MARIJUANA'S IMPACT on CALIFORNIA

California High Intensity Drug Trafficking Report

2016

Medical Marijuana Policy Decision Matrix: Best Regulatory Practices for Minimizing Youth Harms

POLICY DECISION	FACTORS TO CONSIDER	WHAT THE DATA SHOW	BEST PRACTICES TO MINIMIZE YOUTH IMPACTS	HOW TO ENFORCE
Storefront Marijuana Businesses → ALLOW	• Density • Visibility • Business practices • On-site use • Types of products • Potency • Marketing • Security requirements • Drugged driving	• Limiting density limits youth access and neighborhood impacts (Freisthler & Gruenwald, 2014). • Limiting visibility of outlets and advertising limits perceptions of social norms favoring marijuana use (D'Amico, Miles & Tucker, 2015). • Edibles present a higher risk of overdose and unintentional consumption by small children (McCoun & Mello, 2015). • Strict security protocols limit theft and subsequent diversion to the black market (Subritsky, Pettigrew, & Lenton, 2016).	• Limit the quantity of storefront marijuana businesses and prevent outlets from clustering in specific neighborhoods. • Restrict location of marijuana outlets to low visibility areas far from places youth frequent. • Restrict signage and advertising to minimize visibility to youth. • Limit hours of operation. • Cap THC concentrations or allow only low THC/high CBD products. • Require child safe packaging and clear labeling for edibles. • Prohibit on-site use. • Implement security requirements to prevent robbery and burglary.	• Require conditional use permits contingent on passing an annual compliance review. • Impose an annual renewal fee for conditional use permits to fund compliance inspections. • Implement high visibility enforcement like drugged driving checkpoints. • Take quick legal action against unlicensed or non-compliant outlets. • Fine and hold accountable building owners for renting to an unlicensed marijuana outlet. • Use a portion of licensing fees to fund random inspections and responsible retailer training. • Implement and locally publicize a Minor Decoy Program to evaluate compliance with age restrictions on marijuana sales.
DON'T ALLOW →	• Comprehensiveness • Enforceability	• States that prohibit retail medical marijuana storefront experience lower increases in	• Ensure the ordinance addresses all relevant marijuana activities, including cultivation	• Educate law enforcement officers about the

Delivery Services

Banning or limiting delivery services: Marijuana delivery services have been found to circumvent community efforts to regulate marijuana (Freisthler & Gruenwald, 2014) and present serious concerns for monitoring and enforcement of laws intended to prevent youth access and diversion to the black market.

Accountability

The current State law is unclear about what enforcement resources will be made available to local jurisdictions to monitor and enforce medical marijuana regulations. As such, it falls to cities to define how they will monitor and enforce compliance on a local level.

High Visibility Enforcement

Highly visible enforcement is a deterrent to future violations of medical marijuana regulations. Enforcement techniques could include drugged driving checkpoints and publicizing use of a Minor Decoy Program that evaluates compliance with age restrictions.

Community Involvement

To date, many local jurisdictions have relied heavily on reports and inquiries from residents to identify non-compliant or unlicensed marijuana businesses.

Training

Local law enforcement can be trained on local and state regulations regarding medical marijuana, on how to recognize and police drugged driving, and on how to evaluate security standards at commercial cultivation sites and medical marijuana storefronts. Officers or civil officials will require education to effectively carry out pre-permitting

About RethinkingAccess to Marijuana

Rethinking Access to Marijuana (RAM) is a collaboration of public health professionals seeking to prevent marijuana-related harms by limiting youth access to marijuana in the County of Los Angeles.

This group was established with the vision of educating communities about the potential harms of marijuana use; implementing and evaluating environmental strategies formulated to limit youth access to marijuana; and influencing policy actions that support flourishing youth and communities free from marijuana-related harms. RAM neither supports nor opposes any specific legislation.

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		et al., 2015) even if they allow marijuana cultivation for personal use.	• Ensure the ordinance is worded to apply to recreational marijuana should that become legal.	*unlicensed or non-compliant* marijuana outlets.
Personal Use Cultivation	**ALLOW**	• Youth exposure • Visibility • Resource Use • Nuisance complaints • Burglary	• State law allows every medical marijuana patient to grow up to 100 square feet of plants (and up to 500 square feet if they are a personal caregiver) (CA Health and Safety Code 11362.769). • State regulations don't include any requirements to keep personal use cultivation indoors or secured from kids or non-patients. • Marijuana is a water and energy-intensive crop (Bauer et al., 2015; Mills, 2012).	• Ensure cultivation sites are not visible or accessible by youth. • Require a cultivation permit with an annual fee to fund enforcement. • Require an inspection of proposed cultivation sites for safety and youth exposure prior to issuing permits. • Enact annual site inspections to evaluate concerns like drifting odors, water and electricity use, and security from theft.	• Dedicate local enforcement resources to site inspections for permit approvals and on-going annual inspections. • Establish a procedure to address nuisance complaints and disputes between neighbors. • Require written approval from building owner prior to granting permits for cultivation in rental units, to minimize landlord/tenant disputes.
	DON'T ALLOW	• Comprehensiveness • Enforceability	• A 2016 ballot measure to legalize recreational marijuana use would rescind the right of cities and counties to enact full bans on personal use cultivation (Prop 64 website).	• Distinguish between personal use cultivation and commercial cultivation in ordinance text. • Ensure personal use cultivation ordinance(s) will apply to recreational marijuana if that should become legal.	• Educate residents and local law enforcement about the local policy on personal use cultivation. • Establish a procedure for residents to report un-permitted cultivation sites.
Commercial Cultivation	**ALLOW**	• Visibility to Youth • Environmental Impact • Resource Use (Water/Energy Demand) • Indoor versus Outdoor Cultivation • Zoning Restrictions	• Marijuana is a water and energy-intensive crop (Bauer et al., 2015; Mills, 2012). • Pesticides used in marijuana cultivation represent a health risk for youth and families (Carah et al., 2015). • Data is limited, but outdoor grows have a greater potential for burglary/other crimes (CA Narcotics Officers Association, 2016).	• Restrict commercial cultivation to non-residential areas to reduce youth exposure/visibility. • Restrict density. • Look to state lawmakers. Environmental standards to be determined at a state level.	• Look to the CDFA. The Department of Food and Agriculture is developing regulations and licensing requirements for cultivators. • Seek grant funding. The BMCR will establish a grant program for local jurisdictions to assist with regulation and enforcement (CA Business and Professions Code 19351).
	DON'T ALLOW	• Enforceability	• Legislators may need to revisit bans as state regulations on commercial cultivation develop.	• Distinguish between personal use cultivation and commercial cultivation in ordinance text. • Ensure cultivation ordinances will apply to recreational marijuana should that become legal.	• Establish a procedure for residents to report suspected commercial cultivation sites or any violation of the law. • Educate local law enforcement and residents on local/state policy for commercial cultivation.
Delivery Services	**ALLOW**	• Restrict to dispensaries licensed in your jurisdiction. Or, • Restrict to registered collectives delivering to handicapped customers.	• Marijuana delivery services have been found to circumvent community efforts to regulate marijuana (Freisthler & Gruenwald, 2014).	• Prohibit delivery to schools and colleges attended by youth under 21. • Rescind conditional use permits of storefront marijuana businesses for deliveries to minors or in quantities that exceed state limits.	• Establish a procedure for residents to report violations of age restrictions or limits on quantity. • Use a Minor Decoy Program to evaluate delivery services' compliance with age restrictions or limits on quantity.
	DON'T ALLOW	• Enforceability	• Bans on marijuana delivery within city limits may be challenging to enforce.	• Implement regulations that prohibit sales to minors or restrict quantities (may be nearly impossible to enforce for delivery services).	• Enact traffic stops for suspected deliveries within city limits. • Issue citations for verified deliveries to addresses within city limits.

Re: Marijuana

RAM

Marijuana Regulation and Enforcement Priorities for Cities

Changes in marijuana policy are gaining momentum throughout Los Angeles County. Yet, little is known about the impact these shifts will have on health systems, prevention and treatment of substance abuse, social outcomes such as education and professional achievement, and other disease prevalence. Proliferation of marijuana outlets, whether recreational or medical, has the potential for a serious negative impact on the health and safety of communities, and youth in particular.

As public health advocates, we are concerned with preventing health harm associated with marijuana use. The chief priority for protecting the health of LA County residents is preventing use of marijuana during the important developmental periods of childhood and adolescence. Marijuana is particularly risky for young people to use because it can interfere with brain development[1] and has been shown to cause long-term deficits in cognitive function when use begins in adolescence[2].

Comprehensive regulation is a crucial strategy for city leaders to prevent negative impacts from marijuana on youth. As of January 2016, California has new medical marijuana regulations, yet many areas of regulation are still under development. There is also the possibility that legal recreational marijuana use will become a reality in the near future. How can city residents and officials act now to ensure that local policies protect youth and preserve the character of our communities?

This document reviews proven strategies to limit youth access to marijuana by regulating medical marijuana dispensaries, personal use cultivation, commercial cultivation, and delivery services; it also outlines the potential impact of various policy options. The following matrix includes important information for local legislators concerned with enacting **smart marijuana regulation that adequately protects youth in our communities.**

Key Domains for Regulation

Storefront Marijuana Businesses

Restricting and carefully monitoring licenses and licensees: Licensing provisions that are actively enforced through regular random compliance checks in which violators, such as those that sell to minors, are subject to meaningful penalties (including license suspension and revocation) create a culture of compliance among marijuana licensees.

Restricting density of marijuana outlets: Decades of research on alcohol and tobacco use demonstrate the need for strong controls on the density of businesses, and research shows the physical availability of medical marijuana dispensaries is similarly related to the prevalence and frequency of marijuana use (Ammerman et al., 2015). Density restrictions on the number of businesses that can locate in a given area can prevent uneven clustering of marijuana outlets in our neighborhoods.

Restricting where marijuana storefronts can be located: Marijuana-related businesses should not be located near areas youth frequent such as schools, parks, and playgrounds. Similarly, locating marijuana businesses in mainstream shopping districts can increase perceptions among youth that marijuana is normal and socially acceptable, which has been shown to have strong associations with underage marijuana use (Ashbridge et al., 2016).

Personal Use Cultivation

Requiring licensing and inspections for cultivation: Current state laws regulating personal use cultivation lack basic requirements for security and preventing youth access. Ideally, property proposed as a site for personal use marijuana cultivation should be subject to an inspection and approval process, taking into account ways children may be exposed to the crop and other concerns, such as security from theft, visibility, water/electricity usage, the potential for nuisance from drifting odors, and the rights of property owners.

Commercial Cultivation

Restricting where marijuana storefronts can be located: The current State law is more comprehensive in regulations on commercial cultivation. However, it falls to city leaders to minimize the impacts of commercial cultivation on youth by restricting grow operations to non-residential zones and enforcing state regulations intended to prevent diversion of marijuana products to the black market.

1 = (Volkow et al., 2014)
2 = (Meier et al., 2015)

Marijuana Edibles Fact Sheet

County of Los Angeles Public Health

5. Are edibles labeled accurately?

Even though state regulations for medical marijuana products are being carried out across California, marijuana edibles are not monitored by the Food and Drug Administration (FDA). As a result, a marijuana edible label may not correctly represent the list or amounts of ingredients in the product. Lack of industry standards and monitoring systems have resulted in inconsistent and inaccurate labeling. The strength of edibles can vary from batch to batch, and even professional distributors can have difficulty advertising the correct dosages. For this reason, the THC level on the label may not always reflect the true strength of the product.[iv] Due to inconsistent testing, marijuana edible products may contain poisons such as artificial fertilizers and chemicals used to kill insects. California is working to regulate medical marijuana products in an effort to ensure greater consistency and accuracy.

6. How can you tell the difference between edibles and regular foods?

A lack of standard rules and consistency on labeling can make it hard for consumers to know what products contain marijuana. Some edibles are clearly labeled as marijuana products, while others are more difficult to identify. Edibles without clear labeling can be especially dangerous for young children who cannot read or understand the packaging. Many marijuana-related emergency room admissions for small children result from accidental consumption of marijuana edibles.[v]

Pay close attention to the labels, and look for marijuana plant leaves, green crosses, and other marijuana related words or images like the ones below:

The quality and safety of marijuana products are not currently guaranteed by industry and consumer standards and monitoring systems. Many of the same health risks related to inhaling marijuana smoke or vapors also apply to marijuana edibles. It can be easy to accidentally consume high doses of marijuana with edibles due to their slow-acting properties. Care must be taken to avoid individual and public health harms linked to all marijuana products.

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[ii] Id.
[iii] Wall & Perez-Reyes, *The metabolism of delta 9-tetrahydrocannabinol and related cannabinoids in man*, J Clin Pharmacol, 1981.
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Marijuana Edibles Fact Sheet

County of Los Angeles Public Health

1. What are "edibles"?

"Edibles" are foods or drinks that contain marijuana. Currently, most medical marijuana dispensaries in California have edibles available for purchase by eligible people. Edibles come in many shapes and types, and can look like regular foods that don't contain marijuana. Many types of marijuana edibles are made with tetrahydrocannabinol (THC), a type of chemical that is taken from the marijuana plant. THC can be mixed into oils or butter as ingredients in cookies, cupcakes, candy, chocolate and other foods. Burgers, salads, jerky, and entire meals can also contain added THC. It can also be mixed in soda, juice, or other drinks. It can be hard to tell the difference between marijuana edibles and other foods, so it's important to keep marijuana edibles away from children, pets, or others.

2. Are the effects of edibles different from smoking marijuana?

The effects of eating or drinking edibles can be very different from smoking marijuana or using a vaporizer. When people smoke marijuana, they feel the effect almost right away. When a person starts to feel the effects, they may stop smoking, which can control the dose. However, when people eat or drink marijuana, their bodies take longer to digest and metabolize it (break it down) before they feel the effects. By the time they feel "high," it's too late to control the dose. How someone will react to edibles depends on the type and strength of the edibles, the person's body mass, chemistry, metabolism, and the amount consumed.[i] These factors, combined with non-standard dosage labeling for marijuana edibles, make it common for a person to accidentally eat or drink a higher dose of THC than planned.

3. How long does it take to feel the effects from eating or drinking edibles?

The time needed to feel the effects of edible marijuana products will be different for each person, depending on their body's ability to metabolize foods and the type of edible consumed. For example, mints with THC will produce an effect faster than cookies with THC, because mints are absorbed in the mouth and get into the blood quickly, while a cookie has to be processed by the liver. People with faster metabolisms may feel the effects after an hour of eating or drinking an edible. People with slower metabolisms may feel the effects a few hours later. The amount of food a person has before having marijuana edibles may also affect how quickly their body metabolizes the edibles.[ii]

The type of edible can also affect how they are metabolized. Many suckers, lozenges, tinctures (liquid extract), and hard candies are digested quickly in the mouth. Cookies, brownies, and other baked goods take a longer time to digest in the stomach and the effects will last much longer. Items such as drinks and chocolates are absorbed both in the mouth and stomach and have faster and long-lasting effects. The effects of edibles usually last between 3-10 hours, depending on the individual and the amount taken.

It is important to remember that the effects of edibles are not felt right away and could take hours. The effect that comes right away after smoking marijuana usually acts as a signal to stop, while the delayed effects of edibles can cause people to accidentally consume high levels of marijuana.

4. How strong are marijuana edibles?

Eating or drinking marijuana edibles can have a stronger effect on the body than smoking marijuana. When THC is inhaled, it travels directly to the brain and a person can feel the effects right away. When eating or drinking an edible, the THC is metabolized by the liver, which converts THC to a stronger form called the "11-hydroxy-THC". This form of THC can cross the blood-brain barrier and have a long and intense effect.[iii]

Edibles are usually made with a higher dose of marijuana oil or butter. A single edible, like a cookie or a cupcake, can have more than one "dose"-(10mg) of marijuana. Eating an entire cookie or a cupcake with added THC can result in accidentally consuming multiple doses of marijuana.

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SUBSTANCE ABUSE PREVENTION AND CONTROL
MEDICAL DIRECTOR'S BRIEF
Marijuana Misuse/Abuse and Consequences

COUNTY OF LOS ANGELES Public Health

September 2015 No. 4

Prevalence

• According to the National Survey on Drug Use and Health (NSDUH) 2013, marijuana is the most commonly used illicit drug in the United States, California, and Los Angeles County (LAC)[1].

• After 2008, marijuana use among individuals age 12 or older in LAC (13.1% past year use, 8.0% past month use) became greater than the national average (11.7% past year use, 7.0% past month use). Marijuana use in LAC is lower than the overall use in California[1].

• According to the NSDUH 2012-2013, among individuals age 12 and older, past month marijuana use in California is higher in males than in females[2].

• Past month marijuana use increases, peaks at age 18-19 years for females (16%) and 20-21 years for males (26.6%) and steadily decreases with age[2].

Risk Perception

• THC is the main psychoactive chemical in marijuana. The average THC content in federally seized marijuana increased 286% for cannabis leaf specimens from 1991 to 2013, and increased 296% for hash oil specimens from 1995 to 2013[3].

• Among US high school seniors, perception of occasional use of marijuana as a great risk declined 59.6% while past year use of marijuana increased 46.8% over the period 1991-2014[4].

Drug-Impaired Driving

• Using alcohol or marijuana impairs driving and increases the risk of motor vehicle collisions[11].

• Driving or riding with a driver under the influence of marijuana exceeds drunk driving and riding with a drunk driver for high school seniors and college students[12-13].

• According to the Fatality Analysis Reporting System, traffic crash fatalities involving marijuana (positive drug test in driver) in LAC began to increase after 1996, steeply increased by 360% from 2003 to 2004, continued an overall increasing trend until 2008 before decreasing in 2009, and steadily increased again by 30% from 2010 to 2013[5]. These increases co-occurred with the passage of the Compassionate Use Act (allow medical marijuana use), the initiation of the Medical Marijuana Program (medical marijuana ID card program), and the decriminalization of marijuana (possession of <1oz reduced from misdemeanor to infraction), respectively.

Healthcare Utilization

• Emergency department (ED) visits with a marijuana-related primary diagnosis increased 204% from 334 cases in 2006 to 1,014 cases in 2013. ED visits involving marijuana in LAC increased 459% from 2,861 cases in 2006 to 15,993 cases in 2013[6].

• In 2013, ED visits with a marijuana-related primary diagnosis accounted for 9.5% of all ED visits with a drug-related primary diagnosis in LAC. Marijuana was involved in 36.6% of all drug-related ED visits[6].

• The most common primary diagnoses among ED visits in 2005-2013 that involved marijuana included chest pain, alcohol or cannabis abuse, psychosis, anxiety, altered consciousness, depression, abdominal pain, palpitations, amphetamine abuse, epilepsy, and nausea/vomiting[6].

• According to the California Department of Public Health, in 2013, marijuana-related hospitalizations accounted for 21,886 discharges (135% increase from 2005), 126,596 days of hospitalization (107% increase from 2005), and $730 million in hospital charges (160% increase from 2005; adjusted for inflation to 2015 dollars)[6].

• Marijuana use is associated with the later development of mental illness, especially schizophrenia and psychosis[8,14].

• The most common primary diagnoses among hospitalizations in 2005-2013 that involved marijuana included schizophrenia-related disorders, psychosis, depression, drug withdrawal, bipolar disorder, chest pain, and congestive heart failure[6].

Marijuana as a Gateway Drug

• Early and regular marijuana use is associated with use of other illicit drugs, including cocaine, hallucinogens, prescription opioids, stimulants, inhalants, tranquilizers, methamphetamine, sedatives, and heroin[10].

• According to the NSDUH 2012-2013, individuals who first used marijuana before age 18 used other illicit drugs at a much higher rate than individuals who used marijuana after age 18 or individuals who never used marijuana during their lifetimes in California[2].

• Individuals who first used marijuana after age 18 used other illicit drugs at a much higher rate than individuals who never used marijuana during their lifetimes in California[2].

Long-term Outcomes

• Addiction risk increases with greater frequency and with earlier age of initiation of marijuana use[7].

• Regular recreational marijuana use increases the risk of many adverse social, cognitive, and physical health outcomes[9-10,12].

• Compared to never using marijuana, regular use of recreational marijuana was associated with a 2-fold lower educational attainment[8], 8 point decline in IQ[9], 2-fold increased risk for having psychosis, a 2-fold increased risk for developing lung disease, a 3-4 fold increased risk for getting a heart attack, a 2-3 fold increased risk in developing testicular cancer[8].

Treatment

• African Americans have the highest rate of treatment admissions with a primary marijuana choice across all age groups. The treatment admission rate for African Americans ages 18-24 years under 133%FPL was more than two times that of the same age group of Latinos (970 vs. 433 per 100,000 133% FPL population).

• Most clients admitted to publicly funded SUD treatment programs in LAC are under 133%FPL, which tends to have much higher SUD rates than the general population. The treatment admission rate for African Americans ages 18-24 years under 133%FPL was nearly 3 times that of the same race-age group in the general population (970 vs. 343 per 100,000 population). The same trend was found for Latinos ages 18-24 years (433 vs. 137 per 100,000 population).

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For treatment in LAC, call (800)564-6600 during normal business hours, or call 211. For more support, call Marijuana Anonymous at (800)766-6779

For more information regarding this brief, please contact Tina Kim at tkim@ph.lacounty.gov

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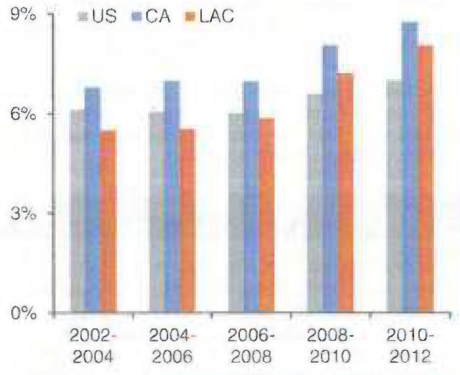
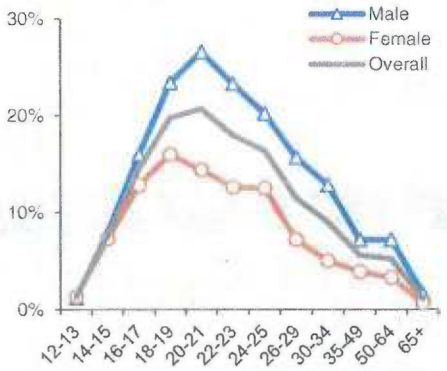
Prevalence

Marijuana use in the past month, age 12 or older, 2002-2012[1]



Marijuana use in Los Angeles County (LAC) became greater than the US average after 2008

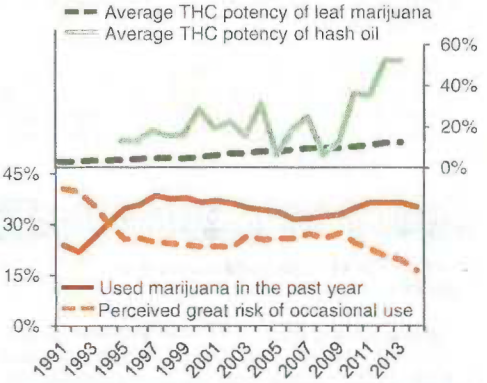
Past month marijuana use, by age and gender, CA, 2012-2013[2]



Marijuana use is higher in males, and peaks at ages 18-21 years

Risk Perception

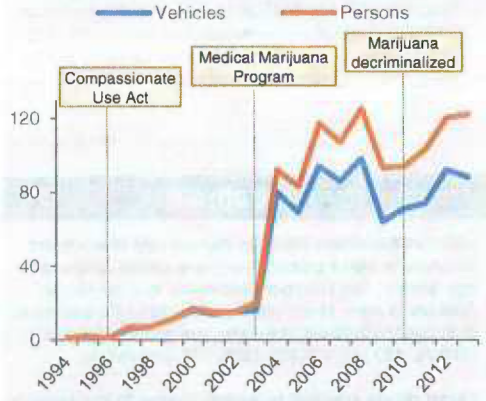
THC potency, and use and perceived harm of marijuana among 12th graders, US, 1991-2014[3-4]



Use increased as perceived harm of occasional use of marijuana decreased despite increasing THC potency

Drug-Impaired Driving

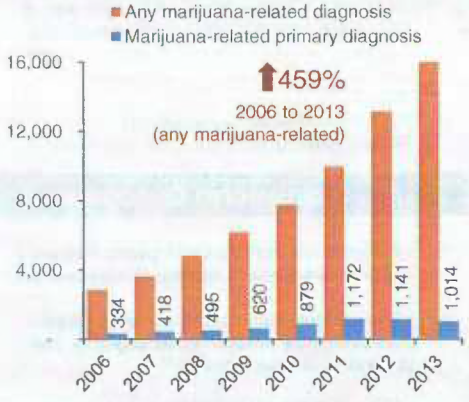
Traffic crash fatalities involving marijuana, LAC, 1994-2013[5]



Marijuana-involved traffic fatalities increased by 510% from 2003-2013

Healthcare Utilization

Drug-related emergency department (ED) visits involving marijuana, LAC, 2006-2013[6]



Marijuana was involved in 37% of all drug-related ED visits

Burden of marijuana-related hospitalizations, LAC, 2005 and 2013[6]

Total Discharges

9,321 in 2005 ↑135% 21,886 in 2013

Days of Hospitalization

61,022 in 2005 ↑107% 126,596 in 2013

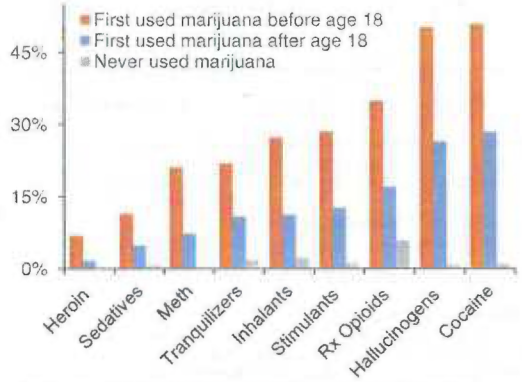
Hospital Charges

$281 M in 2005 ↑160% $730 M in 2013

Marijuana-related hospitalizations accounts for a large economic burden

Marijuana as a Gateway Drug

Lifetime illicit drug use, by marijuana use, CA, 2012-2013[2]



Marijuana users were more likely to use other illicit drugs in their lifetime, especially teen initiates

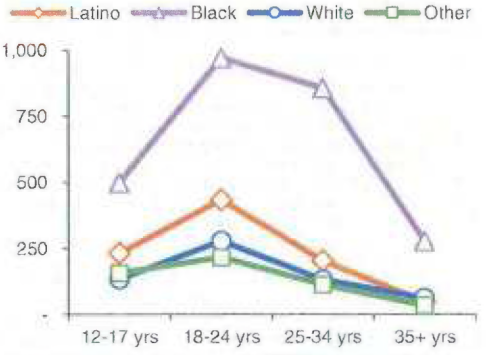
Long-term Outcomes

1 in 9 experimenters
1 in 6 teen initiates
1 in 2 daily users
become addicted[7]

Adverse outcome	Strength of effect among regular recreational users[8]
Education	2-fold lower attainment
IQ	8 points lower (teen initiates)[9]
Psychosis	2-fold increased risk
Lung disease	2-fold increased risk
Heart attack	3-4 fold increased risk
Testicular cancer	2-3 fold increased risk

Treatment

Rate of admission (per 100,000 pop under 133%FPL) with marijuana as primary drug problem, by age and race/ethnicity, 2014[10]



African Americans have the highest rate of entering treatment for marijuana use disorder in all age groups

For treatment in LAC, call (800)564-6600 during normal business hours, or call 211. For more support, call Marijuana Anonymous at (800)766-6779

For more information regarding this brief, please contact Tina Kim at tkim@ph.lacounty.gov

About Rethinking Access to Marijuana

Rethinking Access to Marijuana (RAM) is a collaboration of public health professionals seeking to prevent marijuana-related harms by limiting youth access to marijuana in the County of Los Angeles.

This group was established with the vision of educating communities about the potential harms of marijuana use; implementing and evaluating environmental strategies formulated to limit youth accessibility to and availability of marijuana; and influencing policy actions that support flourishing youth and communities free from marijuana-related harms.

RAM neither supports nor opposes any specific legislation. Rather, we take a prevention-oriented public health approach, educating policy-makers and communities about ways to protect youth from the potential harms of marijuana use and abuse.

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72%

of children who report their parents use marijuana have used it also.

Research shows the more marijuana use is seen as normal, the more likely youth are to try it themselves.

Only **20%**

of children whose parents have never used marijuana use it themselves.

operating near churches, residential areas and other high-risk businesses, such as those that sell alcohol, is also highly recommended.

Below are other recommended regulations that reduce the extent to which youth are exposed to marijuana:

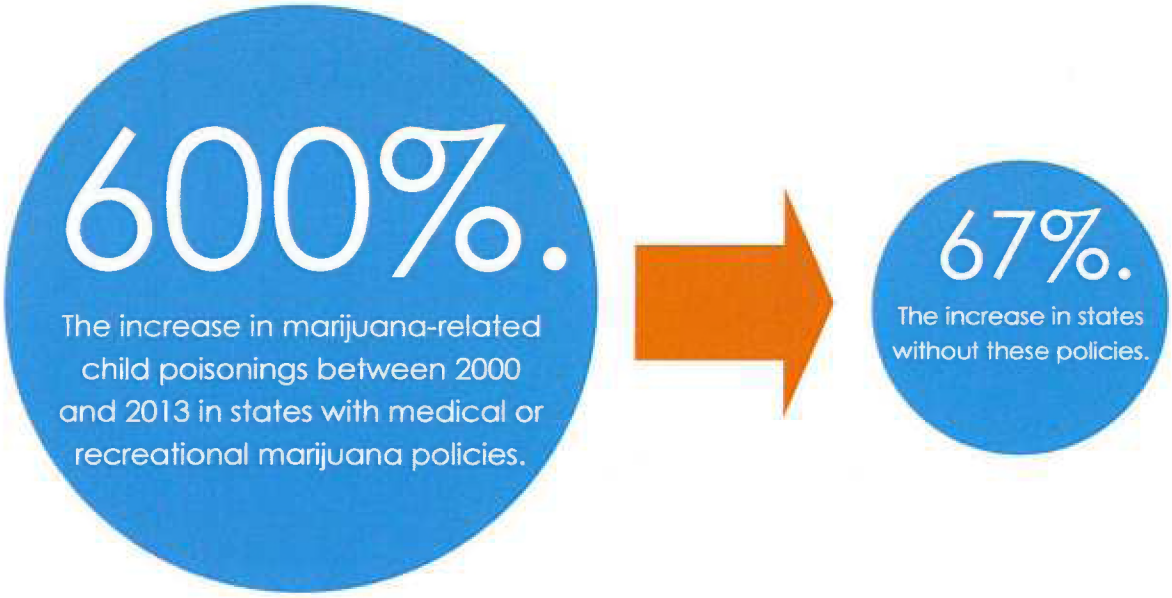
- **Limiting the types of products sold**, including prohibiting the sale of products that are especially appealing to youth, such as candy containing marijuana.
- **Limitations on marketing that promotes the sale and use of marijuana products**, including window signs, billboards, print and television advertisements, especially onscreen use in television and film.
- **Preventing impaired driving** through highly publicized checkpoints designed to deter marijuana impaired driving.
- **Restricting public consumption** at parks, concerts, sporting events, malls, public transportation sites, etc.

Additionally, community support for a comprehensive data collection strategy could make a big difference in understanding the scope of youth marijuana use and abuse in LA County.

What Can You Do?

Change can start with you! Here are a few ways to take action in your community.

- **Join or create a community coalition.** Through active participation in a community coalition, you can come together with concerned neighbors, determine effective strategies, and most importantly, have a collective voice in your community that can powerfully shape public opinion.
- **Advocate for laws that protect youth.** Policymakers listen to community members. Make your voice heard by writing letters or appearing as a spokesperson to support legislation that protects youth, such as limiting marijuana outlet density in your community.
- **Write letters to the editor and guest editorials.** Write your concerns about marijuana and its impact on youth in a letter to the editor or a guest editorial.
- **Educate your friends and family.** Talk with your friends, neighbors and family about the issues. Share the research to help dispel myths and protect youth.
- **Promote extracurricular activities.** Keeping youth busy after school can prevent marijuana use[9]. Support local organizations that provide a healthy forum for youth, or create fun, alcohol- and drug-free social activities for youth.



marijuana. Usage peaks from 18-24 (35%), but goes down in adults: only 15% of adults 25 years and older report marijuana use[5].

Additionally, increased exposure to marijuana seems to correlate to increased youth use. According to a nationwide survey of young adults ages 18 to 25, children of parents who smoke marijuana are *more than three times more likely to use it themselves*. Among those whose parents had used marijuana, 72% had used it also. Conversely, only 20% of those whose parents had never used marijuana reported having used marijuana themselves[6].

Ways to Limit Youth Access to Marijuana

Support Public Health Regulations for Marijuana

Marijuana legalization has the potential for serious negative impact on the health and safety of communities, and youth in particular. Therefore, it is important to consider regulations that can be put in place to address these problems. Research on the effective regulation of alcohol and tobacco indicates the following restrictions are recommended to minimize youth access and use:

- **Restricting and carefully monitoring licenses and licensees.** Licensing provisions that are actively enforced through regular random compliance checks in which violators, such as those that sell to minors, are subject to meaningful penalties (including license suspension and revocation) create a culture of compliance amongst marijuana licensees.
- **Restrict density of marijuana outlets.** Decades of research on alcohol and tobacco use has demonstrated the need for strong controls on the density of businesses[7]. The physical availability of medical marijuana dispensaries is similarly related to current use and more frequent use[8]. Density restrictions on the number of businesses that can locate in a given area prevent overconcentrations of marijuana outlets in our neighborhoods. Marijuana delivery services have been found to circumvent these important community protections[8].
- **Restrictions on where businesses can be located.** Marijuana-related businesses should not be located near areas youth frequent such as schools, parks, and playgrounds. Prohibiting businesses from

How Communities Can Protect Youth from Marijuana-Related Harm

Prepared by Rethinking Access to Marijuana · January 2017

The changing role of marijuana in communities sparks a wide range of strong reactions. Yet, across the spectrum, most agree it should not be easily accessible to youth.

"Youth are one of the groups most at risk for...harms associated with regular marijuana use."

- California Blue Ribbon Commission on Marijuana Policy (July 2015)

Who We Are

Rethinking Access to Marijuana (RAM) is a collaboration of community-based organizations seeking to prevent marijuana-related harms by limiting youth access and exposure to marijuana in the County of Los Angeles.

Potential Harms of Marijuana Use on Youth

Emerging research demonstrates that there are side effects to regular marijuana use, including potentially dangerous harms to brain development among teens that may translate to an up to 8 point drop in IQ[1]. The impacts on brain development are likely to blame for the social and developmental problems associated with youth marijuana use, such as poorer school performance, higher school dropout rates[2] and impaired verbal, cognitive, and attention performance as compared to non-users[3]. These effects increase with earlier and heavier marijuana use.

THC (the active ingredient in marijuana) poisoning poses the greatest risk for younger children. States with medical or recreational marijuana policies experienced an **over 600%** increase in child THC poisonings between 2000 and 2013, compared to a 67% increase in states without these policies[4].

Social Influences on Marijuana Use

Knowing the harms of marijuana use will likely not be enough to deter young people from using it if they think their peers are all using it or if the adults in their life use it. Despite popular beliefs that marijuana use is prevalent among youth, data show this isn't so — only 25% of youth in LA County aged 12-17 report using

EXECUTIVE SUMMARY

A growing number of California residents are interested in removing barriers to recreational marijuana use, and this paper will outline the current state of marijuana policy in California and the potential impacts of further legalizing marijuana use.

Section One, The Science on Marijuana
Marijuana is the most abused illicit drug in the world, but the gap between the science on marijuana and the common perception of marijuana has never been greater.

Section Two, California Youth Marijuana Use
In 2013, California was ranked 20th in current use among youth, and by 2014 California was ranked 11th in the country. The state's largest average increase in youth past 30-day use of marijuana coincided with the proliferation of marijuana dispensaries in the state; at that time, California's youth use rate was already 29% higher than the national average.[1]

Section Three, California Schools
Due to a new program, school expulsion rates in California have greatly decreased, even though the number of students who are caught with drugs has not declined.[2]

Section Four, California Marijuana Use Ages 18-25
In 2012 and 2013, adult marijuana use for California adults aged 18-25 years was 22% compared to the national average of 19%.[3]

Section Five, Marijuana-Related Emergency Department Visits and Hospital Admissions
From 2010 to 2014, after marijuana dispensaries began to proliferate, there was a 116% increase in Emergency Department visits and admissions for any related marijuana use.[4] Marijuana-related exposures for young children (0-5 years old) also increased 513% between 2005 and 2015. During the same time there was a 139% increase among children 6-19 years old.[5]

Section Six, Treatment
From 2005 to 2015, the rate of admissions to drug treatment programs for marijuana abuse remained steady – so did the fact that teens and young adults make up the largest proportion of people admitted for treatment.[6]

Section Seven, California Impaired Driving
From 2005 to 2014, total statewide traffic fatalities decreased 29% in California, but fatalities involving drivers testing positive for marijuana increased 17%.[7]

Section Eight, Diversion
More interdiction events, including those by the United States Postal Service (USPS) Inspection Service, resulted in seized marijuana originating from California than from any other state.[8]

Section Nine, THC Extraction Labs

California has by far the largest number of THC extraction labs, but it is difficult to gauge the labs' true prevalence due to inconsistent reporting practices among law enforcement agencies and data collection sources.[9]

Section Ten, Environmental Impacts of Marijuana in California

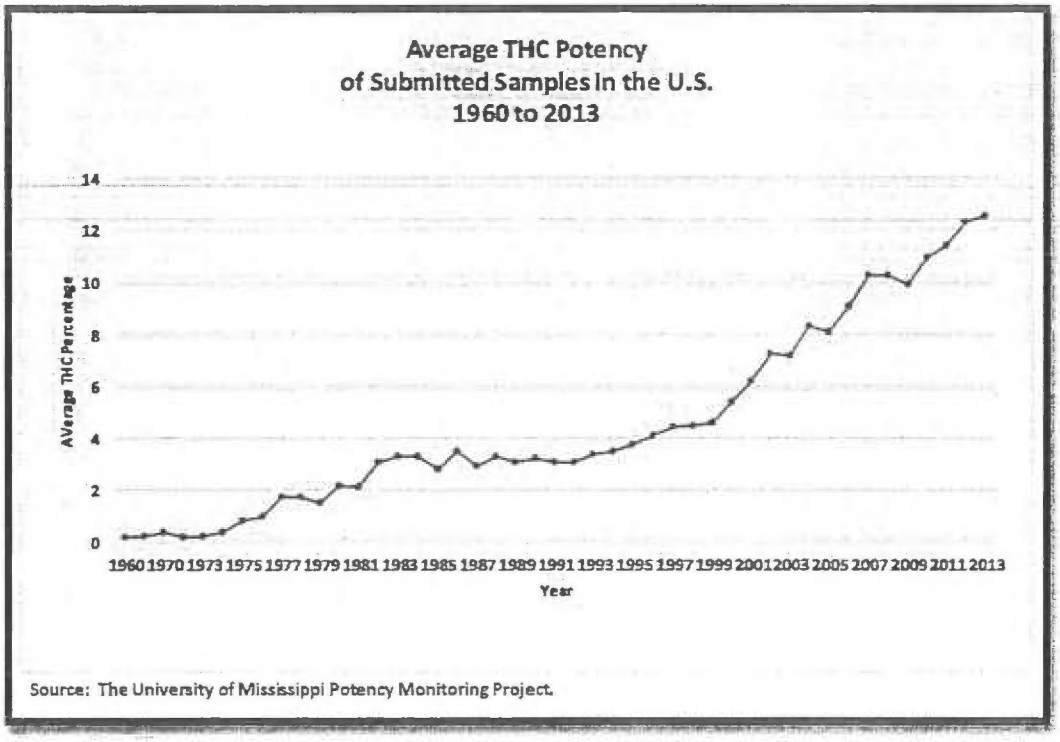
California is consistently ranked among the top states for outdoor marijuana cultivation in the United States. This is an environmental risk because growing marijuana damages watersheds, land, and fish and wildlife resources – particularly since much of California's marijuana is illegally grown on public lands.

SECTION ONE: The Science on Marijuana

Marijuana is the most abused illicit drug in the world and at the same time one of the most misunderstood. In 2014, 22 million individuals aged 12 or older in the United States reported using marijuana. Of that 22 million, 39% (8.6 million) were 12-25 years of age.[21] Yet, the gap between the science on marijuana and the common perception of marijuana has never been greater.

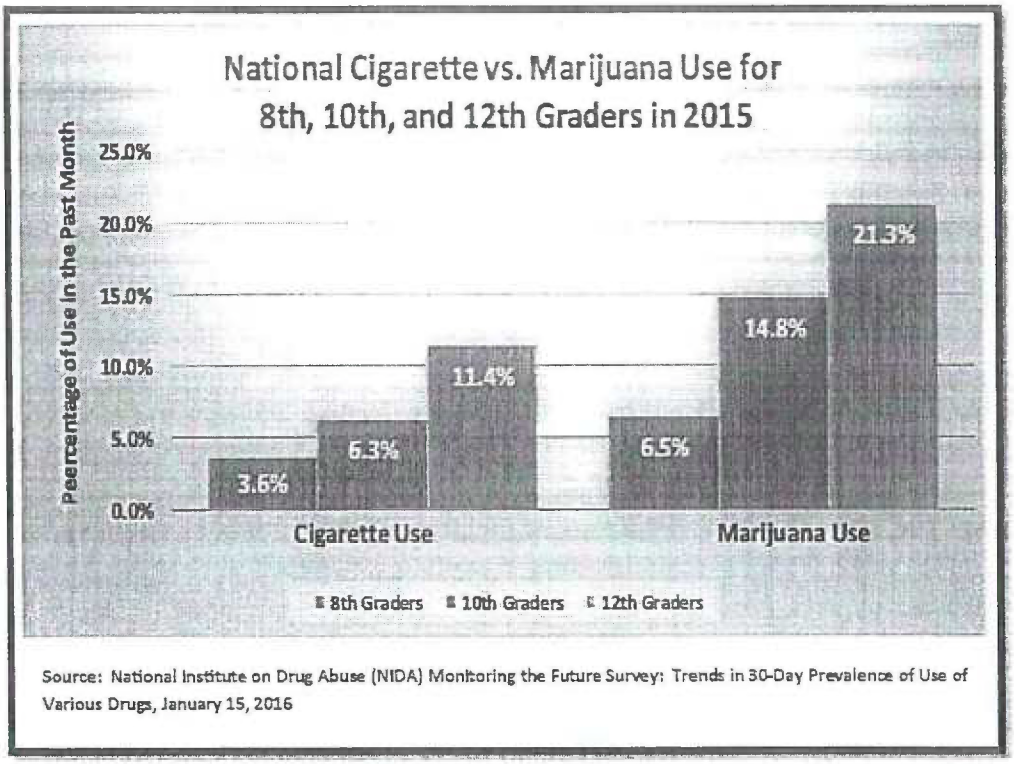
Potency

An often-overlooked aspect is that marijuana has increased in strength over time, with the average potency of Tetrahydrocannabinol (THC), the primary psychoactive found in cannabis, up from about 1% in the early 60s to an average of 15% today.[22] The THC content in Colorado retail flower lies between 8-22%, with a mean estimate of roughly 17%.[23] Marijuana extracts can contain up to 90% THC.[24] And THC extraction can present its own risks to public safety, in addition to which, higher THC levels increase users' chances of becoming addicted and of having negative reactions to the drug.[25]



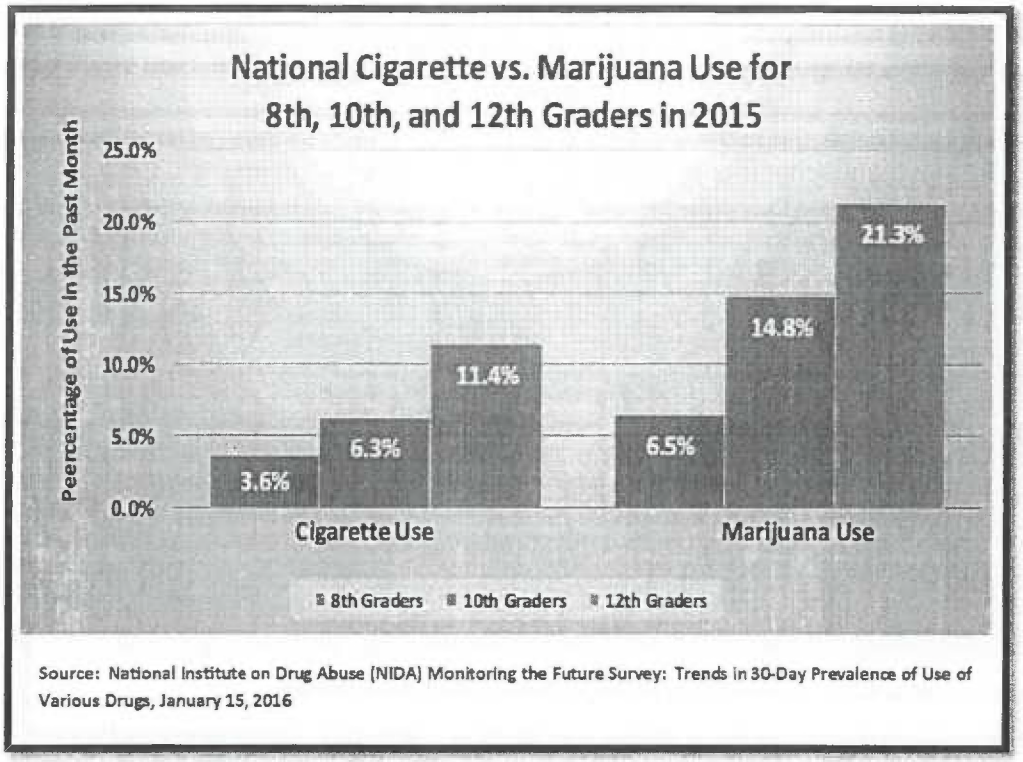
Marijuana and Addiction

As with cigarettes, not everyone who smokes or ingests marijuana will become addicted, but with an increasing number of users and rising THC contents, there will be more people addicted to marijuana in the future. In 2014, 4.2 million users had a marijuana use disorder, the clinical name for what is commonly referred to as addiction; 2.4 million, or 57%, of that 4.2 million people who are addicted to marijuana were 12-25 years of age.[26]



Source: National Institute on Drug Abuse (NIDA) Monitoring the Future Survey: Trends in 30-Day Prevalence of Use of Various Drugs, January 15, 2016

The graph above, from the 2015 Monitoring the Future National Survey of 8th, 10th, and 12th grade students, illustrates past 30-day use of cigarettes and marijuana. In 2015, more 8th, 10th, and 12th graders used marijuana than cigarettes. This was the first time in the 41 years of the Monitoring the Future study that, marijuana smoking surpassed cigarette use. Marijuana was also the most widely used illicit drug.[54]



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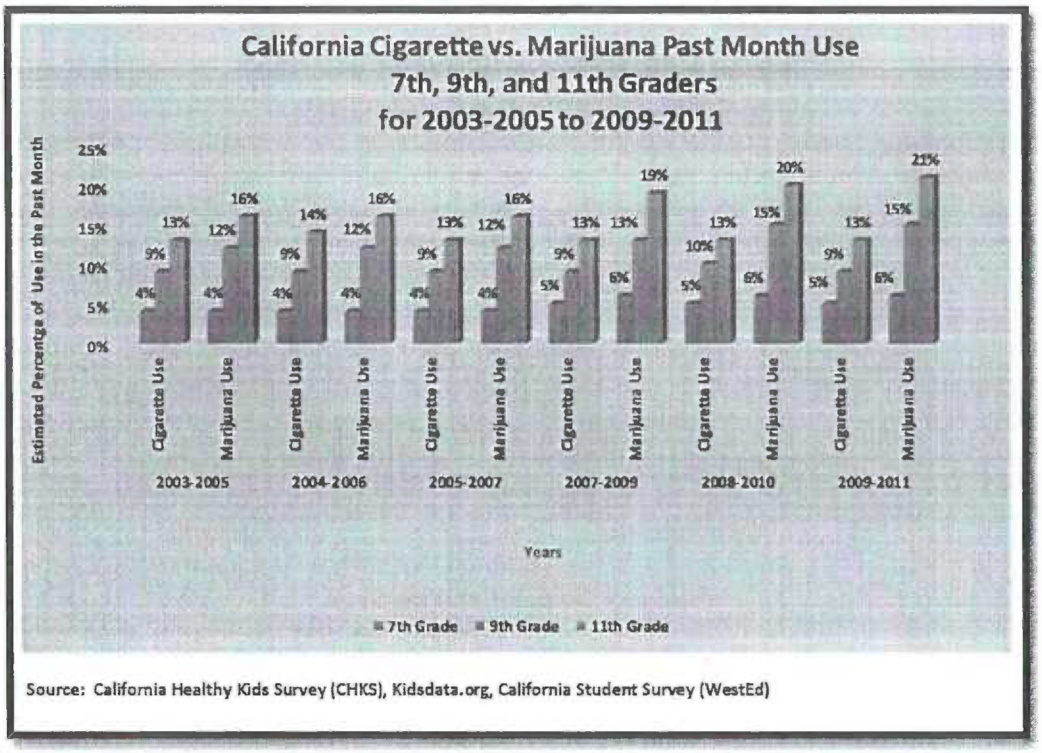
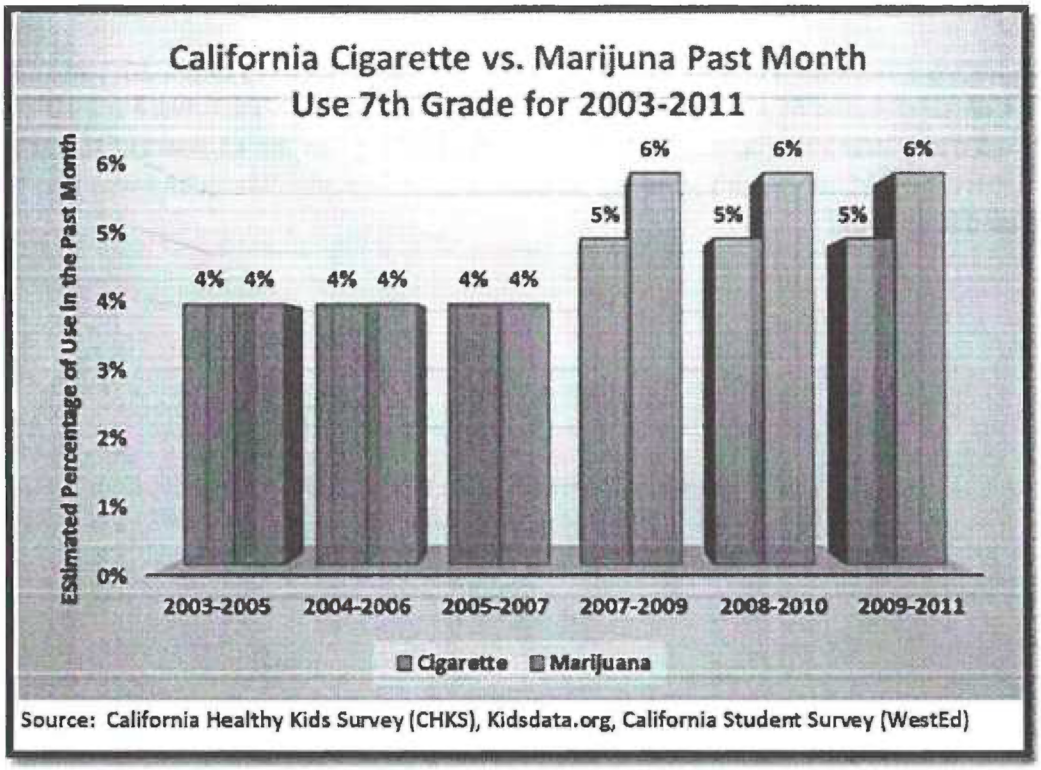
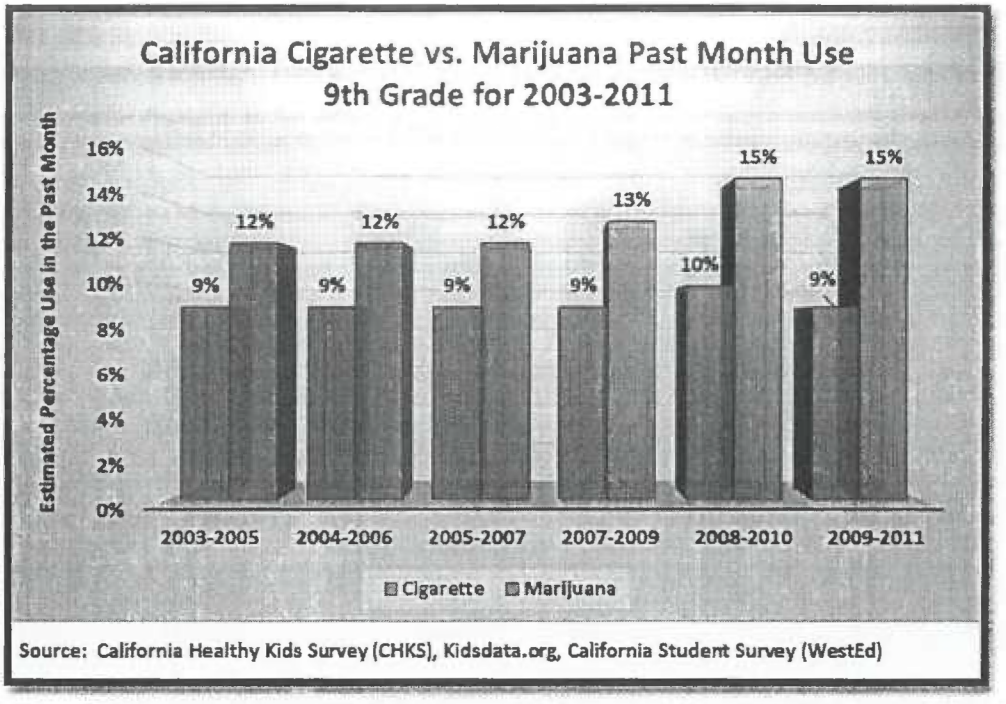
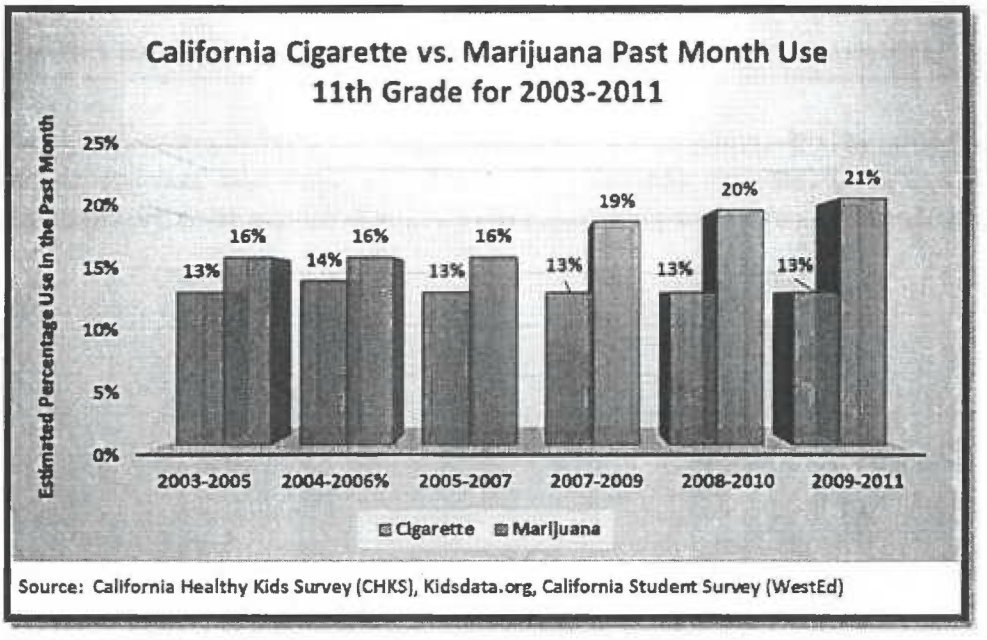


Source: California Healthy Kids Survey (CHKS), Kidsdata.org, California Student Survey (WestEd)

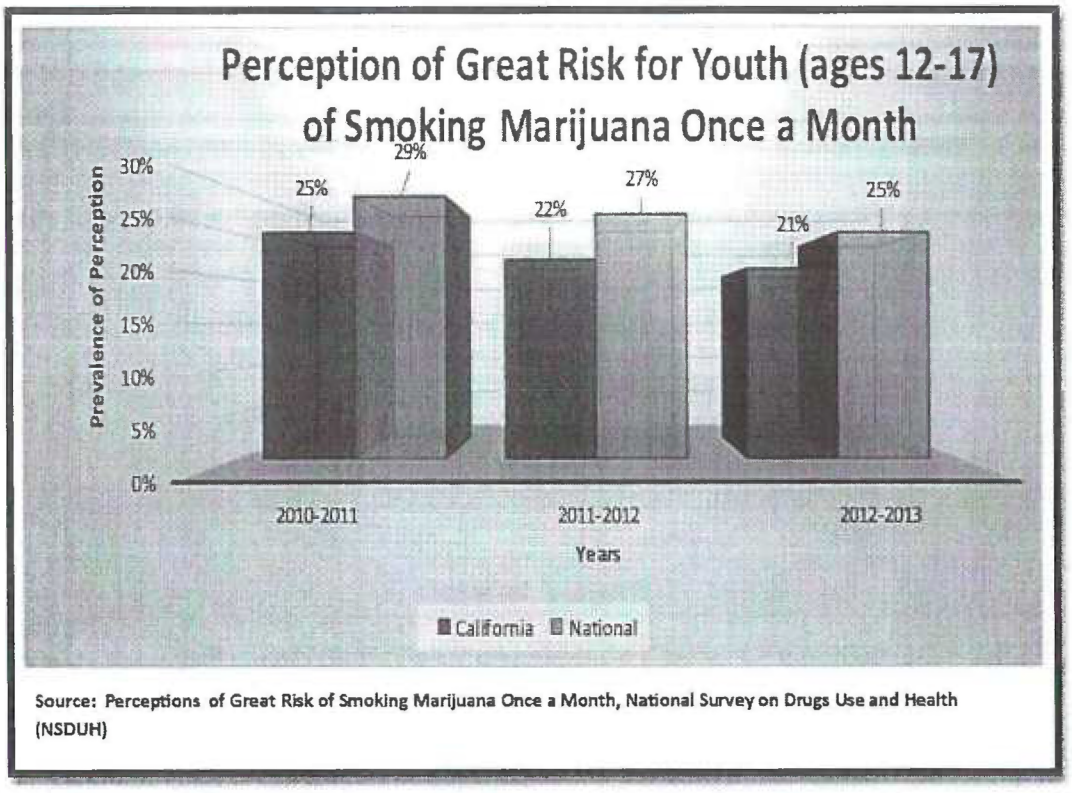


Source: California Healthy Kids Survey (CHKS), Kidsdata.org, California Student Survey (WestEd)



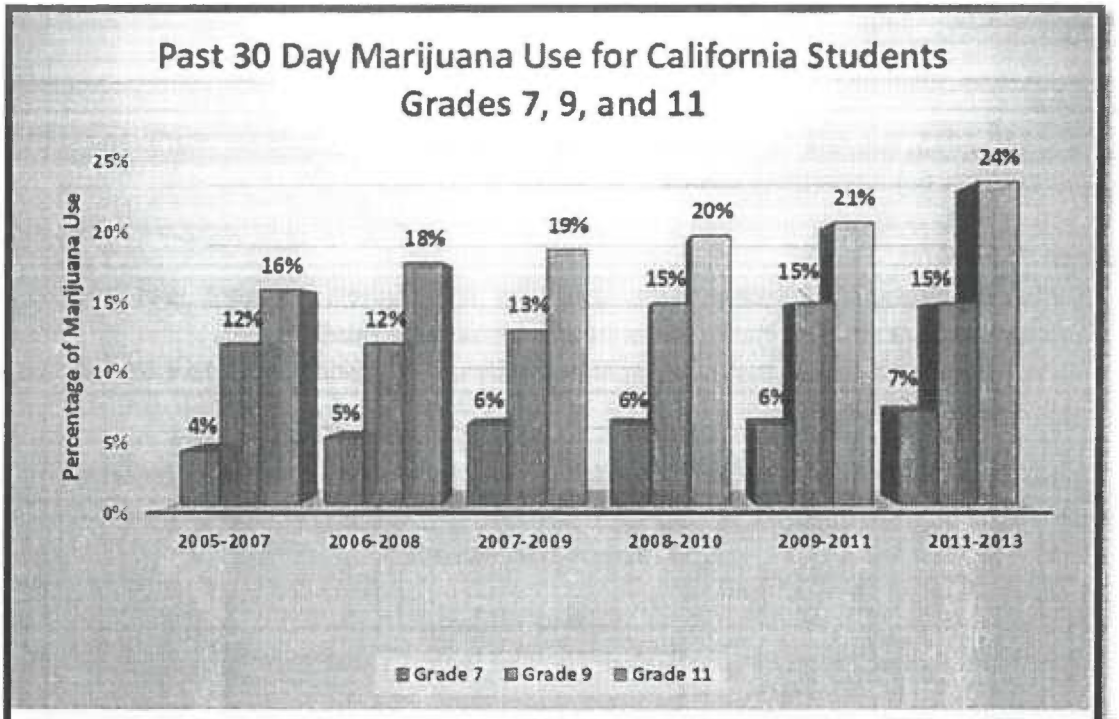


The graphs above shows data derived from the California Healthy Kids Survey (CHKS) of 7, 9, and 11th grade California students, past 30-day use of cigarettes and marijuana over an eight year period. Each survey showed that marijuana use was equal to (7th grade) or higher than (9th and 11th) tobacco use.[55]



Source: Perceptions of Great Risk of Smoking Marijuana Once a Month, National Survey on Drugs Use and Health (NSDUH)

The data illustrated in the graph above compares the perception of risk of smoking marijuana for youth ages 12-17 in California and nationally. California youth have consistently had a lower perception of great risk of smoking marijuana once a month compared to the national average.[56]



Source: California Healthy Kids Survey (CHKS), Kidsdata.org. California Student Survey for 2005-2007 through 2011-2013.

The graph above demonstrates the past 30 day use of marijuana for California students in grades 7,9, and 11 from the years 2005-2013, derived from California Healthy Kids Survey (CHKS). Past 30 day use for California students' grades 7, 9, and 11, has continued to increase since 2005.[61]

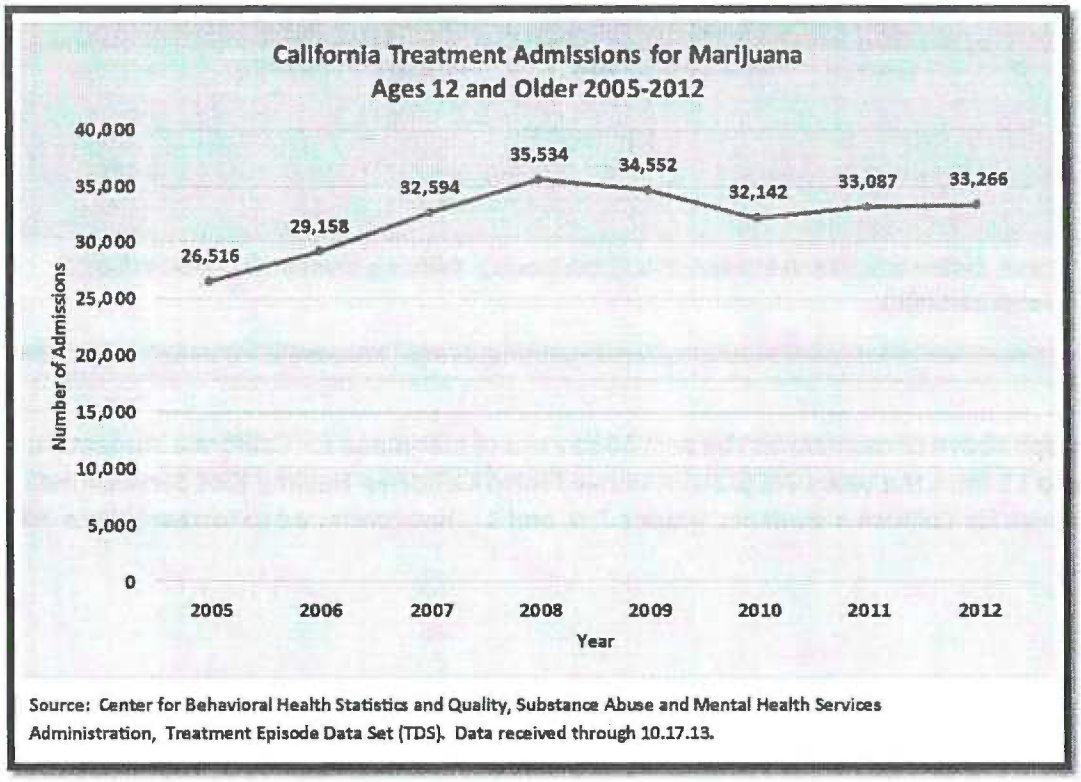
SECTION SIX: Treatment

Overview

From 2005 to 2015, the rate of admissions to drug treatment programs for marijuana substance use disorder remained relatively steady.

Findings

- Methamphetamine/amphetamine use was the highest, alcohol was second, and marijuana was third with relatively steady admittance rates.[81]
- Youth make up the largest percentage of individuals seeking treatment for marijuana in the state of California



The graph above illustrates California admissions for marijuana abuse treatment for ages 12 and older, for the years between 2005 and 2012.[82]

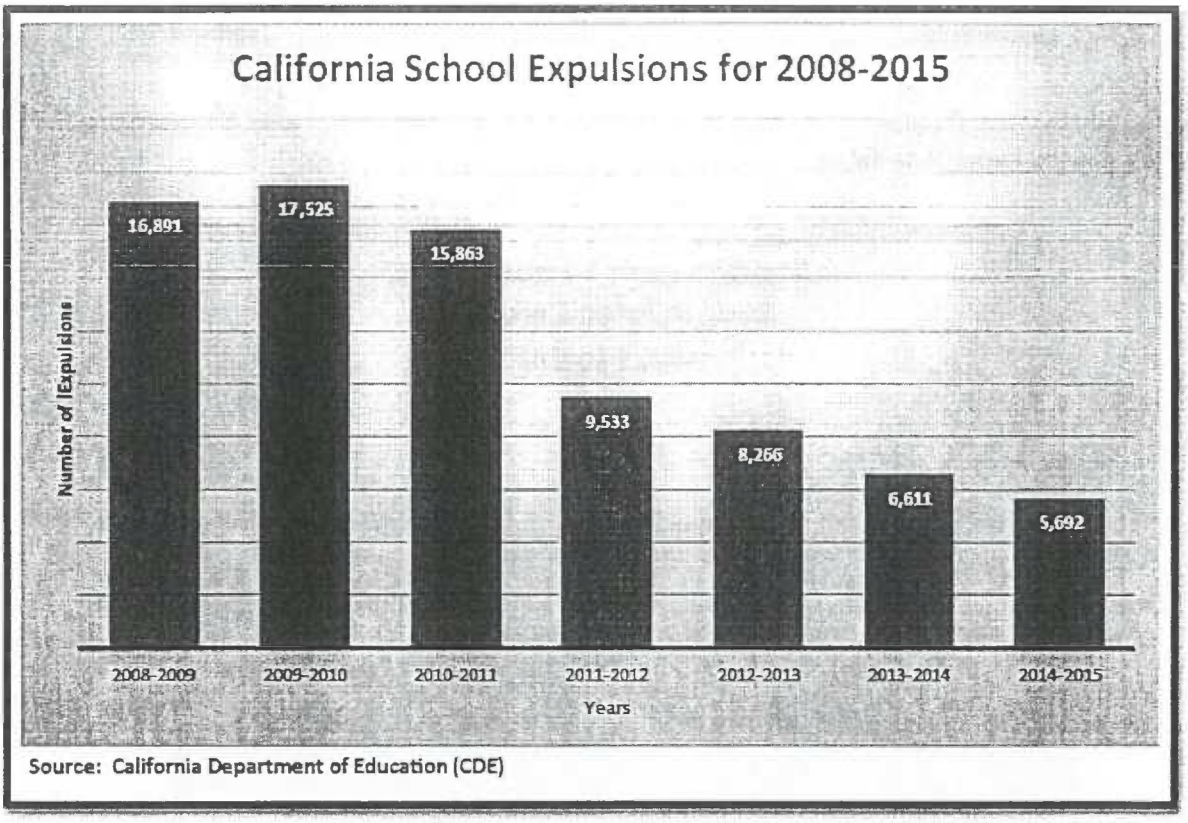
SECTION THREE: California Schools

Overview

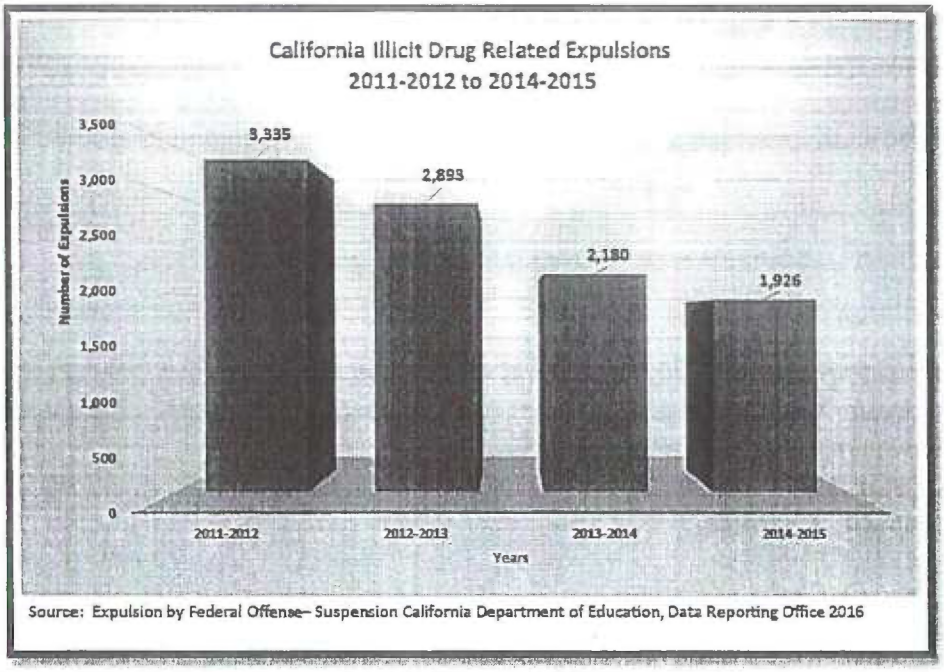
In 2011, the California school system began implementing a program called Restorative Practices. This program aims to keep students found in violation of school drug policies from being expelled.[63] For this reason, school expulsion rates in California have greatly decreased, even though the number of students who are caught with drugs has not declined.

Findings:

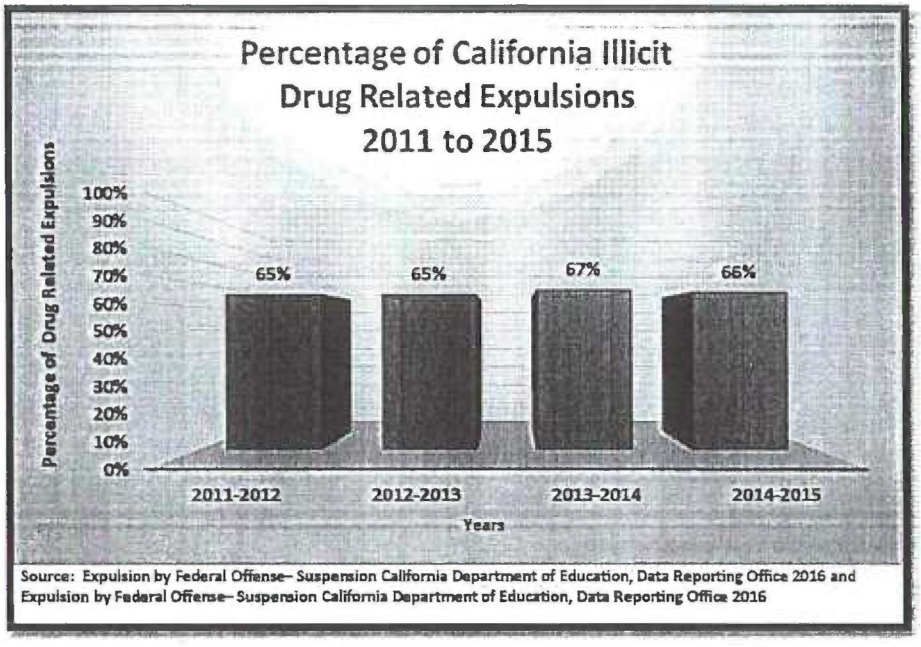
- The number of expulsions in the state of California has decreased at a rapid rate.
- The number of illicit drug related expulsions in the state of California has decreased, but at a slower rate than overall expulsions.[64]
- Restorative Practices began in 2011, requiring school districts to come up with alternatives to expulsion.[65]



The graph above from the California Department of Education (CDE) depicts the total number of expulsions within the California education system from 2008 to 2015.



The graph above from the California Department of Education (CDE) shows the number of illicit drug related expulsions throughout the state from 2011 to 2015.

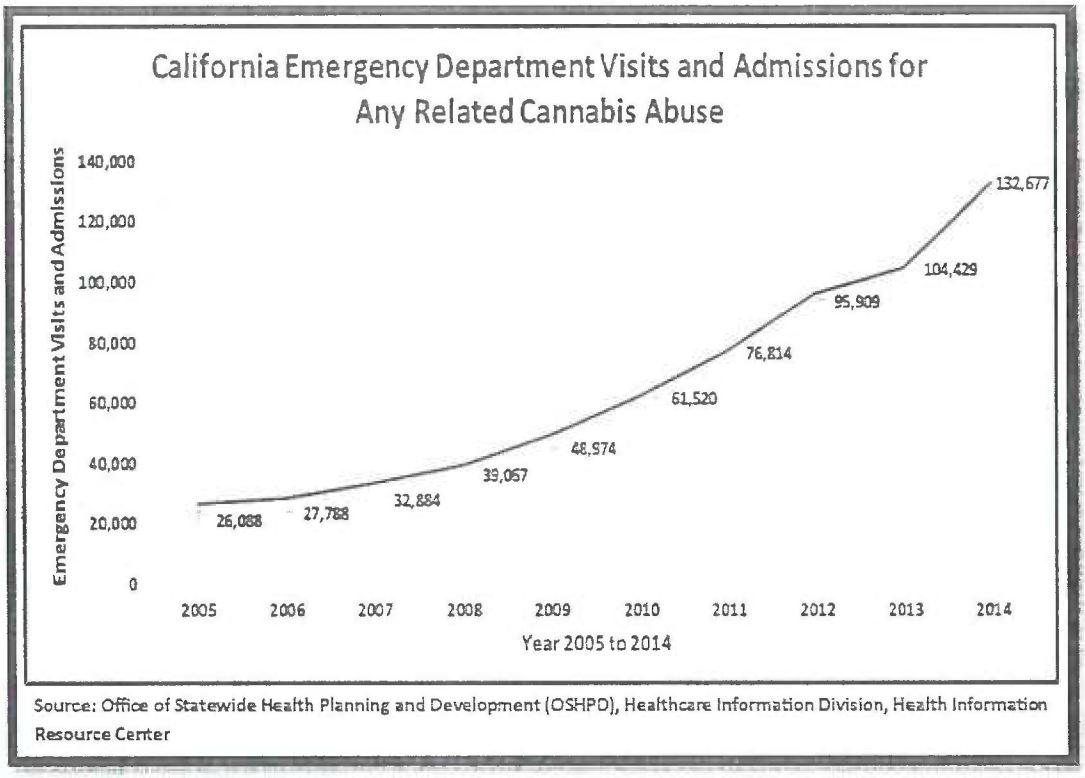


The graph above from the California Department of Education (CDE) shows the percentage of illicit drug related expulsions throughout the state from 2011 to 2015.

Conclusion

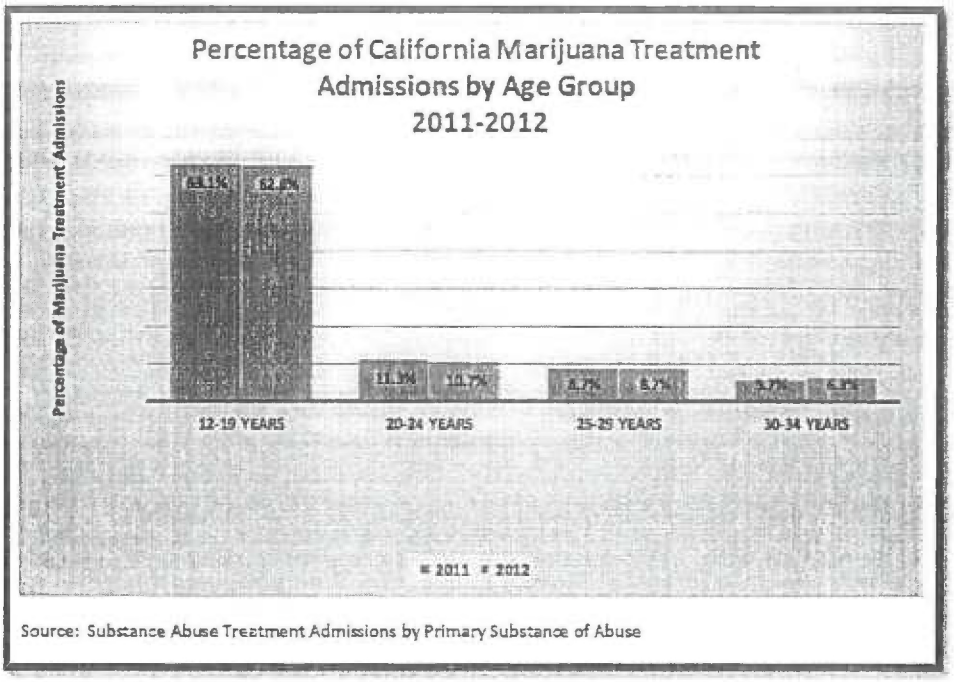
Restorative practices appears to be addressing the issue of high expulsion rates. Nonetheless, while overall expulsion rates throughout the state have been decreasing dramatically, drug related expulsion rates have been dropping at a much slower rate- and thus drug-related expulsions are constituting a higher percentage of total expulsions. This may suggest that drug use in California schools is a mounting problem.

What happens to these students once they are found in violation of school drug policy? Do they have access to resources to address patterns of substance abuse? Do they continue going to their regular classes? If so, what is the effect on other students? And if they go to another class, what steps are being taken to address their drug use and ensure that they remain on track to graduate? California schools were given this mandate without being provided with additional funding or statewide guidance, as such programs vary greatly between districts.

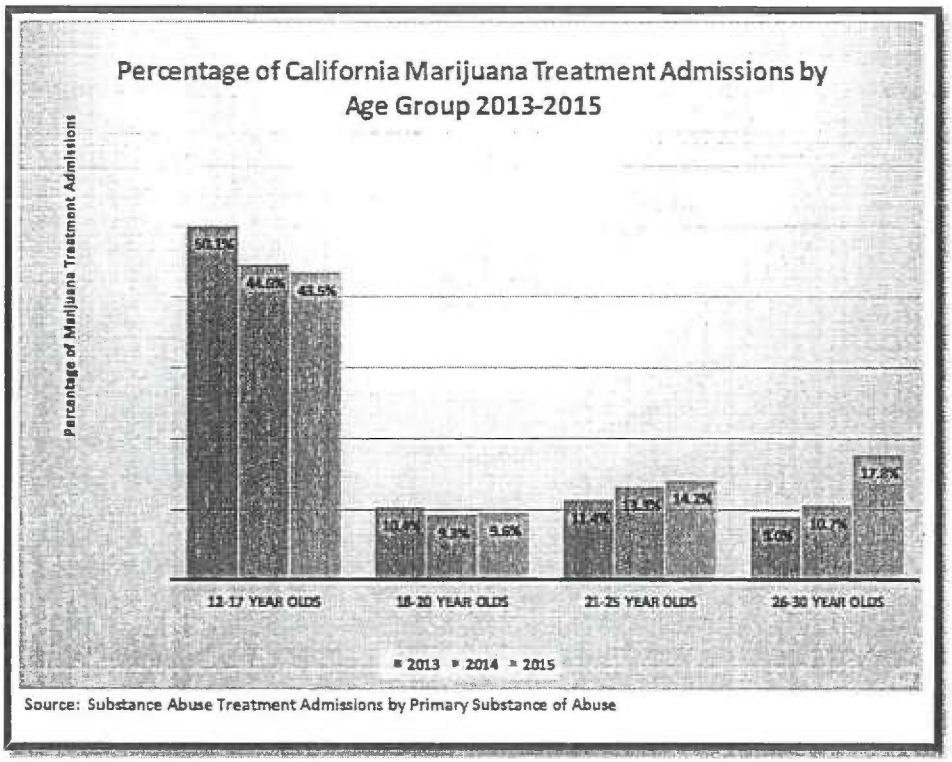


Source: Office of Statewide Health Planning and Development (OSHPD), Healthcare Information Division, Health Information Resource Center

The preceding graph depicts the number of emergency department visits resulting in admissions for any related cannabis abuse for the years of 2005 to 2014. These figures were collected from the Office of Statewide Health Planning and Development (OSHPD), and include ANY ICD-9 code 305.2 (cannabis abuse).[75]



Source: Substance Abuse Treatment Admissions by Primary Substance of Abuse



Source: Substance Abuse Treatment Admissions by Primary Substance of Abuse

The percentage of youth in treatment for a marijuana use disorder is by far the largest of the age groups seen above. Data recording for marijuana treatment admissions changed in 2013, and age groups were defined differently, but both graphs above show that for the years 2011 to 2015, the majority of those in treatment for marijuana abuse were minors.[83]