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>> Marijuana Report

Marijuana use, attitudes and
health effects in Oregon

Oregon
Health
Authority
PUBLIC HEALTH DIVISION

Acknowledgments

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Executive summary

In November 2014, Oregon voters passed Measure 91 to legalize non-medical retail marijuana sale in the state. The Oregon Health Authority's Public Health Division created this report to provide current data on marijuana-related public health surveys and other measures. This report summarizes readily available data sources that describe marijuana use, attitudes and health effects. These data shed light on the public health impacts of marijuana use and create a baseline in order to monitor trends over time.

Key findings from this report

Many young people and adults in Oregon currently use marijuana.

- Nearly one in 10 eighth-graders (9%) and approximately one in five 11th-graders (19%) report current marijuana use in 2015; this is comparable to national use patterns. More youth currently use marijuana than smoke cigarettes. Recent trends in youth use have been stable.
- Approximately half (48%) of Oregon adults report they have ever used marijuana. One in 10 (11%) Oregon adults report they currently use marijuana; use is higher among men (14%) than women (8%). Young adults are the highest reported use age group (18% among ages 18–24 years). Oregon's adult marijuana use is higher than the nation's adult use.
- Although multiple methods of marijuana use are practiced (including eating marijuana in food and “vaping” in electronic vaporizers), smoking is the most common method (approximately 90%).

Youth prevention efforts may be needed.

- 62% of 11th-graders report they have easy access to marijuana. Youth report that marijuana is easier to get than cigarettes.
- Nearly half of 11th-graders currently using marijuana that drive a car report that they drove within three hours of using marijuana in the past month.

Many adults report seeing marijuana marketing in communities; gaps exist in public knowledge of marijuana-related health risks and the law.

- Approximately half (51%) of Oregon adults had seen marijuana product or store advertising in their community in the past month; less than one-third (29%) had seen information about health risks of using marijuana.
- More than half of adults (61%) knew that 21 years or older is the legal age to use marijuana in Oregon, and more than half (59%) knew that it is still illegal to use marijuana in public spaces. However, nearly two-thirds (63%) said they didn't know when it is legal to drive after using marijuana.
- Three in four (75%) adults knew that driving under the influence of marijuana increases the risk of a traffic crash, and half (54%) knew that users that start young face greater health risks.

Many adults use marijuana for medical purposes.

- Annual numbers of medical marijuana patients have increased during the last 15 years, and 78,045 medical marijuana patients are currently registered in Oregon. The primary indication for use is severe pain. Few children or youth are registered as medical marijuana users.
- Three percent of adults report current medical marijuana use, making up less than one-third of total adult marijuana use.

Public health impacts have already been observed associated with legalization of marijuana.

- Marijuana-related calls to the Oregon Poison Center were stable from 2013 through mid-2015 and increased in the second half of 2015. From 2013–2015, calls for persons under age 13 increased.
- Marijuana-related arrests decreased from 2012 to 2015.

This is the first installment in a planned series of data reports. New information will be reported as it becomes available from these or other potential sources that provide greater understanding about marijuana and public health.

Purpose

Oregon has had a legal medical marijuana system since 1998, and voters approved legalized retail (non-medical, also known as recreational) marijuana in 2014. As marijuana distribution systems have become more publicly governed, the state and policymakers need information to support decision making about how best to serve public interest.

The Oregon Health Authority Public Health Division serves to protect Oregon’s public health. The role of the Public Health Division relevant to marijuana includes:

- Understanding and minimizing the possible negative public health impacts of retail and medical marijuana products;
- Educating the public about health issues related to marijuana use;
- Protecting children and vulnerable populations from marijuana exposure;
- Preventing youth from starting to use marijuana;
- Monitoring marijuana use, attitudes and health effects.

The purpose of this report is to provide a first look at marijuana-related public health metrics for Oregon. This “baseline report” summarizes readily available information about marijuana use, attitudes and health effects. Future reports will describe changes over time in key indicators, and also provide information about some health measures that are not currently available.

This report, and future reports in the series, provide data that can be used by public health and community leaders to identify where action is needed to protect public health, and to monitor progress of those actions.

Note to readers: definitions

The following definitions guide readers in understanding the terms used throughout this document.

Marijuana: Marijuana (sometimes known as cannabis, weed or pot) is derived from the plant *Cannabis sativa*. The main psychoactive compound in marijuana is tetrahydrocannabinol (THC). Unless otherwise specified in this report, the term marijuana refers to any marijuana products, intended for either medical or recreational purposes.

Marijuana use: Unless otherwise specified, this means use of marijuana in any form. Marijuana is most commonly used by smoking dried flowers and leaves; it also can be consumed through ingesting infused foods or liquids, inhaling vapors from concentrates using an electronic device (e.g. “vaping”), inhaling smoke from extracts heated on a hot surface (e.g. “dabbing”) or applying infused lotions or oils to skin.

Medical marijuana: This term refers to marijuana used for treatment of a disease or symptoms, as recommended by a physician. Medical marijuana products may not differ from non-medical products.

Substance use: Consumption of alcohol or drugs as a general group is sometimes called “substance use.” In this report, the term is used in discussions about marijuana, alcohol and tobacco.

Current use: Current use of marijuana means any use of marijuana products, in any form, within the past 30 days. This is the standard definition on national and state health surveys for both youth and adults.

Confidence interval: Much of this report’s data came from surveys. Surveys represent populations but, because surveys used here do not query every member of a population, we don’t know the population’s “true value.” We use 95% confidence intervals in this report. This means we can be 95% sure the “true value” for a population falls within this range. In other words, if the survey sampling was done in the population 100 times, we would expect the “true value” to fall within this range 95 times. The larger the sample, the more confident we are of its value.

Confidence intervals also help to compare whether results from one group are significantly different from another group. In this report, when you see that the ends of gray “barbell” lines (representing the confidence interval) do not overlap between two groups, those measures are significantly different. When the gray “barbell” lines overlap between two populations, we cannot be sure that the populations truly differ without a more formal statistical test. (See Appendix A for more information about confidence intervals.)

Background

In November 2014, Oregon voters passed Measure 91 to legalize a non-medical retail marijuana market in the state; possession of limited amounts of marijuana by people aged 21 and older became legal in Oregon as of July 1, 2015. Possession and use of non-medical marijuana by youth (under age 21), driving under the influence of marijuana and using marijuana in public places remain illegal.

Retail stores that sell non-medical marijuana and marijuana products will not be opened and regulated until late 2016; however, limited early retail sales of marijuana (dried leaves and flowers, immature marijuana plants and seeds) were allowed through medical marijuana dispensaries beginning Oct. 1, 2015. (See “Resources” section at the end of this report for links to additional information about the law and oversight of medical and retail marijuana systems in Oregon.)

Multiple entities play a role in the regulation of marijuana in Oregon. Currently, medical marijuana dispensaries are registered with the Oregon Medical Marijuana Program (OMMP). The Oregon Liquor Control Commission (OLCC) began licensing retail marijuana facilities in 2016. Some cities and counties have passed ordinances that prohibit medical marijuana dispensaries or early retail sales within medical dispensaries, and these policies are monitored by the OMMP and OLCC.

As of Nov. 30, 2015:

- 333 medical marijuana dispensaries were registered with the Oregon Medical Marijuana Program:
 - 42% (139) of medical dispensaries were within Multnomah County.
 - 85% (283) of statewide medical dispensaries were participating in early retail sales of marijuana.
- Multiple Oregon communities have established local ordinances to further regulate marijuana distribution:
 - 11 counties (Crook, Douglas, Harney, Jefferson, Klamath, Malheur, Marion, Morrow, Umatilla, Union and Wheeler) prohibit medical marijuana dispensaries.

- Linn County prohibits early retail sales in its medical marijuana dispensaries.
- 40 Oregon cities have ordinances in place that prohibit medical marijuana dispensaries.
- An additional nine cities (Albany, Gresham, La Pine, Medford, Newberg, Reedsport, Scappoose, Sherwood and Tangent) prohibit early retail sales in their medical marijuana dispensaries.

Figure 1 shows the location of Oregon’s medical marijuana dispensaries, including those participating in (dark blue) or not participating in (orange) the limited early retail sales that began Oct. 1, 2015. There are 138 total dispensaries in the city of Portland, 21 in Eugene, 18 in Bend and 17 in Salem. Other cities have fewer than 10 dispensaries.

Figure 2 shows regions that have banned medical dispensaries (shaded orange) and regions that have banned early sales through medical dispensaries (shaded dark blue). County-wide bans may not apply within the limits of some cities, depending on city-county agreements.

Figure 1: Oregon registered medical marijuana dispensaries and status of early retail sales, by city, Nov. 30, 2015

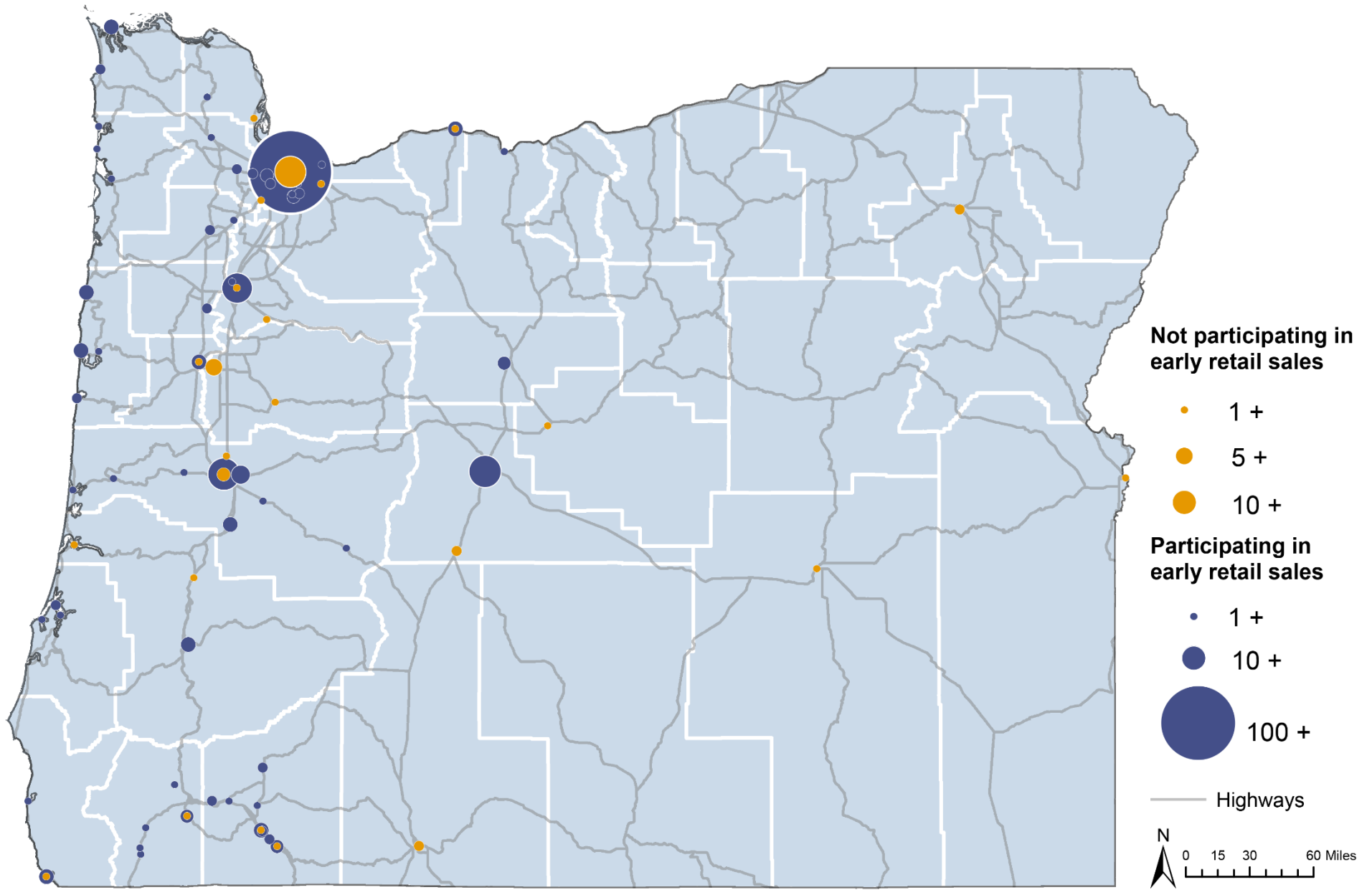
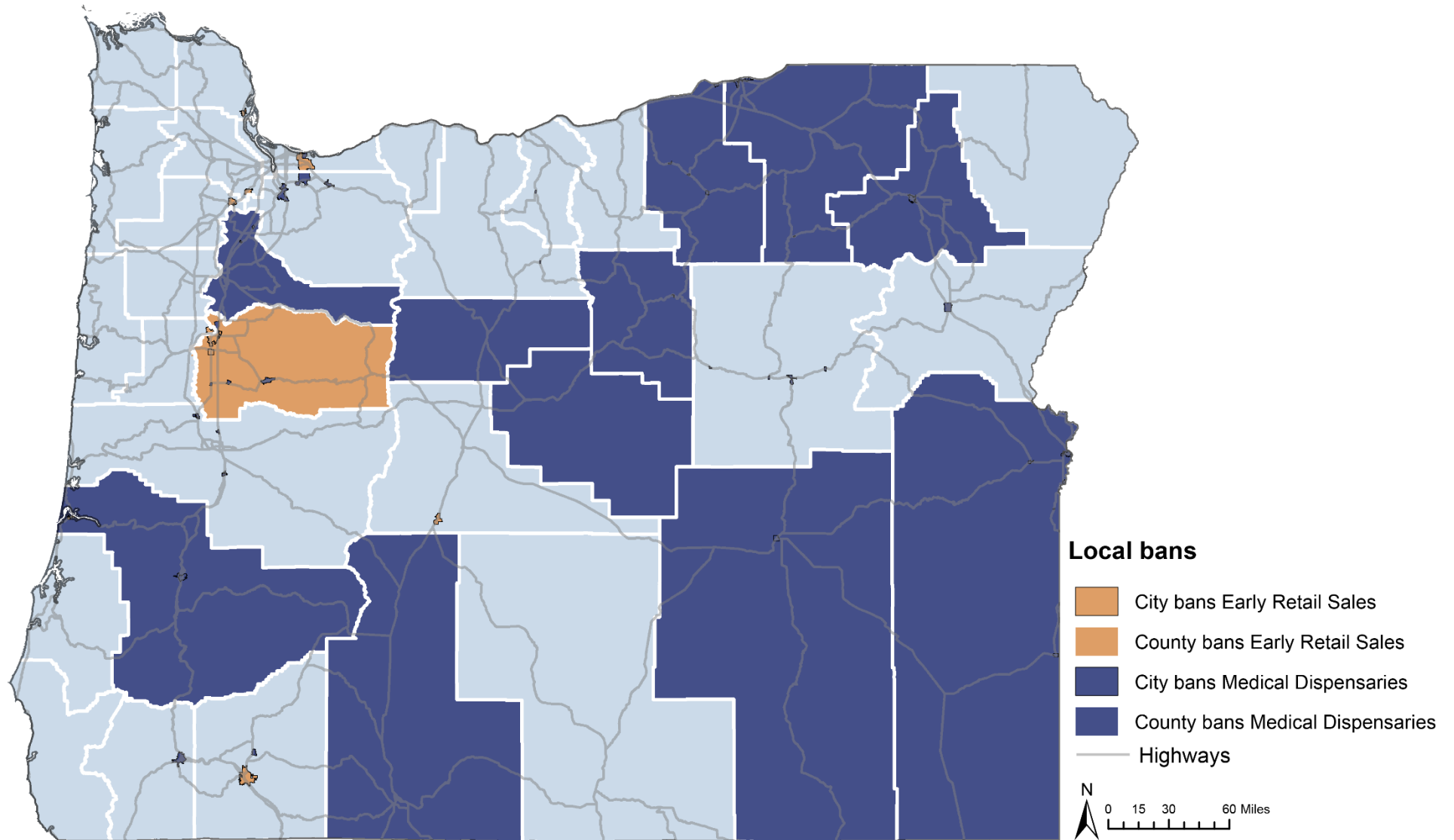


Figure 2: Local bans on medical marijuana dispensaries



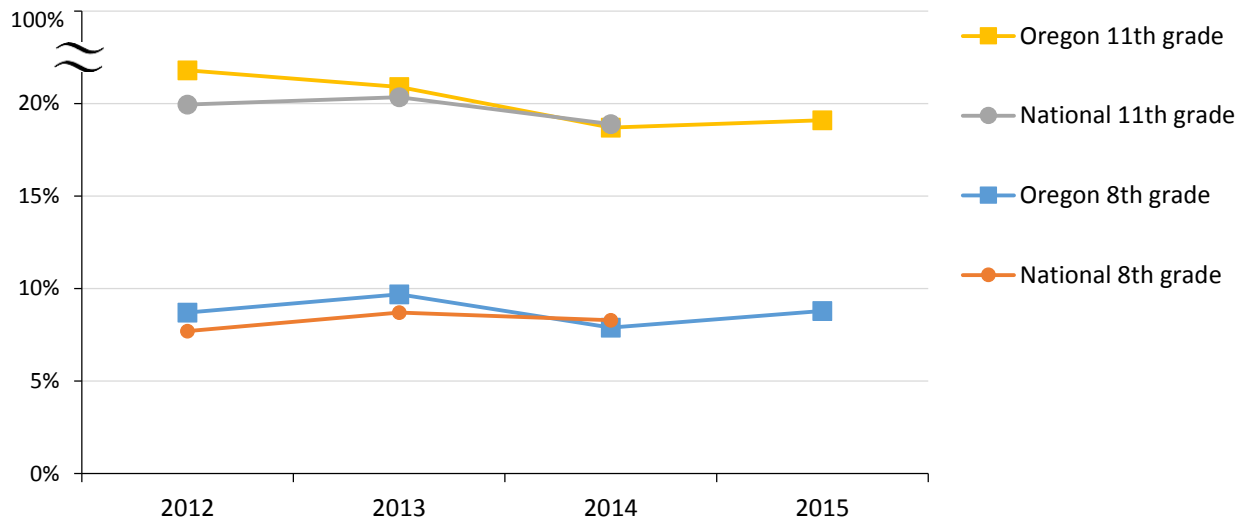
Behaviors

Youth use

Oregon’s Student Wellness Survey (SWS) and Oregon Healthy Teens (OHT) are anonymous, school-based surveys conducted by the Oregon Health Authority. Both surveys contain multiple marijuana-related measures, including patterns of use. National youth data were obtained from Monitoring the Future (MTF), a similar school-based survey of U.S. secondary school students. Oregon’s surveys collect data among eighth-graders and 11th-graders. MTF results for 10th-graders and 12th-graders were averaged to provide a national comparison for Oregon’s 11th-graders.

On all youth surveys “current use” is defined as using marijuana on one or more of the past 30 days.

Figure 3. Current marijuana use among Oregon and U.S. youth, 2012–2015

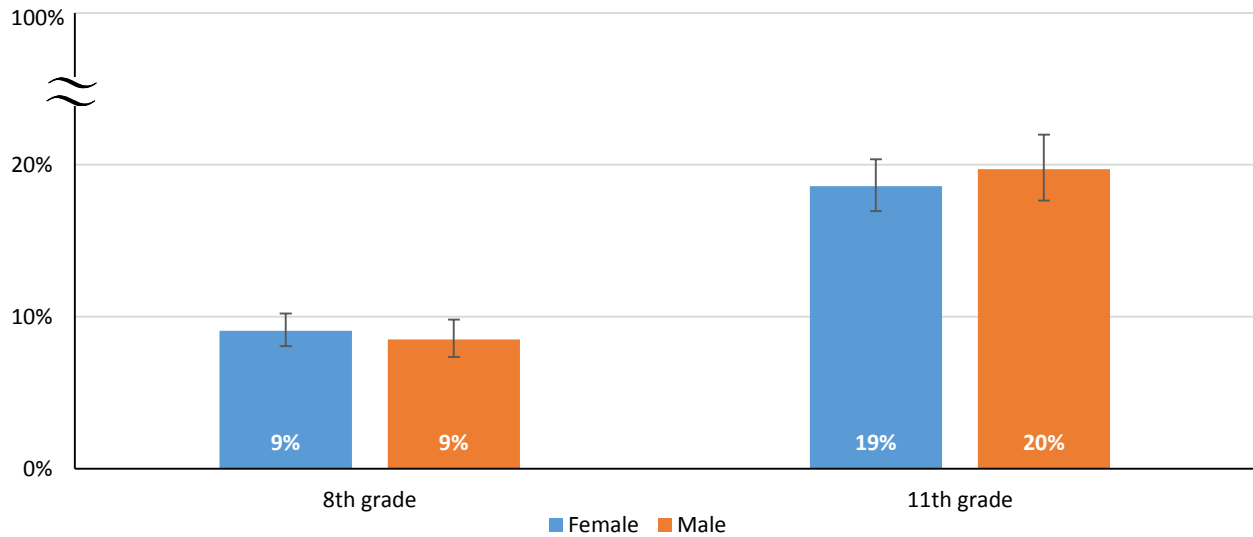


Data sources: Oregon data are from Healthy Teens Survey (2013 and 2015) and Student Wellness Survey (2012 and 2014). National data are from Monitoring the Future Survey (2012–2014)

As shown in Figure 3:

- Current marijuana use among Oregon eighth- and 11th-graders is similar to national estimates.
- From 2012–2015, nearly one in 10 eighth-graders, and approximately one in five 11th-graders, report current marijuana use each year.
- In 2015, 9% of Oregon eighth-graders and 19% of Oregon 11th-graders report current marijuana use.

Figure 4. Current marijuana use among Oregon youth, by grade and gender, 2015



Data source: Oregon Healthy Teens Survey, 2015

Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

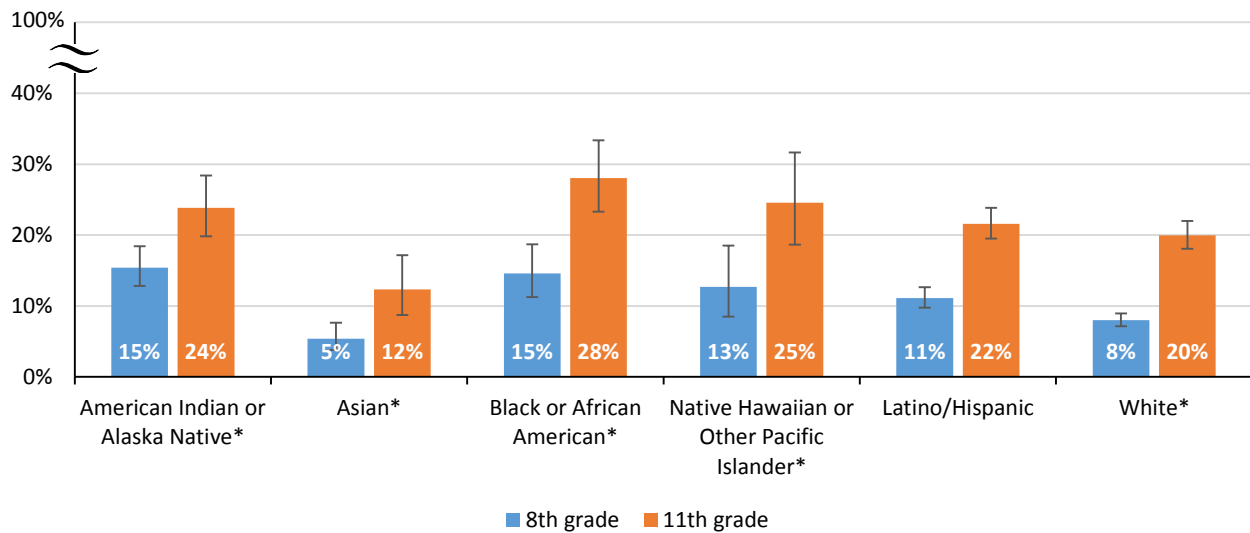
As shown in Figure 4:

- 11th-grade marijuana use was almost double that of eighth-grade student use.
- Marijuana use rates were similar between male and female students in both 8th and 11th grades.

Additionally, (data not shown):

- Among eighth-grade marijuana users, approximately two in five (41%) reported they used between one and two days in the past month; one-third (30%) reported they used on 10 or more days in the past month.
- Among 11th-grade marijuana users, approximately one-third (34%) reported they used between one and two days in the past month; and two in five (40%) reported they used on 10 or more days in the past month.

Figure 5. Current marijuana use among Oregon youth, by race and ethnicity, 2015



*Indicates non-Latino or non-Hispanic ethnicity. Racial groups were defined based on students' self-reported race, either alone or in combination with another race. Latino or Hispanic youth can be of any race.

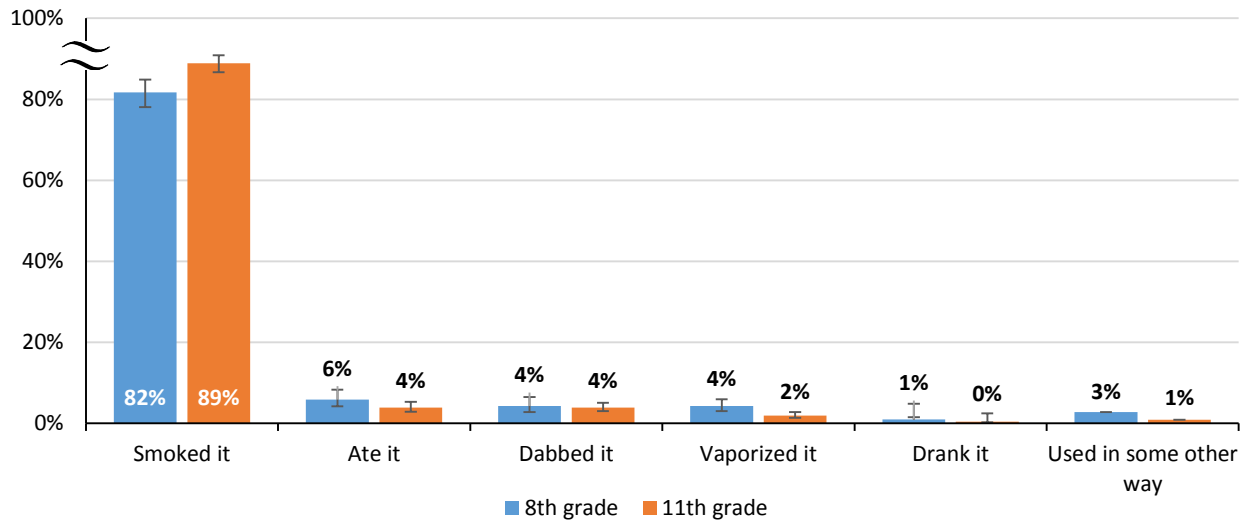
Data source: Oregon Healthy Teens Survey, 2015. Results are unweighted. Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 5:

- During the 2015 school year, current marijuana use among Oregon youth varied by race and ethnicity.
- Among eighth-graders, current marijuana use was higher among students that identified as American Indian or Alaska Native, Black or African American, Native Hawaiian/Pacific Islander or Latino when compared to students that only identified as non-Latino White.
- Among 11th-graders, current marijuana use was higher among students that identified as Black or African American when compared to students that only identified as non-Latino White.

Figure 6. Usual mode of marijuana use among Oregon youth that currently use marijuana, 2015

Oregon students were asked, “During the past 30 days, if you used marijuana, how did you usually use it?” Students had to choose a single answer.



Data source: Oregon Healthy Teens Survey, 2015

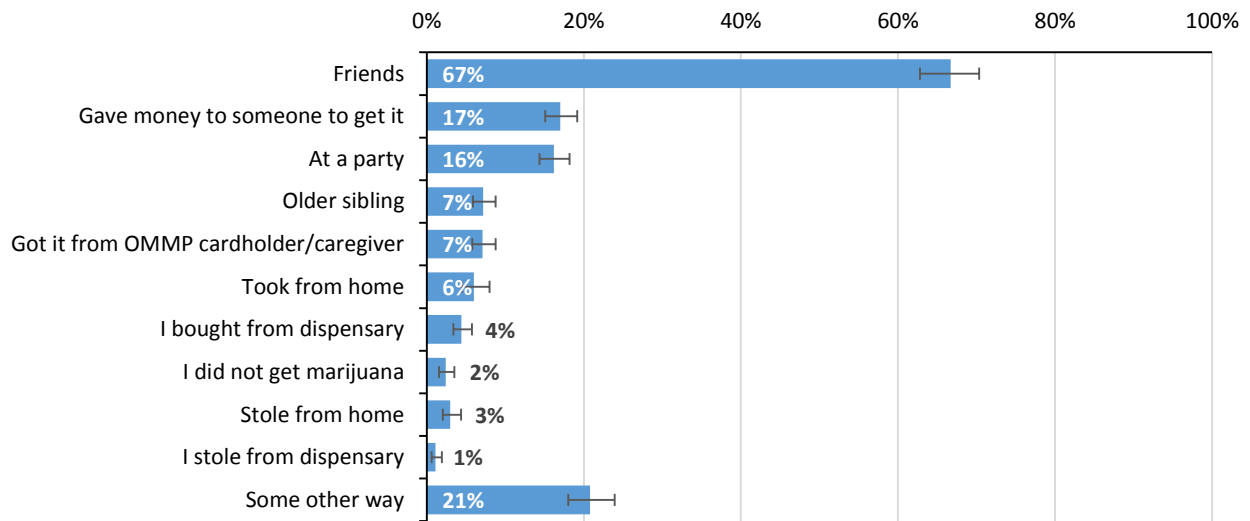
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 6:

- Most students reported smoking as their usual mode of use, followed by eating (edibles), dabbing (inhaling smoke from vaporized marijuana concentrate) and vaping (inhaling vapors from an electronic cigarette-like vaporizer or electronic device).
- A higher proportion of 11th-grade current marijuana users reported smoking marijuana compared to eighth-grade users.

Figure 7. Source of marijuana among 11th-grade current marijuana users in Oregon, 2015

Oregon students that used marijuana were asked, “During the past 30 days, how did you get marijuana?” Students could choose multiple answers.



Data source: 11th-grade Oregon Healthy Teens Survey, 2015

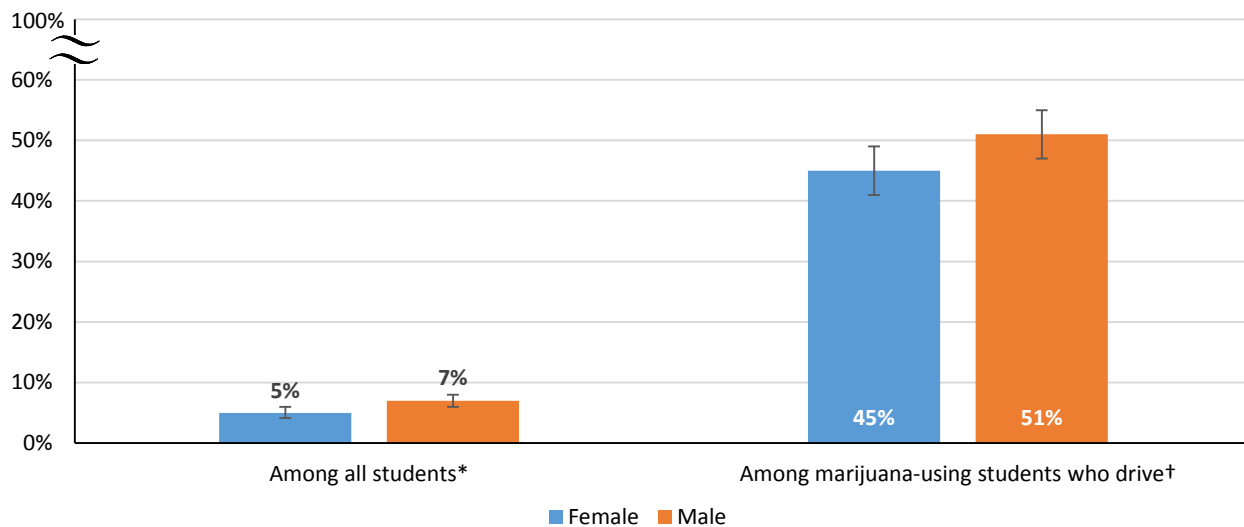
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 7:

- Among Oregon 11th-graders that currently use marijuana, the majority of students that gave a specific answer reported getting their marijuana from friends (67%), giving someone money to buy it (17%) or getting it at a party (16%).

Figure 8. Driving within three hours of marijuana use in past 30 days among Oregon 11th-graders, by gender, 2015

Oregon students were asked, “During the past 30 days, how many times did you drive a car or other vehicle within three hours after using marijuana?” One response option was, “I did not drive in the past 30 days.” Youth that gave any other response besides this one were classified as “students who drive.”



*All students includes all 11th-graders, regardless of whether or not they use marijuana.

†Drivers are defined as students that gave any response to question other than “I did not drive in the past 30 days.”

Source: Oregon Healthy Teens Survey, 2015

Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 8:

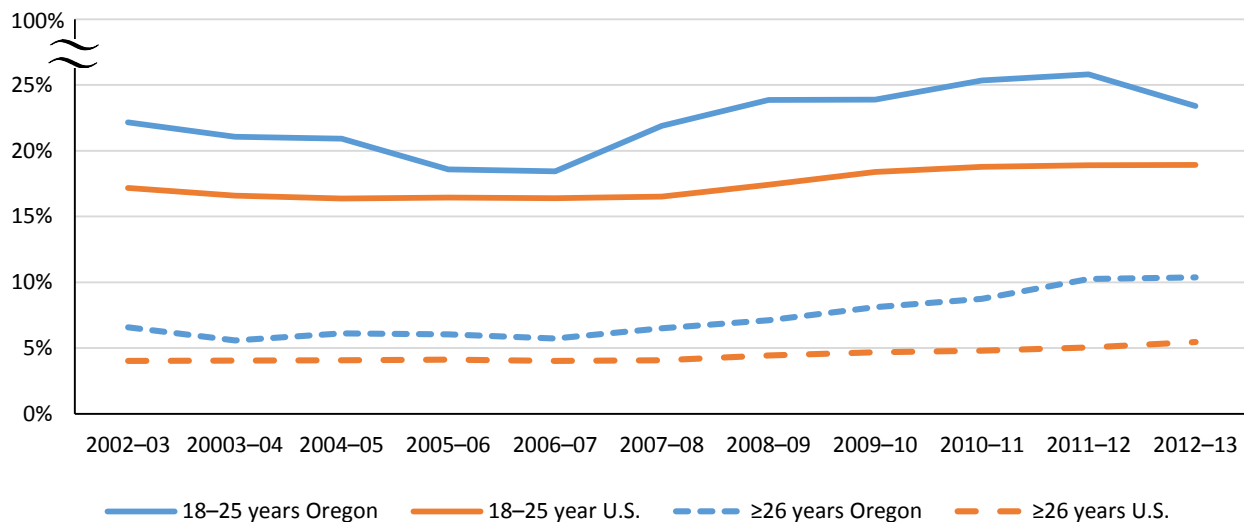
- Of all 11th-grade students, approximately one in 20 girls (5%) and one in 15 boys (7%) had driven within three hours of marijuana use in the past 30 days.
- Approximately one-third of all 11th-graders said they had driven in the past month (data not shown). Among the subgroup of 11th-graders that had both driven a vehicle and used marijuana in the past month (not necessarily at the same time), half of boys (51%) and nearly half of girls (45%) had driven within three hours of marijuana use.

Adult use

The National Survey on Drug Use and Health (NSDUH) is a federally sponsored survey that provides national and state-level data on the use of tobacco, alcohol and illicit drugs and mental health in the United States. This survey has measured adult marijuana use for multiple years.

Adults are classified as “current marijuana users” if they report using on one or more of the past 30 days.

Figure 9. Current marijuana use among Oregon and U.S. adults, by age group, 2002–2013



Data source: National Survey on Drug Use and Health, 2002–2013

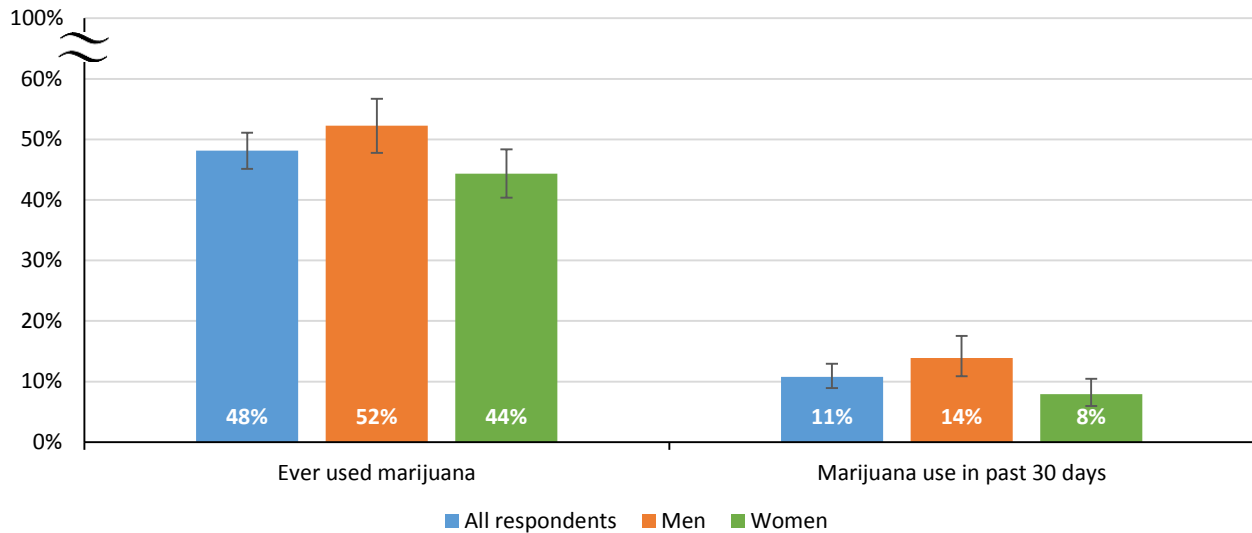
As shown in Figure 9:

- Current marijuana use is consistently higher for young adults (ages 18–25 years) compared to older adults (ages 26+ years) in both Oregon and the United States.
- Oregon marijuana use has been higher than national use among both age groups for the last decade.
- Oregon marijuana use among those 26 years and older has approximately doubled since 2006–2007, while national use has increased only slightly.

The Oregon Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey of health behaviors among Oregon adults.

Marijuana use questions were added to Oregon’s BRFSS beginning in 2014. Oregon adults were asked, “How old were you the first time you used marijuana in any form, if ever?” and, “During the past 30 days, on how many days did you use marijuana or hashish (grass, hash or pot)?” Adults that provided an age of first marijuana use were classified as “ever using.” As with national surveys, adults were defined as “current marijuana users” if they reported using on one or more of the past 30 days.

Figure 10. Marijuana use among Oregon adults, by gender, 2014

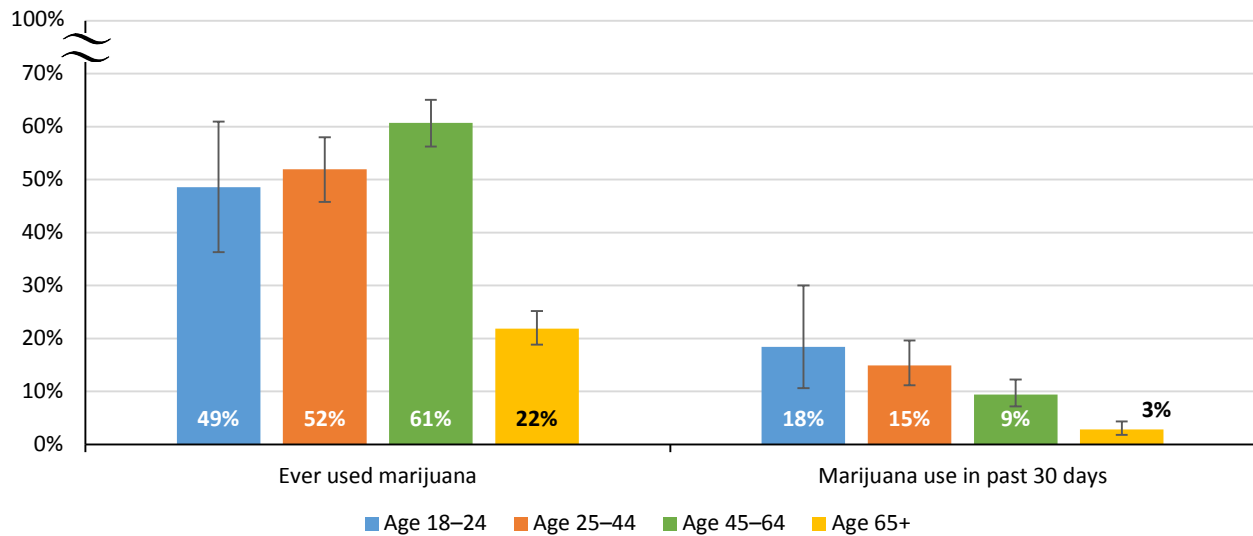


Data source: Oregon Behavioral Risk Factor Surveillance System, 2014
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 10:

- Approximately half (48%) of Oregon adults report they have ever used marijuana.
- One in 10 (11%) Oregon adults report they currently use marijuana.
- Current marijuana use is higher among men (14%) than women (8%).

Figure 11. Marijuana use among Oregon adults, by age, 2014



Data source: Oregon Behavioral Risk Factor Surveillance System, 2014
Error bars (I) indicate 95% confidence intervals (see pages 5-6 for definition).

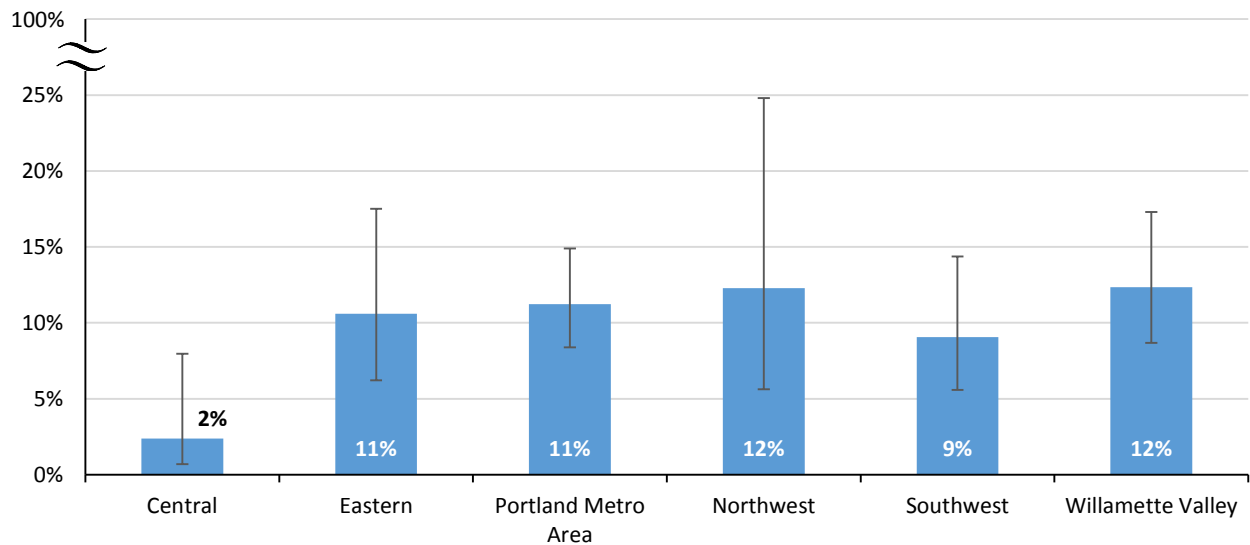
As shown in Figure 11:

- Adults aged 45-64 years were more likely than both younger (ages 18-44 years combined) and older age groups (65+) to have ever tried using marijuana.
- Current marijuana use decreases with age, with adults ages 18-44 years (combined) more likely to use marijuana than older respondents.

Additionally (data not shown):

- One in 10 (11%) adult women of typical childbearing age (18-39 years old) currently use marijuana.
- Among adults that had ever tried marijuana, the median age of first use was 16 years.

Figure 12. Current marijuana use among Oregon adults, by geographic region*, 2014



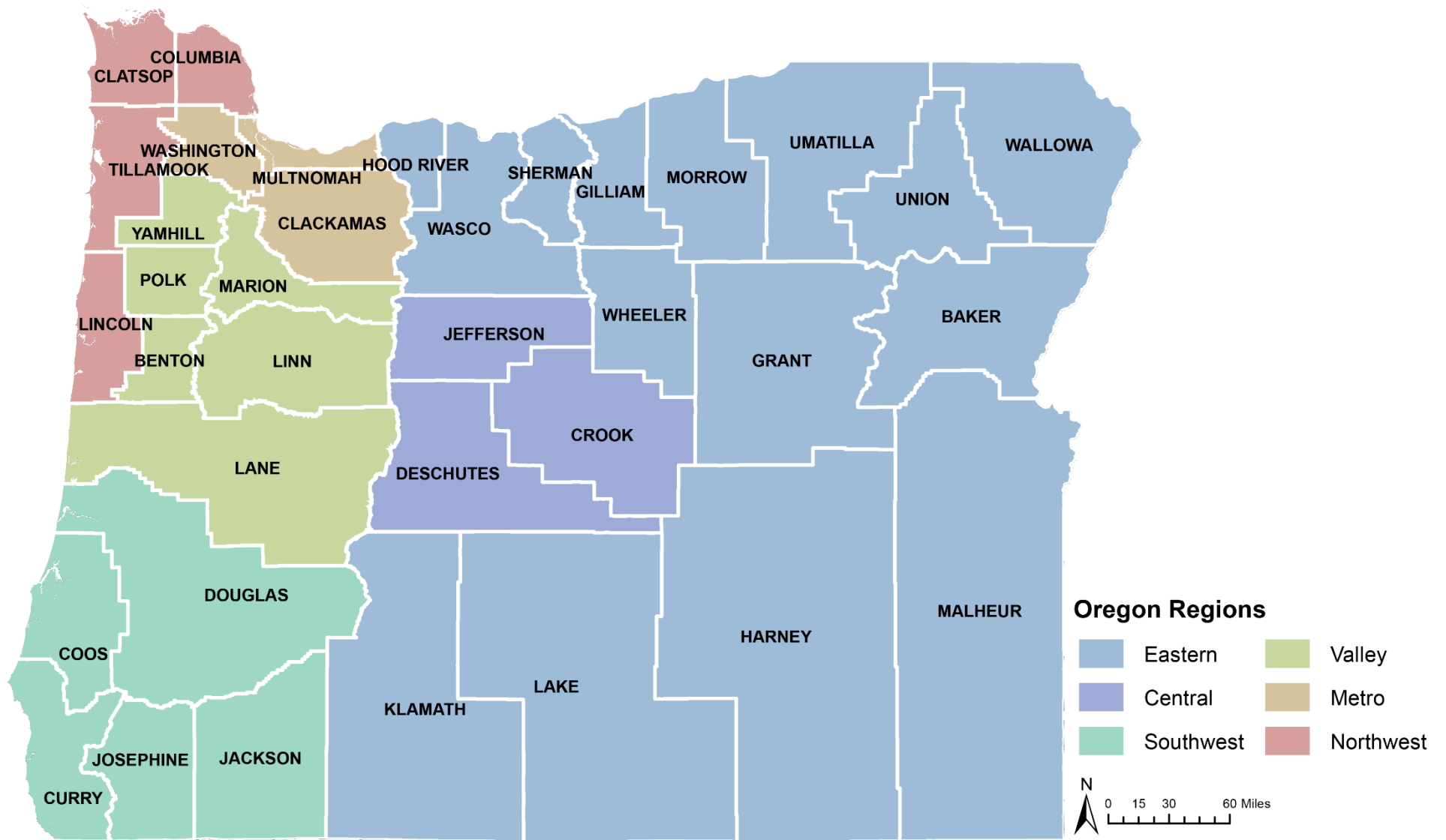
*Regions were defined by county of residence, as shown in Figure 12A.

*Data source: Oregon Behavioral Risk Factor Surveillance System, 2014.
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).*

Figure 12 shows current marijuana use among adults by Oregon geographic regions (see map in Figure 12A for regional reference):

- Adults from the Central region reported lower current marijuana use (2%) than adults from each of the five other regions (9%–12%).
- Other regions' marijuana use was similar to each other.

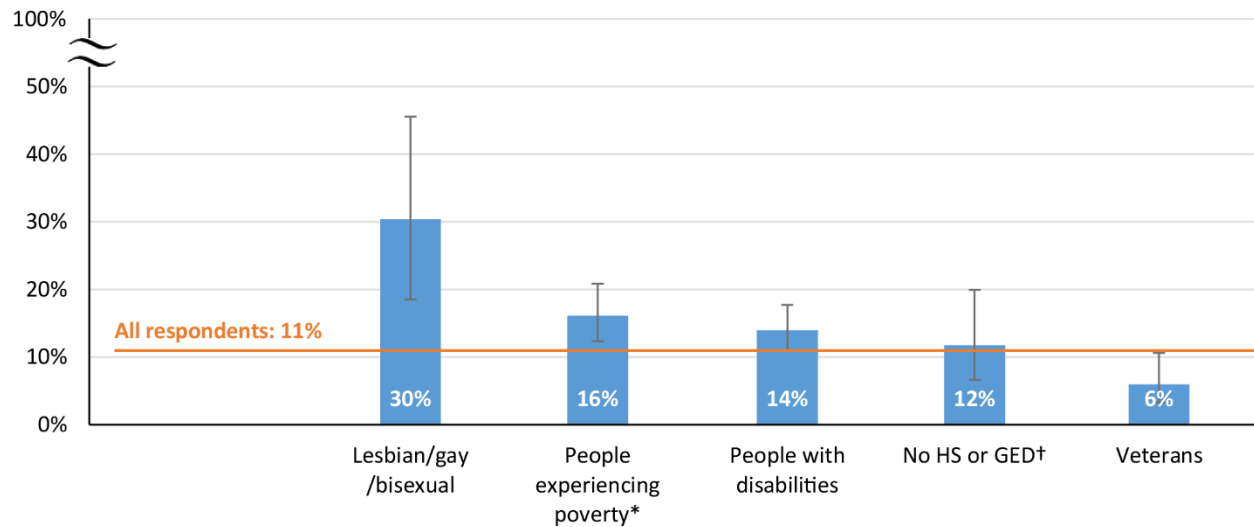
Figure 12A. Oregon geographic regions*



*Oregon regions delineated by county, as defined by Oregon Geospatial Enterprise Office, Spatial Data Library, February 2011.

Some populations that experience health disparities are of particular concern. These include people with low education levels, low income and disabilities as well as veterans and sexual minorities.

Figure 13. Current marijuana use among Oregon adults, by select demographic characteristics, 2014



*Household income less than 185% of 2014 Federal Poverty Guidelines; more information is available at <https://aspe.hhs.gov/2014-poverty-guidelines>.

†HS: high school graduation; GED: General Education Development, a high school equivalency certification.

*Data source: Oregon Behavioral Risk Factor Surveillance System, 2014
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).*

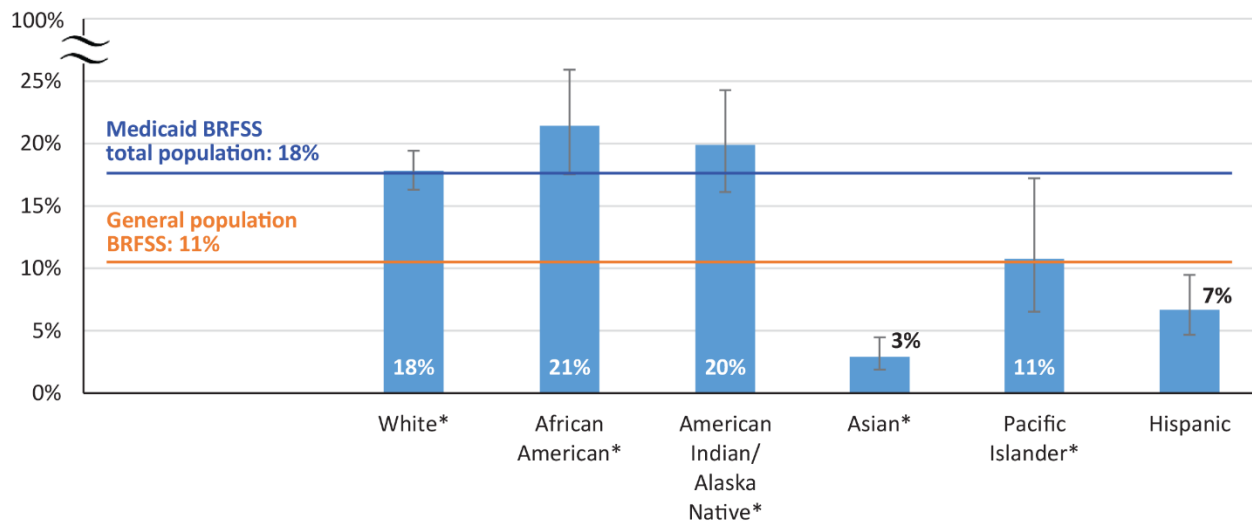
The prevalence of current use for each group is shown in Figure 13. Statistical comparisons to relevant groups were conducted for each group (data not shown) and revealed:

- Marijuana use was higher among:
 - Lesbian/gay/bisexual people, compared to straight, for men and women combined;
 - People with disabilities, compared to people without disabilities;
 - People experiencing poverty, compared to those not in poverty.
- Marijuana use was lower among:
 - Military veterans, compared to non-veterans.

- There was no significant difference in marijuana use:
 - Between people that did not graduate high school (HS) or receive a GED, compared to those with higher levels of education.

In 2014, a special version of the BRFSS Survey was conducted among Oregon adults enrolled in Medicaid, including an oversample of selected racial and ethnic groups. The standard BRFSS did not include sufficient numbers of adults from specific racial and ethnic groups to report marijuana use prevalence, but the Medicaid BRFSS had sufficient participation to do so.

Figure 14. Current marijuana use among Oregon adults enrolled in Medicaid, by race and ethnicity, 2014



*Indicates non-Latino or non-Hispanic ethnicity. Racial groups were defined as respondents that identified with a single race or “preferred race” among multiple races.

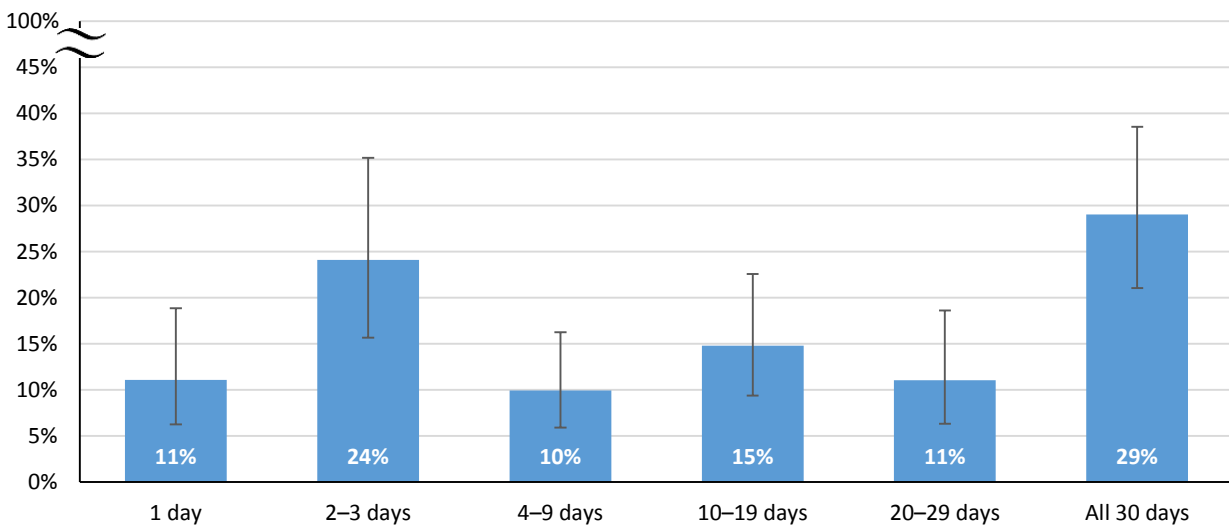
Data sources: Oregon Medicaid Behavioral Risk Factor Surveillance System, 2014, Oregon Behavioral Risk Factor Surveillance System, 2014
 Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 14:

- Current marijuana use was higher among adults in the Medicaid BRFSS compared to the general population BRFSS.
- Within the Medicaid population, current marijuana use was higher among Black or African American (21%), American Indian or Alaska Native (20%) and non-Hispanic White (18%) adults than among the other groups (Asian, Pacific Islander and Hispanic groups).

Figure 15. Frequency of current marijuana use among Oregon adults, 2014

Adults were asked, “During the past 30 days, on how many days did you use marijuana or hashish (grass, hash or pot)?”



Data source: Oregon Behavioral Risk Factor Surveillance System, 2014
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

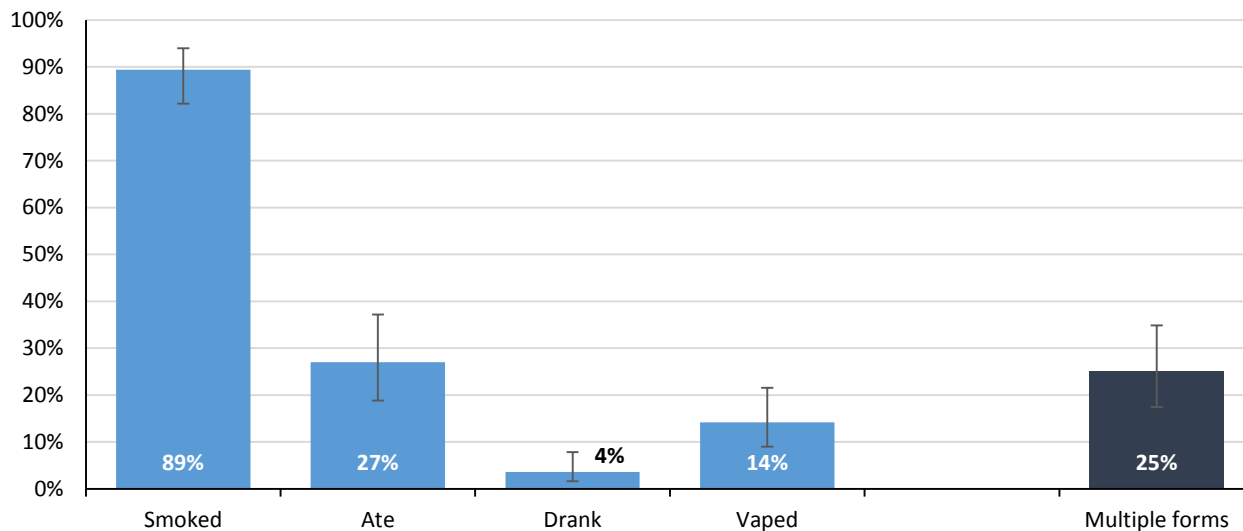
As shown in Figure 15:

- More than one in four (29%) current marijuana users reported using marijuana all 30 days in the past month.
- On average, current users reported every-other-day (14.5 of 30 days) marijuana use (data not shown).

*Although confidence intervals overlap, these groups were found to be significantly different in a separate, formal statistical test.

Figure 16. Modes of marijuana use among Oregon adults that currently use marijuana, 2014

In the 2014 BRFSS, adults that reported using marijuana in the past 30 days were asked, “How did you use marijuana in the past 30 days?” Multiple choices were allowed.



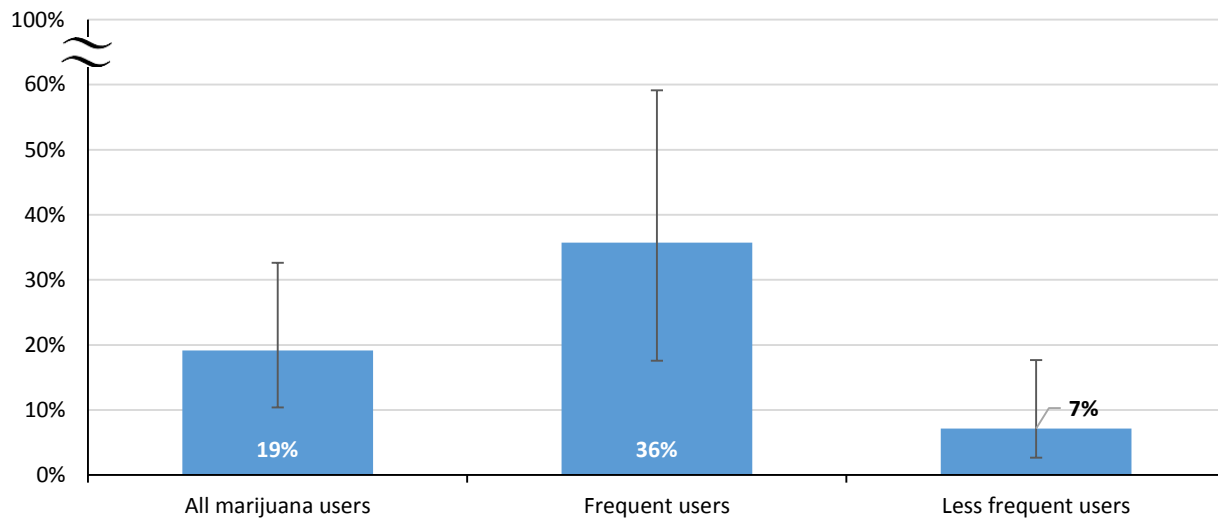
*Data source: Oregon Behavioral Risk Factor Surveillance System, 2014
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).*

As shown in Figure 16:

- The vast majority (89%) of current marijuana users reported smoking it.
- Approximately one in four (27%) current users ate marijuana (edibles) in the past month.
- One in four (25%) reported using multiple forms of marijuana in the past month.
- Approximately one in ten (14%) reported vaping, which is inhaling vapors from an electronic cigarette-like vaporizer or electronic device.
- Frequent marijuana users (20+ days of use in the past month) were more likely than less frequent users to have used multiple forms and to have vaped marijuana (data not shown).

Figure 17. Driving within three hours of using marijuana among Oregon adults that currently use marijuana, 2014

In the 2014 BRFSS, adults that reported using marijuana in the past 30 days were asked, “Thinking about the last 12 months, did you ever drive within approximately three hours after using marijuana or hashish?”



*Data source: Oregon Behavioral Risk Factor Surveillance System, 2014
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).*

As shown in Figure 17:

- Approximately one in five (19%) current marijuana users reported driving within three hours of use in the past year.
- Frequent marijuana users (20+ days of last 30) were more likely (36%) than less frequent users (7%) to have driven within three hours of using marijuana.

Marijuana, alcohol and tobacco

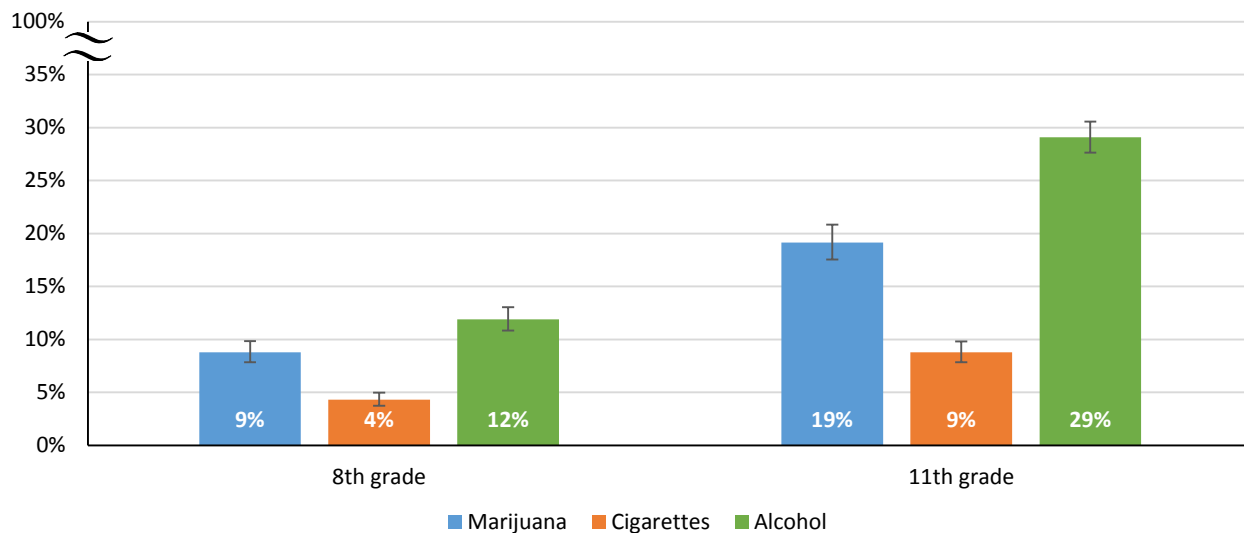
Alcohol and tobacco use patterns are important to consider in monitoring marijuana-related public health data. Changing patterns of marijuana use may lead to substitution for other substance use (e.g., using marijuana rather than binge-drinking alcohol), or combining with other substances to increase their use (e.g., smoking marijuana with tobacco).

Both the Oregon school-based youth surveys and BRFSS ask questions about alcohol and tobacco use, which are reported below.

Youth substance use and access

Oregon youth were also asked about alcohol and cigarette use in school-based health surveys. As with marijuana, youth that reported they had used alcohol or cigarettes on one or more of the past 30 days were defined as “current users.”

Figure 18. Current use of marijuana, cigarettes and alcohol among Oregon youth, 2015



Data source: Oregon Healthy Teens Survey, 2015

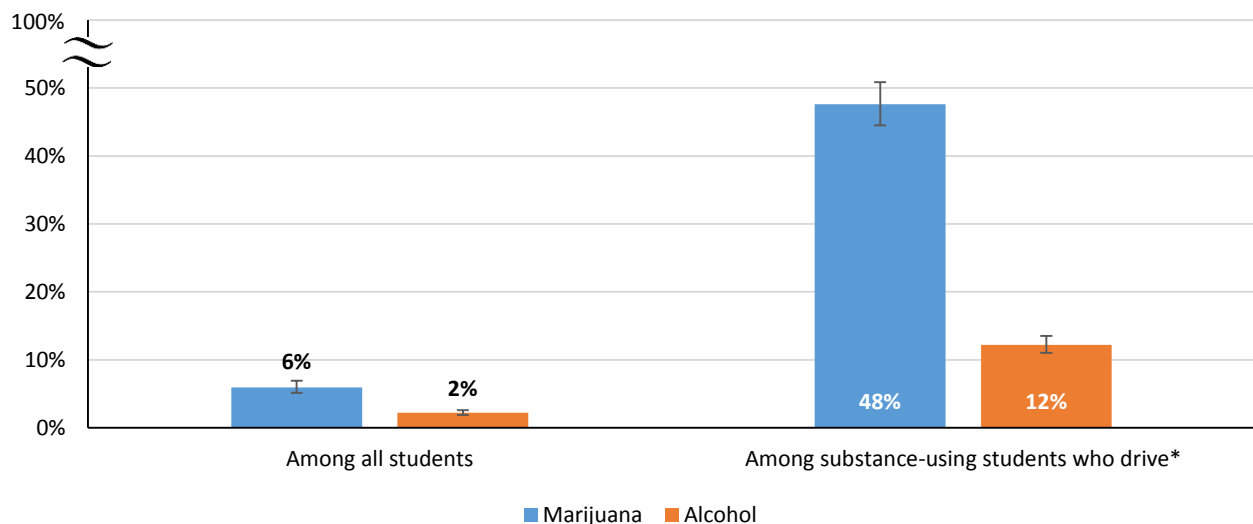
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 18:

- Current marijuana use was higher than current cigarette smoking among both eighth- and 11th-grade students.
- Current marijuana use was lower than alcohol use among both grades.

Figure 19. Driving after use of marijuana or alcohol among Oregon 11th-grade students, 2015

Oregon youth were asked, “During the past 30 days, how many times did you drive a car or other vehicle within three hours after using marijuana?” and “During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?” Youth could respond, “I did not drive in the past 30 days.” Youth that gave any other response besides this one were classified as “students who drive.”



*Drivers defined as students that gave any response to question other than “I did not drive in the past 30 days.”

Data source: Oregon Healthy Teens Survey, 2015
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 19:

- In the overall student population, more 11th-grade students drove within three hours of marijuana use than did after drinking alcohol in the past month.
- Approximately one-third of all 11th-graders said they had driven in the past month (data not shown). Among the subgroup of 11th-grade students that drove and that used

substances in the past month, nearly half (48%) of marijuana users had driven after using marijuana in the past month. This is four times higher than the one in 10 (12%) alcohol-using students that drove after using alcohol in the past month.

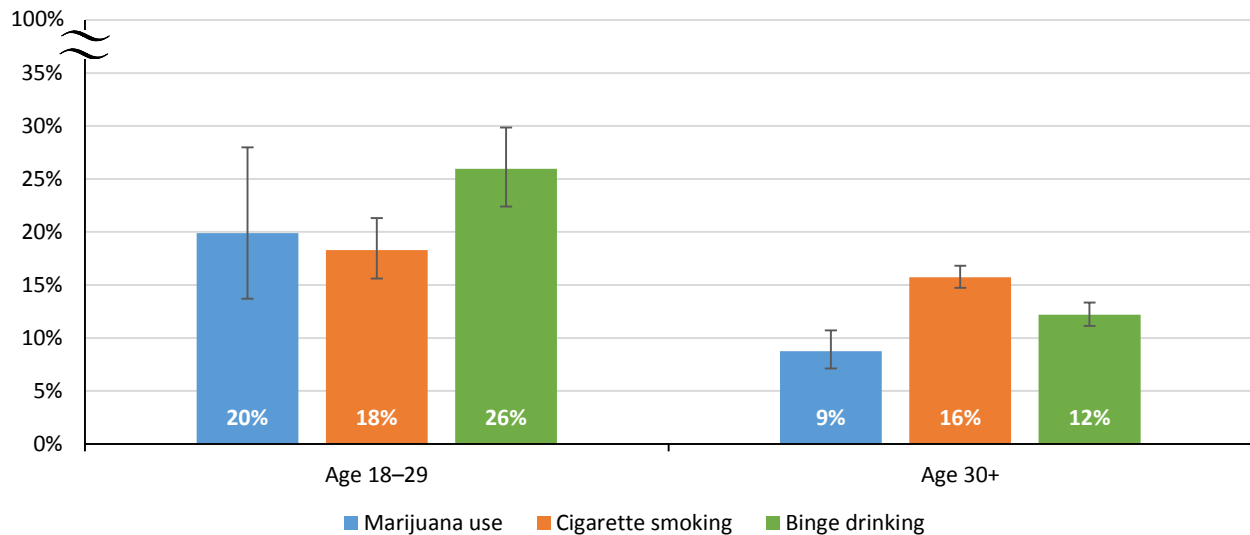
Adult substance use

In the 2014 BRFSS, adults were also asked about the use of other substances, including tobacco and alcohol.

Figure 20. Current marijuana and tobacco use and binge drinking among Oregon young adults (18–29) and age 30+, 2014

Current smokers are people that have smoked at least 100 cigarettes in their lifetime and that now smoke cigarettes “every day” or “some days.” One measure of potentially harmful alcohol use among adults is “binge drinking.” Binge drinking is defined as five or more drinks on one occasion for men, four or more for women, in the past 30 days.

Data source: Oregon Behavioral Risk Factor Surveillance System, 2014



Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 20:

- Among all adults, 11% currently used marijuana, 16% smoked cigarettes and 15% reported binge drinking (data not shown).

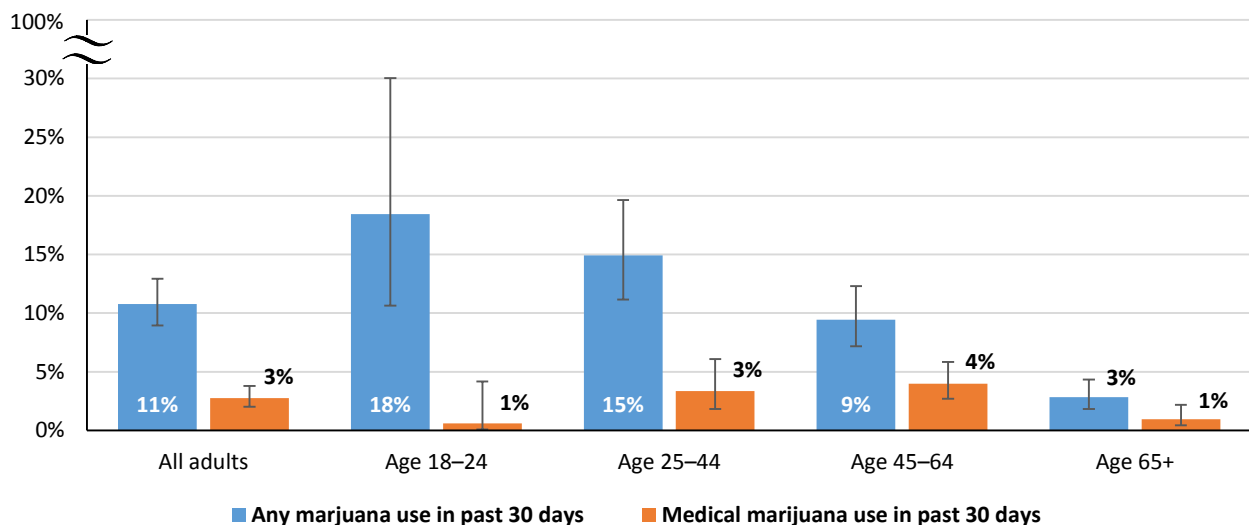
- Among respondents ages 18–29, current marijuana use (20%) was comparable to current tobacco smoking (18%).
- Current marijuana use was less prevalent than smoking and binge drinking among adults ages 30 years and older.
- Among current marijuana users, 42% reported current cigarette smoking and 32% reported binge drinking (data not shown).

Medical marijuana

Medical marijuana use has been legal in Oregon since 1998, when the state’s voters passed the Oregon Medical Marijuana Act.

Figure 21. Current any and medical marijuana use among Oregon adults, by age group, 2014

In addition to asking about general marijuana use, the 2014 BRFSS asked respondents that had ever tried marijuana, “*During the past 30 days, on how many days did you use medical marijuana as recommended by a doctor or other health care provider for treatment of a medical condition?*” People that said they had used medical marijuana during the past 30 days were classified as “medical marijuana users.”

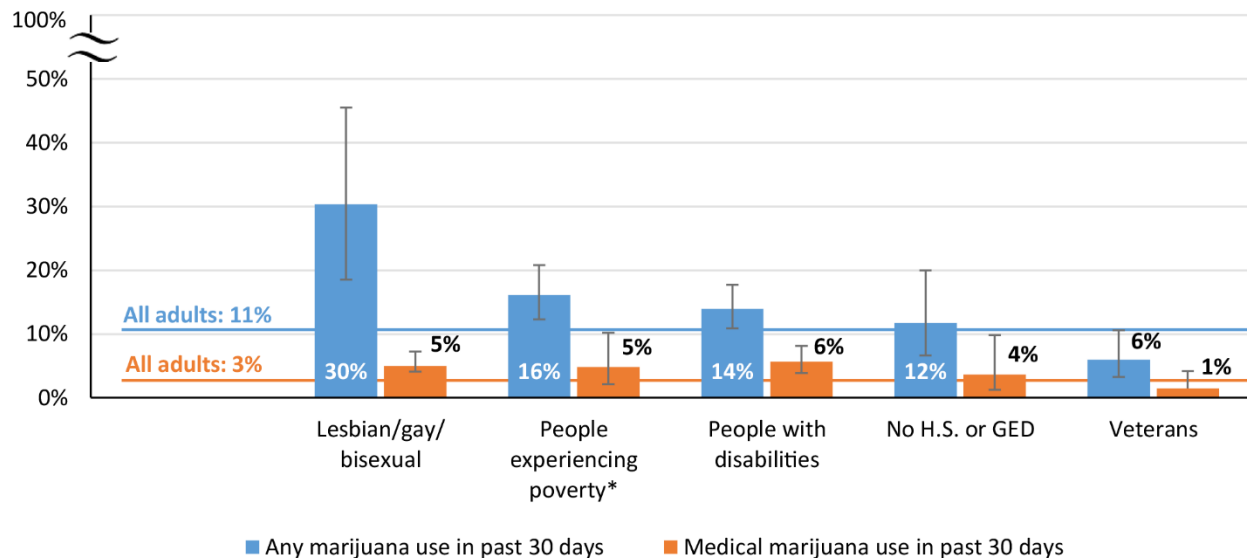


Data source: Oregon Behavioral Risk Factor Surveillance System, 2014
 Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 21:

- Three percent of adults reported current medical marijuana use, making up less than one-third of the 11% total use percentage.
- Young adults (18–24 years old) that use marijuana are least likely to use marijuana for medical purposes. Medical marijuana use makes up a greater share of any marijuana use among groups older than 25 years of age.
- While any marijuana use decreases with age, medical marijuana use increases with age among those less than 65 years old.

Figure 22. Current marijuana and medical marijuana use among Oregon adults, by select demographic characteristics, 2014



*Household income below 185% of the 2014 Federal Poverty Guidelines. Further information available at <https://aspe.hhs.gov/2014-poverty-guidelines>.

Data source: Oregon Behavioral Risk Factor Surveillance System, 2014
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 22:

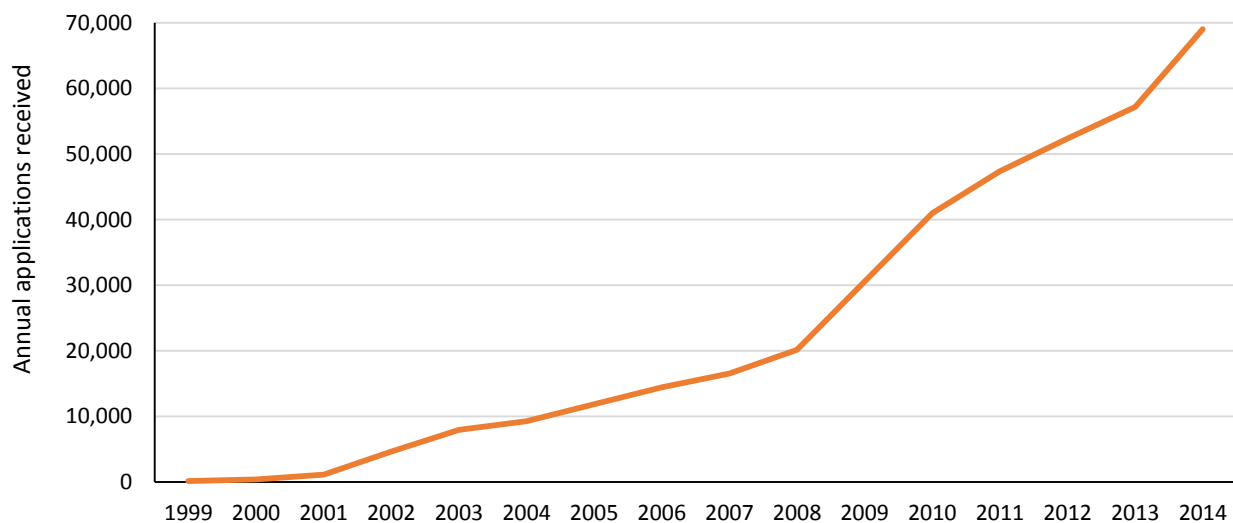
- Medical marijuana use represents between one-sixth and one-third of total marijuana use for all groups.
- Medical marijuana use represents the greatest share of total marijuana use among people with disabilities for the groups shown.

Statistical comparisons between relevant groups were conducted (data not shown), and medical marijuana use was higher among:

- People with disabilities, compared to people without disabilities;
- People experiencing poverty, compared to those not in poverty.

The Oregon Medical Marijuana Program (OMMP) is a state registry program within the Oregon Health Authority Public Health Division. OMMP’s role is to administer the Oregon Medical Marijuana Act, including registering patients to use marijuana for medical treatment for specific conditions as confirmed by a physician. Patients must have their condition and medical marijuana treatment recommendation reaffirmed by a physician once per year. The OMMP also registers medical marijuana caregivers (individuals 18 years and older who have significant responsibility for the wellbeing of a patient, including assisting with supply, transportation and administration), growers and grow sites. The OMMP routinely analyzes its registry data.

Figure 23. Annual numbers of Oregon medical marijuana card patient applications, 1999–2014



Data source: Oregon Medical Marijuana Program (OMMP)

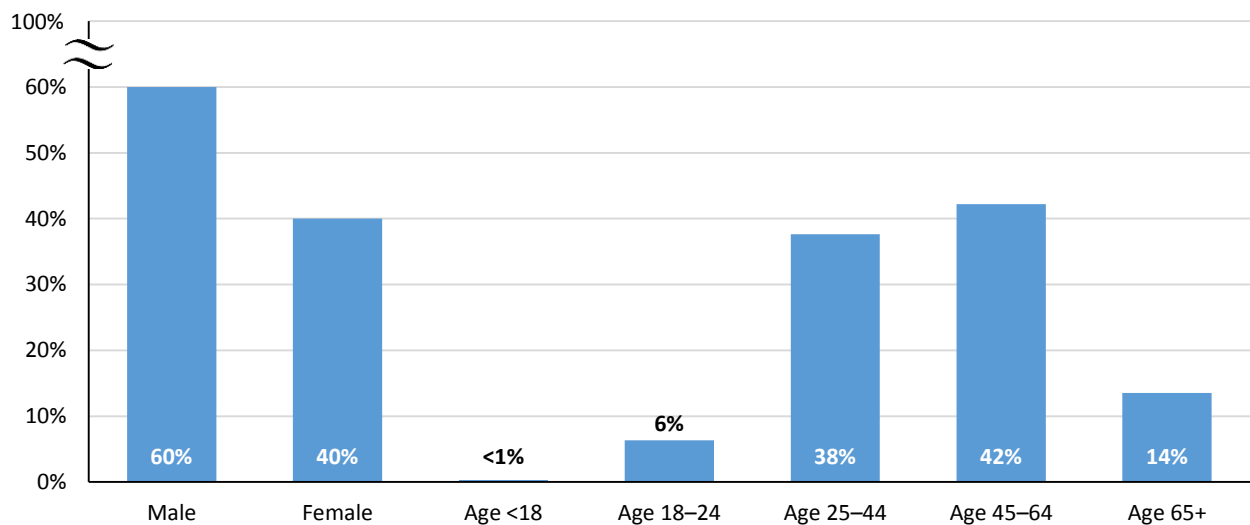
As shown in Figure 23:

- The OMMP has experienced a steady growth in medical marijuana card applications for patients, from 118 in 1999 to 69,062 in 2014.
- Most applications received are approved. Since 2001, an average of 4% of applications were not approved due to lack of documentation or compliance with OMMP.

According to OMMP, as of Oct. 30, 2015, there were:

- 78,045 medical marijuana patients registered in Oregon;
- 37,017 caregivers registered in Oregon;
- 48,699 medical marijuana growers registered in Oregon;
- 33,194 medical marijuana grow sites registered in Oregon;
- 1,705 physicians that provided treatment recommendations for medical marijuana patients.

Figure 24. Demographic characteristics of Oregon medical marijuana patients, 2015



Data source: Oregon Medical Marijuana Program (OMMP)

As shown in Figure 24:

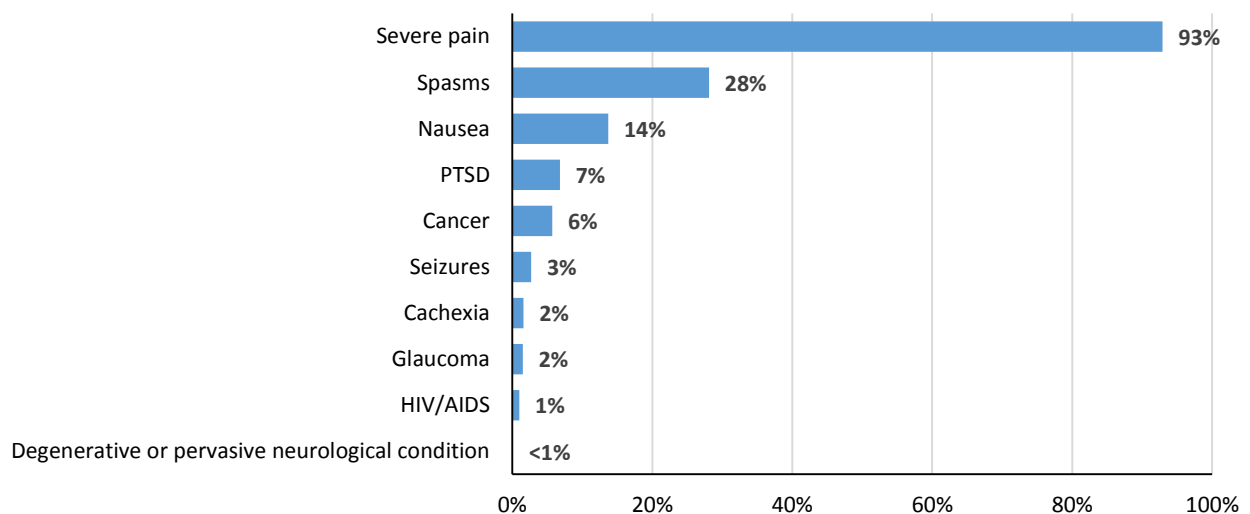
- Men make up a larger proportion of medical marijuana patients than women (60% vs. 40%).
- Most medical marijuana patients are between the ages of 25 and 64.
- Relatively few minors are medical marijuana patients; 257 (less than 0.5%) of currently registered patients are less than 18 years old.

Medical conditions that qualify a patient for the OMMP are:

- Cancer;
- Glaucoma;
- Agitation due to Alzheimer’s disease;
- Positive status for human immunodeficiency virus (HIV) or acquired immune deficiency syndrome (AIDS);
- Post-traumatic stress disorder (PTSD); or
- A medical treatment or condition that produces cachexia, severe pain, severe nausea, seizures (including, but not limited to, seizures caused by epilepsy) or persistent muscle spasms (including, but not limited to, spasms caused by multiple sclerosis).

These conditions are not mutually exclusive. A patient may have one or more conditions.

Figure 25. Oregon medical marijuana patient conditions, 2015



Data source: Oregon Medical Marijuana Program (OMMP), October 2015 Statistical Snapshot

As shown in Figure 25:

- Severe pain is the most common condition for which patients apply to receive medical marijuana, and is reported by nearly all applicants (93%).
- Approximately one in four (28%) medical marijuana patient applications indicated treatment of spasms as a qualifying condition.
- Approximately one in 10 (14%) medical marijuana patient applications indicated nausea as a qualifying condition.
- Other qualifying conditions besides severe pain, spasms and nausea were mentioned in fewer than 10% of patient applications.

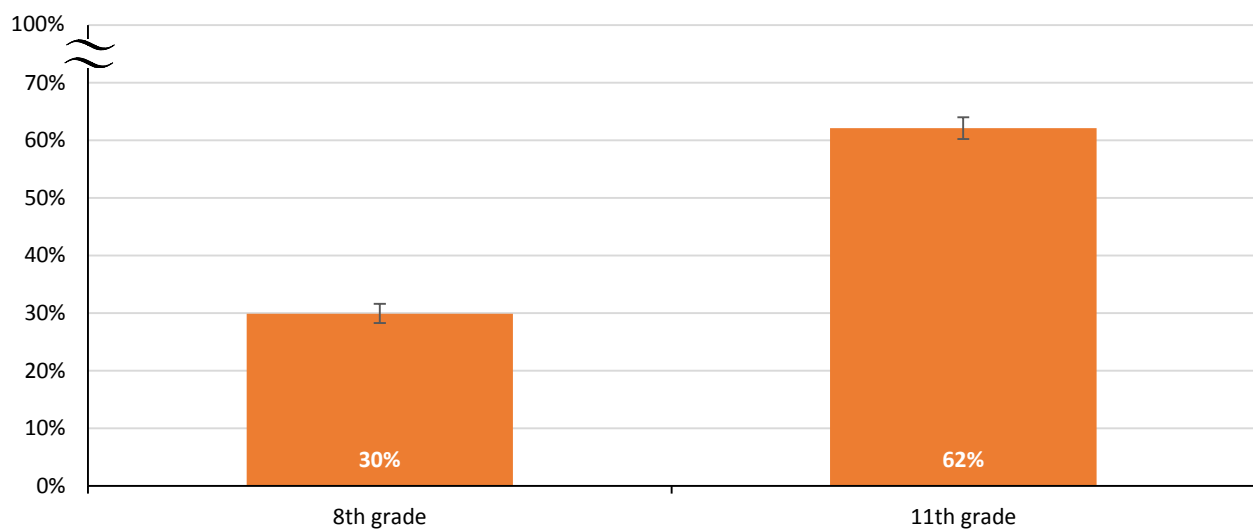
Knowledge and attitudes

Youth attitudes

The Oregon Healthy Teens Survey asks a limited number of questions about marijuana-related attitudes.

Figure 26. Oregon youth that think marijuana is easy to get, 2015

Oregon youth were asked, “If you wanted to get ... some marijuana, how easy would it be for you to get some?” Responses of “sort of easy” and “very easy” were combined and reported as “easy” in this figure.



Data source: Oregon Healthy Teens Survey, 2015

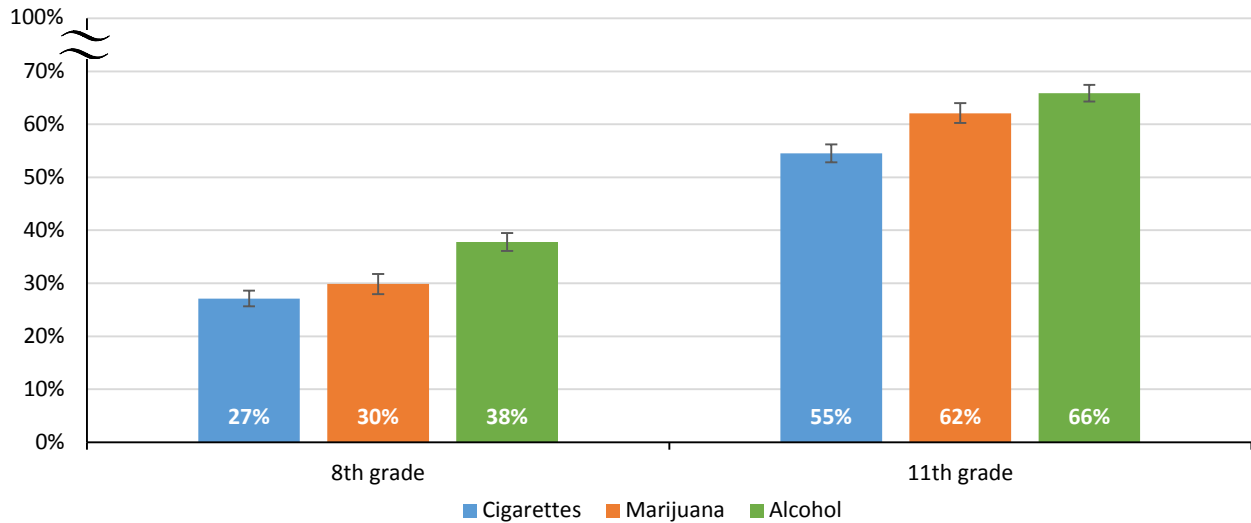
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 26:

- Approximately three in five (62%) 11th-graders reported it would be easy to get marijuana.
- Eleventh graders were more likely than eighth-graders to report it would be easy to get marijuana.

Figure 27. Oregon youth that think selected substances are easy to get, 2015

Oregon youth were asked, “If you wanted to get ... [cigarettes/marijuana/alcohol], how easy would it be for you to get some?” Responses of “sort of easy” and “very easy” were combined and reported as “easy” in this figure.



Data source: Oregon Healthy Teens Survey, 2015

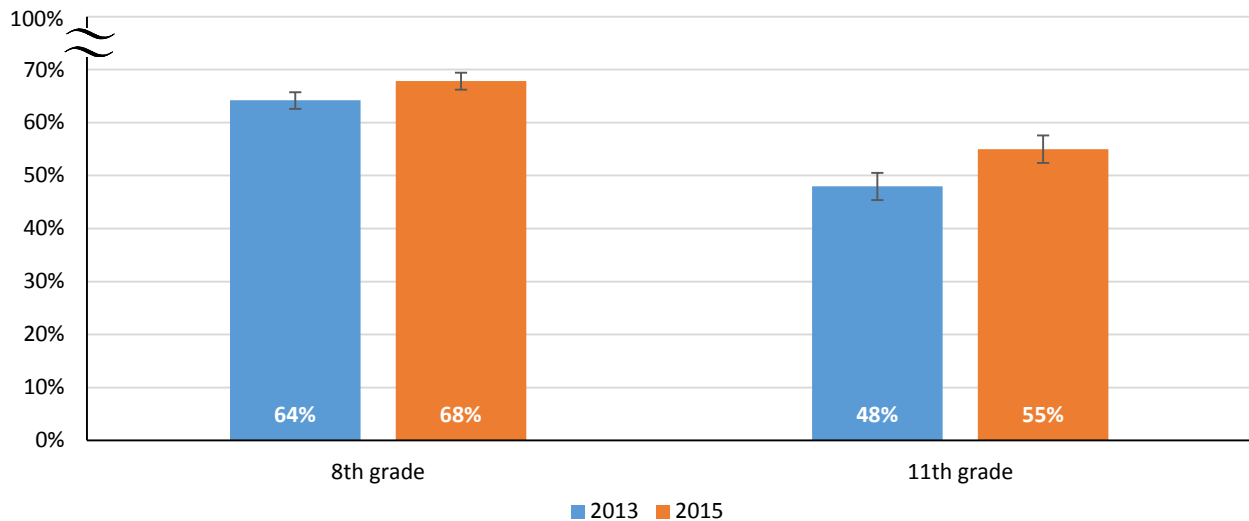
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 27:

- Among eighth-graders, perceived easy access to marijuana was comparable to that of cigarettes, while alcohol is reported as easier to get.
- Among 11th-graders, access to marijuana was reported as being easier than cigarettes, while alcohol is the easiest to get of the three substances.

Figure 28. Oregon youth that think weekly marijuana use* is harmful, 2013–2015

Oregon youth were asked, “How much do you think people risk harming themselves (physically or in other ways) if they....smoke marijuana once or twice a week (asked in 2013) / use marijuana regularly (at least once or twice a week) (asked in 2015)?” The percent of youth that said “great risk” and “moderate risk” was combined and reported as a perception of “harmful.”



*Survey language was “smoke marijuana” in 2013, “use marijuana” in 2015.

Data source: Oregon Healthy Teens Survey, 2013 and 2015

Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

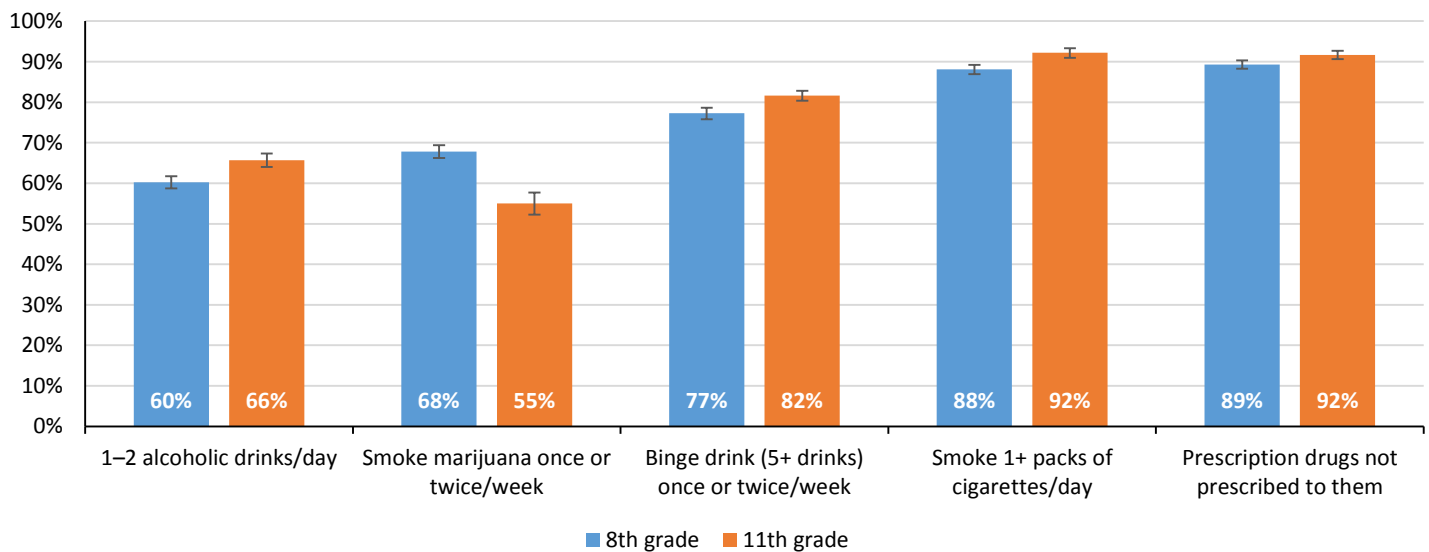
As shown in Figure 28:

- In 2015, more than two-thirds (68%) of eighth-graders and more than half (55%) of 11th-graders thought people were at moderate-to-great risk from weekly marijuana use.
- Risk perception of weekly marijuana use increased in both grades between 2013 and 2015.

Oregon students that participated in the Oregon Healthy Teens Survey were also asked about perceived harm from other substance use. Their responses provide insights about the relative perception of harm from marijuana use.

Figure 29. Oregon youth that think select substance use is harmful, by grade, 2015

Oregon youth were asked, “How much do you think people risk harming themselves (physically or in other ways) if they...” (see response options below chart in this figure). The percent of youth that said “great risk” and “moderate risk” was combined and reported as a perception of “harmful.”



Data source: Oregon Healthy Teens Survey, 2015

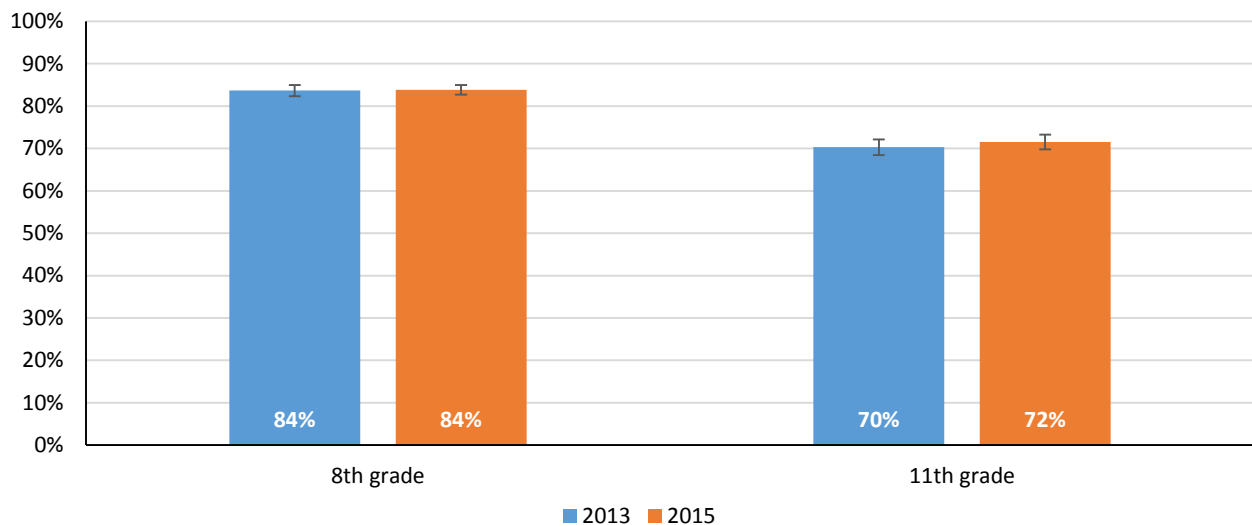
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 29:

- In general, both eighth- and 11th-grade Oregon students reported thinking that using marijuana weekly is less harmful than smoking a pack of cigarettes a day, binge drinking or using prescription drugs that do not belong to them.
- Eleventh-graders reported that using marijuana weekly is less harmful than drinking between one and two alcoholic drinks a day; however, eighth-graders believed that using marijuana weekly is more harmful than daily alcohol drinking.
- Eleventh-graders were less likely than eighth-graders to believe that using marijuana is harmful; for all other substances, eleventh-graders were more likely to perceive harm.

Figure 30. Oregon youths' perception that parents feel it would be very wrong for respondents to use* marijuana, by grade, 2013–2015

Oregon youth were asked, “How wrong do your parents feel it would be for you to...smoke marijuana (2013) / use marijuana (2015)?” Response options include “very wrong,” “wrong,” “a little bit wrong” and “not wrong at all.” Responses of “very wrong” are reported in this figure.



*Survey language was “smoke marijuana” in 2013, changed to “use marijuana” in 2015.

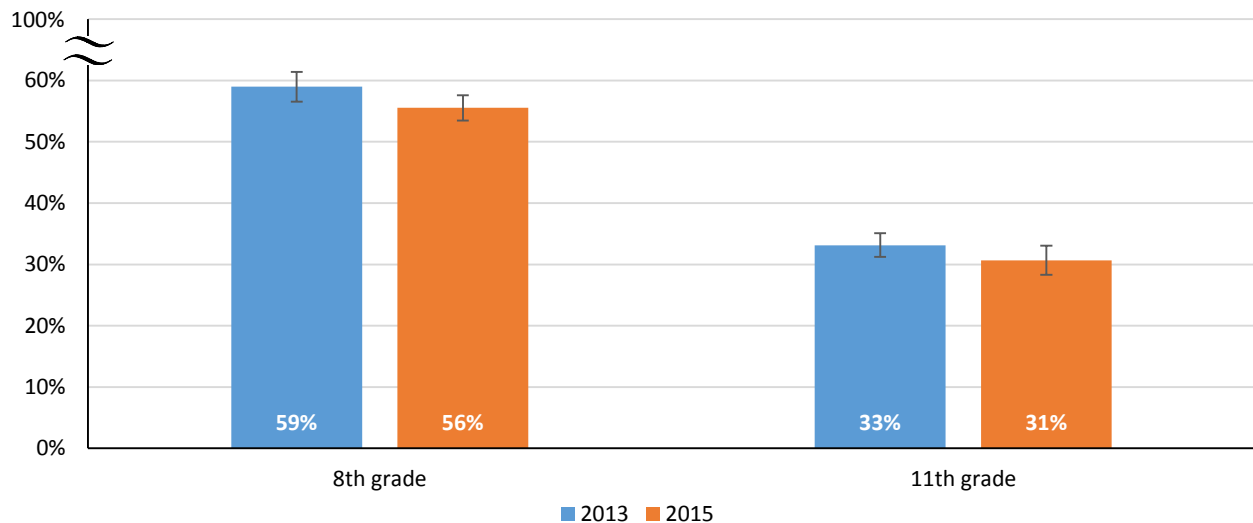
Data source: Oregon Healthy Teens Survey, 2013 and 2015
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 30:

- Eighth-grade students are more likely to report that their parents feel it would be “very wrong” for them to use marijuana than 11th-grade students.
- Youth perception of parents’ feelings were similar between 2013 and 2015.

Figure 31. Oregon youths' perception that friends feel it would be very wrong for respondents to use* marijuana, by grade, 2013–2015

Oregon youth were asked, “How wrong do your friends feel it would be for you to...smoke marijuana (2013) / use marijuana (2015)?” Response options include “very wrong,” “wrong,” “a little bit wrong,” and “not wrong at all.” Responses of “very wrong” are reported in this figure.



*Survey language was “smoke marijuana” in 2013, changed to “use marijuana” in 2015.

Data source: Oregon Healthy Teens Survey, 2013 and 2015

Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 31:

- Eighth-grade students are more likely to report that friends feel it would be “very wrong” for them to use marijuana than 11th-grade students.
- The percentage of eighth-graders reporting friends’ “very wrong” feelings regarding marijuana decreased from 2013 to 2015. †

†Although confidence intervals overlap, these groups were found to be significantly different in a separate, formal statistical test.

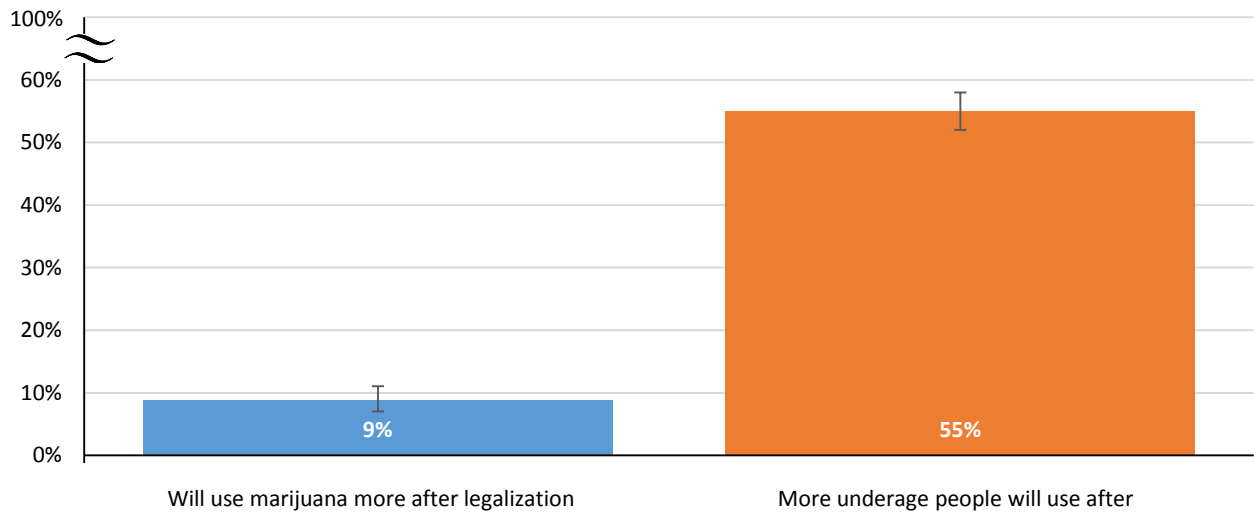
Adult attitudes

The Oregon Public Health Division conducted an online survey of approximately 2,000 Oregon adults in November 2015. This survey included multiple measures of marijuana-related attitudes, beliefs and knowledge about Oregon's new marijuana laws.

Respondents were asked, "How much do you agree with the following statements?" Paraphrased statements are listed within figures 32-34. Respondents could select strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree or strongly disagree.

Figure 32. Oregon adults' perceptions of how legalization has changed marijuana use, 2015

The percent of adults that said “strongly agree” or “somewhat agree” were combined and reported as “agree” in this figure.



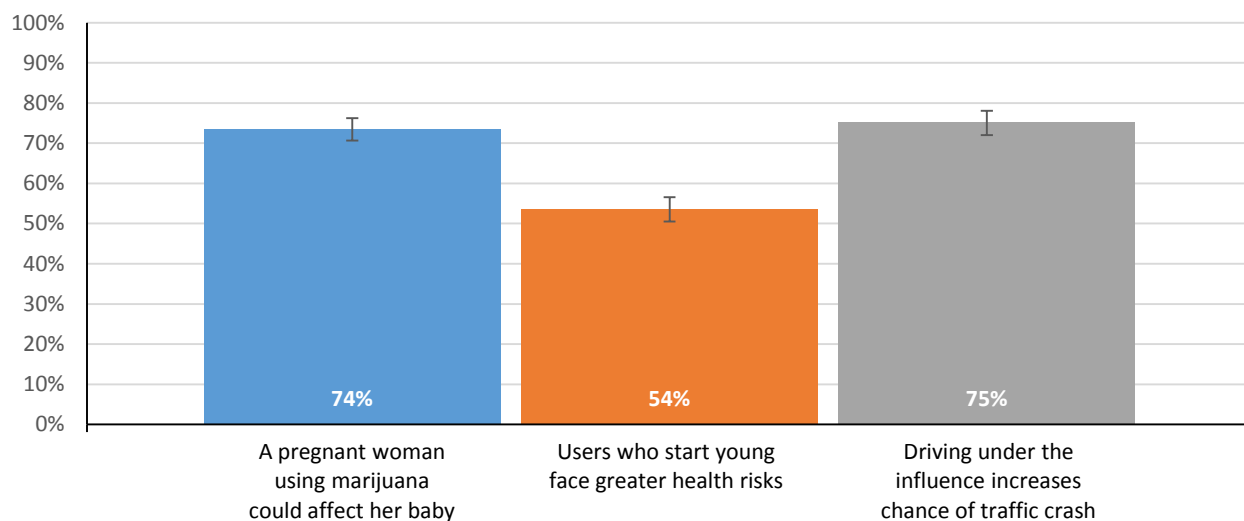
Data source: Tobacco Panel Survey, Health Promotion & Chronic Disease Prevention Program, Oregon Public Health Division, November 2015 (unpublished)
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 32:

- Nine percent of all Oregon adults agreed that they use marijuana more often now that it has been legalized in Oregon.
- A higher proportion of younger adults (ages 18–34 years) reported using more marijuana after legalization compared to adults 35 years and older (15% vs. 6%) (data not shown).
- Approximately half (55%) of adults agreed that more underage people will be trying marijuana now that it has been legalized in Oregon.
- Belief about increased underage use was higher among people that had never personally used marijuana. 72% of adults that never used marijuana agreed with this statement compared to 46% among those that had ever used marijuana (data not shown).

Figure 33. Oregon adults' beliefs about harms from marijuana use, 2015

Respondents were asked, “How much do you agree with the following statements?” Paraphrased statements are listed within this figure. Respondents could select strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree or strongly disagree. The percent of adults that said “strongly agree” or “somewhat agree” were combined and reported as belief in harms about marijuana use as reported in this figure.



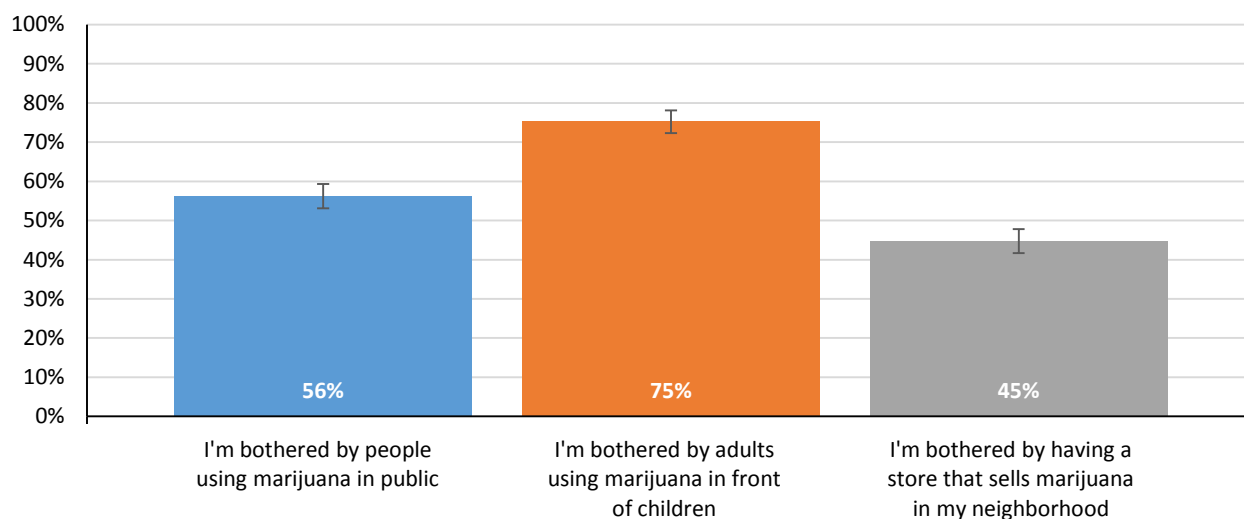
Data source: Tobacco Panel Survey, Health Promotion & Chronic Disease Prevention Program, Oregon Public Health Division, November 2015 (unpublished)
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 33:

- Approximately three of four adults agreed that driving under the influence of marijuana increases the chance of a traffic crash (75%) and that if a pregnant woman uses marijuana it could hurt her baby (74%).
- Fewer adults – approximately half (54%) – agreed that people that start using marijuana when they are younger face more long-term health and addiction risks than people that start using marijuana when they are older.

Figure 34. Oregon adults' attitudes about marijuana use, 2015

Respondents were asked, "How much do you agree with the following statements?" Paraphrased statements are listed within this figure. Respondents could select strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree or strongly disagree. The percent of adults that said "strongly agree" or "somewhat agree" were combined and reported as agreement with statements that indicate negative attitudes about marijuana use in this figure.



Data source: Tobacco Panel Survey, Health Promotion & Chronic Disease Prevention Program, Oregon Public Health Division, November 2015 (unpublished)
Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

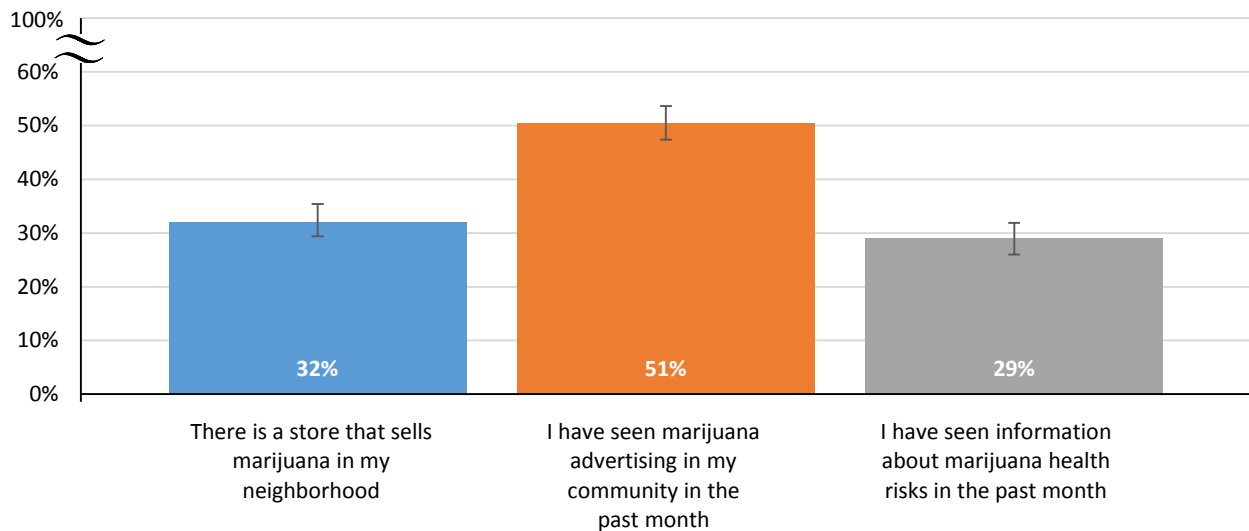
As shown in Figure 34:

- Approximately three of four (75%) adults agreed they would be bothered by adults using marijuana in front of children.
- Slightly more than half of adults (56%) agreed they would be bothered by people using marijuana in public.
- Slightly fewer than half of adults (45%) agreed they would be bothered by having a store that sells marijuana in their neighborhood.
- Younger adults (ages 18–34 years) were less likely than older adults to agree that they were bothered by marijuana use in public, use by adults in front of children, and the presence of a store that sells marijuana in their neighborhood (data not shown).

- Adults that had never used marijuana were more likely to agree they were bothered by having a store that sold marijuana in their neighborhood (72%) compared to current marijuana users (16%) (data not shown).

Figure 35. Awareness of marijuana business activity and related messaging in communities among Oregon adults, 2015

Respondents were asked if they had seen marijuana-related business activity or messages in their community during the past 30 days.



Data source: Tobacco Panel Survey, Health Promotion & Chronic Disease Prevention Program, Oregon Public Health Division, November 2015 (unpublished)
 Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

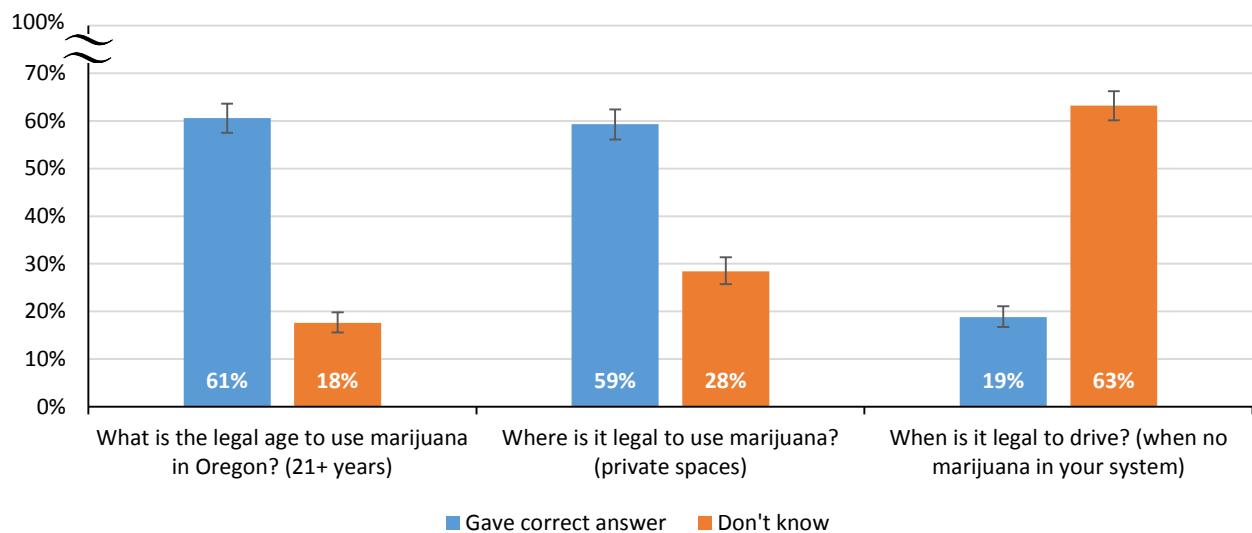
As shown in Figure 35:

- Approximately one-third of adults (32%) said there is a marijuana dispensary or store that sells marijuana in their neighborhood.
- Half of adults (51%) said they had seen or heard advertising for marijuana products or stores in their community (in TV, radio, signs, billboards, newspapers, pamphlets, street side marketing) in the past month.
- Fewer adults (29%) said they had heard anything about the health risks of marijuana in their communities through similar information channels in the past month.
- Although there were not differences in awareness of community marijuana advertising between current marijuana users and non-users, current marijuana users were more likely

to report seeing marijuana health risk information in the past month (40%) than former or non-marijuana users (23% and 27%, respectively) (data not shown).

Figure 36. Oregon adults' knowledge of new Oregon marijuana law's components, 2015

Respondents were asked about several specific components of Oregon's marijuana laws. The percent of adults that chose the correct answer from among multiple choices is reported in Figure 36. Each question also had "I don't know" as a response option, and the percent of adults that selected this answer is also reported in this figure.



Data source: Tobacco Panel Survey, Health Promotion & Chronic Disease Prevention Program, Oregon Public Health Division, November 2015 (unpublished)
 Error bars (I) indicate 95% confidence intervals (see pages 5–6 for definition).

As shown in Figure 36:

- More than half of adults (61%) correctly knew that 21 years or older is the legal age to use marijuana in Oregon, but approximately one in five (18%) said they didn't know.
- More than half of adults (59%) correctly knew that it is legal to use marijuana in private spaces rather than in public, but approximately one in four (28%) said they didn't know where it was legal to use marijuana.
- Nearly two-thirds of adults (63%) said they didn't know when it is legal to drive after using marijuana according to Oregon law. Approximately one in five (19%) gave the best response from among the options offered, which was "when there is no measurable marijuana in your system" (other answer options were "2 hours after you have used

marijuana” and “2 hours after you have used marijuana, as long as you didn’t combine it with alcohol or other drugs”). However, Oregon has not yet established specific criteria for measuring marijuana-impaired driving (such as the .08% blood alcohol content that is a threshold for alcohol-related driving under the influence [DUI] conviction).

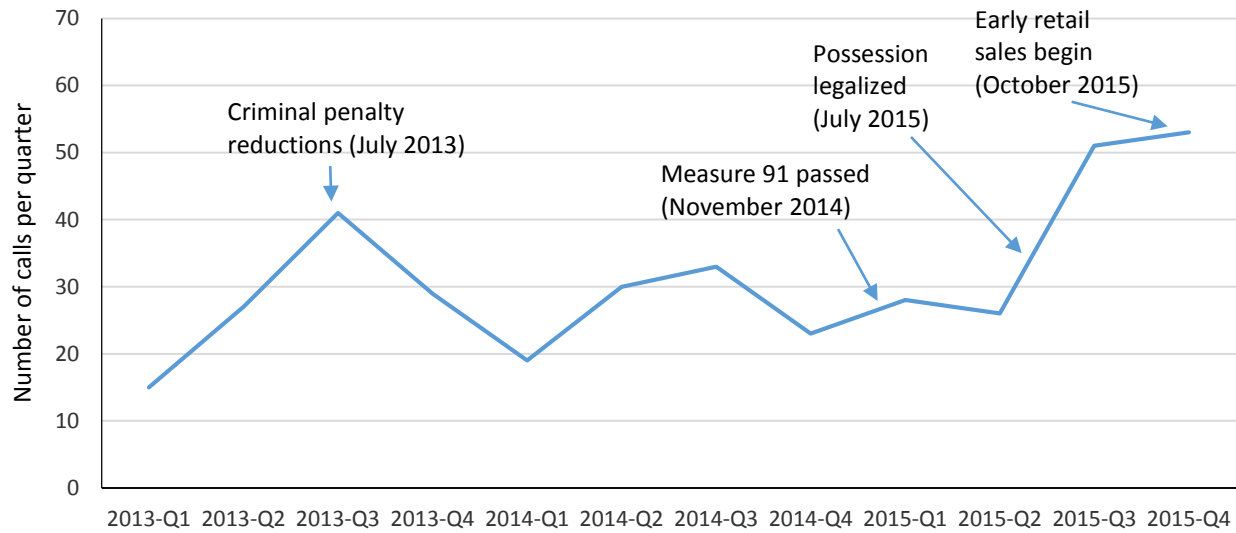
Public health and social consequences

Poison Center calls

The Oregon Poison Center is a 24-hour health care information and treatment resource staffed by doctors and nurses trained in toxicology. For more than 30 years, the Poison Center has provided emergency treatment information for patients experiencing a poisoning or toxic exposure.

Marijuana exposure calls to the Oregon Poison Center are an important measure of acute adverse reactions and accidental poisonings from marijuana. People may call the Poison Center when someone (especially children) accidentally ingests marijuana, or if they are concerned about having overdosed.

Figure 37. Marijuana-related calls to the Oregon Poison Center, quarterly, 2013–2015

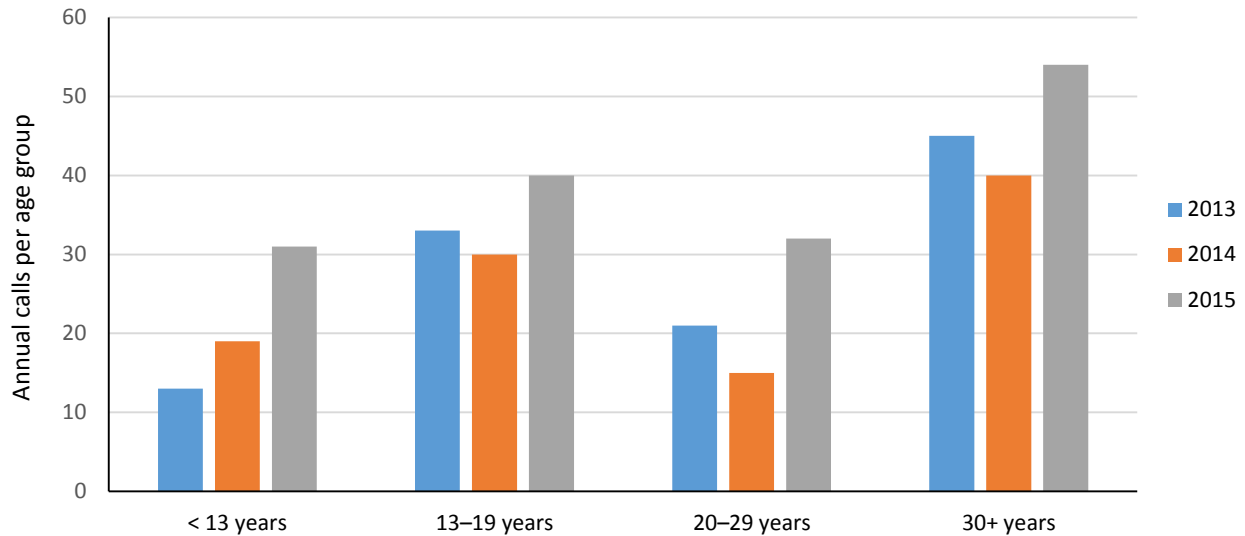


Data source: Toxic Exposure Surveillance System. Oregon Poison Center, Oregon Health & Science University, 2013–2015

As shown in Figure 37:

- Marijuana-related calls to the Poison Control Center increased in the second half of 2015.
- There were 112 total calls about marijuana to the Oregon Poison Center in 2013, 105 total calls in 2014 and 158 in 2015.
- Longer-term monitoring will be necessary to determine whether there has been a sustained increase in call frequencies following changes in Oregon’s marijuana laws.

Figure 38. Annual marijuana-related calls to Oregon Poison Center, by age group, 2013–2015



Data source: Toxic Exposure Surveillance System. Oregon Poison Center, Oregon Health & Science University, 2013–2015

As shown in Figure 38:

- There were more calls in 2015 than in prior years, among all age groups.
- The number of annual exposure calls for children younger than age 13 has increased modestly since 2013. The percentage of all marijuana exposure calls for children younger than age 13 affected by marijuana has increased from 12% in 2013 to 20% in 2015.

Marijuana-related crimes

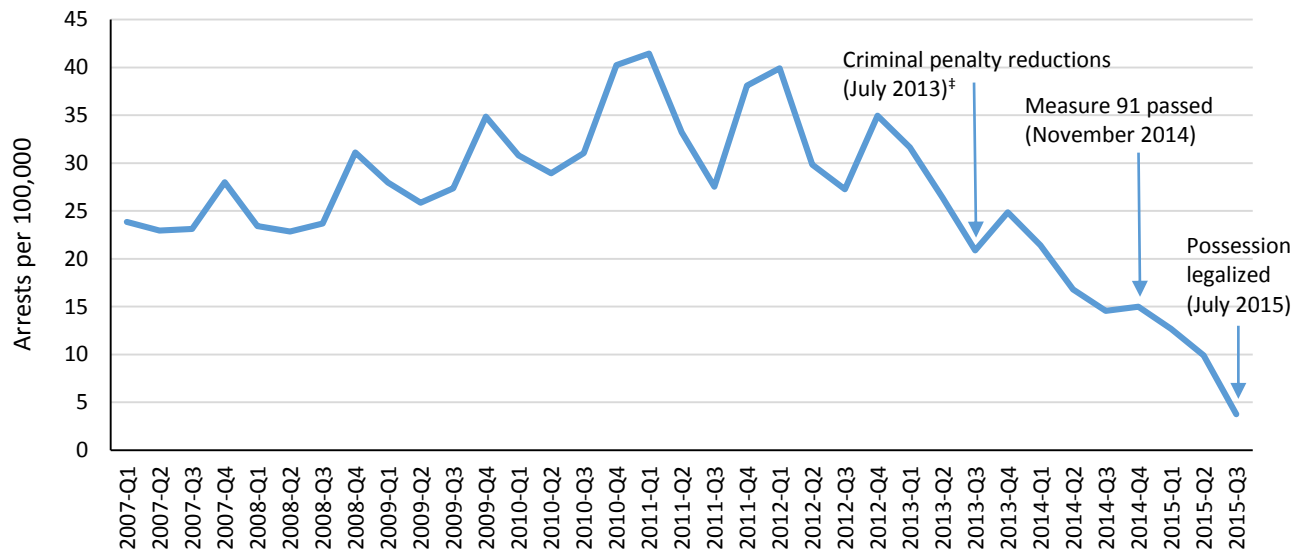
Arrests and convictions can have long-lasting consequences such as decreased employment opportunities for individuals. In addition, people with incarceration histories are more likely to have mental illness, chronic conditions and communicable diseases. Furthermore, children can be negatively affected because incarceration of a household member is considered an adverse childhood experience; it can act as a risk factor for poor subsequent adult health.*

Oregon State Police routinely collect information about drug-related adult arrests. Data in this section reflect marijuana-related arrests where the subject is taken into custody (booked and fingerprinted). Juveniles that are prosecuted as adults are also included in these arrest reports. Citations (such as for possessing less than an ounce of marijuana) are not included.

*For more discussion about effects of incarceration on health, see

<https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/CDSummaryNewsletter/Documents/2012/ohd6101.pdf>.

Figure 39. Quarterly marijuana arrest rates among Oregon adults, January 2007–September 2015



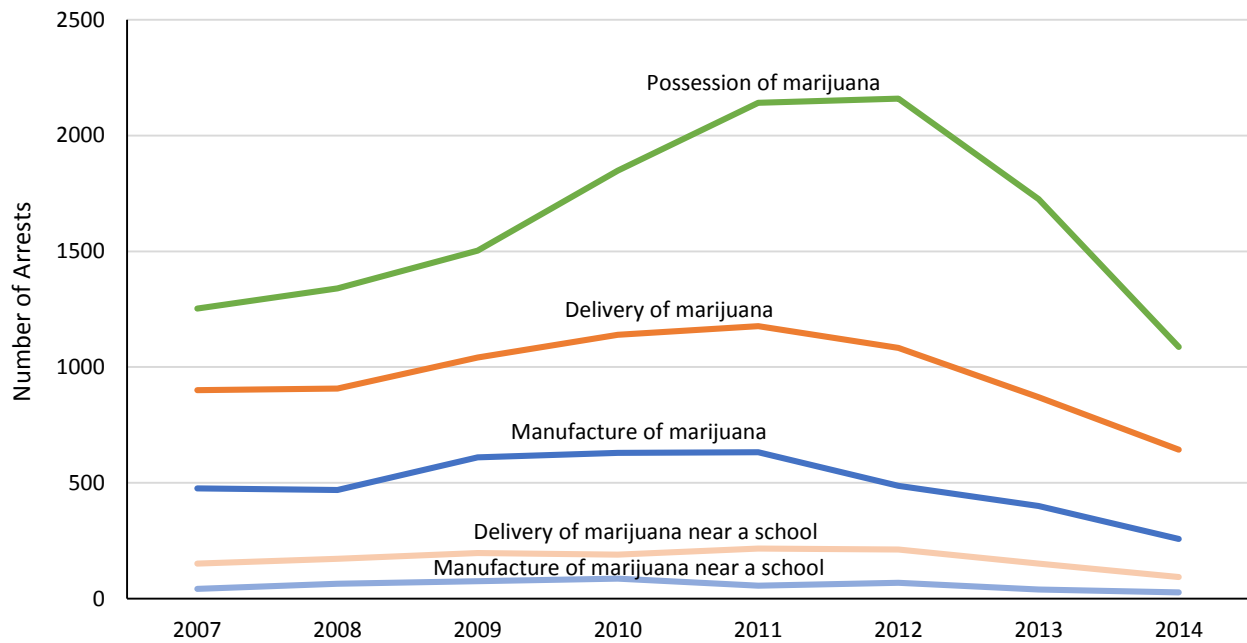
†Reduction in penalties for >1 ounce of marijuana possession & marijuana manufacturing.

Data source: Oregon State Police arrest data.
Oregon Criminal Justice Commission, 2007–September 2015

As shown in Figure 39:

- The rate of marijuana arrests has decreased in the past five years, from a peak quarterly average of 35 arrests per 100,000 adults during 2011 to nine arrests per 100,000 adults during 2015 (Figure 39).
- During 2006–2014 (prior to marijuana legalization), marijuana arrests accounted for 16% of all drug-related arrests in Oregon (data not shown)

Figure 40. Marijuana arrests among Oregon adults, by charge type, 2007–2014

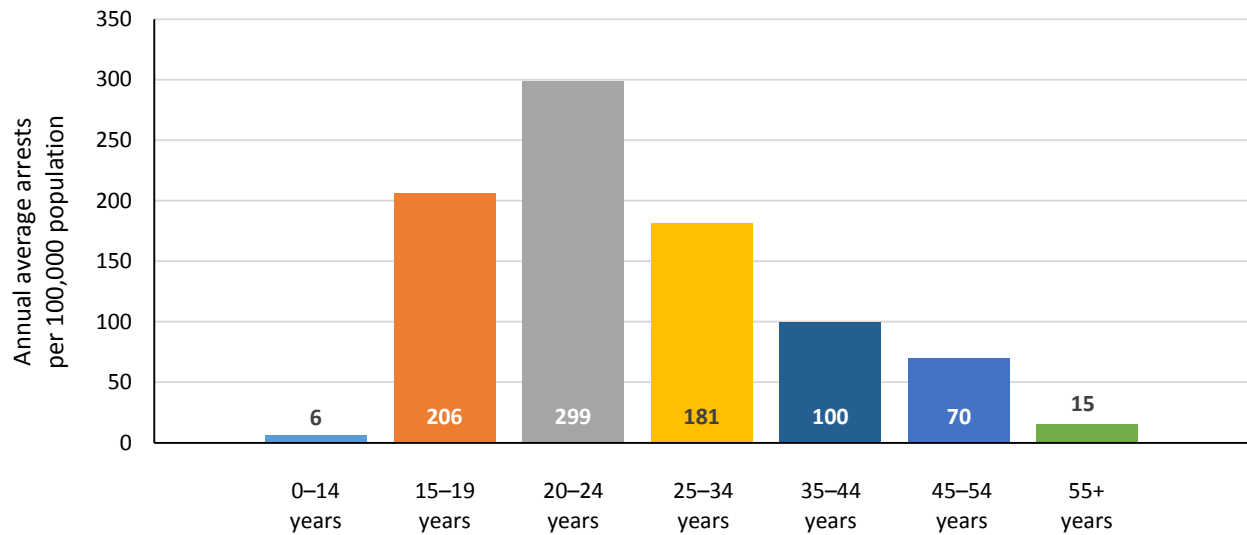


Data source: Oregon State Police arrest data.
Oregon Criminal Justice Commission, 2007–2014

As shown in Figure 40:

- The number of marijuana arrests for all charge types combined decreased between 2011 (a total of 4,223 arrests) and 2014 (a total of 2,109 arrests).
- The largest decrease was seen for marijuana possession arrests, which declined from a peak of 4,223 arrests in 2011 to 2,109 arrests in 2014.
- In 2014, more than half of marijuana arrests were for possession (52%), one-third (35%) were for delivery of marijuana and one in seven (14%) were for manufacture of marijuana (data not shown).

Figure 41. Average annual marijuana arrest rates in Oregon, by age group*, 2007–2014



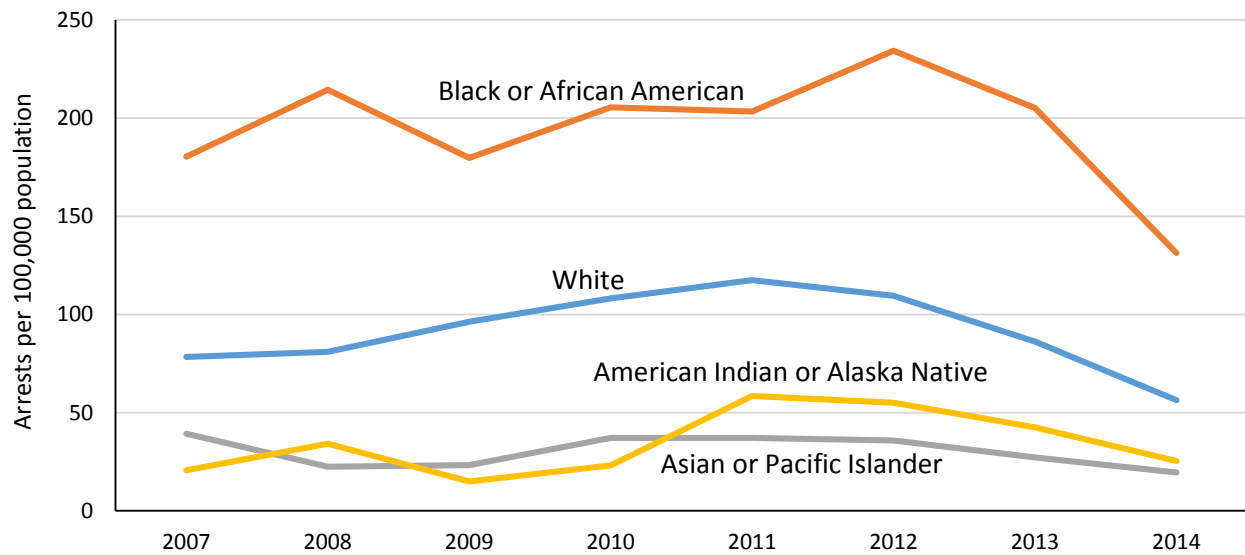
*Juveniles prosecuted as adults are included in this data.

*Data source: Oregon State Police arrest data.
Oregon Criminal Justice Commission, 2007–2014*

As shown in Figure 41:

- During 2007–2014, the highest rate of marijuana arrests occurred among 20–24 year olds.
- The majority of the people arrested for marijuana crimes were men (84%); 16% were women (data not shown).

Figure 42. Oregon marijuana arrest rates*, by race, 2007–2014



*Annual rates are age-adjusted.

*Data source: Oregon State Police arrest data.
Oregon Criminal Justice Commission, 2007–2014*

As shown in Figure 42:

- Racial differences exist in the rate of marijuana arrests. In 2014, the rate of marijuana arrests among Black or African Americans was 2.3 times higher than the marijuana arrest rate among Whites. This disparity in marijuana arrests did not significantly change from 2007 to 2014.
- The rates of marijuana arrests among Asian or Pacific Islander and American Indian and Alaska Native adults were lower or similar to the arrest rate for Whites from 2007 to 2014.

Future directions

This report provided a summary of information from readily available data sources that describe metrics related to marijuana and public health.

Other data sources will also provide important information moving forward.

Key sources include:

- **Oregon ESSENCE.** ESSENCE is a syndromic monitoring system that collects information about emergency department visits for the purpose of identifying emerging public health threats (such as infectious disease outbreaks). Currently, a project is underway to accurately identify marijuana-related emergency department visits within the system. A first look report describing marijuana-related emergency department visit data from ESSENCE is planned for 2016.
- **Oregon Measures and Outcomes Tracking System (MOTS).** MOTS is a comprehensive electronic data system used by behavioral health service providers to improve care, control costs and share information. MOTS collects information about publicly funded addictions treatment, including which substances are being addressed through treatment. A plan to extract appropriate MOTS data for monitoring trends in publicly funded marijuana-related addictions treatment is in development.
- **Expanded Behavioral Risk Factor Surveillance System (BRFSS) measures.** This report included a summary of adult marijuana use data from the 2014 BRFSS. This was the first year that questions about marijuana use had been added to the Oregon BRFSS. Beginning in 2016, an expanded set of marijuana indicators was added to the survey, including to assess combined use of marijuana with alcohol or tobacco, whether users have experienced adverse effects associated with marijuana use, and whether parents are storing marijuana so that it is inaccessible to children. Reports from the 2016 data will be available in fall 2017.
- **Oregon's Pregnancy Risk Assessment Monitoring System (PRAMS).** PRAMS is a well-established and ongoing survey to assess maternity-related health, conducted among women that recently had a baby in Oregon. Questions about marijuana use prior to

pregnancy, during pregnancy and after delivery will be collected beginning in 2016. This will be the first population-based information available in Oregon to describe maternal marijuana use during pregnancy and post-partum (including among breastfeeding mothers). Data from calendar year 2016 will be available in fall 2017.

Other data sources under investigation include emergency medical services and trauma data, hospital discharge data, traffic crash data and marijuana-related student discipline data. Information will be reported as it becomes available from these or other potential sources that provide greater understanding about marijuana and public health.

Data sources

Youth behavior and attitude data

Oregon Healthy Teens (OHT) and Student Wellness Survey (SWS) are anonymous, school-based surveys conducted by the Oregon Health Authority. Both surveys collect health behavior information from eighth- and 11th-graders in most counties across Oregon. Data are weighted to represent students proportionally across Oregon. Unweighted data are used for race-specific estimates. The trend of current marijuana use among Oregon 8th- and 11th-graders used both SWS (2012 and 2014 school years) and OHT (2013 and 2015 school years). Additional analysis was conducted for OHT 2015 school year.

For more information about OHT, go to

<https://public.health.oregon.gov/BirthDeathCertificates/Surveys/OregonHealthyTeens/Pages/index.aspx>.

For more information about SWS, go to <https://oregon.pridesurveys.com/>.

Adult behaviors

The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing random-digit-dialed telephone survey of adults ages 18 or older concerning health-related behaviors. The BRFSS was developed by the Centers for Disease Control and Prevention (CDC) and is conducted in all states in the United States. Each year, between 5,000 and 15,000 adult Oregonians are interviewed. The BRFSS includes questions on health behavior risk factors such as diet, weight control, tobacco and alcohol use, physical activity, preventive health screenings, and use of health care services. The data are weighted to represent all adults aged 18 and older. The Medicaid Behavioral Risk Factor Surveillance System (MBRFSS) was a special version of BRFSS, conducted in 2014 among the Oregon adult Medicaid-enrolled population and including an oversample of selected racial/ethnic groups.

For more information about the Oregon BRFSS, go to

<https://public.health.oregon.gov/BirthDeathCertificates/Surveys/AdultBehaviorRisk/Pages/index.aspx>.

The National Survey on Drug Use and Health (NSDUH) is an annual nationwide survey involving interviews with approximately 70,000 randomly selected individuals aged 12 and older. The NSDUH provides national and state-level data on the use of tobacco, alcohol, illicit drugs (including non-medical use of prescription drugs) and mental health in the United States. NSDUH biennial state-level reports published online were used for this report.

For more information about NSDUH and results, go to

www.samhsa.gov/data/population-data-nsduh.

Oregon Medical Marijuana Program (OMMP)

The OMMP provides quarterly “statistical snapshot” reports of current patients, caregivers, growers and grow sites, based on their applications. Reports are routinely updated and posted at

<https://public.health.oregon.gov/DiseasesConditions/ChronicDisease/MedicalMarijuanaProgram/Pages/data.aspx>.

Oregon Poison Center (OPC)

The Oregon Poison Center (OPC) uses Toxicall®, a data software program for documentation of each poison center case. Poison center staff collect extensive demographic, clinical and substance information from each caller. Statistical data from the OPC is obtained through custom data queries of Toxicall. De-identified data elements from each poison center in the country are transmitted to the National Poison Data System (NPDS). The NPDS enables queries of national aggregate poison center data.

Each call reported represents one exposure; calls that discuss exposures for two people would be counted twice. Overall OPC call levels have declined slightly during the years presented in this report. There were 40,902 total calls in 2013, 39,949 in 2014 and 39,657 in 2015.

More information about the Oregon Poison Center is available at

www.ohsu.edu/xd/outreach/oregon-poison-center/index.cfm.

Crime

Law Enforcement Data Systems (LEDS) arrest data were provided by the Oregon State Police for all drug-related charges between 2006 and September 2015. Each record in the data set represents a unique charge in an arrest. This data system captures all adult arrests where the subject is taken into custody (booked and fingerprinted). Juveniles that are processed as adults are also included in the system. Adult and juvenile arrests that did not result in the subject being taken into custody are not captured in this data set (e.g., citations). All rates in analysis were age-adjusted to the 2000 U.S. standard population.

For more information about LEDS, go to www.oregon.gov/osp/CJIS/Pages/index.aspx.

Health Promotion & Chronic Disease Prevention Panel Survey

The Oregon Public Health Division's Health Promotion & Chronic Disease Prevention Section conducted an online survey of Oregon adults in November 2015. The online survey consisted of 66 questions and was taken by a total of 2,000 adults (ages 18 years and older) living in Oregon. Survey respondents were invited to participate through a professionally maintained panel. Panelists were provided an incentive by the panel vendor to participate in surveys, but were not given any additional incentive by the Oregon Public Health Division for participation. The survey asked questions about tobacco use, attitudes about community policies to regulate tobacco products, active transportation (walking, biking) and marijuana use and attitudes. Statistical weights were applied to the data after collection so that respondents reflect the demographic characteristics of Oregon's adult population, a common practice for population-based survey analysis that ensures the survey results better represent all Oregon adults.

Oregon medical marijuana dispensaries and local bans

Information about local bans was collected from the Oregon Medical Marijuana Program record of cities or counties that have prohibited the establishment of registered medical marijuana processors and/or dispensaries, and/or prohibited early retail sales of marijuana in registered medical marijuana dispensaries

(www.oregon.gov/oha/mmj/Documents/MMDP%20Opt%20Out%20List.pdf). Ordinances that prohibit medical marijuana facilities and/or early retail sales must have been reported to the Oregon Health Authority.

Registered medical marijuana dispensary information was obtained from the Oregon Medical Marijuana Program dispensary registry (www.oregon.gov/oha/mmj/Pages/directory.aspx).

Both local ban reports and dispensary data were collected Nov. 30, 2015.

Resources

The following websites provide more information on topics related to this report. Resources available at each website are summarized below each listing.

Oregon Health Authority: Marijuana and Your Health

<http://public.health.oregon.gov/PreventionWellness/marijuana/Pages/index.aspx>

- Marijuana and health and safety
- Frequently asked questions
- Summary of the law
- Description of the Public Health Division's role
- Scientific Advisory Committee reviews of evidence on marijuana-related health effects

Oregon Medical Marijuana Program (OMMP)

<http://public.health.oregon.gov/DiseasesConditions/ChronicDisease/medicalmarijuanaprogram/Pages/index.aspx>

- Registers patients and caregivers including medical marijuana as part of treatment for specific medical conditions

Oregon Medical Marijuana Dispensary Program

www.oregon.gov/oha/mmj/Pages/about.aspx

- Information about the licensing, regulation and oversight of medical marijuana facilities in Oregon
- Includes a current directory of medical marijuana dispensaries

Educate Before You Recreate Public Education Campaign

<http://whatslegaloregon.com/>

- Infographic summarizing marijuana laws in Oregon

Oregon Liquor Control Commission (OLCC)

www.oregon.gov/olcc/marijuana/Pages/default.aspx

- Recreational marijuana licensing: current information about recreational marijuana licensing, including routinely updated lists of cities/counties prohibiting licensed recreational marijuana facilities
- Updates on developing laws and rules

Measure 91: Control, Regulation and Taxation of Marijuana and Industrial Hemp Act

www.oregon.gov/olcc/marijuana/Documents/Measure91.pdf

- Measure text, as passed by Oregon voters in November 2014

Appendix A

This report provides data in charts with confidence intervals (see example in figure on following page). It is unlikely that point estimates (%) reported from any surveys based on a sample of people are *exactly* the same as the “true” value for the total population. Confidence intervals help to understand the size of this uncertainty.

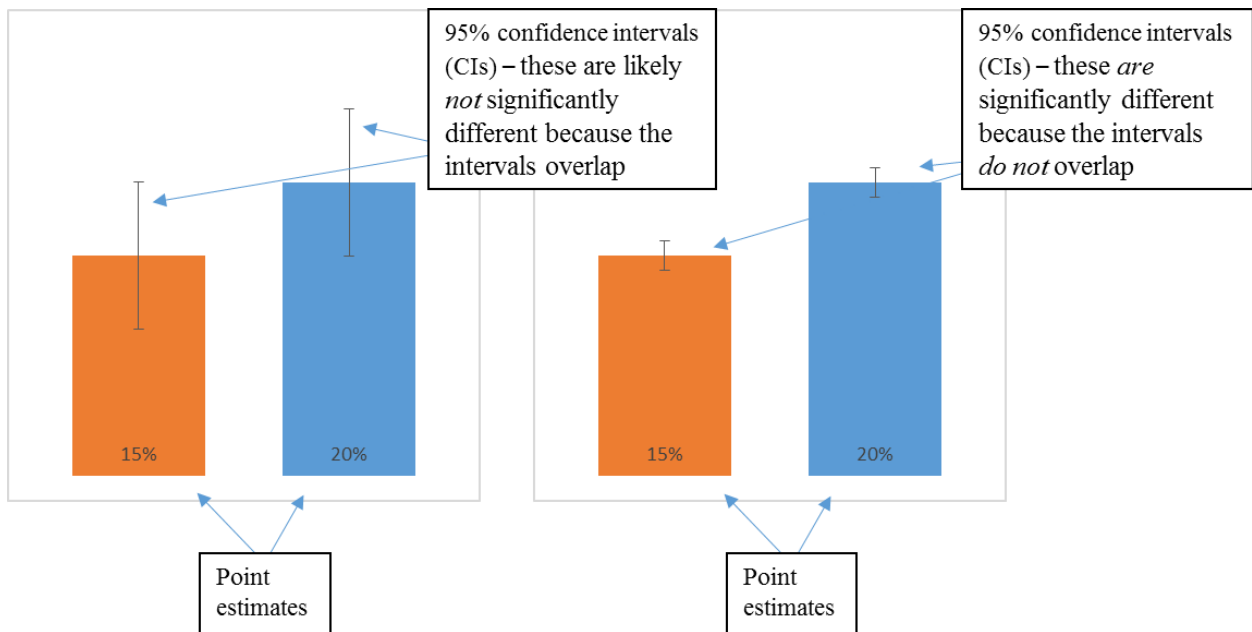
Our report uses 95% confidence intervals. If there is no bias in the data collection system, there is a 95% chance (95 times of 100) that the confidence interval will include the true value for the total population. Groups with smaller numbers of people included in surveys (e.g., racial minorities) will have larger confidence intervals relative to groups with larger numbers of people because there is less precision (or confidence) for those estimates.

The “margin of error” is a common term for the \pm (plus or minus) value around a point estimate, which in total represents the confidence interval.

Readers are advised to consider the precision of point estimates provided in this report by using confidence intervals around estimates. Generally, when the confidence intervals for two groups overlap, it is not certain that the true value of results for these groups are truly different. If the confidence intervals do not overlap, then we believe the true values of results for these two groups are different.

Throughout this report, unless otherwise noted, only statistically significant results are described in text as being “higher” or “lower” than other groups.

Example of confidence intervals displayed in report charts





The marijuana universal symbol means a product contains marijuana and should be kept in its original packaging, out of the reach of children.

Oregon Health Authority

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