

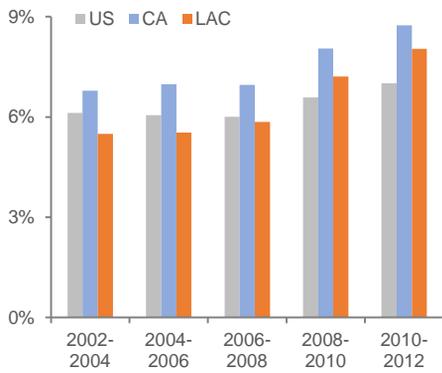
# SUBSTANCE ABUSE PREVENTION AND CONTROL

## MEDICAL DIRECTOR'S BRIEF

### Marijuana Misuse/Abuse and Consequences

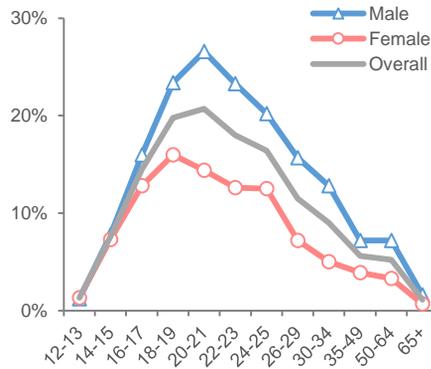
#### Prevalence

Marijuana use in the past month, age 12 or older, 2002-2012<sup>1</sup>



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

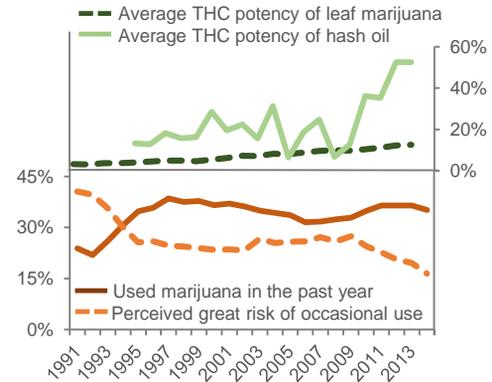
Past month marijuana use, by age and gender, CA, 2012-2013<sup>2</sup>



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

#### Risk Perception

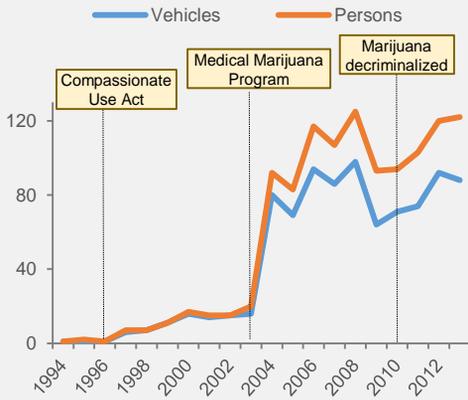
THC potency, and use and perceived harm of marijuana among 12<sup>th</sup> graders, US, 1991-2014<sup>3-4</sup>



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

#### Drug-Impaired Driving

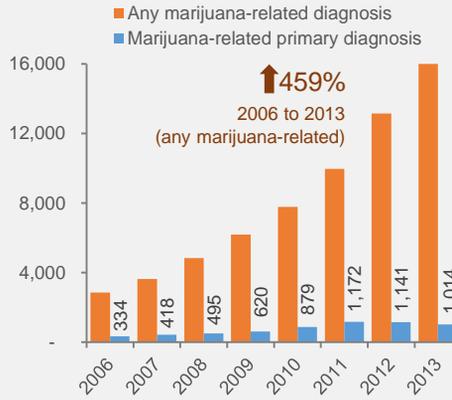
Traffic crash fatalities involving marijuana, LAC, 1994-2013<sup>5</sup>



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

#### Healthcare Utilization

Drug-related emergency department (ED) visits involving marijuana, LAC, 2006-2013<sup>6</sup>



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

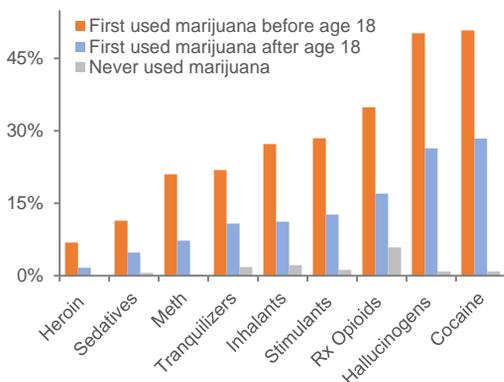
Burden of marijuana-related hospitalizations, LAC, 2005 and 2013<sup>6</sup>



Marijuana-related hospitalizations accounts for a large economic burden

#### Marijuana as a Gateway Drug

Lifetime illicit drug use, by marijuana use, CA, 2012-2013<sup>2</sup>



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

#### Long-term Outcomes



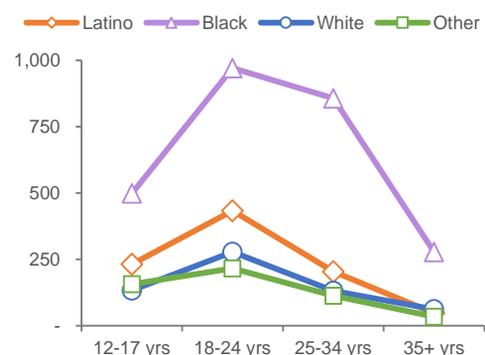
1 in 9 experimenters  
1 in 6 teen initiates  
1 in 2 daily users

become addicted<sup>7</sup>

Adverse outcome	Strength of effect among regular recreational users <sup>8</sup>
Education	2-fold lower attainment
IQ	8 points lower (teen initiates) <sup>9</sup>
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<sup>10</sup>



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

# Marijuana Misuse/Abuse and Consequences

## 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)<sup>1</sup>.
- 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<sup>1</sup>.

- 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<sup>2</sup>.
- 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<sup>2</sup>.

## 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<sup>3</sup>.
- 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<sup>4</sup>.

## Drug-Impaired Driving

- Using alcohol or marijuana impairs driving and increases the risk of motor vehicle collisions<sup>11</sup>.
- 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<sup>12-13</sup>.
- 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<sup>5</sup>. 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<sup>6</sup>.
- 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<sup>6</sup>.
- 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<sup>6</sup>.
- 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)<sup>6</sup>.
- Marijuana use is associated with the later development of mental illness, especially schizophrenia and psychosis<sup>8,14</sup>.
- 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<sup>6</sup>.

## 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<sup>10</sup>.
- 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<sup>2</sup>.
- 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<sup>2</sup>.

## Long-term Outcomes

- Addiction risk increases with greater frequency and with earlier age of initiation of marijuana use<sup>7</sup>.
- Regular recreational marijuana use increases the risk of many adverse social, cognitive, and physical health outcomes<sup>9-10,12</sup>.
- Compared to never using marijuana, regular use of recreational marijuana was associated with a 2-fold lower educational attainment<sup>8</sup>, 8 point decline in IQ<sup>9</sup>, 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<sup>8</sup>.

## 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)<sup>10</sup>.
- 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)<sup>10</sup>.

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