# California Youth Tobacco and Marijuana Use and Secondhand Smoke Exposure for Rural Communities and by Geographic Region

Significant health disparities have been well established for people living in rural communities compared to individuals from urban areas.[1,2] Residents of rural areas have higher rates of preventable diseases such as obesity, diabetes, and cancer,[1] and are also more likely to engage in risky behaviors.[2] Notably, youth from rural communities are at a higher risk for using tobacco products,[3,4] and are also less likely to be protected by tobacco control policies.[5,6]

Using data from the **2019-2020 California Student Tobacco Survey (CSTS)**,[7] this factsheet explores disparities in youth tobacco and marijuana use and secondhand smoke exposure. The CSTS is a representative biennial statewide tobacco surveillance survey of California middle (8th grade) and high school (10th and 12th grade) students. This factsheet focuses on analyzing data for high school student respondents.

## Urban Classification (City, Suburban, Rural/Town)

Urban classification was determined using definitions from the United States Department of Education based on population size of the area where the school was located[8]:

- **City** as territories inside a principal city inside an urbanized area
- **Suburban** as territories outside a principal city and inside an urbanized area
- **Rural & Town** as territories outside an urbanized area and in or out of an urban cluster

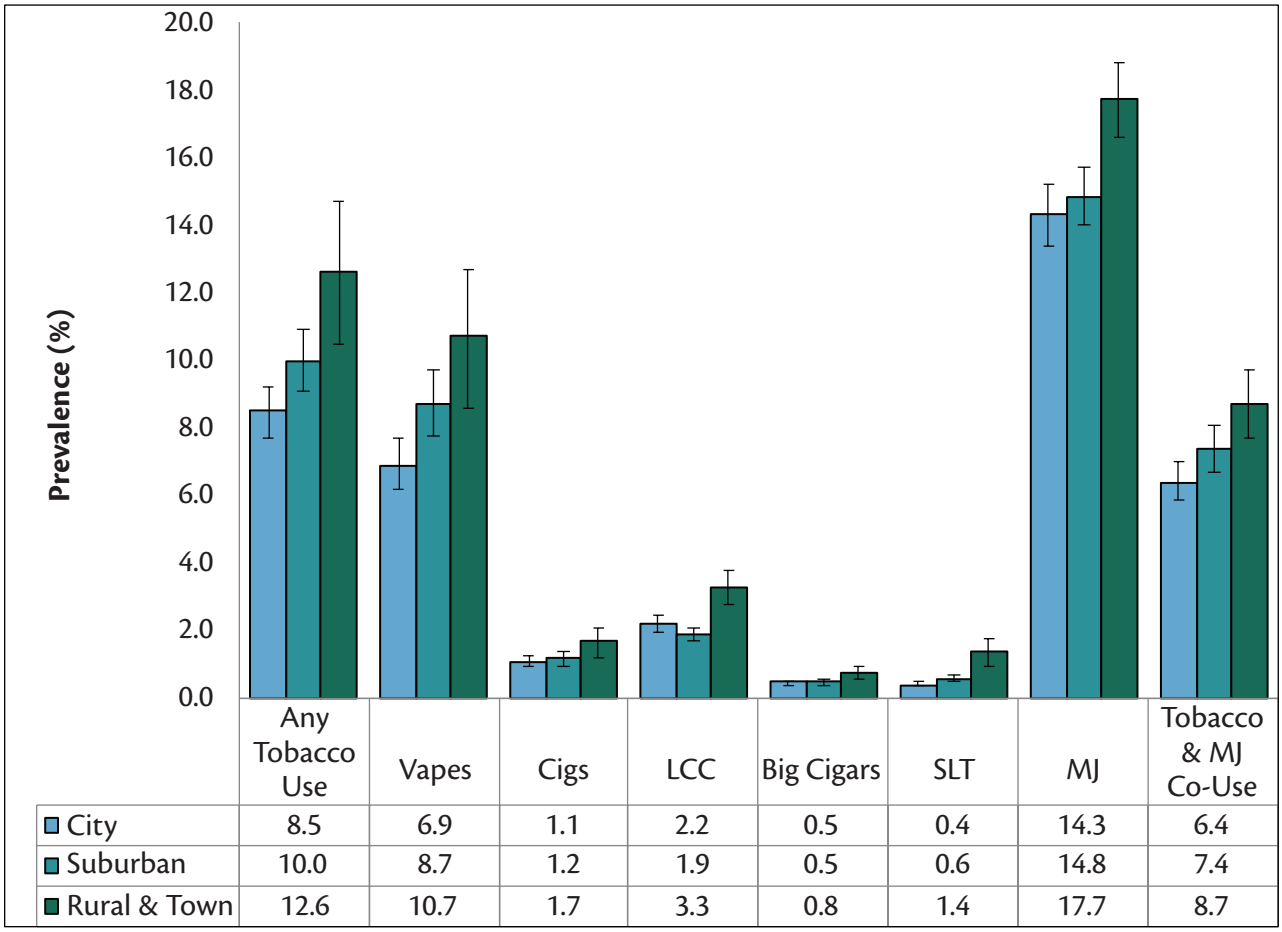
Most high school students attended schools in city (43.3%) and suburban (43.5%) areas. Approximately, **13.2% of students attended a school in a rural area**.

[1] The term marijuana (instead of cannabis) is used throughout this factsheet, as youth were asked specifically about their marijuana use in the survey instrument. Additionally, marijuana is the term widely used by the Centers for Disease Control and Prevention (CDC) and is in alignment with terminology used in California Proposition 64–Adult Use of Marijuana Act.

# Prevalence

In 2019-2020, about 9.7% of California high school students reported the current use (past 30 day) of at least one tobacco product.

- As shown in Figure 1, youth that attended school in a rural area had the highest prevalence of current any tobacco use and tobacco/marijuana co-use.
- Rural youth also had the highest current use prevalence for vapes, little cigars or cigarillos (LCC), big cigars, and smokeless tobacco.




| | Any Tobacco Use | Vapes | Cigs | LCC | Big Cigars | SLT | MJ | Tobacco & MJ Co-Use |
|---|---|---|---|---|---|---|---|---|
| City | 8.5 | 6.9 | 1.1 | 2.2 | 0.5 | 0.4 | 14.3 | 6.4 |
| Suburban | 10.0 | 8.7 | 1.2 | 1.9 | 0.5 | 0.6 | 14.8 | 7.4 |
| Rural & Town | 12.6 | 10.7 | 1.7 | 3.3 | 0.8 | 1.4 | 17.7 | 8.7 |

**Figure 1**. California high school student current (past 30 day) tobacco and marijuana prevalence by urban classification.

*Note*. Any tobacco product use includes students who reported using vapes, cigarettes, little cigars or cigarillos, big cigars, smokeless tobacco, hookah, and/or heated tobacco products in the past 30 days. Cigs = cigarettes; LCC = little cigars or cigarillos; SLT = smokeless tobacco; MJ = marijuana.

**Data source**. 2019-2020 California Student Tobacco Survey.

# Age of Initiation

Initiation of tobacco use at an early age is associated with greater nicotine dependence and sustained tobacco use, leading to determinantal long-term health effects.[9] Residents of rural communities are more likely to initiate tobacco product use at a younger age compared to their city and suburban counterparts.[11]

- The proportion of youth that started using cigarettes by the age of 13 was highest in youth from rural areas (Figure 2).
- The same pattern of results was shown for vapes with marijuana and for marijuana use that excluded vapes (Figure 2).

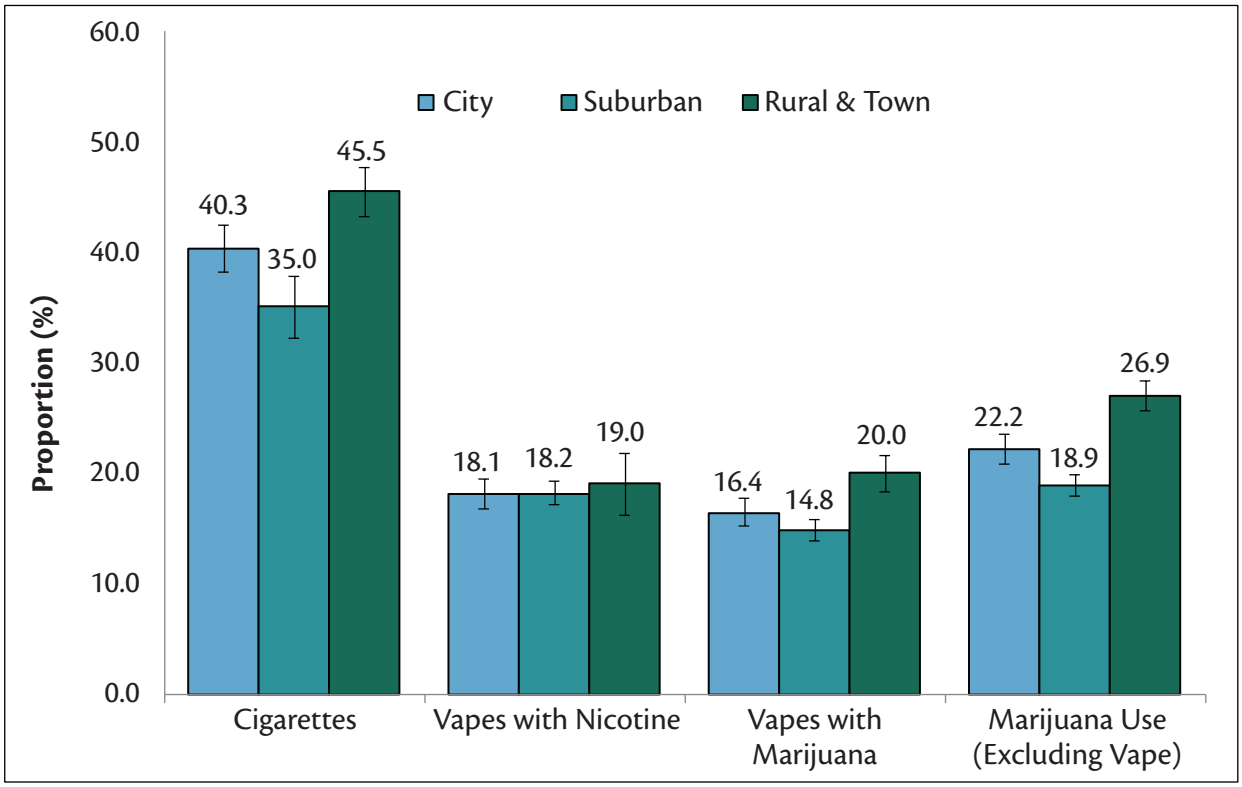



**Figure 2**. Proportion of California high school students that initiated tobacco and/or marijuana use before the age of 13 years by urban classification.

**Data source**. 2019-2020 California Student Tobacco Survey.

# Secondhand Smoke and Vapor Exposure

People living in rural areas are more likely to be exposed to secondhand smoke at home.[6] This is troubling as secondhand smoke is filled with toxic chemicals and can lead to negative health conditions such as respiratory problems, cardiovascular disease, and lung cancer.[12]

- Rural California youth had the highest occurrence of secondhand smoke exposure to both cigarette and marijuana smoke in either a car or room compared to youth from city and suburban areas (Figure 3).
- Youth that reported they were exposed to secondhand smoke in a room were asked where they were during their last exposure.
    - Rural youth had the highest exposure rate at home (40.0%) compared to their city (34.2%) and suburban (33.5%) counterparts.

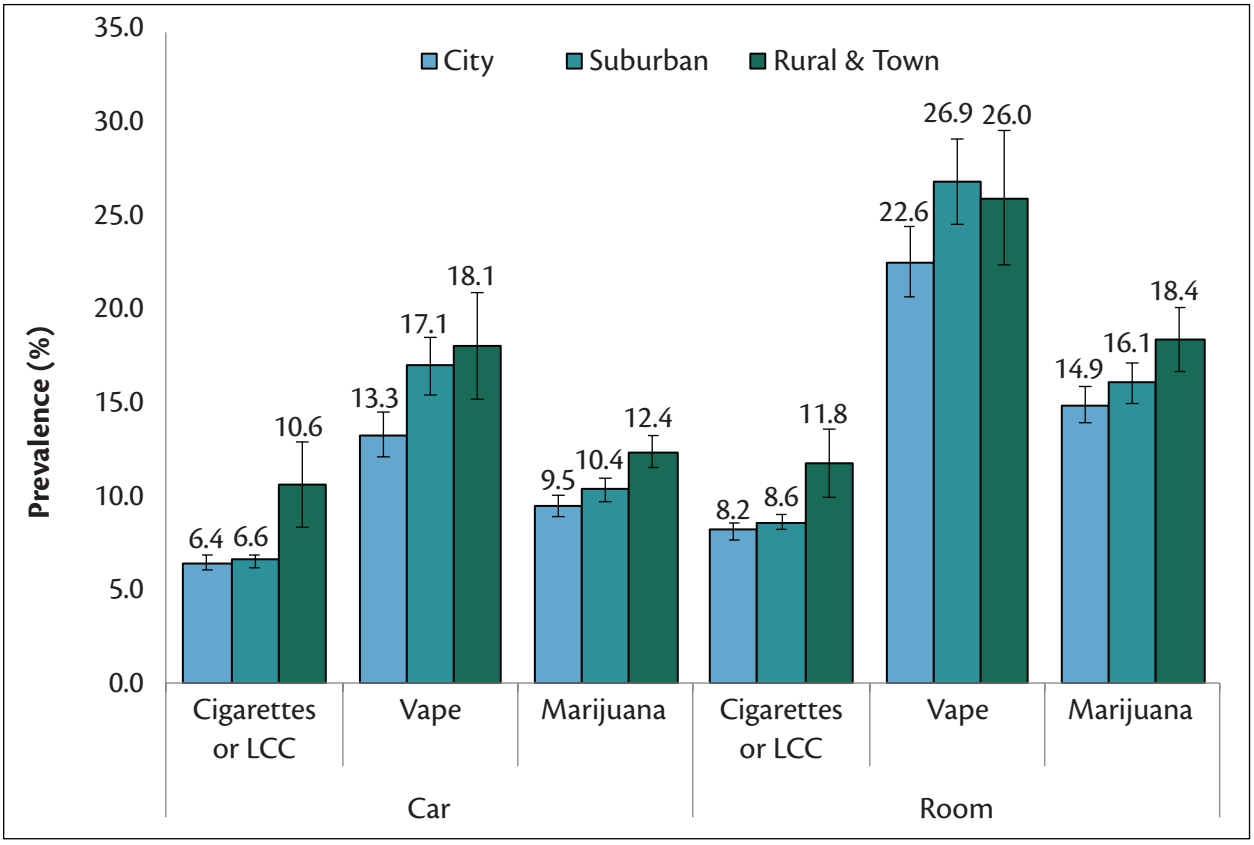



**Figure 3**. California high school student indoor secondhand smoke exposure in a car or room in the last 2 weeks by urban classification.

**Data source**. 2019-2020 California Student Tobacco Survey.

- Rural youth reported the lowest occurrence of a total home ban on smoking cigarettes (81.5%) and marijuana (82.8%) compared to youth that attended school in suburban communities (85.0% and 85.4%, respectfully).
- Youth that attended school in rural communities reported the lowest occurrence of a total home ban on vaping (81.2%) compared to city (83.6%) and suburban (84.3%) youth.
- As shown in Figure 4, the percentage of youth that lived with someone that either smoked cigarettes, vaped, and/or used marijuana was highest in rural areas.

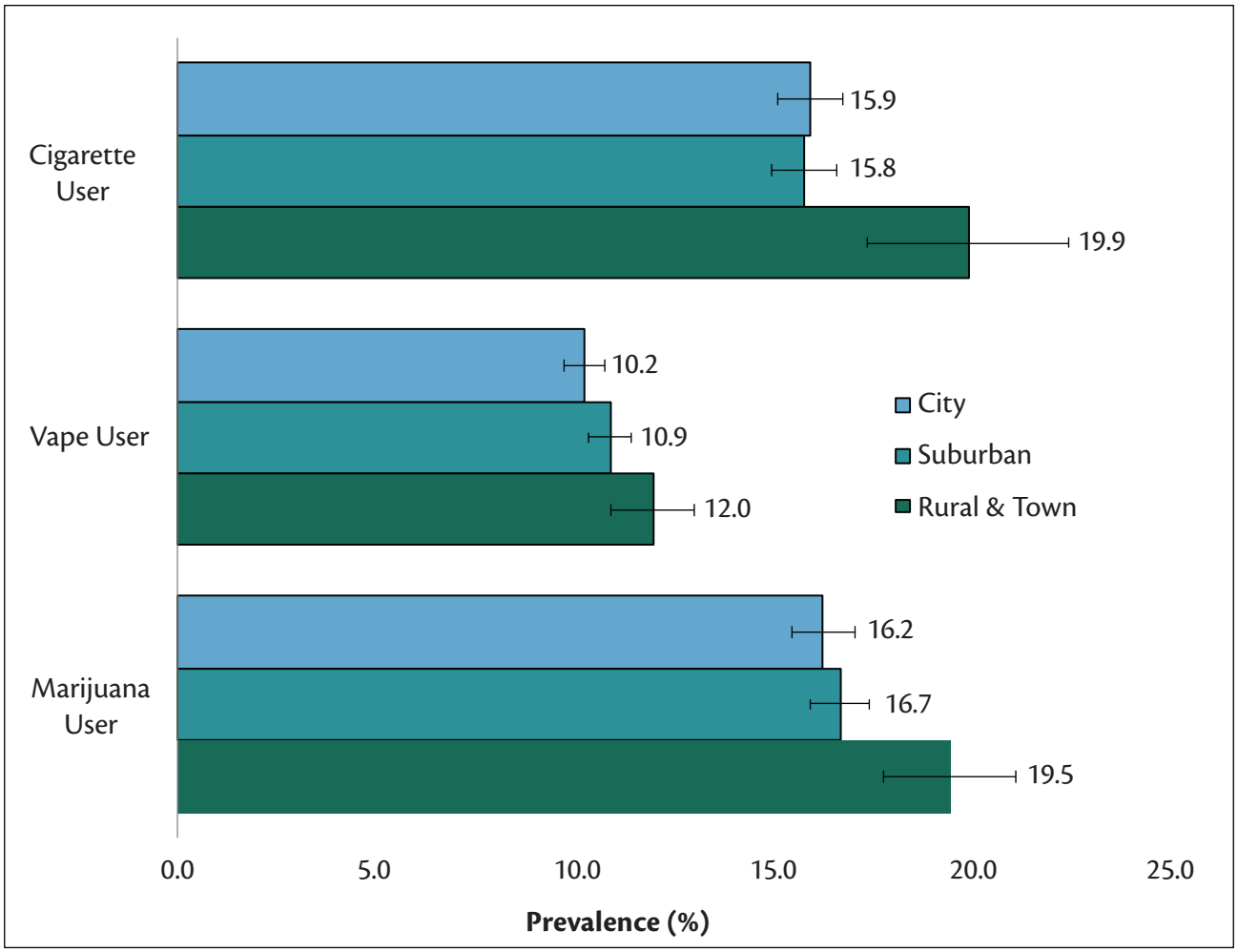



**Figure 4**. Percent of California high school students that reported living with a cigarette, vape, and/or marijuana user by urban classification.

**Data source**. 2019-2020 California Student Tobacco Survey.

# Geographic Location

Youth tobacco and marijuana use and secondhand smoke exposure was also examined using the geographic location of the school youth respondents attended. Data are presented for each California county. Differences based on rurality are also shown by comparing counties that self-identified as rural versus those that did not (i.e., non-rural counties).

## Prevalence

Youth attending school in Far Northern California and Eastern Central California had the highest prevalence of any tobacco use. Additionally, youth in rural areas had the highest prevalence of any tobacco product use (Figure 5).

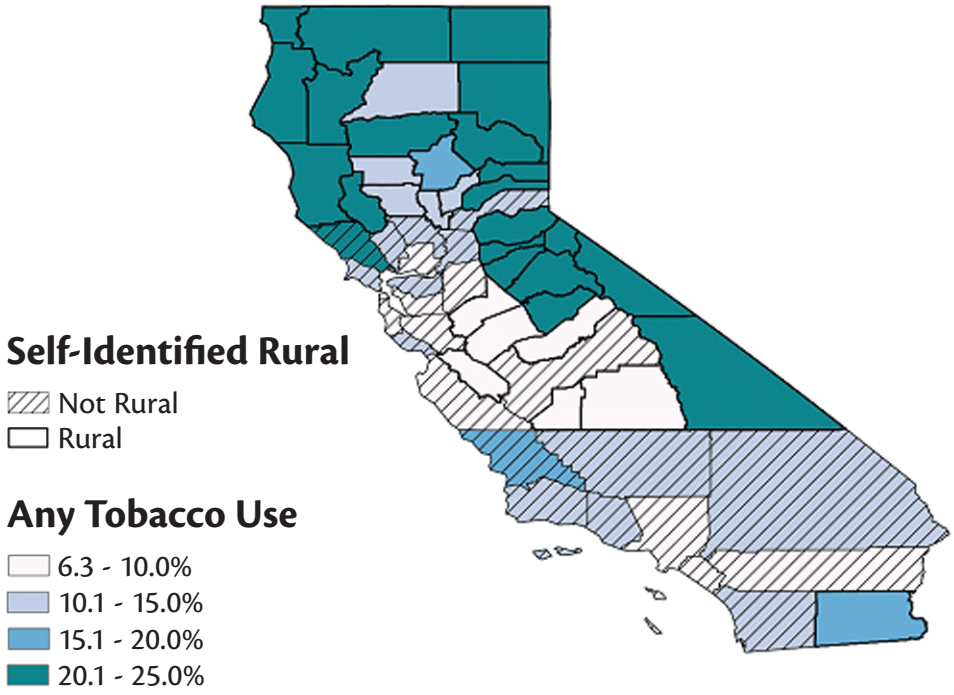



**Figure 5**. California high school student current (past 30 day) use of any tobacco product by geographic region.

*Note*. Any tobacco product use includes students who reported using vapes, cigarettes, little cigars or cigarillos, big cigars, smokeless tobacco, hookah, and/or heated tobacco products in the past 30 days.

**Data source**. 2019-2020 California Student Tobacco Survey.

As shown in Figure 6, youth attending school in Eastern Central California and/or a rural area had the highest prevalence of current vape use.

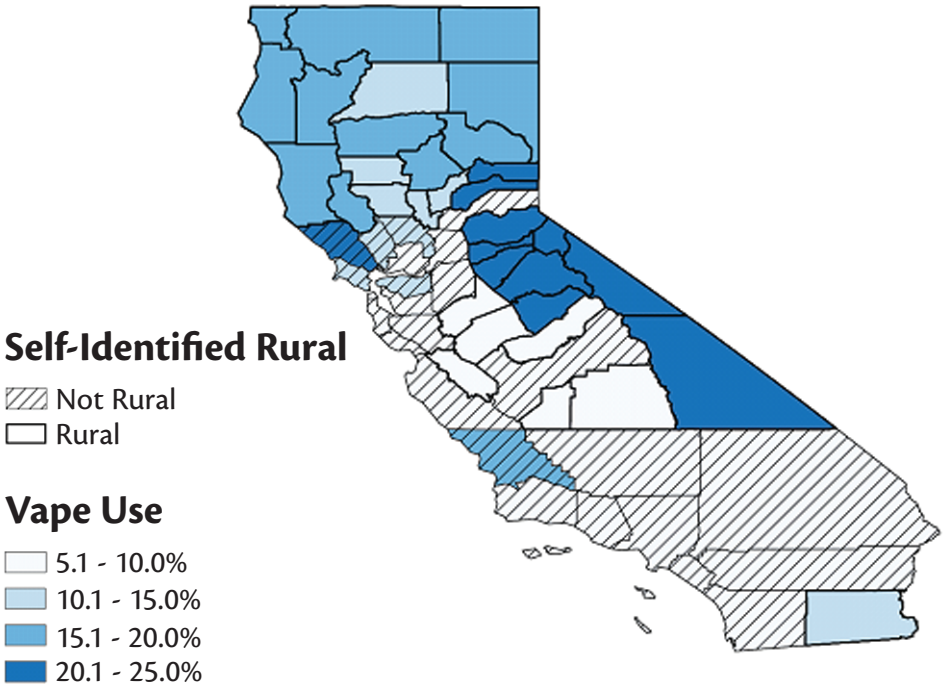



**Figure 6**. California high school student current (past 30 day) vape use by geographic region.

*Note*. Vapes include electronic devices like vape pens, e-cigarettes, e-hookah, hookah pens, e vaporizers, tanks, pods, or mods used to inhale a vapor. Vape use prevalence included students who reported vaping or using a hookah pen with nicotine or just flavoring (not vaping marijuana).

**Data source**. 2019-2020 California Student Tobacco Survey.

In general, youth that attended a school in Far Northern California and/or a rural area had the highest current marijuana use prevalence (see Figure 7).

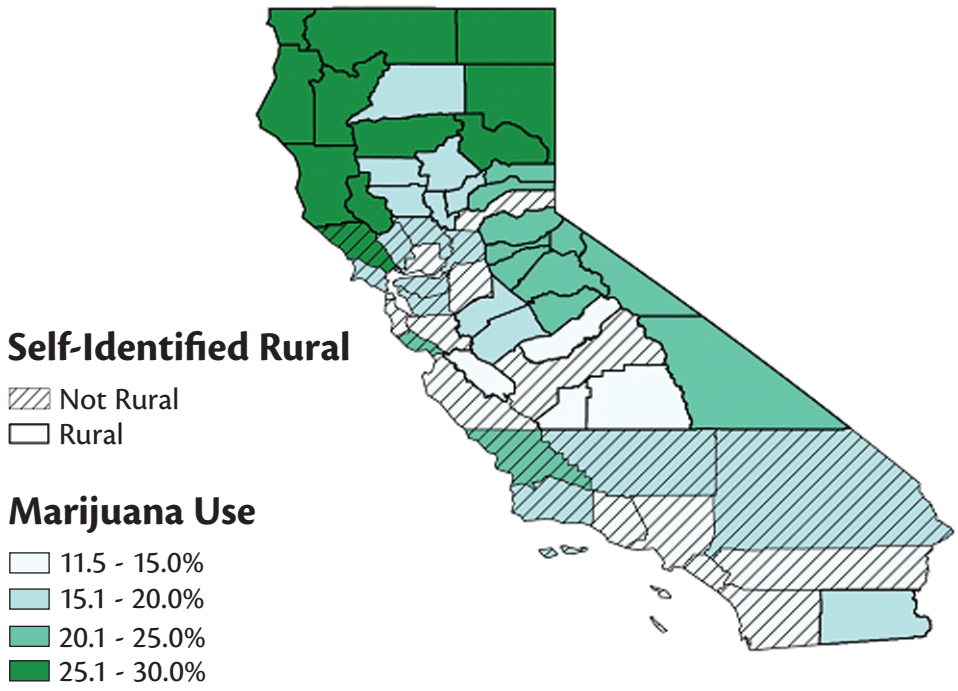



**Figure 7**. California high school student current (past 30 day) use of any marijuana product by geographic region.

**Data source**. 2019-2020 California Student Tobacco Survey.

# Secondhand Smoke and Vapor Exposure

On average, youth attending school in Far Northern California and/or a rural area had the greatest indoor secondhand smoke exposure to cigarettes, little cigars, and/or cigarillos (see Figure 7).

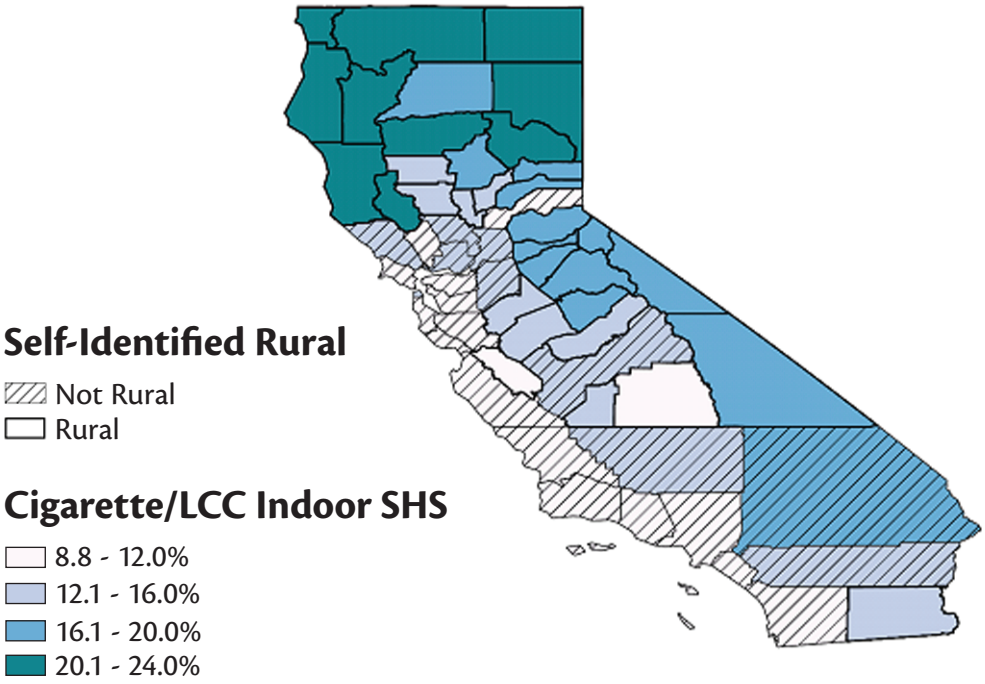



**Figure 7**. California high school student indoor secondhand smoke exposure to cigarettes, little cigars, and/or cigarillos in a room or car during the last two weeks by geographic region.
*Note*. LCC = little cigars or cigarillos; SHS = secondhand smoke.
**Data source**. 2019-2020 California Student Tobacco Survey.

Youth attending school in Eastern Central California and/or a rural area had the highest indoor exposure to vapes (see Figure 8).

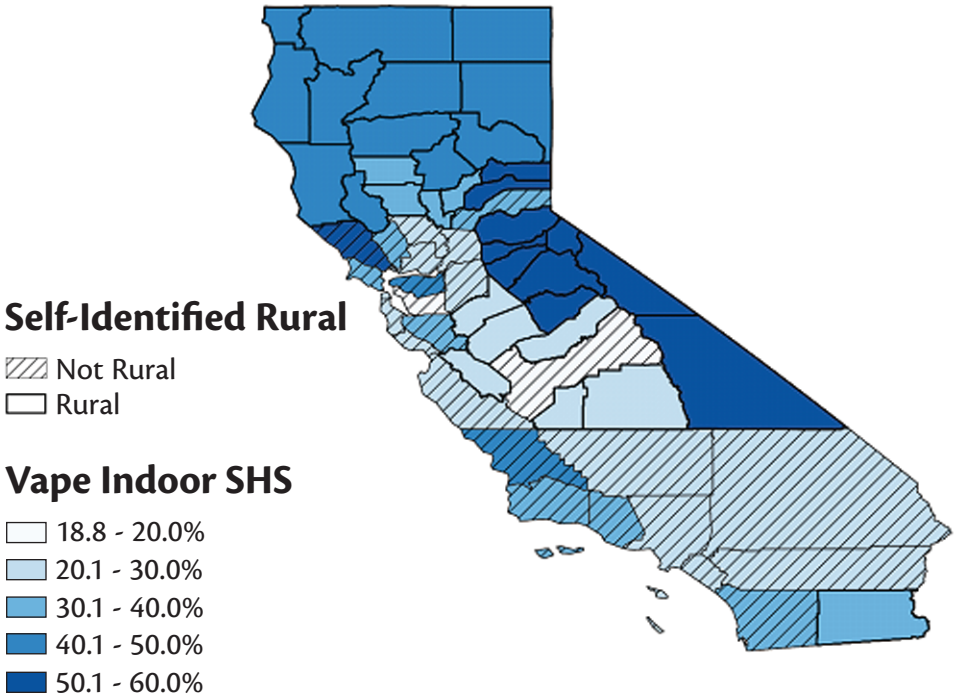



**Figure 8**. California high school student indoor secondhand vapor exposure to vapes in a room or car during the last two weeks by geographic region.

*Note*. SHS = secondhand smoke.

**Data source**. 2019-2020 California Student Tobacco Survey.

As shown in Figure 7, youth in Far Northern California and/or a rural area had the highest marijuana secondhand smoke exposure.

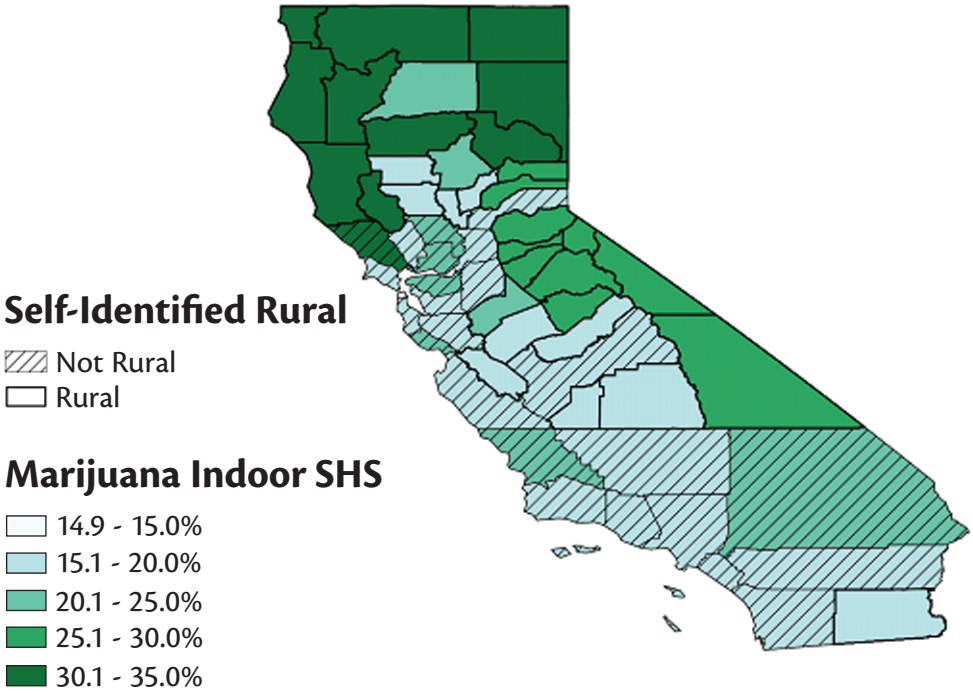



**Figure 7**. California high school student indoor secondhand smoke exposure to marijuana in a room or car during the last two weeks by geographic region.

*Note*. SHS = secondhand smoke.

**Data source**. 2019-2020 California Student Tobacco Survey.

# References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