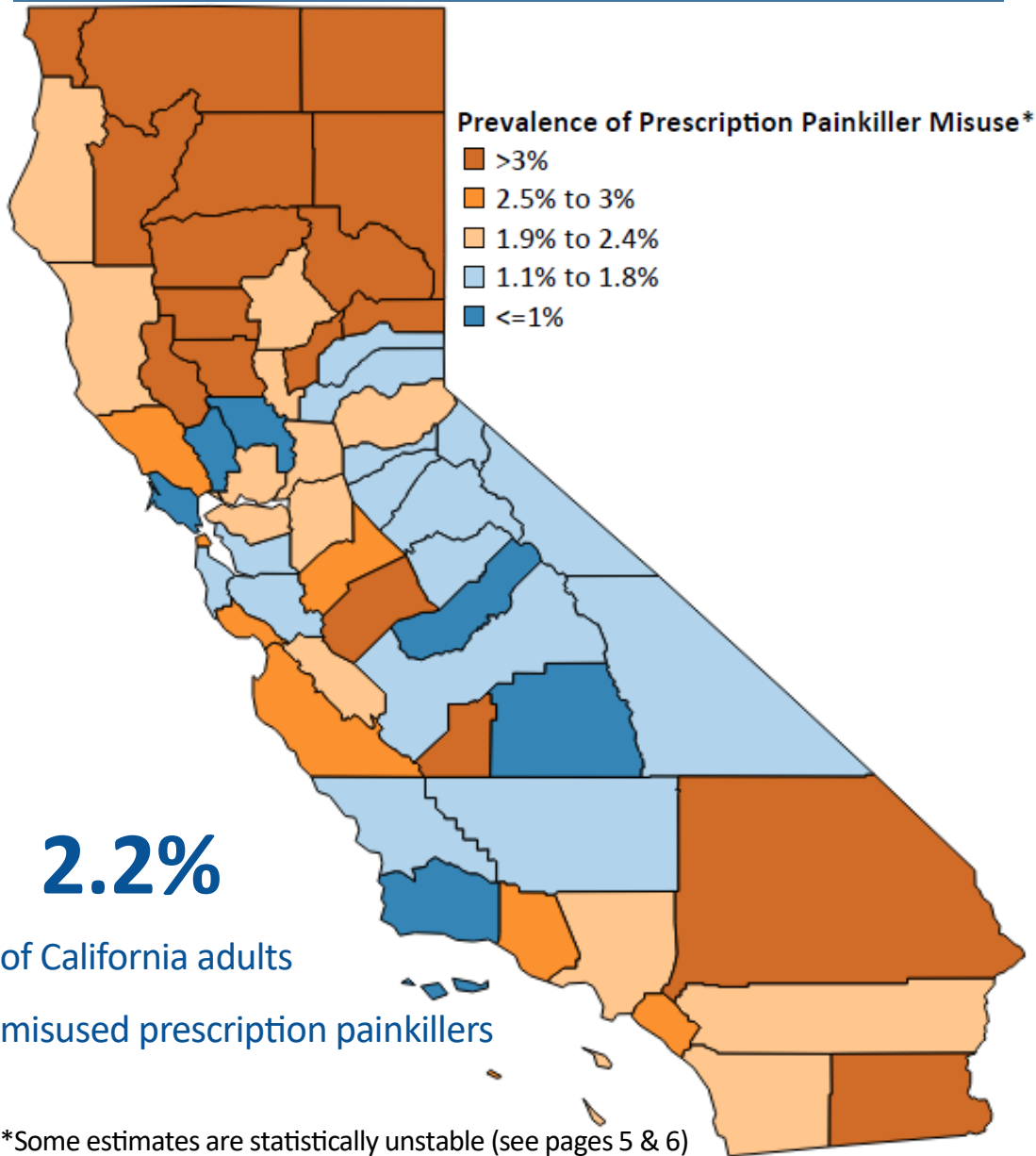


Adult Prescription Painkiller Misuse in California, 2017-2019

Key Points

- Prescription painkiller misuse is defined as having used any prescription painkiller in a way that did not follow the doctor’s directions, in the past 12 months
- From 2017 to 2019, 2.2% of California adults misused prescription painkillers. This is below the national average of 4.2% in 2017 and 3.7% in 2018 and 2019¹
- County-level prevalence ranged from 0.57% in Yolo County to 4.4% in Colusa, Glenn, and Tehama counties combined
- County-level prevalence can inform resource allocation to prevent and alleviate the burden of prescription painkiller misuse in California

Prevalence of Self-Reported Prescription Painkiller Misuse by County, 2017-2019



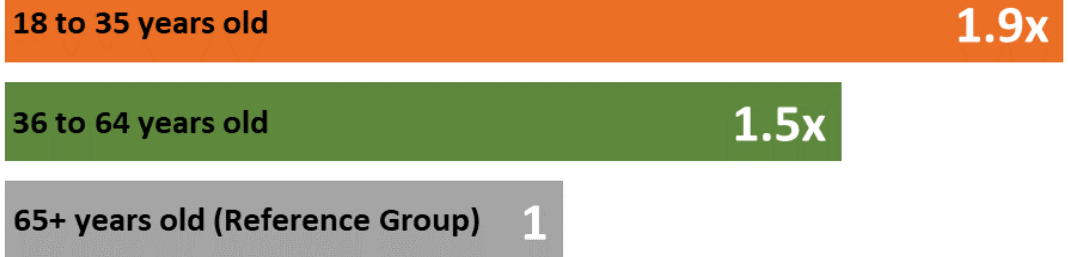
Notes: University of California, Los Angeles’ California Health Interview Survey 2017-2019 data were used.² Misuse was defined via the following question: ‘Examples of prescription painkillers are Vicodin®, OxyContin®, Norco®, Hydrocodone, Percocet® and Methadone. In the past 12 months, have you used any prescription painkiller in a way that did not follow your doctor’s directions?’. Weighted prevalence estimates were calculated. The tan category (1.9% to 2.4%) is comparable to the 95% confidence interval of the statewide prevalence. Weighted values were calculated across 3 years to increase sample size.

Adult Prescription Painkiller Misuse in California, 2017-2019: Reasons for Use & Prescription Source

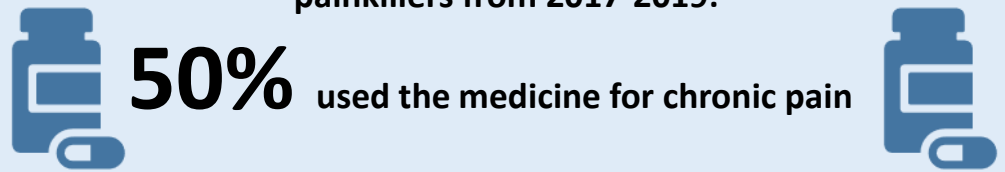
Key Points

- Younger adults have a greater likelihood of misusing prescription painkillers compared to older adults (65+)
- Chronic pain is the primary reason for prescription painkiller use among adults who misused prescription painkillers in the last 12 months; other conditions can be found on page 7
- There is a need for alternatives to prescription painkillers, like access to holistic pain management approaches
- Compared to older adults, a greater proportion of younger adults did not get prescription painkillers from a doctor
- Overall, most adults misusing prescription painkillers got prescriptions from a doctor

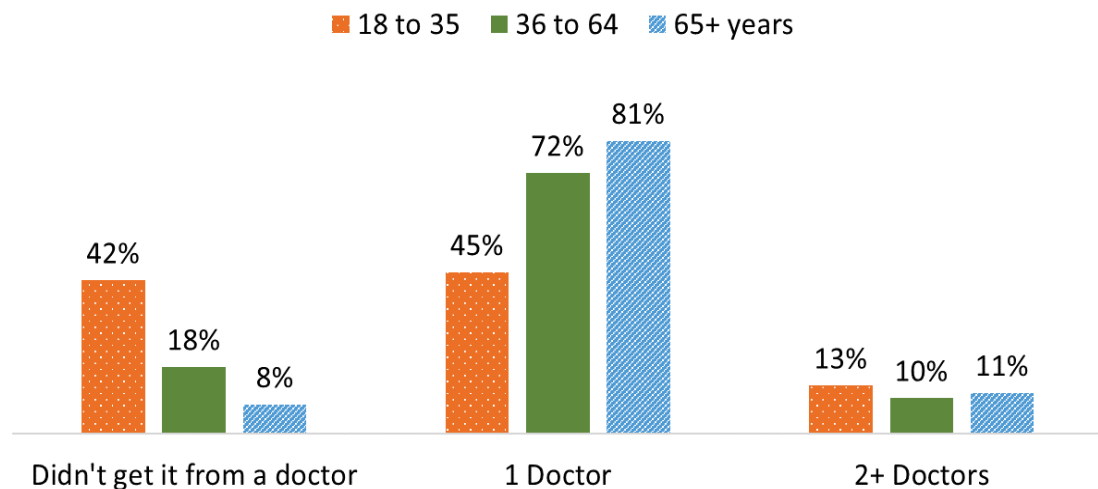
Prescription painkiller misuse is nearly **2x** as common in younger adults compared to adults 65+



Among 1,198 adults self-reporting misusing prescription painkillers from 2017-2019:



Prescription Painkiller Source by Age Group, 2017-2019



Notes: University of California, Los Angeles' California Health Interview Survey 2017-2019 data were used.² Misuse was defined via the following question: 'Examples of prescription painkillers are Vicodin®, OxyContin®, Norco®, Hydrocodone, Percocet® and Methadone. In the past 12 months, have you used any prescription painkiller in a way that did not follow your doctor's directions?'. Prevalence ratios were calculated to compare prescription painkiller misuse by age group. Weighted percentages and unweighted frequencies are shown. Among adults misusing prescription painkillers, survey response options for prescription source included: 'one doctor', 'more than one doctor', or 'I didn't get it from a doctor'.

Resources

Properly Dispose of Unused Prescription Painkillers and Other Medicines



- [Dispose of unused medicines properly](#) to decrease access to and lower the risk of prescription painkiller misuse. Use this [search tool](#) to find year-round public medicine disposal sites. The Drug Enforcement Administration holds a [National Prescription Drug Take Back Day](#) campaign annually in April and October.

Recognize an Overdose Event—Carry and Give Naloxone



- Naloxone, also known as Narcan, is an opioid antagonist that temporarily reverses the effects of an opioid overdose. Watch a [video](#) on [how to recognize an overdose event and give naloxone](#). **With a fentanyl overdose, two or more doses of naloxone may need to be given. Call 911 after giving naloxone.**
- Learn about the [CDPH Statewide Standing Order](#) and California Department of Health Care Services (DHCS) [Naloxone Distribution Project](#).

Promote Resources to Providers and Prescribers



- [Nonpharmaceutical alternatives](#) to chronic pain management, such as acupuncture, massage, [self-management programs](#), and [nonopioid medications](#), can provide chronic pain relief and are safer than opioids.
- [Prescription Drug Monitoring Programs \(PDMPs\)](#) are statewide electronic databases that track all controlled substance prescriptions to help improve patient safety. [California law](#) requires licensed authorized prescribers of scheduled drugs to register and use California's PDMP: [Controlled Substance Utilization Review and Evaluation System \(CURES\)](#).
- [Centers for Disease Control and Prevention's Guideline for Prescribing Opioids for Chronic Pain](#) aims to improve communication between providers and patients about opioid therapy for chronic pain.
- [Center for Innovation in Academic Detailing on Opioids \(CIAO\)](#) is a learning hub that supports providers delivering compassionate chronic pain and opioid management. CIAO offers clinical tools and guidelines, including a [guide for primary care providers on opioids and chronic pain](#).



Promote Resources to Help Those with Substance Use Disorder

- [Choose Change California](#) is a DHCS website that provides an easy pathway to get help for people affected by substance use disorder.



About the Data

Background: Prescription painkillers can be effective treatment for pain. However, when prescription painkillers are misused, they can lead to addiction, overdose, and death. Recent and county-level prevalence of prescription painkiller misuse in California have yet to be well estimated. Data from UCLA's 2017-2019 California Health Interview Survey (CHIS),² a statewide representative web and telephone-based survey, were used to assess statewide and county prevalence of adult misuse of prescription painkillers and to explore reasons for prescription painkiller use and source.

Methods and Data Sources: Using 2017-2019 CHIS data, prescription painkiller misuse was defined as having used any prescription painkiller in a way that did not follow the doctor's directions, in the past 12 months. Adults who self-reported misuse were subsequently asked about their prescription source and reasons for use. Prescription source included receiving prescription painkillers from one doctor, more than one doctor, or didn't get it from a doctor. Reasons for prescription painkiller use included 1) dental work/dental pain, 2) surgery, not accident related, 3) recent injury, 4) chronic pain, regardless of cause, and 5) other. Analyses used PROC SURVEYFREQ in SAS 9.4 and prevalence ratios were computed with replicate weights for proper variance estimation. Missing values were imputed.³ Three multi-county strata were analyzed in accordance with CHIS sampling methodology due to the small sample size of counties.³ See page 6 for strata.

Results: Among 64,490 adult CHIS participants (18-85 years old) in 2017-2019, prescription painkiller misuse in the last 12 months was reported by 2.2% (95% Confidence Interval [CI]: [1.9, 2.4] n=1,198), estimated to represent 640,721 California adults. California's prevalence is below the national average of 4.2% in 2017 and 3.7% in 2018 and 2019 based on estimates provided by the National Survey on Drug Use and Health.¹ County-level prevalence in California ranged from 0.57% in Yolo County to 4.4% in Colusa, Glenn, and Tehama counties combined. From 2017-2019, 159 of 64,490 total respondents were imputed for prescription painkiller misuse. Three were imputed as 'yes' to misuse and 156 were imputed as 'no' to misuse. This made no difference in our overall findings.

- Age (grouped as 18-35, 36-64, 65+ years) was statistically significantly associated with misuse of prescription painkillers (Rao-Scott Chi-Square, $\chi^2_{RS} = 13.1$, $p=0.002$). The prevalence of misuse among adults 18-35 was 1.9 times that of adults 65+ years. The prevalence among adults 36-64 was 1.5 times that of adults 65+ years.
- The most common reason for adult prescription painkiller use was chronic pain, regardless of cause, among adults misusing prescription painkillers in the last 12 months (2017=47.2%, 2018=50.3%, 2019=51.7%).
- Prescription source is statistically significantly different across age groups (Rao-Scott Chi-Square, $\chi^2_{RS} = 30.6$, $p<0.0001$). Of adults who misused prescription painkillers and did not get prescriptions from a doctor, 71% were 18-35 years old.
- In 2019, 70% of adults who misused prescription painkillers received prescriptions from one doctor, compared to 46% in 2018 and 61% in 2017. Estimates for 2018 and 2019 are statistically significantly different (95% CI do not overlap).

Data Limitations: Prevalence estimates were calculated across 3 years to increase sample size. Despite pooling the data, some estimates are still statistically unstable. Prevalence may be underestimated due to social desirability bias, although this should be reduced due to the anonymity of the survey. Reasons for use could not be confidently compared across years due to approximately 20% of eligible respondents missing for this measure in 2017 and 2018 compared to 0% missing in 2019. See Appendix on page 7 for more information.

Conclusion: Our findings indicate that prevalence of adult prescription painkiller misuse does not differ much across counties in California. The prevalence does differ by age group, and is lower than the national average. From 2017-2019, most adults misusing prescription painkillers received prescriptions from a doctor; however, the difference in prescription source between younger and older adults highlights the need for tailored interventions across age groups. The primary reason for prescription painkiller use was chronic pain. There is need for alternatives to prescription painkillers, such as equitable access to holistic approaches to pain management.

Prepared by: California Department of Public Health, Overdose Prevention Initiative

References:

1. Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health. Section 1: Illicit Drug Use/[Pain Reliever Misuse Tables - 1.1 to 1.123, 2021.](#)
2. California Health Interview Survey. CHIS 2017, 2018, and 2019 Adult Files. Los Angeles, CA: UCLA Center for Health Policy Research, October 2020.
3. California Health Interview Survey. [CHIS 2017-2018 Methodology Series: Report 3 - Data Processing Procedures.](#) Los Angeles, CA: UCLA Center for Health Policy Research, 2019.



County-level Prevalence of Self-Reported Prescription Painkiller Misuse, 2017-2019

| County | Number of adults misusing prescription painkillers (Unweighted n) | Estimated number of adults misusing prescription painkillers (Weighted N) | Weighted prevalence of prescription painkiller misuse (%) | Standard Error | Lower 95% CI | Upper 95% CI | Statistically Unstable* |
|-----------------|---|---|---|----------------|--------------|--------------|-------------------------|
| Alameda | 30 | 13,489 | 1.07 | 0.29 | 0.49 | 1.64 | Stable |
| Butte | 16 | 3,930 | 2.29 | 0.87 | 0.57 | 4.00 | Unstable but reasonable |
| Contra Costa | 32 | 18,479 | 2.02 | 0.82 | 0.40 | 3.64 | Unstable but reasonable |
| El Dorado | 13 | 3,229 | 2.27 | 0.63 | 1.02 | 3.51 | Stable |
| Fresno | 13 | 7,770 | 1.10 | 0.66 | 0.00 | 2.40 | Unstable |
| Humboldt | 20 | 2,158 | 2.16 | 0.78 | 0.63 | 3.70 | Unstable but reasonable |
| Imperial | 40 | 4,324 | 3.53 | 0.98 | 1.59 | 5.46 | Stable |
| Kern | 17 | 8,339 | 1.38 | 0.72 | 0.00 | 2.80 | Unstable |
| Kings | 26 | 3,702 | 3.61 | 1.23 | 1.19 | 6.04 | Unstable but reasonable |
| Lake | 20 | 1,855 | 3.66 | 1.88 | 0.00 | 7.36 | Unstable |
| Los Angeles | 203 | 173,018 | 2.23 | 0.26 | 1.71 | 2.74 | Stable |
| Madera | 9 | 915 | 0.97 | 0.38 | 0.21 | 1.72 | Unstable |
| Marin | 6 | 1,232 | 0.65 | 0.33 | 0.00 | 1.30 | Unstable |
| Mendocino | 16 | 1,369 | 1.94 | 2.61 | 0.00 | 7.08 | Unstable |
| Merced | 18 | 6,212 | 3.63 | 1.04 | 1.57 | 5.68 | Stable |
| Monterey | 10 | 7,451 | 2.45 | 1.26 | 0.00 | 4.92 | Unstable |
| Napa | 15 | 1,014 | 1.02 | 0.44 | 0.15 | 1.88 | Unstable but reasonable |
| Nevada | 8 | 861 | 1.05 | 0.76 | 0.00 | 2.54 | Unstable |
| Orange | 71 | 64,978 | 2.67 | 0.52 | 1.65 | 3.68 | Stable |
| Placer | 12 | 5,527 | 1.77 | 0.95 | 0.00 | 3.65 | Unstable |
| Riverside | 54 | 38,691 | 2.19 | 0.59 | 1.03 | 3.35 | Stable |
| Sacramento | 28 | 27,209 | 2.39 | 0.84 | 0.74 | 4.03 | Unstable but reasonable |
| San Benito | 19 | 838 | 2.23 | 0.89 | 0.49 | 3.97 | Unstable but reasonable |
| San Bernardino | 49 | 52,221 | 3.37 | 0.75 | 1.90 | 4.83 | Stable |
| San Diego | 131 | 53,837 | 2.21 | 0.42 | 1.38 | 3.05 | Stable |
| San Francisco | 40 | 17,826 | 2.53 | 0.84 | 0.87 | 4.20 | Unstable but reasonable |
| San Joaquin | 13 | 12,622 | 2.19 | 1.16 | 0.00 | 4.46 | Unstable |
| San Luis Obispo | 15 | 3,440 | 1.83 | 0.68 | 0.49 | 3.18 | Unstable but reasonable |

Prepared by: California Department of Public Health, Overdose Prevention Initiative

Weighted prevalence of prescription painkiller misuse by county is rounded to the tenths place on the page 1 map.

*Estimates marked as Unstable or Unstable but reasonable should be interpreted with caution. Estimates were grouped into 3 levels of stability to provide a nuanced understanding of the rare, but important outcome—prevalence of prescription painkiller misuse. Unstable estimates have a coefficient of variation (CV) >50%, and Unstable but reasonable estimates have a CV between 30% and 50% and a sample size ≥ 11 .

All county-level estimates are in accordance with CHIS data suppression rules.



County-level Prevalence of Self-Reported Prescription Painkiller Misuse, 2017-2019

| County | Number of adults misusing prescription painkillers (Unweighted n) | Estimated number of adults misusing prescription painkillers (Weighted N) | Weighted prevalence of prescription painkiller misuse (%) | Standard Error | Lower 95% CI | Upper 95% CI | Statistically Unstable* |
|---|---|---|---|----------------|--------------|--------------|-------------------------|
| San Mateo | 9 | 8,593 | 1.37 | 0.78 | 0.00 | 2.91 | Unstable |
| Santa Barbara | 12 | 3,028 | 0.85 | 0.41 | 0.04 | 1.66 | Unstable but reasonable |
| Santa Clara | 27 | 21,567 | 1.46 | 0.75 | 0.00 | 2.94 | Unstable |
| Santa Cruz | 17 | 5,711 | 2.82 | 1.30 | 0.27 | 5.38 | Unstable but reasonable |
| Shasta | 20 | 4,458 | 3.24 | 1.76 | 0.00 | 6.71 | Unstable |
| Solano | 17 | 5,829 | 1.93 | 0.71 | 0.52 | 3.33 | Unstable but reasonable |
| Sonoma | 13 | 10,849 | 2.71 | 0.73 | 1.27 | 4.16 | Stable |
| Stanislaus | 20 | 9,887 | 2.47 | 0.78 | 0.93 | 4.00 | Unstable but reasonable |
| Sutter | 20 | 1,591 | 2.07 | 0.69 | 0.71 | 3.44 | Unstable but reasonable |
| Tulare | 11 | 2,243 | 0.71 | 0.36 | 0.00 | 1.42 | Unstable |
| Ventura | 21 | 17,692 | 2.72 | 1.17 | 0.42 | 5.02 | Unstable but reasonable |
| Yolo | 7 | 953 | 0.57 | 0.75 | 0.00 | 2.04 | Unstable |
| Yuba | 16 | 2,086 | 3.38 | 1.83 | 0.00 | 6.98 | Unstable |
| Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, and Tuolumne counties combined | 14 | 2,171 | 1.53 | 1.00 | 0.00 | 3.50 | Unstable |
| Colusa, Glenn, and Tehama counties combined | 17 | 3,846 | 4.43 | 2.09 | 0.31 | 8.54 | Unstable but reasonable |
| Del Norte, Lassen, Modoc, Plumas, Sierra, Siskiyou, and Trinity counties combined | 13 | 3,682 | 3.67 | 2.29 | 0.00 | 8.18 | Unstable |
| Total | 1,198 | 640,721 | 2.16 | 0.13 | 1.91 | 2.42 | Stable |

Prepared by: California Department of Public Health, Overdose Prevention Initiative

Weighted prevalence of prescription painkiller misuse by county is rounded to the tenths place on the page 1 map.

*Estimates marked as Unstable or Unstable but reasonable should be interpreted with caution. Estimates were grouped into 3 levels of stability to provide a nuanced understanding of the rare, but important outcome—prevalence of prescription painkiller misuse. Unstable estimates have a coefficient of variation (CV) >50%, and Unstable but reasonable estimates have a CV between 30% and 50% and a sample size ≥ 11 .

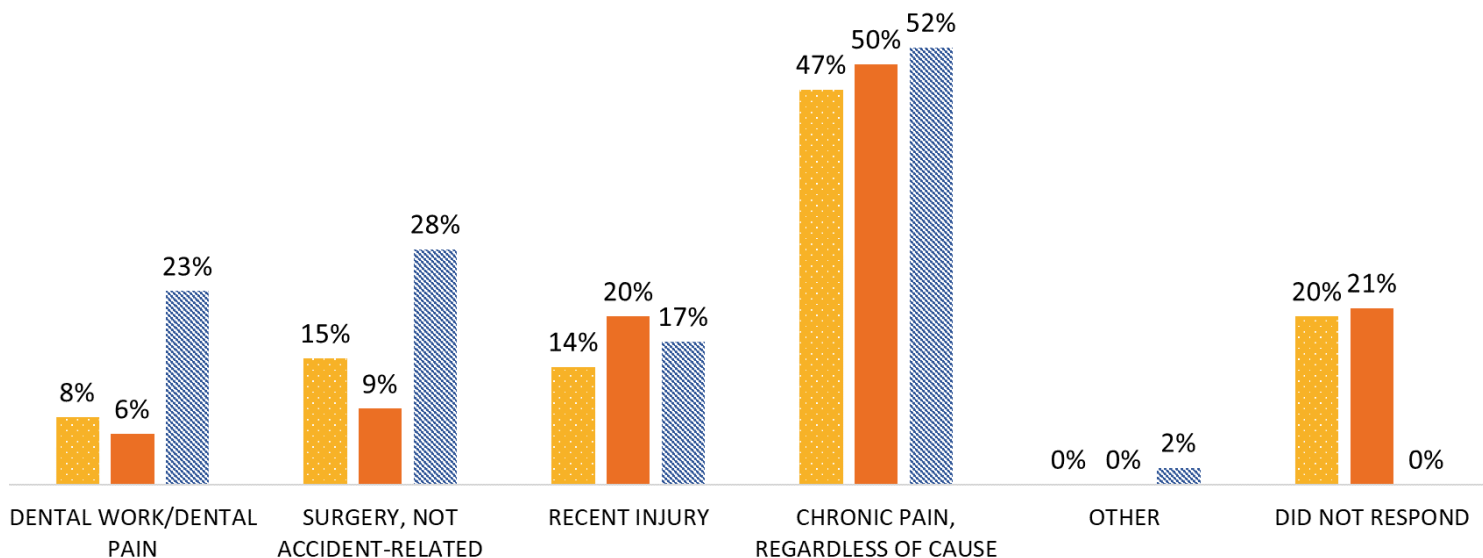
All county-level estimates are in accordance with CHIS data suppression rules.



Appendix

Reasons for Prescription Painkiller Use by Year, 2017-2019

■ 2017 ■ 2018 ■ 2019



Notes: University of California, Los Angeles' California Health Interview Survey 2017-2019 data were used.² Weighted percentages are shown. Participants who identified as misusing prescription painkillers in the past 12 months were asked 'What condition or conditions have you taken the medicine for?'. Participants could select one or more of the first five options above. In 2019, the 'other' category had fill-in responses related to anxiety, sleep, and drug addiction. Due to the large difference in response rates between 2017-2018 and 2019, year-to-year trends should be interpreted with caution. In 2019, survey administration included web-based surveys in addition to the usual telephone-based surveys used in 2017 and 2018. About 89% (unweighted) of 22,160 respondents in 2019 answered the web-based survey and 11% (unweighted) answered the telephone-based survey.

Please use the following citation when referencing this data brief:

Muñoz TA, Arthur KN. Adult Prescription Painkiller Misuse in California, 2017-2019. https://www.cdph.ca.gov/Programs/CCDPHP/sapb/CDPH%20Document%20Library/Adult-Prescription-Painkiller-Misuse-in-California_2017-2019_final.pdf. Published 2022.

