

## Cannabis Use: Impact in Washington State



*Jason R. Williams, PhD*

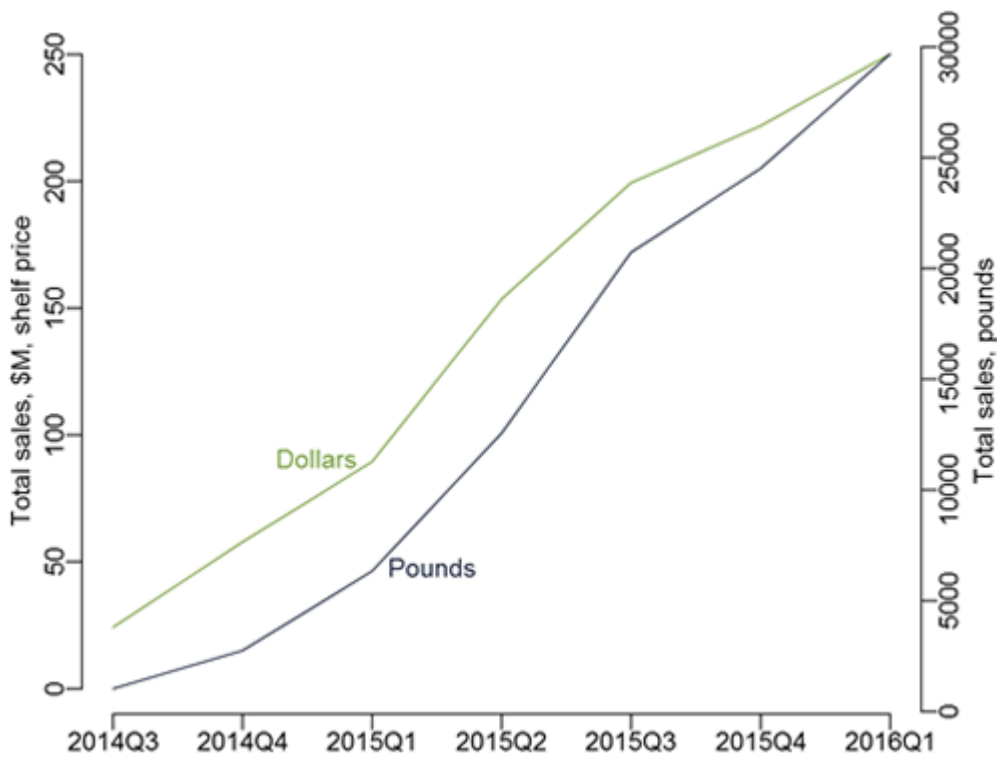
Cannabis is a commonly used drug in the U.S. and in Washington State, by both adults and adolescents. Now legal for recreational use by adults in Washington, cannabis's potential impact on public health and safety is of interest and concern. This page presents current data on the sale of retail cannabis; cannabis-related arrests and treatment admissions among adults and adolescents; and perceptions of and use of cannabis by youth in Washington.

### Highlights

- **Sales:** Retail sales increased dramatically, totaling \$250 million in the first quarter of 2016. Since legal retail sales began in 2014 the price per pound has declined.
- **Arrests and crime lab cases:** Arrests declined dramatically from 2012 to 2013 and police evidence testing, a proxy for local law enforcement cases that are likely to be prosecuted, began declining in 2009. Declines in police evidence testing cases were seen across almost every county in the state.
- **Treatment:** Publicly funded treatment admissions for which cannabis was the primary drug have declined since 2009. A majority of first time admissions to treatment continue to be among those under 18 years of age.
- **Youth:** Perceptions of risk and lifetime use: High school seniors' perception of risk of regular use of cannabis declined substantially from 2004 to 2014; during this period, past month use increased substantially from 19% ( $\pm 2\%$ ) in 2004 to 27% ( $\pm 2\%$ ). Over this same period of time there was no significant change in lifetime use.

### Sales

The Washington State Liquor and Cannabis Board (WSLCB) tracks sales data for the recreational market. Since retail sales began on 8 July 2014, the market continues to grow, as seen below, both in terms of revenue (shelf price = base price + taxes) and in terms of usable cannabis weight sold. The convergence of the two lines implies weight sold is increasing faster than the price, or that the price per pound of underlying cannabis is going down.

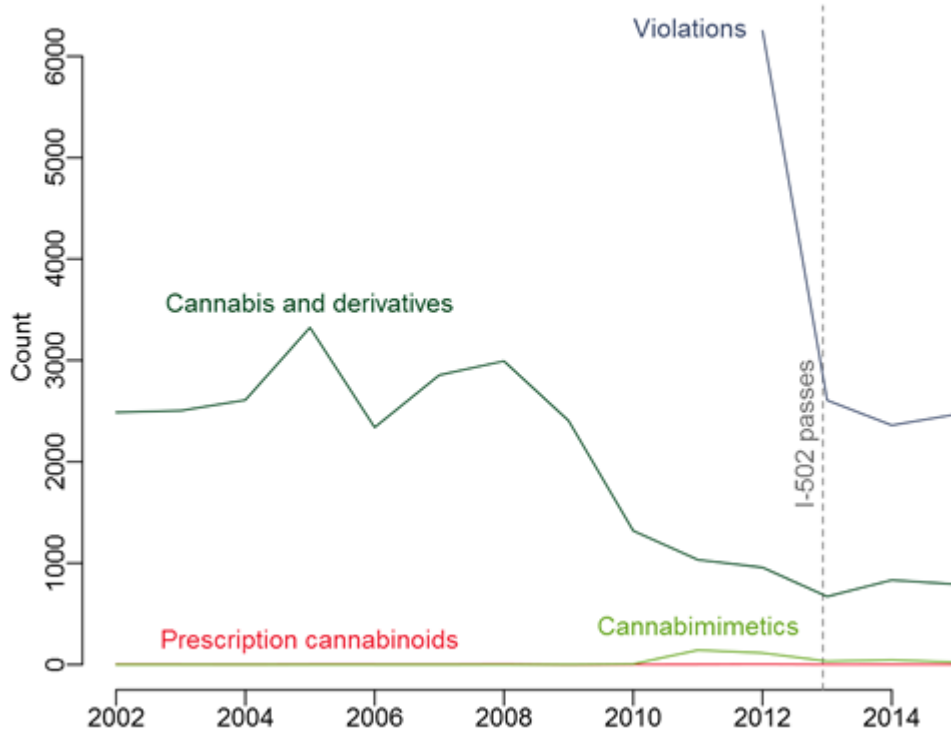


**Figure 1:** Retail cannabis sales by quarter. *Source: Washington State Liquor and Cannabis Board*

## Criminal justice

Law enforcement’s de-emphasis of enforcement and prosecution of cannabis crimes (use and low level dealing) and legal medicinal cannabis sales were part of the context in which support for I-502 grew. Below, we present counts of cannabis and hashish criminal violations collected by the Washington Association of Sheriffs & Police Chiefs and law enforcement drug evidence testing cases reported by the state crime lab (the Washington State Patrol Forensic Laboratory Services Bureau) with positive findings for any amount of cannabis, cannabis derivatives, and related compounds.

Cannabis violations dropped substantially, more than 50%, from 2012 to 2013; I-502 passed November 2012. Note that the National Incident-Based Reporting System replaced the Uniform Crime Reports Summary Reporting System in 2012 precluding presentation of long term trends. The crime lab data, police evidence that is generally tested in preparation for prosecution, indicate that this decrease was occurring long before 2013. Crime lab cases reflect a combination of who gets arrested, which cases get prosecuted, and which items get sent to a lab for testing.

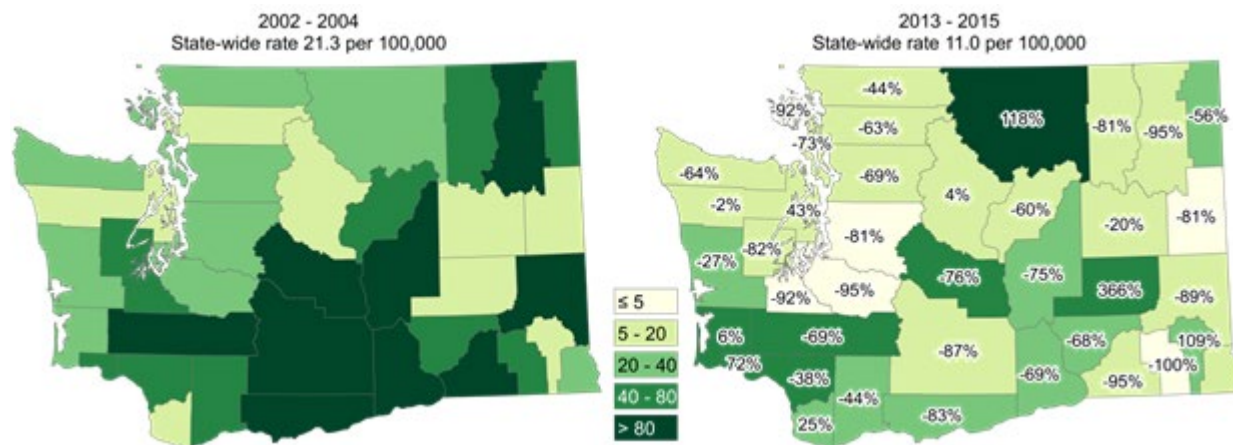


**Figure 2:** Cannabis violations and state crime lab cases involving cannabis and related substances. Sources: Forensic Laboratory Services Bureau, Washington State Patrol (crime lab cases); Washington Association of Sheriffs & Police Chiefs (reported violations)

We also include crime lab cases of prescription cannabinoids and cannabimimetics in Figure 2 (above). Prescription cannabinoids currently include two drugs, dronabinol and nabilone. Cannabimimetics, such as Spice and K2, are synthesized drugs that create some cannabis-like effects. They are increasingly being regulated as Schedule 1 drugs by the DEA (no legal use) while some are still available on the internet and in convenience stores. An important added complication for crime lab testing of both these comparison groups is the need for a standard to which to compare the lab sample for identification. Cannabimimetics in particular is a constantly changing class of drugs in which as soon as a particular formulation (e.g., JWH-018) gains enough notoriety to warrant a standards company producing a chemical standard and a crime lab buying it, the formulation is changed (e.g., to JWH-073). Thus, identified crime lab cases do not capture the rise of a particular cannabimimetic, but at best its peak and decline.

Below, we compare crime lab cases by county, aggregated over an earlier period, after the approval of medical cannabis in 1998, versus a later period immediately following the passage of I-502 in the first 3 years of implementation. Only crime lab submissions from an agency clearly operating within a single county were associated with a county. Those originating from multi-county agencies, such as cross-jurisdiction drug task forces, some Washington State Patrol detachments, or federal law enforcement, are included in the state-wide rate but not the county rates in the

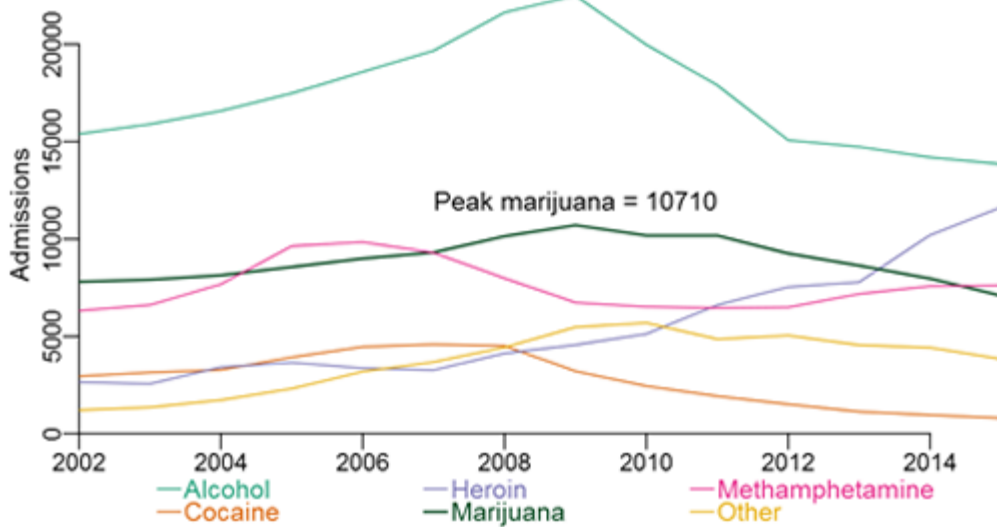
maps below. A consistent and substantial decline in cannabis-involved crime lab cases occurred throughout the state—except for three small counties (Garfield, Okanogan, and Adams, collectively 0.9% of the State population) where rates for cannabis cases more than doubled.



**Figure 3:** State crime lab cannabis cases per 100,000 county residents, with percent change. Sources: Forensic Laboratory Services Bureau, Washington State Patrol (crime lab cases); Washington State Office of Financial Management (population)

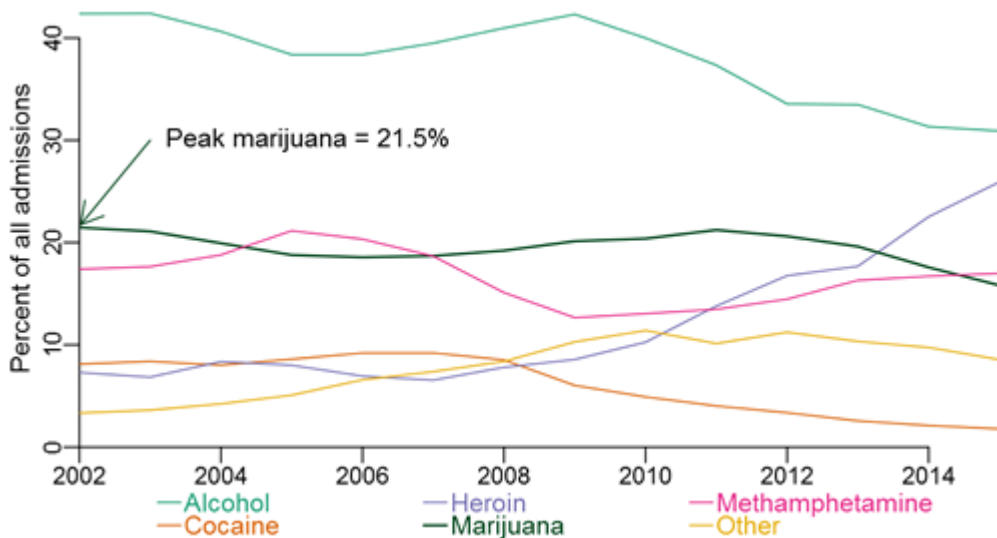
### Treatment admissions

Treatment admission data for Washington State were obtained from the Washington State Division of Behavioral Health and Recovery and were analyzed with a focus on cannabis trends. Note that the overall number of admissions for most drugs increased dramatically through 2010 before declining due to changes in treatment capacity and funding, therefore it is important to consider both the absolute (count) and relative (percentage) distributions of characteristics of interest. Data are presented by the number of treatment admissions per year. Data included are those for people who received public funding for their drug treatment, excluding Department of Corrections treatment. Those included are therefore of low socio-economic-status. Data on private/self-paid treatment are not available and this introduces a massive gap in our understanding of the total population’s drug use and consequences.

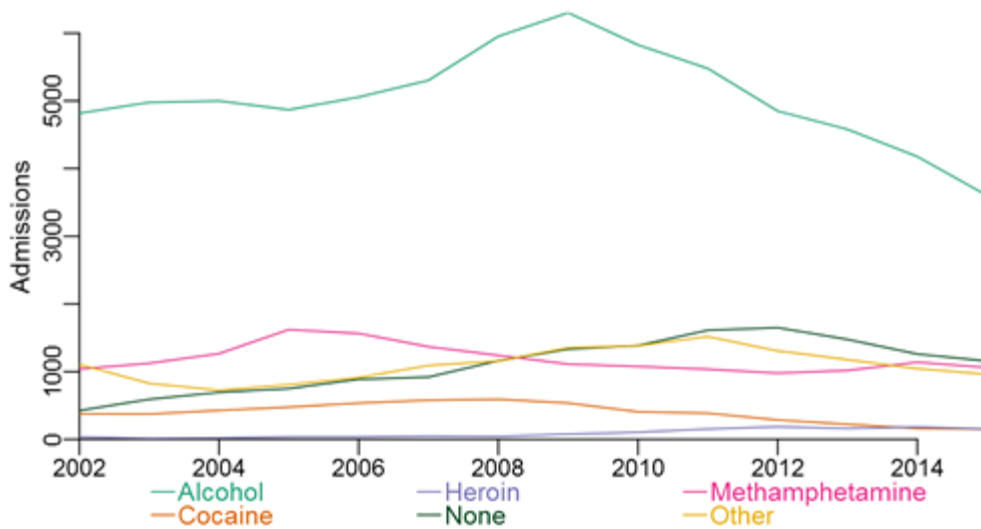


**Figure 4:** Counts of publicly funded substance abuse treatment admissions by primary drug. *Source: Washington State Division of Behavioral Health and Recovery Substance Abuse Treatment Analyzer*

Total cannabis admissions peaked in 2009 at 10,710, as did alcohol-primary admissions. Heroin admissions and, more recently, admissions for which methamphetamine was listed as the primary substance have increased in recent years while cannabis and alcohol admissions have declined. Comparing the proportion and rank of treatment admissions, cannabis peaked at 21.5% of all admissions in 2002, nearly re-ascended that peak in 2011, and declined to rank fourth in 2015.



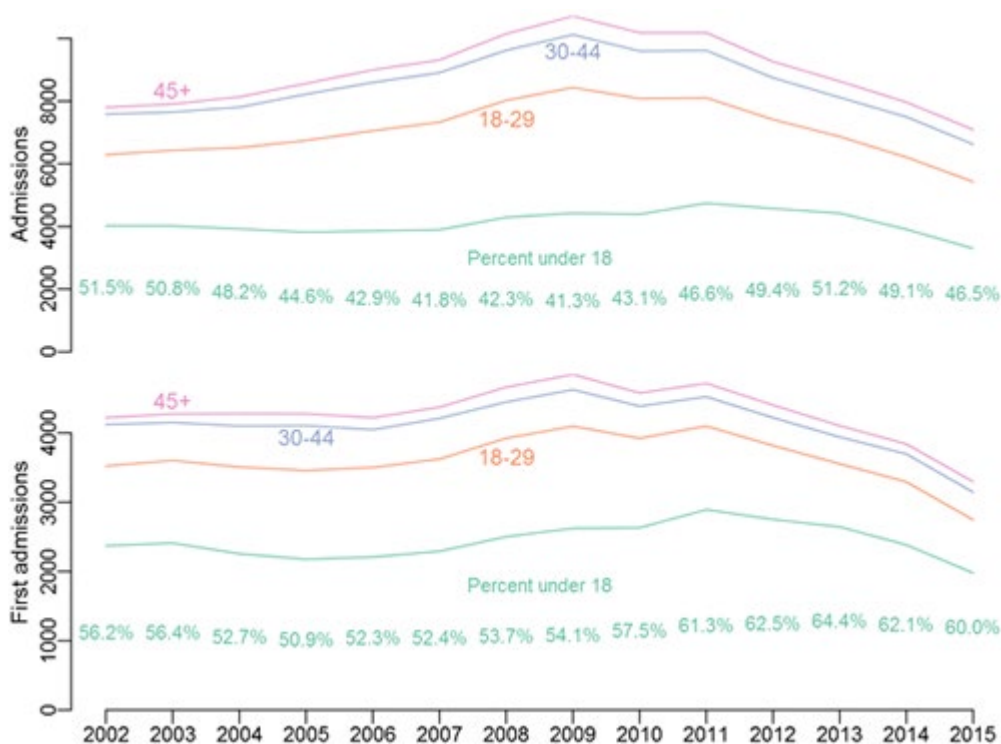
**Figure 5:** Treatment admissions by primary drug as percentage of all admissions. *Source: Washington State Division of Behavioral Health and Recovery Substance Abuse Treatment Analyzer*



**Figure 6:** Treatment admissions with cannabis as primary substance, by secondary substance. Source: Washington State Division of Behavioral Health and Recovery Substance Abuse Treatment Analyzer

Most people admitted to treatment who report cannabis as their primary drug also report a secondary drug. As seen above, alcohol is by far the most prominent. The proportion of patients reporting no other drug besides cannabis peaked in 2012 at 17.8%. Since then, other secondary drugs besides alcohol have become more common.

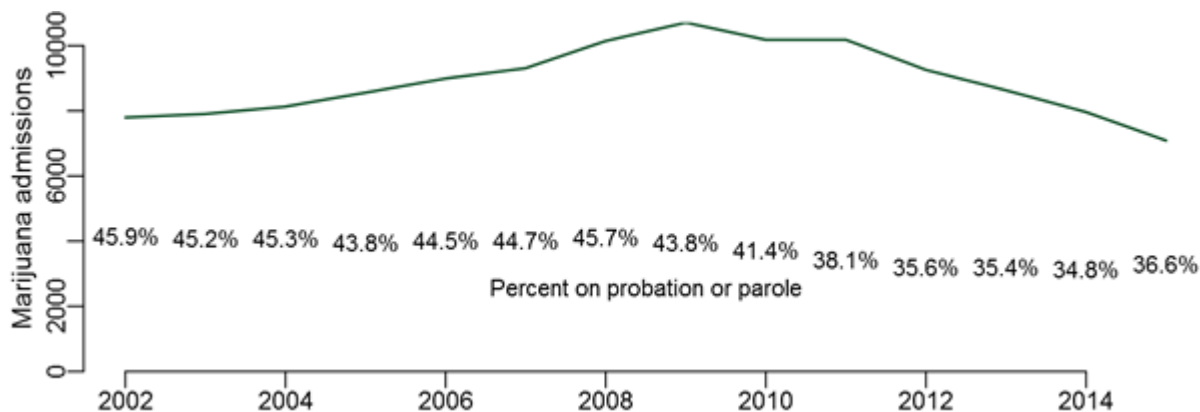
The figures below present counts of admissions stacked by age groups, with those under 18 at the bottom. First admissions, in the lower panel, represent incidence or users newly identified as being problematic users, and are cases for which no prior publicly funded treatment for any drug, regardless of modality, is found for the individual from 1999 onwards.



**Figure 7:** All admissions and first admissions by age group. *Source: Washington State Division of Behavioral Health and Recovery Substance Abuse Treatment Analyzer*

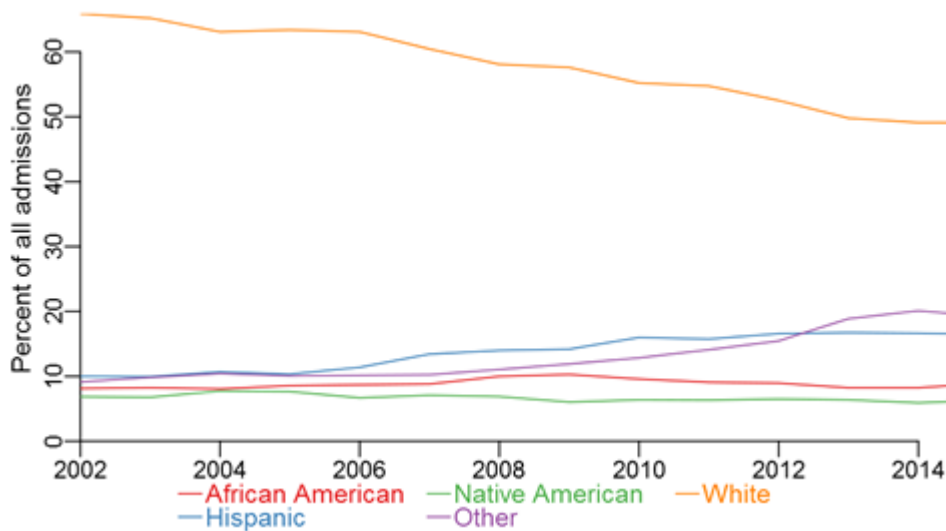
The vast majority of both overall admissions and first admissions are youth and young adults. Since 2002, those under 18 have made up from 41% to 52% of all admissions, and 51% to 64% of first admissions.

While the reason for referral to drug treatment is unknown, young people are less likely to self-refer than older adults. Referrals may come from criminal justice involvement. Below we present the proportion of all cannabis -primary admissions in which the patient was indicated as being on probation or parole. Over the years considered here, this peaked at 45.9% in 2002, and neared this peak in 2008. After 2010, however, less than 40% of all admitted clients have been on probation/parole.



**Figure 8:** Percent of cannabis admissions on probation or parole. *Source: Washington State Division of Behavioral Health and Recovery Substance Abuse Treatment Analyzer*

Standardized admissions records ask for the race or ethnicity the client “most strongly identifies with at the time of application for services.” Below, we combine Asian and Pacific Islander with the categories of Multiple Race and Other (which included ‘unknown’ and ‘unspecified’) due to small numbers. The increase in people identifying with multiple races, however, means this category is now the second most prominent. The share of clients in publicly funded treatment for issues with cannabis identified as white has steadily declined over the years presented here, however it is unknown if this is due to changes in reporting.



**Figure 9:** Race/ethnicity of admitted clients. *Source: Washington State Division of Behavioral Health and Recovery Substance Abuse Treatment Analyzer*

## Washington Healthy Youth Survey

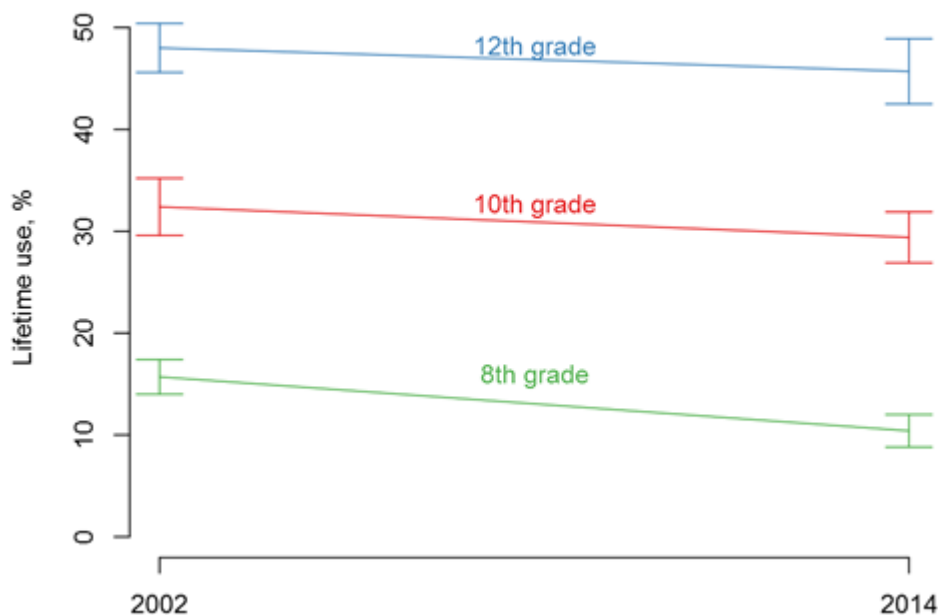
Cannabis use among youth, whose brains are still developing, may cause learning and memory problems. Use is associated with poor grades in school, although the cannabis may not be an actual cause of poor school performance but rather a concomitant sign of other difficulties. The Healthy Youth Survey asks students to complete surveys in Washington classrooms in the Fall of even-numbered school years. Respondents, of course, comprise those actually in class on that day.

A number of questions ask about cannabis use and attitudes towards cannabis. Among 8th graders in 2014, 21% reported cannabis was easy to get, 12% reported that ‘adults don’t think it’s wrong’, and 12% reported that ‘friends don’t think it’s wrong’. These proportions increase to 53%, 20%, and 35% among 10th graders, and 66%, 27%, and 48% among 12th graders. Four in 10 8th graders, 61% of 10th graders, and 72% of seniors report that there is little or no risk from trying cannabis once or twice. The proportion reporting no or low risk from regular use has steadily increased from 2004 to 2014, from 13% to 20% among 8th graders, 17% to 34% of 10th graders,



and 20% to 45% of 12th graders. It should be noted that in 2014 the wording for the regular use question changed from 'smoking' to 'using' cannabis .

Despite increases in perceived access and acceptability of use, actual reported use has not increased. The figure below presents reported lifetime use across all three grades, all of which show modest declines, particularly among 8th graders. As with the regular use question above, the question that assesses lifetime use changed from 'smoked' to 'used' in 2014. Conversely, for current (last month) use among high school seniors, prevalence increased from 19% ( $\pm 2\%$ ) in 2004 to 27% ( $\pm 2\%$ ) in 2014. (The wording for this question underwent a relatively minor change, with 'weed' replacing 'grass' as a synonym for cannabis .) The rate of past month use is about 60% of the lifetime use rate (67% among 8th graders), which implies about 6 in 10 of high school students who have ever used cannabis are regular users if we assume the past month is a representative month.



**Figure 10:** Lifetime cannabis use, with 95% confidence intervals. *Source: Washington State Healthy Youth Survey*

## Related resources

- [Marijuana Trends in Washington](#) is a companion web resource for this report, with interactive data tables; it is located on ADAl's Washington Data website,
- [Marijuana and Tobacco Dashboard](#) from the Washington State Liquor and Cannabis Board provides an overview of the marijuana market in Washington, including licensing, productions, sales, and compliance figures.

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<https://adai.uw.edu/pubs/infobriefs/williams-2017cannabisuse.pdf>

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