

# MARIJUANA USE BY YOUNG PEOPLE: THE IMPACT OF STATE MEDICAL MARIJUANA LAWS

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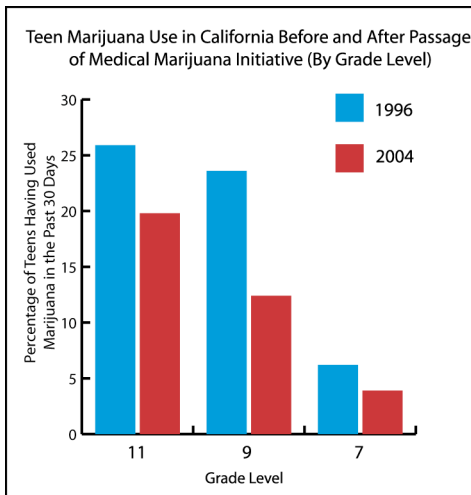
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## EXECUTIVE SUMMARY

The debate over medical marijuana laws has included extensive discussion of whether such laws “send the wrong message to young people,” thus increasing teen marijuana use. This is the first report to analyze all available data to determine the trends in teen marijuana use in states that have passed medical marijuana laws.

Nine years after the passage of the nation’s first state medical marijuana law, California’s Prop. 215, a considerable body of data shows that no state with a medical marijuana law has experienced an increase in youth marijuana use since their law’s enactment. All have reported overall decreases of more than the national average decrease — exceeding 50% in some age groups — strongly suggesting that enactment of state medical marijuana laws does not increase teen marijuana use.



- In **California** — which has the longest-term, most detailed data available — the number of ninth graders reporting marijuana use in the last 30 days declined by 47% from 1996 (when the state’s medical marijuana law passed) to 2004. An analysis commissioned by the California Department of Alcohol and Drug Programs found “no evidence supporting that the passage of Proposition 215 increased marijuana use during this period.”

- In **Washington** state, sixth graders’ current and lifetime marijuana use has dropped by at least 50% since the 1998 enactment of the state’s medical marijuana law. All other surveyed grade levels have seen both lifetime and current marijuana use drop by between 25% and 50%.

- In **Hawaii**, youth marijuana use has decreased among all surveyed grade levels — by as much as 38% — since the 2000 passage of the state’s medical marijuana law.
- Data from **Maine** suggest a modest decline since the 1999 passage of its law. Data from **Nevada** (whose law was passed in 2000) and **Alaska** (whose law was passed in

1998) show overall decreases in marijuana use, with a modest increase in a few individual grade levels. Data from *Oregon* (whose law passed in 1998) suggest modest declines in marijuana use among the two grades surveyed in 2004, a slight decrease in lifetime marijuana use among high schoolers, and a tiny increase in current marijuana use among high schoolers. *Colorado* (whose law passed in 2000) is the only state without an in-depth statewide survey, but the limited data available suggest modest declines in Colorado teens' marijuana usage as well.

- *Vermont* and *Montana*, whose medical marijuana laws were enacted in 2004, have not yet produced statistically valid data covering the period since their laws were passed.
- *Nationwide*, teenage marijuana use has decreased in the nine years since California enacted the country's first effective medical marijuana law. Overall, the trends in states with medical marijuana laws are slightly more favorable than the trends nationwide. California, Washington, and Colorado have all seen much greater drops in marijuana usage than have occurred nationwide. Overall, Alaska's and Hawaii's trends are also more favorable than nationwide trends, though some individual measures are less favorable. Trends from Maine, Oregon, and Nevada are slightly less favorable than nationwide trends, although use is still down.

**Conclusions and Recommendations:** When states consider proposals to allow the medical use of marijuana under state law, the concern often arises that such laws might “send the wrong message” and therefore cause an increase in marijuana use among young people. The available evidence strongly suggests that this hypothesis is incorrect and that enactment of state medical marijuana laws has not increased adolescent marijuana use. Consequently, legislators should evaluate medical marijuana proposals based on their own merits — without regard for the speculative and unsupported assertions about the bills sending the “wrong message.”

**Methods and Data Sources:** Nearly every state that has enacted a medical marijuana law has conducted surveys on adolescent marijuana use both before and after their medical marijuana laws were enacted. We analyzed publicly available data from all such surveys considered statistically valid by the agencies that performed them.

## OVERVIEW

Since 1996, 10 states — Alaska, California, Colorado, Hawaii, Maine, Montana, Nevada, Oregon, Vermont, and Washington — have passed laws allowing the use of marijuana for medical purposes. Eight of these were enacted via voter-approved ballot measures, while Hawaii's and Vermont's laws were passed by their legislatures. (The District of Columbia passed a similar ballot initiative in 1998, but due to congressional action, the law hasn't been implemented.) In addition, medical marijuana legislation was considered during the 2005 legislative sessions of at least 16 state legislatures.

One argument consistently raised in opposition to such measures is that they “send the wrong message to young people,” encouraging teen drug experimentation. For example, in an October 1996 letter to anti-drug advocates, U.S. Drug Enforcement Administration Administrator Thomas A. Constantine wrote, “How can we expect our children to reject drugs when some authorities are telling them that illegal drugs should no longer remain illegal, but should be used instead to help the sick? ... We cannot afford to send ambivalent messages about drugs.”

Such arguments continue to be raised by opponents of medical marijuana laws. In June 2005, Rhode Island Gov. Donald Carcieri (R) explained his veto of a medical marijuana bill in part by arguing that the measure would “place our children at increased risk of abusing marijuana.” That same month, U.S. Representatives Mark Souder (R-IN) and Frank Wolf (R-VA) raised the “wrong message” concern during a floor debate on medical marijuana in the U.S. House of Representatives.

In 1996, the issue of whether these laws would impact teen marijuana use was an open question: Both sides made assertions, but neither had concrete data for support. Now, nine years after the passage of the first medical marijuana initiative, California’s Prop. 215, a considerable body of data exists. No state with a medical marijuana law has experienced an overall increase in youth marijuana use since the law’s enactment. All have reported overall decreases — in some cases exceeding 50% in specific age groups — strongly suggesting that the enactment of state medical marijuana laws does not increase teen marijuana use.

## METHODOLOGY

All of the data in this report is from state and federal government surveys of drug use by young people. The most well-known of these are the annual Monitoring the Future study, conducted by the University of Michigan under contract with the U.S. National Institute on Drug Abuse, and the National Survey on Drug Use and Health (NSDUH) — formerly called the National Household Survey on Drug Abuse (NHSDA) — conducted by the Research Triangle Institute and sponsored by the U.S. Substance Abuse and Mental Health Services Administration. However, state-specific data were not available for all 50 states from NHSDA/NSDUH until 1999, so before-and-after data are not available for many states with medical marijuana laws. Even in the cases where such data are available, the NSDUH has determined that the state-level “estimates for 2002 and later years [are] not comparable with prior years” and “the relative rankings of States may have been affected” due to methodological changes.<sup>1</sup> Furthermore, the NSDUH’s state samples are very small and NSDUH reports the 12- to 17-year age range as a block, rather than breaking down specific ages or grade levels.

Many states — including California, Hawaii, Maine, Oregon, and Washington — conduct detailed state-level surveys with methodology similar to NSDUH, but they use far larger samples within each state. We have included all relevant data from such surveys where available.

Also of interest is the Youth Risk Behavior Surveillance (YRBS), conducted by many (but not all) states in conjunction with the U.S. Centers for Disease Control and Prevention. The YRBS has produced data for several individual states, including Alaska, Maine, Nevada, and Oregon.

Because some surveys are conducted only every other year, and because of the time needed to collect and process data, the two states with the newest medical marijuana laws — Montana and Vermont — have not yet released results covering the period since their laws were enacted. Nevertheless, enough data are available now from the eight other medical marijuana states to draw conclusions.

Data were located through Internet searches and federal and state government agencies. In each case, we have reviewed all publicly available data from national and statewide teen drug use surveys, including the most recent figures available as of this writing, August 2005. The only results omitted from the analysis are from surveys in which the only available data are “unweighted.” This occurs, for example, when school-based surveys are unable to enroll a

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<sup>1</sup> Substance Abuse and Mental Health Services Administration, Office of Applied Studies, “2002-2003 National Surveys on Drug Use and Health (NSDUH): State By State Model Based Estimates,” Appendix A: State Estimation Methodology.

broadly representative sample of a state's school population, meaning that the results cannot be considered statistically valid for the statewide youth population.

Most of these surveys ask whether participants have used drugs in the last 30 days (considered "current use") and ever in their life. Washington changed the wording of its question regarding lifetime drug use in the 2000 survey, but it restored the old language in 2002. Other methodological changes were also made in 2002, including the time of year when surveys were administered. Oregon made substantial changes in the methodology of its 2001 survey, which makes it more difficult to draw firm conclusions across time.

As with all polls and surveys, the surveys analyzed for this report have a statistical margin of error. (Hawaii is the exception because its data is from a census sampling that was given to all public school students whose parents returned consent forms.) The margin of error ranges from 0.3% to 9.5% (the margin of error data was not available for Washington state in 1998 and 2000 or for California's surveys).

Statements from those raising the "wrong message" concern have often been vague as to whether they believe the harm comes from actual implementation of medical marijuana laws or from the public discussion stimulated by the campaigns. Because many of their statements (including that of the DEA administrator cited above) focus on public discussion, and because the campaigns for the state laws produced intense debate and media coverage, we have focused on the date of enactment as the key time-point in before-and-after comparisons.

## **NATIONWIDE DATA**

Since California voters enacted Prop. 215, the debate over it and similar proposals has been covered widely on national television and radio, as well as in local and national newspapers and magazines, including *USA Today's* front-page story on Prop. 215's passage; the *New York Times'* 1999 front-page story on the Institute of Medicine's report on the medical use of marijuana, and many others. If medical marijuana laws "send the wrong message" to children, this widespread attention would be expected to produce a nationwide increase in marijuana use, with the largest increase in those states enacting medical marijuana laws. But just the opposite has occurred.

Since 1996, Monitoring the Future surveys show 43%, 33%, and 9% decreases in eighth, tenth, and twelfth graders' current marijuana use, respectively.<sup>2</sup> Regarding lifetime use, it shows a 29% drop in eighth graders' use, a 12% decline in tenth graders', and a 2% increase among twelfth graders.<sup>3</sup> The biennial national YRBS shows similar trends, with an 11% decrease in high schoolers' current marijuana use since 1995 and a 5% decrease in their lifetime use. It found decreases in every measure in every high school grade level since 1995, except twelfth graders' lifetime marijuana use, which shows a slight increase.<sup>4</sup> As the state-by-state section of this paper will discuss, as a whole, the medical marijuana states' teen use trends compare favorably to nationwide trends.

The Monitoring the Future survey randomly samples approximately 120 high schools nationally for twelfth grade data, surveying about 15,000 students annually. For its survey of eighth graders each year, approximately 17,000 students from 140 randomly selected schools are surveyed annually. For the tenth graders, approximately 130 high schools are sampled, and about 15,000 students are surveyed annually. The national YRBS uses a three-stage, cluster sample

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<sup>2</sup> National Institute on Drug Abuse, "Monitoring the Future: National Results on Adolescent Drug Use, 1975-2004," Table 5-5c.

<sup>3</sup> "Monitoring the Future: National Results on Adolescent Drug Use, 1975-2004," Table 5-5 a.

<sup>4</sup> U.S. Centers for Disease Control and Prevention, "Youth Risk Behavior Surveillance, Youth Online: Comprehensive Results," available at <<http://apps.nccd.cdc.gov/yrbss/SelQuestYear.asp?Loc=XX&cat=3>> .

design to obtain a nationally representative sample of students in grades nine through in the United States. Approximately 10,200 surveys were completed in 2003, 9,900 in 1999, 11,220 in 1997, and 6,540 in 1995.

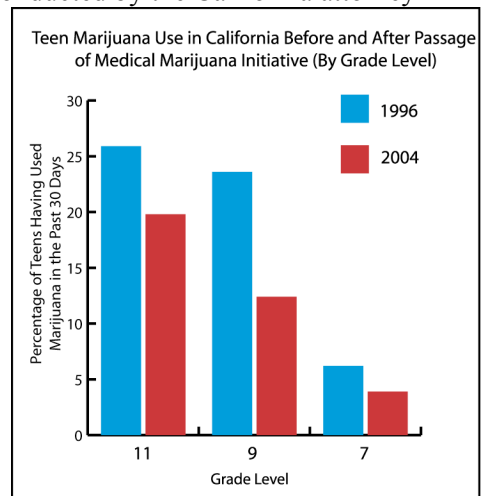
As will be seen below, states enacting medical marijuana laws have been slightly more successful than the nation as a whole at reducing adolescent marijuana use.

## STATE-BY-STATE DATA

### CALIFORNIA (medical marijuana initiative passed November 5, 1996)

As the first state to pass an effective medical marijuana law, California provides the longest period to evaluate such a law’s effect on teen marijuana use. California officials were concerned enough about the “sends the wrong message” theory to commission a special analysis examining this issue.

The biennial California Student Survey (CSS), conducted by the California attorney general’s office, provides some of the most detailed information on teen drug use trends in any single state. It measures three grade levels’ weekly, monthly, and past-six-month marijuana use. The pre-Prop. 215 survey (1995-1996) was based on the responses of 5,775 students, while the most recent survey (2003-2004) was based on responses from about 6,315 students. In the years prior to the 1996 passage of Prop. 215, the CSS charted steady increases in marijuana use by California teenagers in all surveyed grades — seventh, ninth, and eleventh graders. That period of increase ended in 1996, with CSS data showing a clear, swift downward trend since Prop. 215 passed on November 5, 1996. For all grades, marijuana use dropped markedly by every measure between early 1996 and 2004. Among ninth graders, current use dropped by nearly half.



7<sup>th</sup> grade weekly: 37% decrease since late 1995/early 1996 (from 1.9% to 1.2%)

9<sup>th</sup> grade weekly: 50% decrease since late 1995/early 1996 (from 12.3% to 6.2%)

11<sup>th</sup> grade weekly: 36% decrease since late 1995/early 1996 (from 16.5% to 10.6%)

7<sup>th</sup> grade past 30 days: 37% decrease since late 1995/early 1996 (from 6.2% to 3.9%)

9<sup>th</sup> grade past 30 days: 47% decrease since late 1995/early 1996 (from 23.6% to 12.4%)

11<sup>th</sup> grade past 30 days: 24% decrease since late 1995/early 1996 (from 25.9% to 19.8%)

7<sup>th</sup> grade past six months: 44% decrease since late 1995/early 1996 (from 10.9% to 6.1%)

9<sup>th</sup> grade past six months: 45% decrease since late 1995/early 1996 (from 34.2% to 18.8%)

11<sup>th</sup> grade past six months: 29% decrease since late 1995/early 1996 (from 42.8% to 30.5%)

7<sup>th</sup> grade lifetime: 24% decrease since late 1995/early 1996 (from 10.9% to 8.3%)

9<sup>th</sup> grade lifetime: 35% decrease since late 1995/early 1996 (from 35.0% to 22.8%)

11<sup>th</sup> grade lifetime: 17% decrease since late 1995/early 1996 (from 46.9% to 38.7%)<sup>5</sup>

<sup>5</sup> California Office of the Attorney General, “Eighth Biennial California Student Survey,” Tables 5 and 9; California Office of the Attorney General, “Tenth Biennial California Student Survey,” Tables 2, 3, 4, 6, and 9.

California teens' marijuana use rates since 1995 compare favorably to national numbers. Of the national surveys measuring teen marijuana use, only the YRBS surveyed some of the same grades as the CSS — ninth and eleventh. While the YRBS found decreases in youth marijuana use, the decreases were not nearly as sharp as California's decreases. The YRBS estimates a 9% decrease in ninth graders' lifetime marijuana use since 1995. In the same time period, lifetime marijuana use has decreased by 35% among California ninth graders. Ninth graders' past 30-day marijuana usage has decreased by 47% in California, but by only 11% nationwide.<sup>6</sup> (See Appendix for side-by-side comparisons of national data and data in each medical marijuana state with before-and-after data.)

California saw so much concern about Prop. 215's possible effect on youth marijuana use that the 1997-98 version of the CSS included an added set of questions intended to gauge the measure's impact. Researchers from the educational research firm WestEd, located in Los Alamitos, California, analyzed the data. Their report — never formally published but considered public information by the California Department of Alcohol and Drug Programs — was prepared in September 1999.

The researchers found that “students were well aware of the proposition and its meaning,” with 63.5% of ninth graders and 74% of eleventh graders saying they had either read about the measure or heard adults talk about it in person or in the media.<sup>7</sup> Regarding the impact of Prop. 215 on marijuana use, they concluded:

Use of marijuana by youth, which had been on an upward trend since the early 1990s at all three grade levels, did not intensify as predicted by the “wrong message” theory. Instead, it leveled off between 1995-96 and the current (1997-98) survey. **There is no evidence supporting that the passage of Proposition 215 increased marijuana use during this period** [emphasis added].<sup>8</sup>

The researchers did sound a note of caution about “the softening of perceived harm,” writing, “Marijuana use should be followed over the next several years to assess the impact of Proposition 215 on the marijuana use in California's youth.”<sup>9</sup> In this context, the steep declines in use recorded by later surveys are noteworthy.

### **WASHINGTON (medical marijuana initiative passed November 3, 1998)**

Washington, Oregon, and Alaska voters all enacted medical marijuana laws on November 3, 1998. Unfortunately, none of these three states has produced data on teen marijuana use that can be satisfactorily compared to determine trends since their laws' passage. Washington and Oregon have both changed the methodology of their surveys since the passage of their laws, and Alaska's weighted data from before its law was enacted was gathered three years before the law's passage. Of the three, Washington has the most extensive data on teen usage rates since the law's enactment. However, the survey conducted before the law's passage — the Washington State Survey of Adolescent Health Behaviors (WSSAHB) — was replaced by the Healthy Youth Survey (HYS) in 2002 and 2004.

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<sup>6</sup> *Ibid.*, “Youth Risk Behavior Surveillance, Youth Online: Comprehensive Results.”

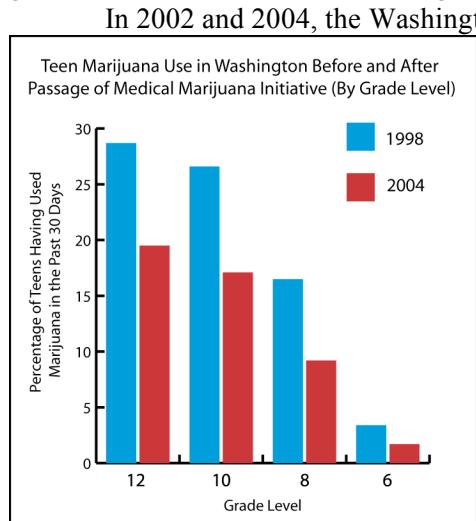
<sup>7</sup> Rodney Skager, Greg Austin and Mamie M. Wong, “Marijuana Use and the Response to Proposition 215 Among California Youth, a Special Study From the California Student Substance Use Survey (Grades 7, 9, and 11), 1997-98,” p. 7.

<sup>8</sup> *Ibid.*, p. 8.

<sup>9</sup> *Ibid.*, p. 7.

The WSSAHB was conducted both before the law’s passage — in spring of 1998 — and two years later — in 2000. Similar to the California survey, Washington data showed a substantial increase in adolescent marijuana use during the years prior to 1998. This increase was followed by a sharp drop in use by all age groups in 2000. Although the wording of the lifetime use question was changed for the 2000 survey, the question regarding use in the past 30 days was not changed and shows a similar trend.

The 1998 survey sampled 6,510 sixth grade students and 6,727 eighth grade students. The tenth and twelfth grade sample was combined, sampling 13,082 students. The 2004 survey reached 7,862 students in sixth grade, 8,466 students in eighth grade, 8,059 students in tenth grade, and 5,876 students in twelfth grade.



Although there are methodological differences between the 1998 and 2004 surveys — including that the 1998 and 2000 surveys were conducted in the spring, while the 2002 and 2004 surveys were administered in the fall — they provide the only comprehensive statewide data available, so the comparisons are worth noting.

**Comparing the 1998 WSSAHB with the 2004 HYS shows dramatic decreases in all surveyed grade levels’ current and lifetime marijuana use since the enactment of its medical marijuana law.** Even the smallest decrease — 25% fewer twelfth graders had used marijuana in their lifetimes in 2004 than in the spring of 1998 — was a significant decline. The most

dramatic decreases were among sixth and eighth graders: Their lifetime usage rates have decreased by roughly 57% and 50%, respectively. The drop in past 30-day usage among sixth and eighth graders has been equally dramatic — at 50% and 40%, respectively.

A comparison of the 1998 WSSAHB with the 2004 HYS shows the following changes:

6<sup>th</sup> grade past 30 days: 50% decrease since 1998 (from 3.4% to 1.7%)  
 8<sup>th</sup> grade past 30 days: 44% decrease since 1998 (from 16.5% to 9.2%)  
 tenth grade past 30 days: 36% decrease since 1998 (from 26.6% to 17.1%)  
 twelfth grade past 30 days: 32% decrease since 1998 (from 28.7% to 19.5%)

6<sup>th</sup> grade lifetime: 57% decrease since 1998 (from 7.0% to 3.0%)  
 8<sup>th</sup> grade lifetime: 50% decrease since 1998 (from 28.2% to 14.0%)  
 tenth grade lifetime: 40% decrease since 1998 (from 49.5% to 29.5%)  
 twelfth grade lifetime: 25% decrease since 1998 (from 55.1% to 41.1%)<sup>10</sup>

As was the case in California, Washington’s current and lifetime teen use rates have decreased far more rapidly among all age groups surveyed than national use rates have. Eighth graders’ current marijuana use decreased by 27% nationally and their lifetime rates decreased by 34% since 1998. In Washington, eighth graders’ current use rate was halved and their lifetime use

<sup>10</sup> Washington State Department of Health, “Washington State Survey of Adolescent Health Behaviors,” Tables 2, 3, 4, 5, 7, 8, 9, and 10; Washington State Department of Health, “2004 Healthy Youth Survey,” Questions D06 and D21.

decreased by 44%. Washington tenth graders' current use decreased by 40% and their lifetime use dropped by 36%, while those national rates decreased by 11% and 15% respectively.<sup>11</sup>

### **OREGON (medical marijuana initiative passed November 3, 1998)**

While Oregon data are available both before and after the 1998 passage of the state's medical marijuana law, Oregon made a number of significant changes in the survey's methodology in 2001, combining the Oregon Public Schools Drug Use Survey (OPSDUS) and Youth Risk Behavior Survey (YRBS) into one survey — Oregon Healthy Teens (OHT). While many questions were repeated essentially unchanged from the older surveys, the timing of the survey and the method of selection of participating schools were altered.<sup>12</sup>

In 1997, Oregon YRBS received usable surveys from about 34,933 students. In 2005, the OHT collected information from over 22,000 Oregon adolescents. The 1998 survey sampled 6,796 students in eighth grade, and 4,929 students in eleventh grade. The 2005 survey sampled 8,577 students in eighth grade and 7,967 students in eleventh grade.

Although methodological changes between the studies make it hard to draw firm conclusions, the data are nonetheless encouraging, suggesting a decrease in teen marijuana use since the passage of Oregon's medical marijuana initiative. **Marijuana use declined in both grades that were surveyed before the passage of the law and in 2004.** Data from an age range that is no longer surveyed — all high schoolers — suggest a slight overall decrease in lifetime marijuana use among high schoolers and an even smaller increase in their past 30-day marijuana use. These results certainly allay any fears that medical marijuana laws would increase teen use.

Comparing the 2005 Oregon Healthy Teens Survey to the 1998 OPSDUS shows the following trends:

8<sup>th</sup> grade past 30 days: 8% decrease since 1998 (from 11.6% to 10.7%)<sup>13</sup>  
eleventh grade past 30 days: 1% decrease since 1998 (from 21.0% to 20.8%)<sup>14</sup>

8<sup>th</sup> grade lifetime: 26% decrease since 1998 (from 25.3% to 18.8%)<sup>15</sup>  
eleventh grade lifetime: 8% decrease since 1998 (from 45.4% to 41.6%)<sup>16</sup>

Comparing the 2005 Oregon Healthy Teens Survey to the 1997 Youth Risk Behavior Survey shows the following trends:

eleventh grade past 30 days: 11% decrease since 1997 (from 23.3% to 20.8%)  
eleventh grade lifetime: 11% decrease since 1997 (from 47% to 41.6%)<sup>17</sup>

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<sup>11</sup>Ibid.; "Monitoring the Future: National Results on Adolescent Drug Use, 1975-2004," Table 5-5 a and 5-5c; The Monitoring the Future survey is the only national survey administered to the same grades on the same years.

<sup>12</sup> When asked if the Office of Mental Health and Addiction Services considers results from the Oregon Healthy Teens Survey statistically comparable to the 1998 Oregon Public Schools Drug Youth Survey, the chief drug and alcohol research analyst noted that the OHT relies on voluntary samples and responded, in part, "I would say that the OHT information is useful to show overall, aggregate changes in the state but it's not to the level of being statistically comparable (which would imply that the exact same population of kids is asked the same set of questions every year)." Pamela Clark, Oregon Office of Mental Health and Addiction Services, chief drug and alcohol research analyst, email comm., August 24, 2005.

<sup>13</sup> "1998 Oregon Public Schools Drug Use Survey" p. 7; Oregon Department of Human Services, "Oregon Healthy Teens 2005" — 8<sup>th</sup> Grade, Q 93. Some of the data used in this report was obtained from the Oregon Office of Mental Health and Addiction Services.

<sup>14</sup> "1998 Oregon Public Schools Drug Use Survey" p. 8; "Oregon Healthy Teens 2005" — eleventh Grade, Q 93.

<sup>15</sup> "1998 Oregon Public Schools Drug Use Survey"; "Oregon Healthy Teens 2005" — 8<sup>th</sup> Grade, Q 94.

<sup>16</sup> "1998 Oregon Public Schools Drug Use Survey"; "Oregon Healthy Teens 2005" — eleventh Grade, Q 94.

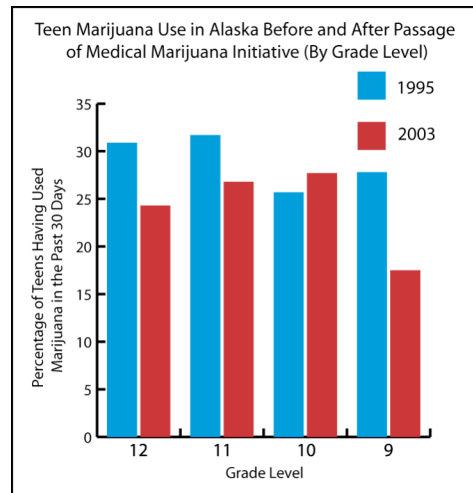


In 1997, 1999, 2001, and 2003, the YRBS also studied past 30-day and lifetime marijuana use in ninth through twelfth graders. As was noted, the methodology changed in 2001. Those figures suggest that lifetime marijuana use decreased by 5% — from 43.5% to 41.3% — and that current marijuana use rose by 3%: From 22.5% to 23.2%.<sup>18</sup>

Unlike in Washington and California, Oregon teens' marijuana usage rates did not decrease by as much as national rates have since it enacted its medical marijuana law. In the case of current marijuana use for all high schoolers, national marijuana use decreased where Oregon's rate increased by 3%.<sup>19</sup> Oregon's eleventh graders' current marijuana use also may have increased during a time-period when national use decreased — from 1997 and 1998 until 2003.<sup>20</sup>

### **ALASKA (medical marijuana initiative passed November 3, 1998)**

Relatively little data are available on Alaska teens' use of marijuana before and after the 1998 passage of its medical marijuana law. The only available weighted data from those timeframes are the Alaska Youth Risk Behavior Surveys (YRBS), which provide estimates of high schoolers' marijuana use in 1995 — three years before the law's passage — and in 2003. The 1995 survey received 10,904 completed questionnaires, a 60% response rate for students surveyed, while the 2003 survey received 2,175 surveys, for a 62% response rate. Although the sample size was reduced, the study design remained consistent and the authors use their data for comparison to 1995.



The YRBSs suggest that **since Alaska passed its medical marijuana law, high school students' lifetime usage of marijuana has slightly declined — by 2% — and their current marijuana use declined more significantly — by 17%.** Current marijuana use decreased among ninth, eleventh, and twelfth graders, though it increased slightly among tenth graders. Lifetime marijuana use has markedly decreased among ninth graders since the law's passage, while it has slightly increased in other high school grades.

Past 30-days marijuana users, high schoolers: 17% decrease since 1995 (from 28.7% to 23.9%)

Past 30-days marijuana users, 9<sup>th</sup> graders: 37% decrease since 1995 (from 27.8% to 17.5%)

Past 30-days marijuana users, tenth graders: 7% increase since 1995 (from 25.7% to 27.7%)

Past 30-days marijuana users, eleventh graders: 15% decrease since 1995 (from 31.7% to 26.8%)

Past 30-days marijuana users, twelfth graders: 21% decrease since 1995 (from 30.9% to 24.3%)

Lifetime marijuana users, high schoolers: 2% decrease since 1995 (from 48.4% to 47.5%)

<sup>17</sup> Centers for Disease Control and Prevention, "1997 Oregon Youth Risk Behavior Survey" (YRBS) Q 54 and 55; "Oregon Healthy Teens 2005" — eleventh Grade, Q 93 and 94. The 1997 Youth Risk Behavior Survey results for eighth graders could not be compared because the data are unweighted.

<sup>18</sup> 1997 YRBS, Q 54 and 55; Centers for Disease Control and Prevention, "2003 Oregon Youth Risk Behavior Survey" (YRBS), A 26e and A 16.

<sup>19</sup> *Ibid.*; "Youth Risk Behavior Surveillance, Youth Online: Comprehensive Results;"

<sup>20</sup> "1998 Oregon Public Schools Drug Use Survey"; "1997 Oregon Youth Risk Behavior Survey" (YRBS) Q 54 and 55 "Oregon Healthy Teens 2005" — eleventh Grade, Q 94"; "Youth Risk Behavior Surveillance, Youth Online: Comprehensive Results;"

Lifetime marijuana users, 9<sup>th</sup> graders: 31% decrease since 1995 (from 43.9% to 30.4%)  
Lifetime marijuana users, tenth graders: 20% increase since 1995 (from 44.7% to 53.5%)  
Lifetime marijuana users, eleventh graders: 5% increase since 1995 (from 52.8% to 55.4%)  
Lifetime marijuana users, twelfth graders: 4% increase since 1995 (from 52.6% to 54.9%)<sup>21</sup>

The rate at which Alaska high schoolers currently use marijuana dropped by a larger margin than national numbers did between 1995 and 2003. The national YRBS found an 11% decrease in high schoolers' past 30-day marijuana use, while Alaska's YRBS show a 17% drop. During the same time frame, Alaska teens' lifetime marijuana use declined by slightly less than their counterparts nationwide: 5% fewer reported trying marijuana throughout the U.S. while 2% fewer Alaskans reported having ever tried marijuana.<sup>22</sup>

### **MAINE (medical marijuana initiative passed November 2, 1999)**

Available data on teen marijuana use suggest usage has decreased among nearly every age group since Maine enacted its medical marijuana law. Two statewide student surveys provide detailed information about Maine adolescents' marijuana use. The Maine Youth Drug and Alcohol Use Surveys (MYDAUS) estimate decreases in most age groups between 1998/1999 and 2004. Eighth, ninth, tenth, eleventh, and twelfth graders' current marijuana use all decreased slightly, while sixth graders' use increased from 1.2% to 1.4% and seventh graders' use increased from 3.2% to 3.4%. Lifetime use decreased or stayed the same for all surveyed grade levels except sixth graders', whose use rose from 2.2% to 2.6%. Similarly, the Maine Youth Risk Behavior Survey (YRBS) shows a 13% decrease in high school marijuana use from 1997 to 2003, with decreases among each high school grade level.

The 1998 MYDAUS was administered to 22,162 students, and the 2004 MYDAUS was administered to 75,165 students.

The MYDAUS shows the following changes:

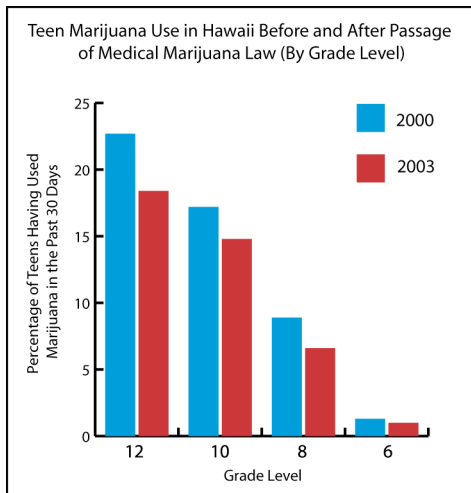
Total past 30 days: 6% decrease since 1999 (from 15.7% to 14.8%)  
6<sup>th</sup> grade past 30 days: 17% increase since 1999 (from 1.2% to 1.4%)  
7<sup>th</sup> grade past 30 days: 6% increase since 1999 (from 3.2% to 3.4%)  
8<sup>th</sup> grade past 30 days: 4% decrease since 1999 (from 8.2% to 7.9%)  
9<sup>th</sup> grade past 30 days: 16% decrease since 1999 (from 18.5% to 15.6%)  
10<sup>th</sup> grade past 30 days: 1% decrease since 1999 (from 22.7% to 22.5%)  
11<sup>th</sup> grade past 30 days: 9% decrease since 1999 (from 28.5% to 25.8%)  
12<sup>th</sup> grade past 30 days: 12% decrease since 1999 (from 30.4% to 26.8%)<sup>23</sup>

Total lifetime: 6% decrease since 1999 (from 28.6% to 26.9%)  
6<sup>th</sup> grade lifetime: 18% increase since 1999 (from 2.2% to 2.6%)  
7<sup>th</sup> grade lifetime: 0% change since 1999 (from 6.6% to 6.6%)  
8<sup>th</sup> grade lifetime: 14% decrease since 1999 (from 17.2% to 14.8%)  
9<sup>th</sup> grade lifetime: 12% decrease since 1999 (from 31.2% to 27.4%)  
10<sup>th</sup> grade lifetime: 3% decrease since 1999 (from 40.8% to 39.4%)  
11<sup>th</sup> grade lifetime: 7% decrease since 1999 (from 50.6% to 47.3%)

<sup>21</sup> National Center for Chronic Disease Prevention and Health Promotion, "Alaska Youth Risk Behavior Survey" 1995; "Alaska Youth Risk Behavior Survey 2003" breakdowns available at <  
<http://apps.nccd.cdc.gov/yrbss/SelQuestyear.asp?cat=3&desc=Alcohol%20and%20Other%20Drug%20Use&loc=AK>>.

<sup>22</sup> *Ibid.*, and "Youth Risk Behavior Surveillance, Youth Online: Comprehensive Results."

<sup>23</sup> Maine Office of Substance Abuse, "The 2004 Maine Youth Drug and Alcohol Use Survey Technical Report," Table 9, p. 20.



12<sup>th</sup> grade lifetime: 12% decrease since 1999 (from 57.7% to 50.6%)<sup>24</sup>

The Maine YRBS shows the following trends:<sup>25</sup>

Total high schoolers' past 30 days: 13% decrease since 1997 (from 30.4% to 26.4%)

9<sup>th</sup> grade past 30 days: 33% decrease since 1997 (from 25.1% to 16.8%)

10<sup>th</sup> grade past 30 days: 13% decrease since 1997 (from 29.5% to 25.6%)

11<sup>th</sup> grade past 30 days: 6% decrease since 1997 (from 35.0% to 32.9%)

12<sup>th</sup> grade past 30 days: 5% decrease since 1997 (from

33.1% to 31.5%)

The percent of Maine teens using marijuana has not decreased as rapidly as nationwide use has. Comparing nationwide and Maine YRBS data shows a narrow gap in the drop in past 30-day marijuana use: 15% nationwide and 13% in Maine. Comparing Monitoring the Future's nationwide trends with MYDAUS trends suggests a slightly larger gap in some years. For example, MTF found a 26% decrease in eighth grade marijuana use, while MYDAUS found a 14% decline.<sup>26</sup>

## HAWAII (medical marijuana bill signed into law on June 14, 2000)

The only data that can be validly compared to trend Hawaiians' teen marijuana use before and after the state's medical marijuana bill was enacted comes from the Hawaii Student Alcohol, Tobacco, and Other Drug Use Studies.<sup>27</sup> Those results show decreases in marijuana use in every surveyed grade level — both in current use and lifetime use. The study does note, “When looking at comparison data from previous years, please note that 2003 data was collected during the fall semester, whereas the 2000 and 2002 data were collected during the spring semester.”

It is worth mentioning that comparing data, which the commissioning organization — the NSDUH — cautions cannot be compared, would suggest a 23% increase in 12- to 17-year-old Hawaiians' current use of marijuana. However, the NSDUH has said that its state-level data from 2002 and subsequent years should not be compared to prior years' data.<sup>28</sup> Furthermore, the Hawaii survey provided estimates for each of four individual grade levels, while the NSDUH failed to break down the data by age group or control for age, despite numerous surveys showing far higher marijuana usage among tenth and eleventh graders than middle schoolers. In addition, the NSDUH surveyed a mere 350 Hawaiian 12- to 17-year-olds in 1999, while the Hawaii

<sup>24</sup> *Ibid.*, Table 8, p. 18.

<sup>25</sup> National Center for Chronic Disease Prevention and Health Promotion, “1997 Maine Youth Risk Behavior Survey”; “2003 Maine Youth Risk Behavior Survey” breakdowns available at <  
<http://apps.nccd.cdc.gov/yrbss/SelQuestyear.asp?cat=3&desc=Alcohol%20and%20Other%20Drug%20Use&loc=ME>>.

<sup>26</sup> “1997 Maine Youth Risk Behavior Survey”; “The 2004 Maine Youth Drug and Alcohol Use Survey Technical Report,” Tables 8 and 9, pp. 18 and 20; “Youth Risk Behavior Surveillance, Youth Online: Comprehensive Results;” “Monitoring the Future: National Results on Adolescent Drug Use, 1975-2004,” Table 5-5 a and 5-5c.

<sup>27</sup> “The 2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Survey,” p. 2.

<sup>28</sup> Substance Abuse and Mental Health Services Administration, Office of Applied Studies, “1999 National Household Survey on Drug Abuse (NHSDA).” Table 3B; “2002-2003 NSDUH: State By State Model Based Estimates,” Table 24

Student Alcohol, Tobacco, and Other Drug Use Study interviewed 25,860 students in 2000 and 30,361 in 2003.<sup>29</sup>

The Hawaii Student Alcohol, Tobacco, and Other Drug Use Studies show the following changes:<sup>30</sup>

6<sup>th</sup> grade past 30-days: 23% decrease since 2000 (from 1.3% to 1.0%)  
8<sup>th</sup> grade past 30-days: 26% decrease since 2000 (from 8.9% to 6.6%)  
10<sup>th</sup> grade past 30-days: 14% decrease since 2000 (from 17.2% to 14.8%)  
12<sup>th</sup> grade past 30-days: 19% decrease since 2000 (from 22.7% to 18.4%)<sup>31</sup>

6<sup>th</sup> grade lifetime: 38% decrease since 2000 (from 2.4% to 1.5%)  
8<sup>th</sup> grade lifetime: 24% decrease since 2000 (from 15.9% to 12.1%)  
10<sup>th</sup> grade lifetime: 8% decrease since 2000 (from 33.2% to 30.5%)  
12<sup>th</sup> grade lifetime: 3% decrease since 2000 (from 45.8% to 44.4%)

Trends in Hawaii teens' marijuana use since that state removed criminal penalties for the medical use of marijuana compare favorably to nationwide trends. Teenagers' current marijuana use in Hawaii decreased as much as or more than it did nationwide since 2000. The percent of eighth and twelfth grade Hawaiians who have ever tried marijuana dropped by significantly more than nationwide eighth and twelfth graders' lifetime rates. Hawaiian eighth graders' lifetime marijuana use decreased by a substantially higher percent than nationwide eighth graders' use, but tenth and twelfth graders' lifetime use decreased at a slightly lower rate than their counterparts nationwide.<sup>32</sup>

Although the NSDUH advised that data from 2002 and later are not comparable to earlier data, it should be noted that if those years were compared, the estimated 23% increase would exceed the nationwide increase — 14%.

### **NEVADA (medical marijuana initiative passed November 7, 2000)**

Both available surveys of adolescent marijuana usage in Nevada show a decrease since Nevada voters passed a medical marijuana initiative on November 7, 2000. However, the 1999 YRBS is based on responses from a total of only 1,675 students statewide, and the 2003 survey on the responses of 1,975 students. Therefore, it is not statistically certain that these figures represent decreases in teen marijuana use by all teenagers.

In 2003, the Nevada Youth Risk Behavior Survey (YRBS) found that roughly 14% fewer high schoolers used marijuana in the past 30 days than in 1999, before the initiative passed. It also showed a 6% drop in high schoolers' lifetime marijuana use.

The NSDUH data (which suffer the methodological shortcomings noted in the Hawaii section) estimate a 17% decrease in youth marijuana use since the medical marijuana law passed.

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<sup>29</sup> NHSDA, Table 1N.

<sup>30</sup> "2000 Hawaii Student Alcohol, Tobacco, and Other Drug Use Study Executive Summary," p. 29; "The 2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Survey," p. 8.

<sup>31</sup> Hawaii Department of Health, "2000 Hawai'i Student Alcohol, Tobacco, and Other Drug Use Survey Executive Summary," p. 10; Hawaii Department of Health, "The 2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Survey," p. 9.

<sup>32</sup> *Ibid.*; "Monitoring the Future: National Results on Adolescent Drug Use, 1975-2004," Table 5-5 a and 5-5c.

The Nevada YRBS shows the following changes:<sup>33</sup>

All high schoolers' past 30 days: 14% decrease since 1999 (from 25.9% to 22.3%)  
9<sup>th</sup> grade past 30 days: 11% decrease since 1999 (from 23.6% to 20.9%)  
10<sup>th</sup> grade past 30 days: 26% decrease since 1999 (from 26.1% to 19.2%)  
11<sup>th</sup> grade past 30 days: 8% decrease since 1999 (from 25.9% to 23.8%)  
12<sup>th</sup> grade past 30 days: 4% decrease since 1999 (from 27.5% to 26.3%)

All high schoolers' lifetime: 6% decrease since 1999 (from 49.5% to 46.6%)  
9<sup>th</sup> grade lifetime: 7% decrease since 1999 (from 40.6% to 37.8%)  
10<sup>th</sup> grade lifetime: 15% decrease since 1999 (from 51.0% to 43.1%)  
11<sup>th</sup> grade lifetime: 4% increase since 1999 (from 52.1% to 54.1%)  
12<sup>th</sup> grade lifetime: 5% increase since 1999 (from 54.9% to 57.5%)

While the decline in high schoolers' current marijuana use in Nevada is close to nationwide numbers, the lifetime marijuana use has not declined by as much as it has nationwide. The national YRBS estimates a 16% decline in high schoolers' past 30-day marijuana use, while Nevada estimates a 14% decline. The Nevada YRBS suggests a 6% decrease in high schoolers' lifetime marijuana use, while the national YRBS shows a 15% decline.<sup>34</sup>

The NSDUH data (which are not supposed to be trended) suggest dramatically better trends in Nevada than nationwide: The data suggest a 14% increase between 1999 and 2003 nationwide, while Nevada's NSDUH data suggest a drop of 17%.

#### **COLORADO (medical marijuana initiative passed November 7, 2000)**

The only weighted survey showing statewide teen marijuana use both before and after the passage of Colorado's medical marijuana law is the NSDUH. However, as noted, the NSDUH has said that the data from 2002 and subsequent years are not comparable to prior years' data.

Furthermore, the other NSDUH methodological shortcomings noted above — a small sample size (of 600 in Colorado) and lack of differentiation by age — apply to the Colorado data as well. Nonetheless, the data suggest a slight decrease in teen marijuana use. According to the NSDUH estimates, past month marijuana use by 12- to 17-year-olds decreased by 5% between 1999 and 2002-2003, from 10.3% to 9.82%.<sup>35</sup> It is worth noting that the NSDUH stated that the 2002 data showed higher prevalence rates than can be accounted for based on year-to-year trends.<sup>36</sup> Thus, this would suggest that marijuana usage in Colorado might actually have decreased by more than 5% since the state's medical marijuana law was enacted.

Colorado is the sixth of the nine medical marijuana states with teen marijuana use data that suggest more favorable trends than nationwide data (though the only available weighted data is NSDUH, which is not comparable). In 2003, the NSDUH reported that 8.2% of 12- to 17-year olds had used marijuana in the past 30 days. This was a 14% increase from the reported number — 7.2% — in 1999. In contrast, its 2002-2003 data for Colorado suggest a 5% decrease.

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<sup>33</sup>National Center for Chronic Disease Prevention and Health Promotion, "Nevada Youth Risk Behavior Survey 1999"; "Nevada Youth Risk Behavior Survey 2003"; breakdowns available at <  
<http://apps.nccd.cdc.gov/yrbss/SelQuestyear.asp?cat=3&desc=Alcohol%20and%20Other%20Drug%20Use&loc=NV>>.

<sup>34</sup>*Ibid.*; "Youth Risk Behavior Surveillance, Youth Online: Comprehensive Results."

<sup>35</sup>NHSDA, Table 3B; NSDUH, Table 12.

<sup>36</sup>NSDUH 2003, Introduction, 1.2. "An unanticipated result of these changes was that the prevalence rates for 2002 were in general substantially higher than those for 2001 — substantially higher than could be attributable to the usual year-to-year trend — and thus are not comparable with estimates for 2001 and prior years."

**VERMONT (medical marijuana bill became law without governor's signature on May 26, 2004)**

Vermont's medical marijuana law went into effect on July 1, 2004. As of this writing, no publicly released surveys have estimated teen use after the law's passage.

**MONTANA (medical marijuana initiative passed November 2, 2004)**

Montana's medical marijuana initiative was enacted on November 2, 2004. As of this writing, no publicly released surveys have estimated teen use after the initiative's passage.

**CONCLUSIONS AND RECOMMENDATIONS**

Since the mid-1990s, the U.S. has witnessed a well-publicized and sometimes emotional national debate over the medical use of marijuana. Contrary to the fears expressed by opponents of medical marijuana laws, there is no evidence that the enactment of 10 state medical marijuana laws has produced an increase in adolescent marijuana use in those states or nationwide. Instead, data from those states suggest a modest decline overall, with very large declines in some age groups in some states. Overall, the decrease in teen marijuana use in medical marijuana states has slightly exceeded the national decline.

In all eight states with available data covering two or more years since enactment of their medical marijuana laws, teen marijuana use declined overall, sometimes dramatically, after passage of a medical marijuana law. Only Hawaii had any data suggesting an overall increase since its law's passage, and making year-to-year comparisons before and after the relevant 2002 survey is considered invalid by the commissioning organization, the NSDUH. Further, far more comprehensive data show decreases among all surveyed ages of Hawaiian youth.

While it is not possible with existing data to determine conclusively that state medical marijuana laws caused the documented declines in adolescent marijuana use, the overwhelming downward trend strongly suggests that the effect of state medical marijuana laws on teen marijuana use has been either neutral or positive, discouraging youthful experimentation with the drug. California researchers, who appear to be the only ones to specifically study the issue in the context of a survey of adolescent drug use, found no evidence of a "wrong message" effect. The reasons for this lack of impact have not been adequately studied. Perhaps medical marijuana laws send a very different message than opponents of such laws have suggested: Marijuana is a treatment for serious illness, not a toy, and requires cautious and careful handling. Legislators considering medical marijuana proposals should evaluate the bills on their own merits, without concern for unproven claims that such laws increase teen marijuana use. Opponents of medical marijuana laws should cease making such unsubstantiated claims.

## Appendix

### Comparing Marijuana Use Trends in Medical Marijuana States With National Trends

The following tables compare before-and-after data on teen marijuana use in medical marijuana states with the national data.<sup>37</sup> In each case, the state data were compared to national data that were the closest match in terms of grades surveyed and years in which the surveys were conducted. If both national and statewide YRBS's were conducted, those data were compared.

#### California

The following table compares trends between California's 1995/1996 and its 2003/2004 CSS with trends between the 1995 and 2003 national YRBS.

<b>Lifetime use</b>	<b>YRBS</b>	<b>California</b>	<b>YRBS</b>	<b>California</b>
9th grade	9% decrease	35% decrease	33.8% to 30.7%	35% to 22.8%
11 <sup>th</sup> grade	3% decrease	17% decrease	45.8% to 44.5%	46.9% to 38.7%
<b>Past 30-day</b>	<b>YRBS</b>	<b>California</b>	<b>YRBS</b>	<b>California</b>
9th grade	11% decrease	47% decrease	20.9% to 18.5%	23.6% to 12.4%
11 <sup>th</sup> grade	12% decrease	24% decrease	27.6% to 24.1%	25.9% to 19.8%

#### Washington

The following table compares trends between Washington's 1998 WSSAHB and its 2004 HYS with trends between the 1998 and 2004 Monitoring the Future surveys.

<b>Lifetime use</b>	<b>MTF</b>	<b>Washington</b>	<b>MTF</b>	<b>Washington</b>
8th grade	27% decrease	50% decrease	22.2% to 16.3%	28.2% to 14.0%
10 <sup>th</sup> grade	11% decrease	40% decrease	39.6% to 35.1%	49.5% to 29.5%
12 <sup>th</sup> grade	7% decrease	25% decrease	49.1% to 45.7%	55.1% to 41.1%
<b>Past 30-day</b>	<b>MTF</b>	<b>Washington</b>	<b>MTF</b>	<b>Washington</b>
8th grade	34% decrease	44% decrease	9.7% to 6.4%	16.5% to 9.2%
10 <sup>th</sup> grade	15% decrease	36% decrease	18.7% to 15.9%	26.6% to 17.1%
12 <sup>th</sup> grade	13% decrease	32% decrease	22.8% to 19.9%	28.7% to 19.5%

#### Oregon

The following table compares trends between a number of Oregon surveys and the national YRBS and Monitoring the Future surveys. It compares the Oregon's 1997 YRBS and 2003 HYS data on high schoolers' and eleventh graders' marijuana use with the national YRBS from the same years. It also compares 1998 OPSDUS data and 2003 HYS on eighth grade and eleventh grade use with national YRBS data from 1997 and 2003. Finally, it compares 1998 OPSDUS data and 2004 HYS data on eighth graders' use with the national 1998 and 2004 MTF data.

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<sup>37</sup>“Youth Risk Behavior Surveillance, Youth Online: Comprehensive Results;” “Monitoring the Future: National Results on Adolescent Drug Use, 1975-2004,” Table 5-5 a and 5-5c. Citations for state data are available in each appropriate state's section.

<b>Lifetime use</b>	<b>YRBS</b>	<b>Oregon</b>	<b>YRBS</b>	<b>Oregon</b>
			47.1% to 40.2%	43.5% to 41.3%
High school	15% decrease	5% decrease		
11 <sup>th</sup> grade ('97 YRBS)	12% decrease	4% decrease	50.3% to 44.5%	47% to 45.2%
				45.4% to 45.2%
11 <sup>th</sup> grade ('98 OPSDUS)	12% decrease	< 0.5% decrease	50.3% to 44.5%	
<b>Past 30-day</b>	<b>YRBS</b>	<b>Oregon</b>	<b>YRBS</b>	<b>Oregon</b>
High school	11% decrease	3% increase	26.2% to 22.4%	22.5% to 23.2%
11 <sup>th</sup> grade ('97 YRBS)	18% decrease	11% increase	29.3% to 24.1%	21.0% to 23.4%
11 <sup>th</sup> grade ('98 OPSDUS)	18% decrease	< 0.5% increase	29.3% to 24.1%	23.3% to 23.4%
<b>Lifetime</b>	<b>MTF</b>	<b>Oregon</b>	<b>MTF</b>	<b>Oregon</b>
8 <sup>th</sup> grade	27% decrease	33% decrease	22.2% to 16.3%	25.3% to 16.9%
<b>Past 30-day</b>	<b>MTF</b>	<b>Oregon</b>	<b>MTF</b>	<b>Oregon</b>
8 <sup>th</sup> grade	34% decrease	11% decrease	9.7% to 6.4%	11.6% to 10.3%

## Alaska

The following table compares trends between Alaska's 1995 and 2003 YRBS with the national YRBS surveys from the identical years.

<b>Lifetime use</b>	<b>YRBS</b>	<b>Alaska</b>	<b>YRBS</b>	<b>Alaska</b>
Total	5% decrease	2% decrease	42.4% to 40.2%	48.4% to 47.5%
9th grade	9% decrease	31% decrease	33.8% to 30.7%	43.9% to 30.4%
10 <sup>th</sup> grade	2% decrease	20% increase	41.4% to 40.4%	44.7% to 53.5%
11 <sup>th</sup> grade	3% decrease	5% increase	45.8% to 44.5%	52.8% to 55.4%
12 <sup>th</sup> grade	3% increase	4% increase	47% to 48.5%	52.6% to 54.9%
<b>Past 30-day</b>	<b>YRBS</b>	<b>Alaska</b>	<b>YRBS</b>	<b>Alaska</b>
Total	11% decrease	17% decrease	25.3% to 22.4%	28.7% to 23.9%
9th grade	11% decrease	37% decrease	20.9% to 18.5%	27.8% to 17.5%
10 <sup>th</sup> grade	14% decrease	7% increase	25.5% to 22%	25.7% to 27.7%
11 <sup>th</sup> grade	13% decrease	15% decrease	27.6% to 24.1%	31.7% to 26.8%
12 <sup>th</sup> grade	2% decrease	21% decrease	26.2% to 25.8%	30.9% to 24.3%

## Maine

The following table compares trends between two different Maine surveys and the national YRBS and Monitoring the Future surveys. It compares Maine's 1997 and 2003 YRBS data with national data from the same years. (Maine did not conduct the YRBS in 1999.) It also compares 1998/1999 and 2004 MYDAUS data with Monitoring the Future data from 1999 and 2004. Finally, it compares 1998/1999 and 2004 MYDAUS data with national YRBS data from 1999 and 2003.



<b>Past 30-day</b>	<b>YRBS</b>	<b>Maine</b>	<b>YRBS</b>	<b>Maine</b>
Total	15% decrease	13% decrease	26.2% to 22.4%	30.4% to 26.4%
9 <sup>th</sup> grade	22% decrease	33% decrease	23.6% to 18.5%	25.1% to 16.8%
10 <sup>th</sup> grade	12% decrease	13% decrease	25% to 22%	29.5% to 25.6%
11 <sup>th</sup> grade	18% decrease	6% decrease	29.3% to 24.1%	35.0% to 32.9%
12 <sup>th</sup> grade	3% decrease	5% decrease	26.6% to 25.8%	33.1% to 31.5%
<b>Lifetime</b>	<b>MTF</b>	<b>Maine (MYDAUS)</b>	<b>MTF</b>	<b>Maine (MYDAUS)</b>
8 <sup>th</sup> grade	26% decrease	14% decrease	22% to 16.3%	17.2% to 14.8%
10 <sup>th</sup> grade	14% decrease	3% decrease	40.9% to 35.1%	40.8% to 39.4%
twelfth grade	8% decrease	12% decrease	49.7% to 45.7%	57.7% to 50.6%
<b>Past 30-day</b>	<b>MTF</b>	<b>Maine (MYDAUS)</b>	<b>MTF</b>	<b>Maine (MYDAUS)</b>
8 <sup>th</sup> grade	34% decrease	4% decrease	9.7% to 6.4%	8.2% to 7.9%
10 <sup>th</sup> grade	18% decrease	1% decrease	19.4% to 15.9%	22.7% to 22.5%
12 <sup>th</sup> grade	14% decrease	12% decrease	23.1% to 19.9%	30.4% to 26.8%
<b>Past 30-day</b>	<b>YRBS</b>	<b>Maine (MYDAUS)</b>	<b>YRBS</b>	<b>Maine (MYDAUS)</b>
9 <sup>th</sup> grade	15% decrease	16% decrease	21.7% to 18.5%	18.5% to 15.6%
11 <sup>th</sup> grade	10% decrease	9% decrease	26.7% to 24.1%	28.5% to 25.8%
<b>Lifetime</b>	<b>YRBS</b>	<b>Maine (MYDAUS)</b>	<b>YRBS</b>	<b>Maine (MYDAUS)</b>
9 <sup>th</sup> grade	12% decrease	12% decrease	34.8% to 30.7%	31.2% to 27.4%
11 <sup>th</sup> grade	10% decrease	7% decrease	49.7% to 44.5%	50.6% to 47.3%

## Hawaii

The following table compares trends between the 2000 and 2003 Hawaii Student Alcohol, Tobacco, and other Drug Use Studies with the Monitoring the Future surveys from the identical years.

<b>Lifetime use</b>	<b>MTF</b>	<b>Hawaii</b>	<b>MTF</b>	<b>Hawaii</b>
8 <sup>th</sup> grade	14% decrease	24% decrease	20.3% to 17.5%	15.9% to 12.1%
10 <sup>th</sup> grade	10% decrease	8% decrease	40.3% to 36.4%	33.2% to 30.5%
12 <sup>th</sup> grade	6% decrease	3.% decrease	48.8% to 46.1%	45.8% to 44.4%
<b>Past 30-day</b>	<b>MTF</b>	<b>Hawaii</b>	<b>MTF</b>	<b>Hawaii</b>
8 <sup>th</sup> grade	18% decrease	26% decrease	9.1% to 7.5%	8.9% to 6.6%
10 <sup>th</sup> grade	14% decrease	14% decrease	19.7% to 17%	17.2% to 14.8%
12 <sup>th</sup> grade	2% decrease	19% decrease	21.6% to 21.2%	22.7% to 18.4%

The following table notes the differences between trends in the national NSDUH data from 1999 until 2003 with Hawaii's data from 1999 until 2002/2003. However, the state's data are not considered comparable by the NSDUH due to methodological changes.

<b>Past 30-day</b>	<b>NSDUH</b>	<b>Hawaii</b>	<b>NSDUH</b>	<b>Hawaii</b>
12- to 17- years	14% increase	23% increase	7.2% to 8.2%	8.3% to 10.23%

### Nevada

The following table compares trends between Nevada's 1999 and 2003 YRBS with the national YRBS surveys from the identical years.

<b>Lifetime use</b>	<b>YRBS</b>	<b>Nevada</b>	<b>YRBS</b>	<b>Nevada</b>
Total	15% decrease	6% decrease	47.2% to 40.2%	49.5% to 46.6%
9 <sup>th</sup> grade	12% decrease	7% <u>decrease</u>	34.8% to 30.7%	40.6% to 37.8%
10 <sup>th</sup> grade	18% decrease	15% <u>decrease</u>	49.1% to 40.4%	51.0% to 43.1%
11 <sup>th</sup> grade	10% decrease	4% increase	49.7% to 44.5%	52.1% to 54.1%
12 <sup>th</sup> grade	17% decrease	5% increase	58.4% to 48.5%	54.9% to 57.5%
<b>Past 30-day</b>	<b>YRBS</b>	<b>Nevada</b>	<b>YRBS</b>	<b>Nevada</b>
Total	16% decrease	14% decrease	26.7% to 22.4%	25.9% to 22.3%
9 <sup>th</sup> grade	15% decrease	11% decrease	21.7% to 18.5%	23.6% to 20.9%
10 <sup>th</sup> grade	21% decrease	26% decrease	27.8% to 22%	26.1% to 19.2%
11 <sup>th</sup> grade	10% decrease	8% decrease	26.7% to 24.1%	25.9% to 23.8%
12 <sup>th</sup> grade	18% decrease	4% decrease	31.5% to 25.8%	27.5% to 26.3%

The following table notes the differences between trends in the national NSDUH data from 1999 until 2003 and Nevada's NSDUH data from 1999 until 2002/2003. As noted, the state data are not considered comparable by the NSDUH due to methodological changes.

<b>Past 30-day</b>	<b>SAMSHA</b>	<b>Nevada</b>	<b>SAMSHA</b>	<b>Nevada</b>
12- to 17- years	14% increase	17% decrease	7.2% to 8.2%	11.6% to 9.58%

### Colorado

The following table notes the differences between trends in the national NSDUH data from 1999 until 2003 and Colorado's NSDUH data from 1999 until 2002/2003. As noted, the state data are not considered comparable by the NSDUH due to methodological changes.

<b>Past 30-day</b>	<b>SAMSHA</b>	<b>Colorado</b>	<b>SAMSHA</b>	<b>Colorado</b>
12- to 17- years	14% increase	5% decrease	7.2% to 8.2%	10.3% to 9.82%