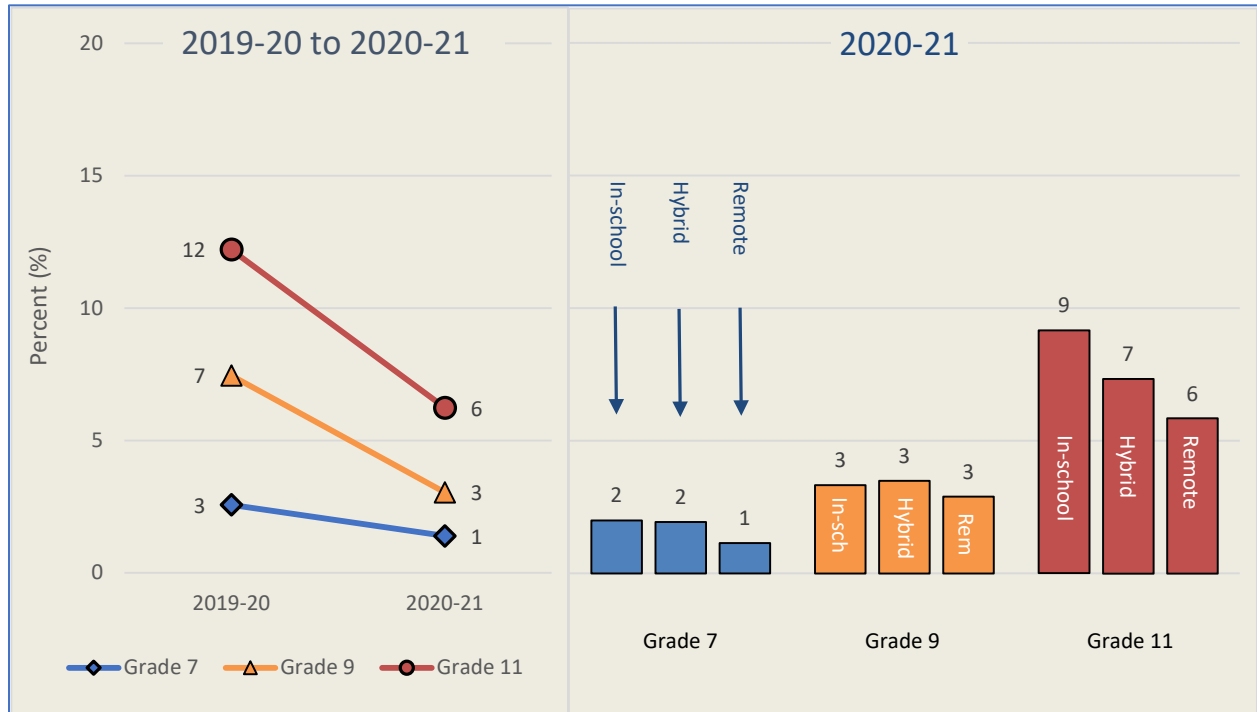
30-day Cigarette Use by Survey Year and Instructional Model, 2019-21



Source: Eighteenth Biennial State California Healthy Kids Survey Data, 2019-21

EXHIBIT 8.

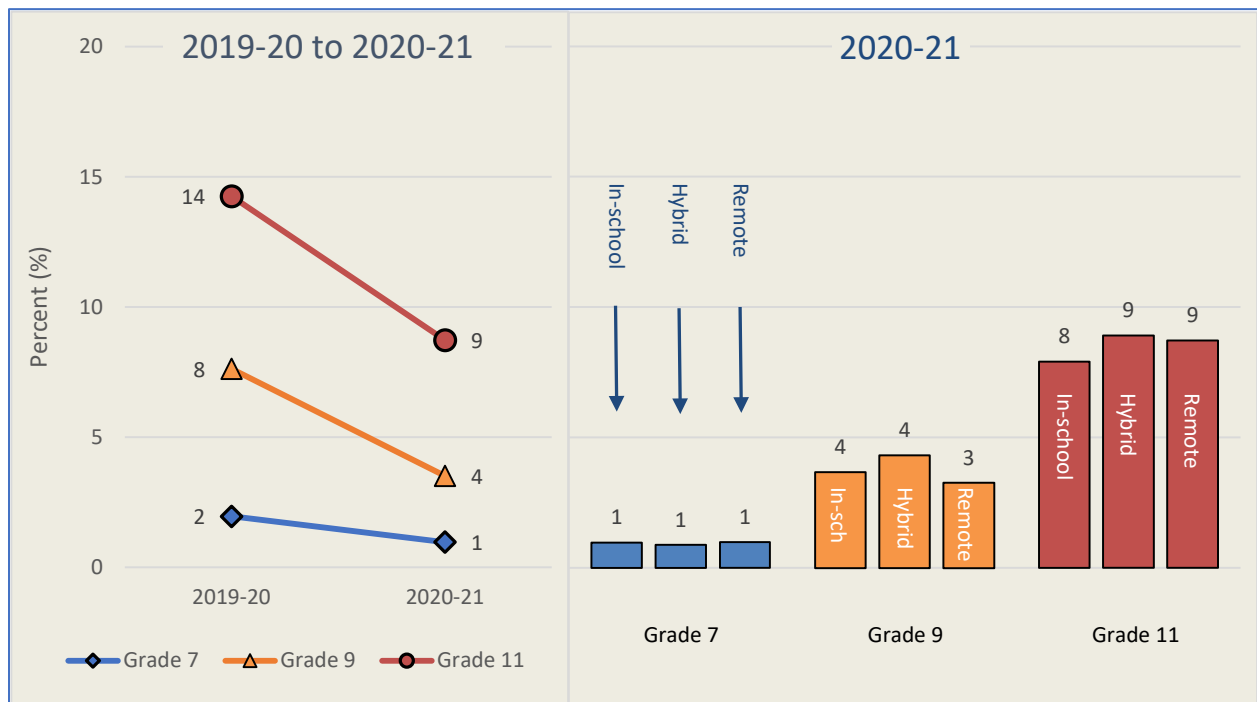
30-day Vaping by Survey Year and Instructional Model, 2019-21



Source: Eighteenth Biennial State California Healthy Kids Survey Data, 2019-21

EXHIBIT 9.

30-day Marijuana Use by Survey Year and Instructional Model, 2019-21



Source: Eighteenth Biennial State California Healthy Kids Survey Data, 2019-21

Summary

Students' self-reported substance use declined substantially in California between 2013-15 and 2012-21, with unprecedented declines in 2020-21. These results are consistent with the results of other surveys conducted during this period.^{2,3}

The consensus among researchers is that these declines were related to the unique conditions produced by the COVID-19 pandemic. Beginning in spring 2020, school building closures and social distancing requirements likely increased the amount of supervised time that youth spent with parents and family, and decreased the amount of time youth spent with peers, including limiting extracurricular activities and in-person interaction. This limited access to substances, opportunities to use them, and the influences of substance-using peers. Supportive of this, current alcohol use, vaping, and marijuana use declined steeply in 2020-21. Whether these findings reflect a long-term change or are just a short-term product of pandemic conditions remains to be seen.

Suggested citation: Hanson, T., Austin, G., Bala, N. and Zheng, C. (2023) *Trends in alcohol, tobacco, and other drug use in California – Key findings from the Biennial State CHKS, 2019/21*. CHKS Factsheet #24. San Francisco, CA. WestEd.

² Hanson, T., & Puckett, L. (2021). *Did COVID-related school building closures reduce student tobacco use, marijuana use, and vaping? CHKS Factsheet #21*. San Francisco, CA: WestEd. <https://calschls.org/docs/factsheet-21.pdf>

³ Johnston, L. D., Miech, R. A., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M.E. (2022). *Monitoring the Future national survey results on drug use 1975-2021: Overview, key findings on adolescent drug use*. Ann Arbor, MI: Institute for Social Research, University of Michigan. <https://eric.ed.gov/?id=ED611736>

Appendix

Biennial State California Healthy Kids Surveys

The surveys were administered over two-year periods to randomly-selected, representative state samples of secondary students (grades 7, 9, and 11). Sample selection and data collection was embedded within the process of local CHKS administration by school districts under the sponsorship of the California Department of Education.

The surveys were conducted under conditions of strict anonymity and confidentiality. Results are weighted to reflect the sampling design, state student enrollment, and state enrollment composition by race/ethnicity, gender, and grade. The California Department of Health Care Services provides financial support for the statewide survey. The state's Committee for the Protection of Human Subjects, Office of Statewide Health Planning and Development, approved the survey protocols.

Participating schools included four schools serving students in grades 7, 9, and 11; 47 schools with students in grade 7 only; 46 schools serving students in grades 9 and 11; and 20 continuation schools. No surveys were obtained from 11th graders in one of the 46 schools serving students in grade 9 and 11.

Pandemic Considerations

Data collection for the Eighteenth Biennial State CHKS differed dramatically from previous administrations due to the COVID-19 pandemic. Designed to be administered over a two-year period in the 2019-20 and 2020-21 academic years, survey administration in the 2019-20 academic year ceased in mid-March 2020 when the vast majority of California schools ended in-person instruction and nearly all students continued their schooling remotely. Just a handful of students took the survey in spring 2020. In addition, school buildings remained closed for most of the 2020-21 academic year and between two-thirds and three-quarters of students were participating in school remotely and took the survey in their homes rather than in classroom settings.

Although the Biennial State CHKS is designed to provide statewide prevalence estimates during a two-year time window, the onset of the pandemic in March 2020 complicates interpretation of the results. To aid in interpretation and to ascertain potential effects of the pandemic, the results in the report were sometimes disaggregated by survey year to depict how the results differ in 2019-20 and 2020-21.

Additionally, the Core Module was modified for students participating in school remotely in 2020-21, and some measures available in past reports are not available this year.

Table A1. List of Selected Measures

Construct	Item(s)	Operationalization
Current Alcohol Use	During the past 30 days, on how many days did you have one or more drinks of alcohol?	The percent of students reporting one or more days.
Current Cigarette Use	During the past 30 days, on how many days did you use cigarettes?	The percent of students reporting one or more days.
Current Vaping	During the past 30 days, on how many days did you use vape products?	The percent of students reporting one or more days.
Current Marijuana Use	During the past 30 days, on how many days did you use marijuana (smoke, vape, eat, or drink)?	The percent of students reporting one or more days.