

# Alcohol and Marijuana Use Trends in Maine



By Tim Diomede, MPPM

November 16<sup>th</sup>, 2018



# Agenda

- **Introduce Maine SEOW**
  - Purpose and Objectives
  - Notes/disclaimers
- **Present Data Indicators**
  - Consumption (self-reported substance use)
  - Consequences (e.g., morbidity/mortality, crime)
  - Contributing Factors (e.g., availability, perceptions)
- **Questions**

# Purpose (SEOW What?)

***The State Epidemiological Outcomes Workgroup (SEOW)***  
*The SEOW is funded under the federal Substance Abuse and Mental Health Services Administration (SAMHSA) Partnership for Success grant, focused on the prevention of substance use among 12 to 25 year olds.*



# SEOW Objectives

- Serve as a clearing house
- Promote systematic, data-driven decision-making
- Guide effective and efficient use of **prevention** resources
- Identify and track substance use trends
- Detect emerging substances/patterns
- Help secure funds and measure progress
- Provide an opportunity for networking and collaboration



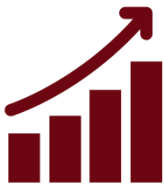
# Data Notes/Disclaimers



SEOW encourages stakeholders to scan a multitude of indicators and information sources. We promote the use of data indicators that have the reputation of being accurate, reliable, and timely.



All data have limitations in terms of accuracy and reliability. Therefore we caution data users not to rely heavily on a single indicator in their assessment and evaluation; instead, we structure and present resources within a larger context to help users look at the broader picture.



Analyses of longer-term trends and perspectives are vital for prevention planning and the assessment/evaluation process. Prevention strategies are successful when conducted over a long period and data monitoring should reflect this process.

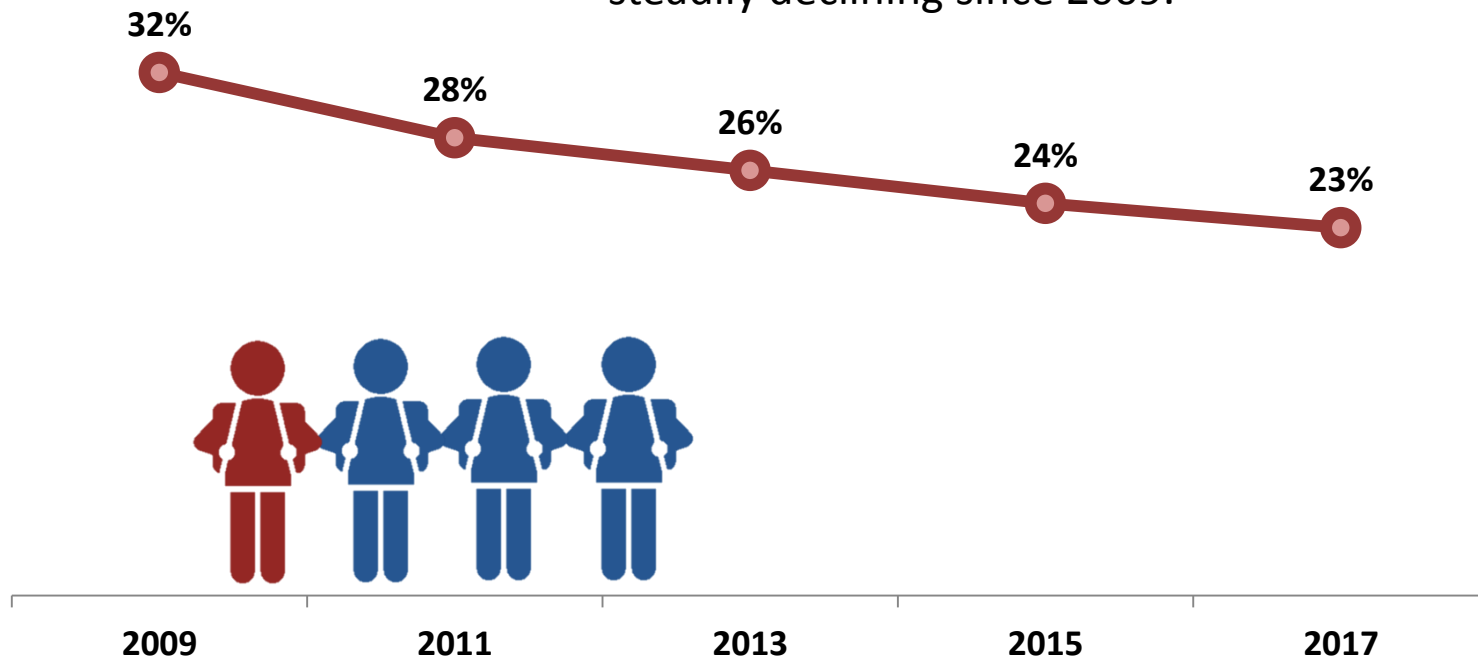
# Consumption

(Surveillance Data)



# Past month alcohol use among high school students: 2009-2017

Less than one in four high school students reported consuming any alcohol in the past month. The rate of consumption has been steadily declining since 2009.

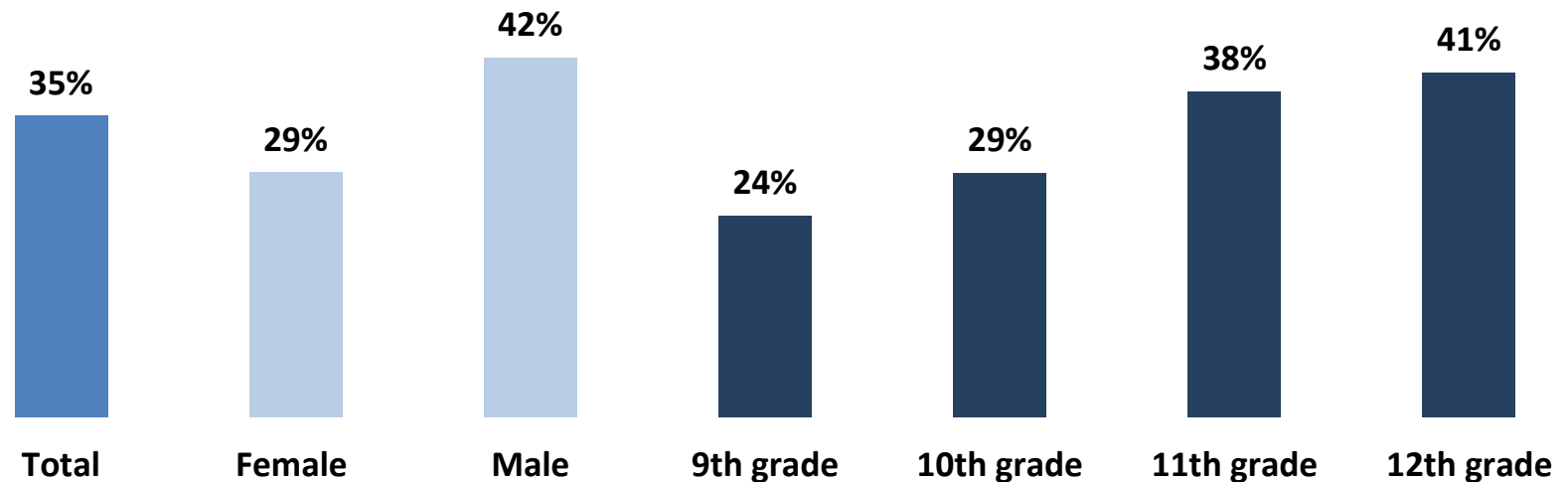


Source: MIYHS

# High school students (among those who have drunk in the past month) who had five or more drinks in a row at least once in the past month: 2017



Male high school students appear more likely than females to participate in high-risk alcohol use, as are older students relative to younger students. Rates of binge drinking differ widely between 10<sup>th</sup> (29%) and 11<sup>th</sup> (38%) graders.

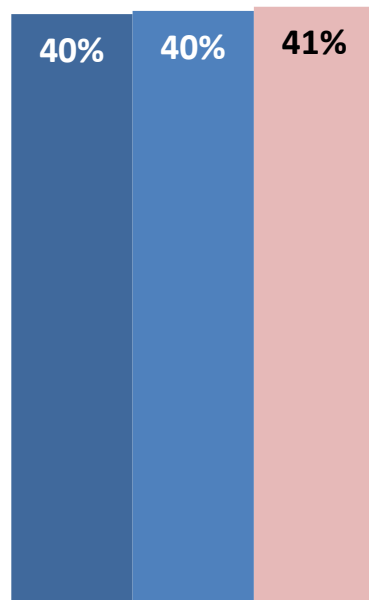


Source: MIYHS, 2017

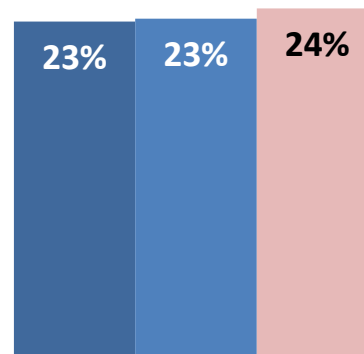


# Adults ages 18 to 20 reporting drinking in past 30 days by type of drinking: 2012–14 to 2014-16

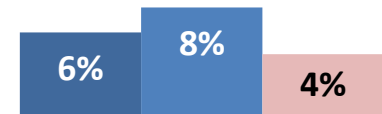
Nearly half (41%) of 18 to 20 year olds drank in the past month and about one in four binge drank in the past month.



Past month alcohol use



Past month binge drinking



At risk for heavy drinking

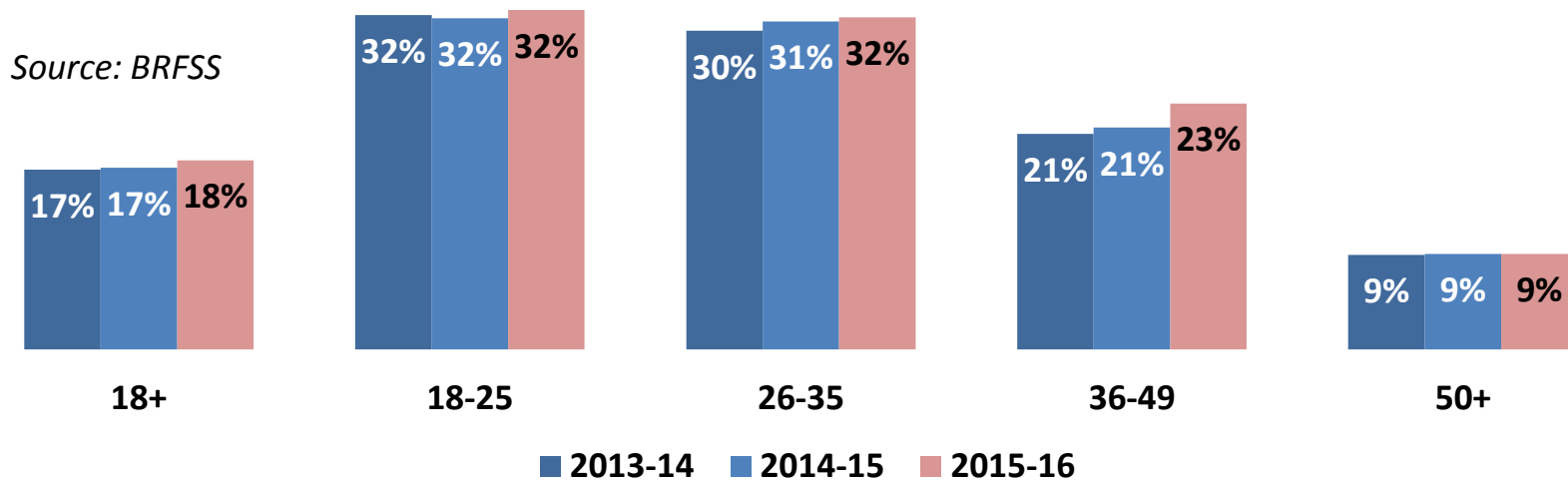
■ 2012-14 ■ 2013-15 ■ 2014-16

Source: BRFSS

# Maine adults reporting binge\* drinking in the past 30 days, by age group: 2013-14 to 2015-16

*\*BRFSS defines binge drinking as five or more drinks in one sitting for a male and four or more drinks in one sitting for a female.*

The highest binge drinking rate remains among 18 to 25 year-olds and 26 to 35 years olds, with about one in three reporting having binge drank in the past month.



# Alcohol use disorder defined by DSM

## Any 1 = Alcohol Abuse

- Found that drinking-or being sick from drinking-often interfered with taking care of your home or family? Or caused job troubles? Or caused school problems?
- More than once gotten into situations while or after drinking that increased your chances of getting hurt (such as driving, swimming, using machinery, walking in a dangerous area, or having unsafe sex)?
- More than once gotten arrested, been held at a police station, or had other legal problems because of your drinking? (Not included in DSM-5)
- Continued to drink even though it was causing trouble with your family or friends?



## Any 3 = Alcohol Dependence

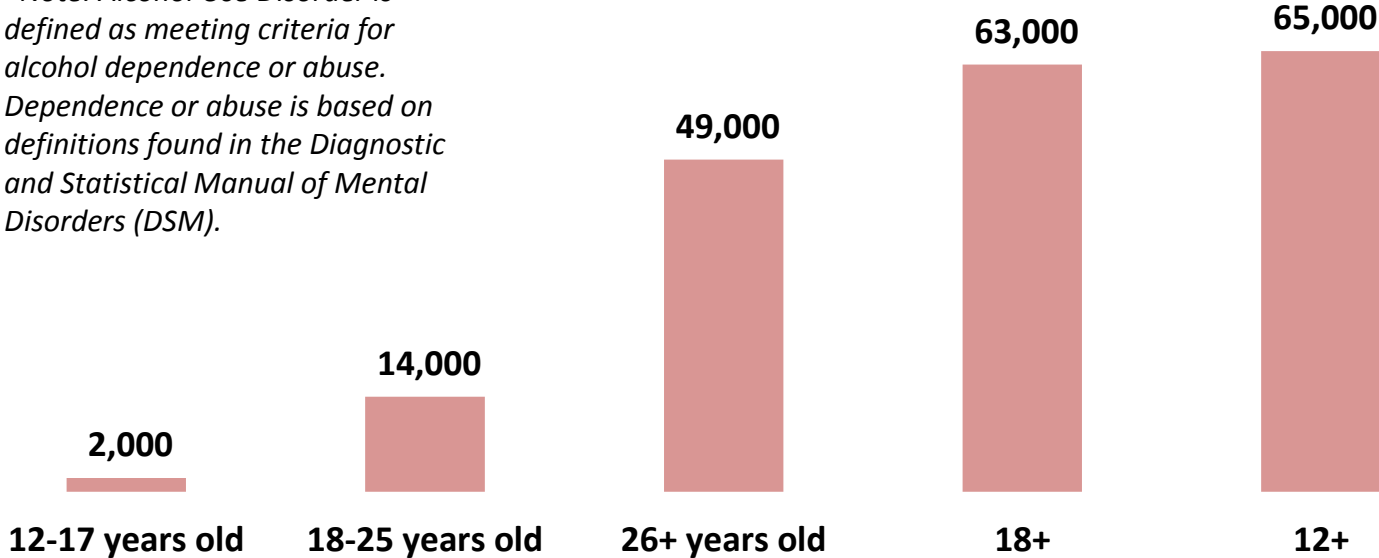
- Had to drink much more than you once did to get the effect you want? Or found that your usual number of drinks had much less effect than before?
- Found that when effects of alcohol were wearing off, you had withdrawal symptoms, such as trouble sleeping, shakiness, restlessness, nausea, sweating, a racing heart, or a seizure? Or sensed things that were not there?
- Had times when you ended up drinking more, or longer than you intended?
- More than once wanted to cut down or stop drinking, or tried to, but couldn't?
- Spent a lot of time drinking? Or being sick getting over aftereffects?
- Given up or cut back on activities that were important or interesting to you, or gave you pleasure, in order to drink?
- Continued to drink even though it was making you feel depressed or anxious or adding to another health problem? Or after having a memory blackout?

# Alcohol use disorder\* (dependence or abuse) in the past year, by age in Maine:2015-16



In 2015-16, it was estimated that 65,000 Mainers (12 and older) qualified as having an alcohol use disorder.

*\*Note: Alcohol Use Disorder is defined as meeting criteria for alcohol dependence or abuse. Dependence or abuse is based on definitions found in the Diagnostic and Statistical Manual of Mental Disorders (DSM).*

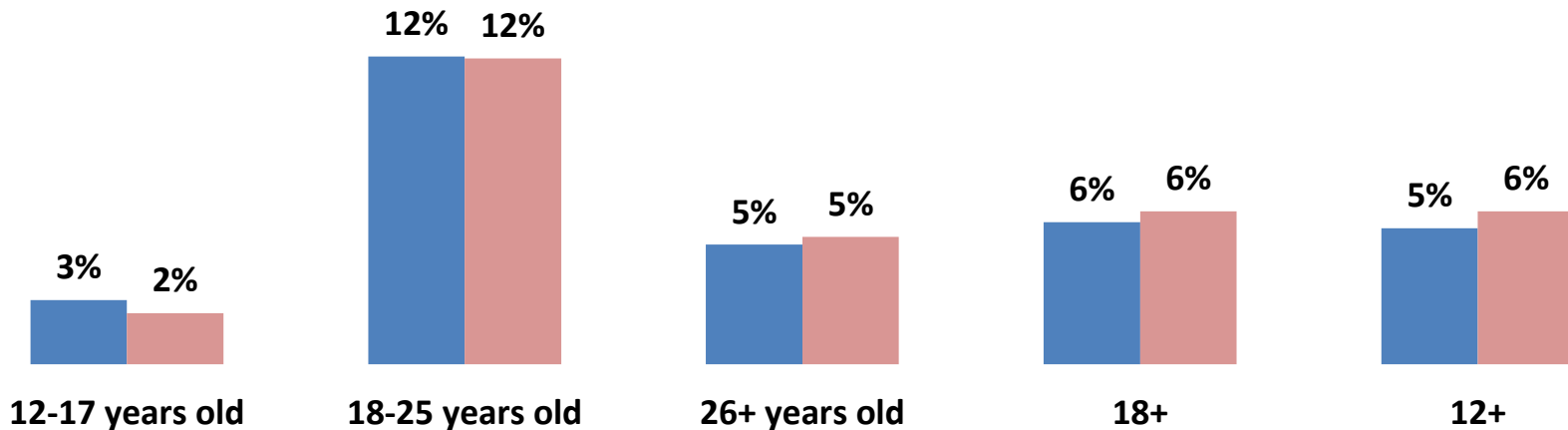
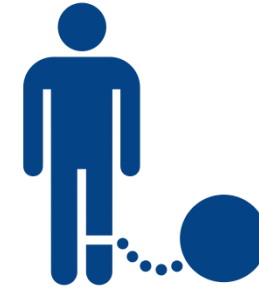


Source: NSDUH

# Alcohol use disorder\* (dependence or abuse) in the past year, by age in Maine: 2014-15 to 2015-16

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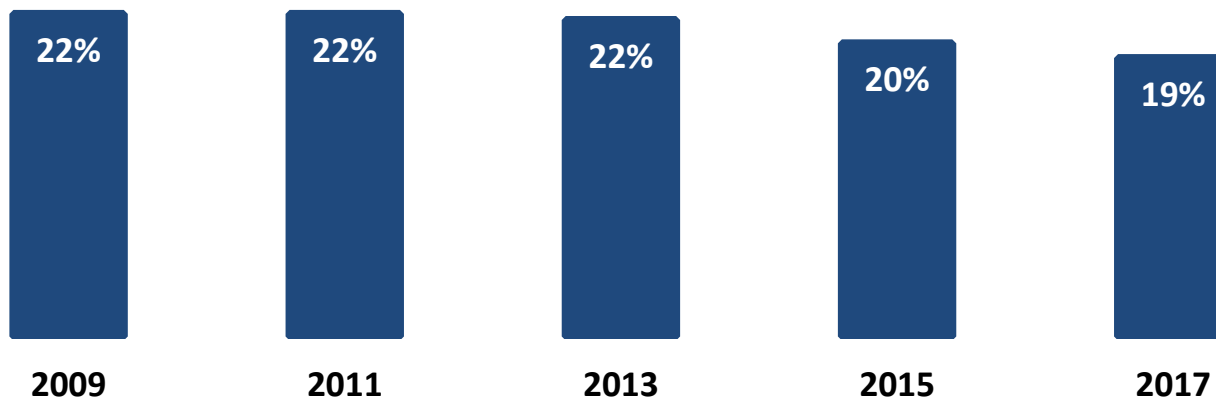
Maine residents 18 to 25 were the most likely age group to have an alcohol use disorder in 2015-16 with an estimate of 12%.



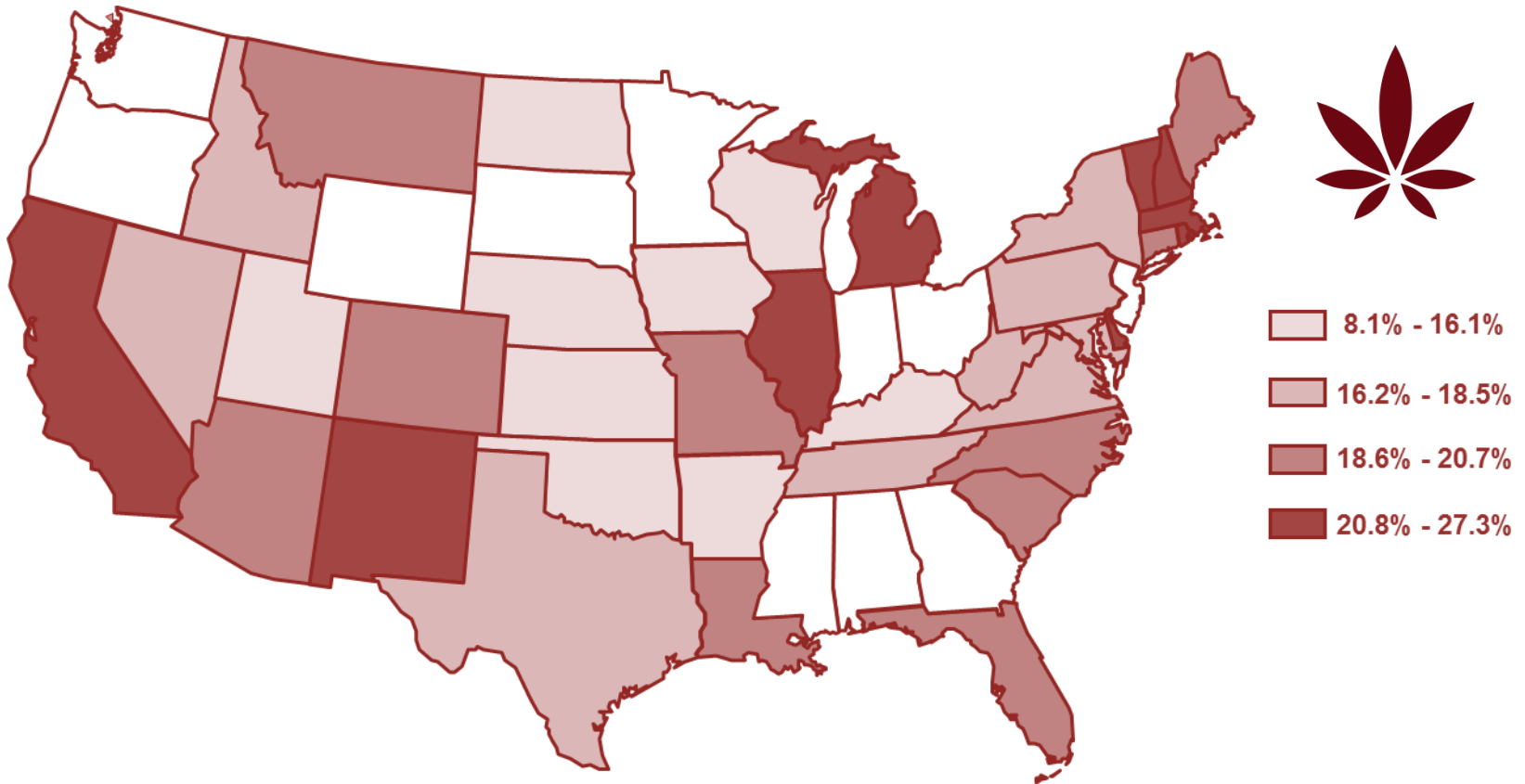
# Maine high school students who have used marijuana at least once in the past month: 2009-2017



In 2017, one in five high school students reported using marijuana within the past month. Rates have been stable over time.



# Percentage of high school students who currently used marijuana:\* 2017

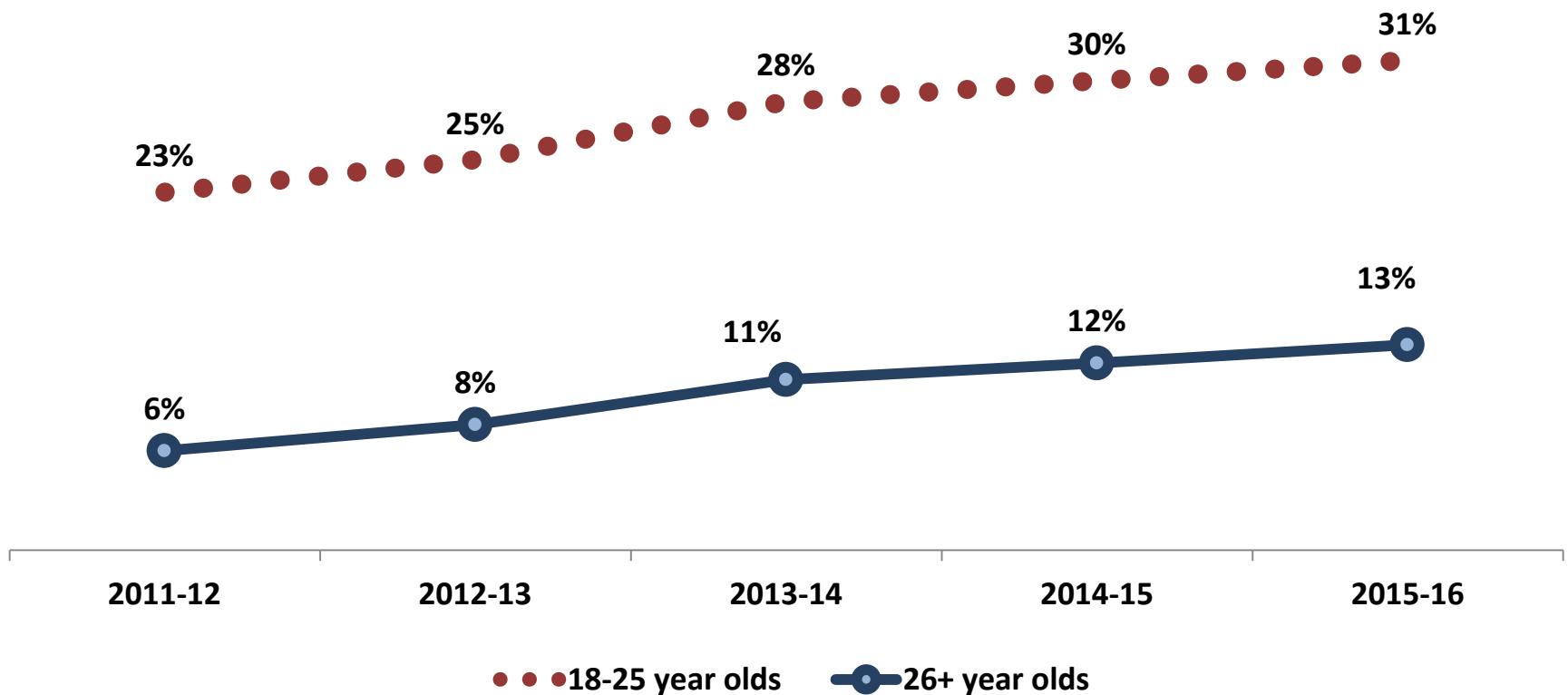


Source: YRBS

# Maine adults reporting marijuana use in the past month: 2011-12 to 2015-16

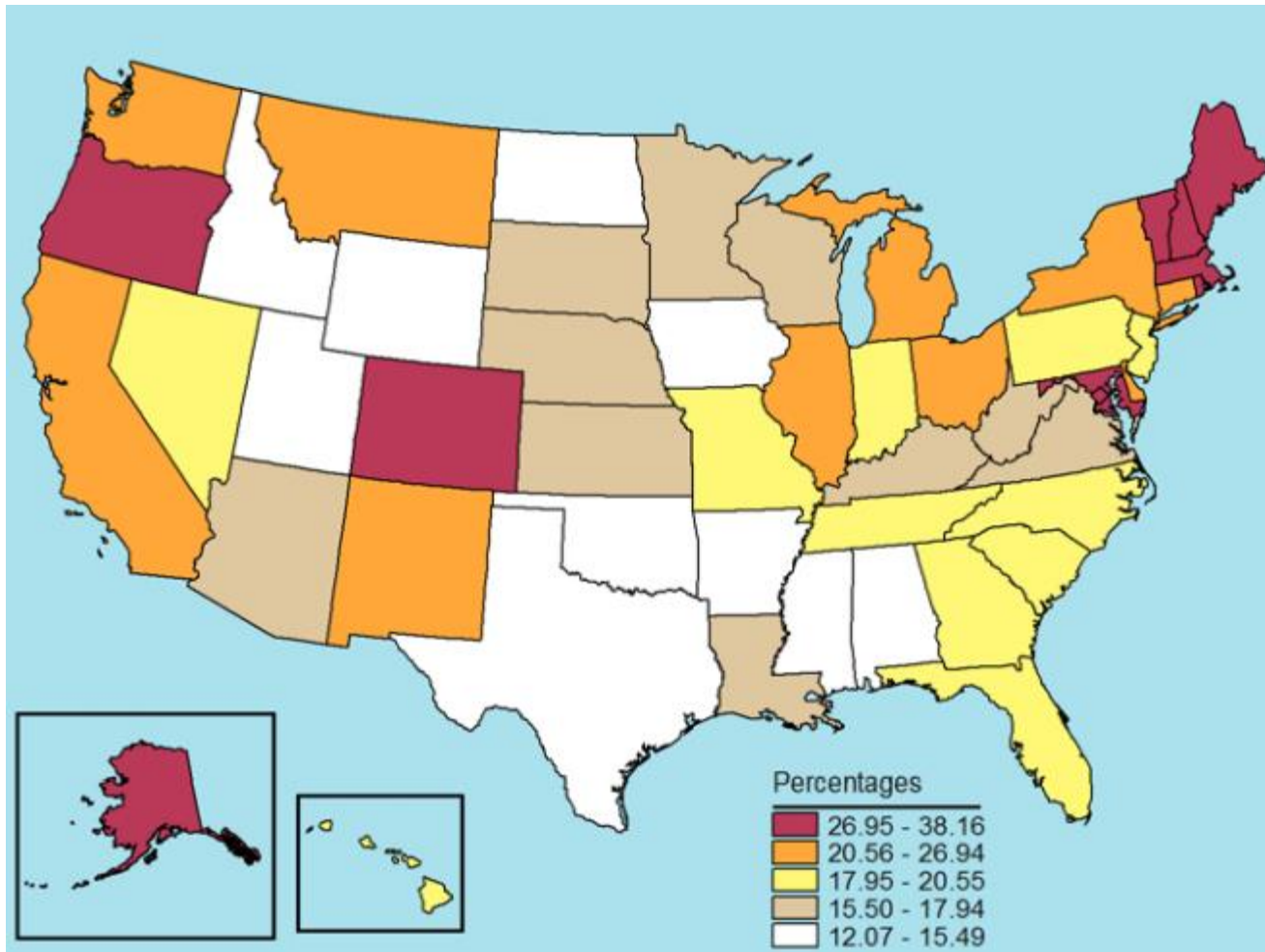


Nearly one in three Mainers ages 18 to 25 used marijuana in the past month in 2015-16, an increase of eight percentage points since 2011-12.





# Marijuana use in the past month among 18 to 25 year olds, by state: 2015-16

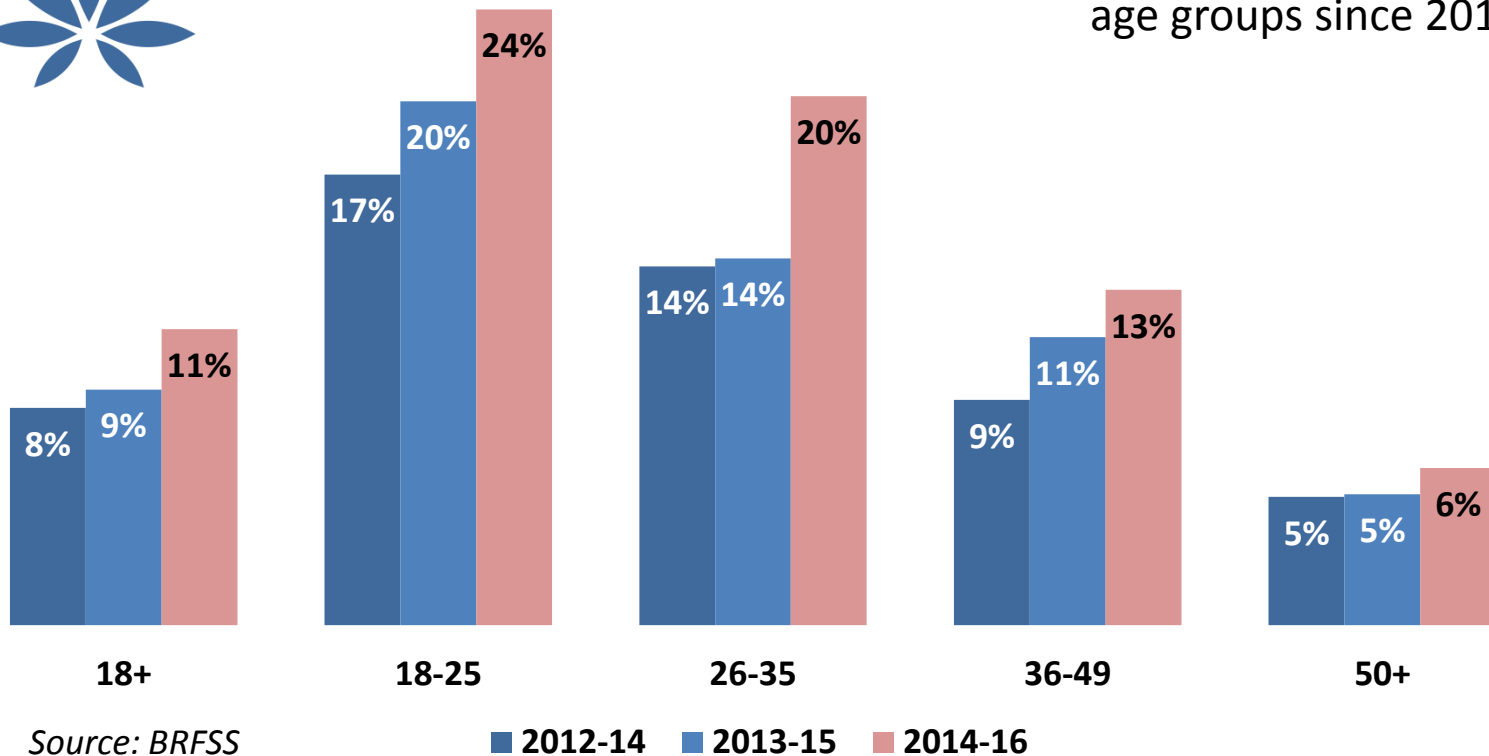


Source: NSDUH/SAMHSA, Center for Behavioral Health Statistics and Quality

# Adults reporting marijuana use in the past month, by age group: 2012–14 to 2014-16

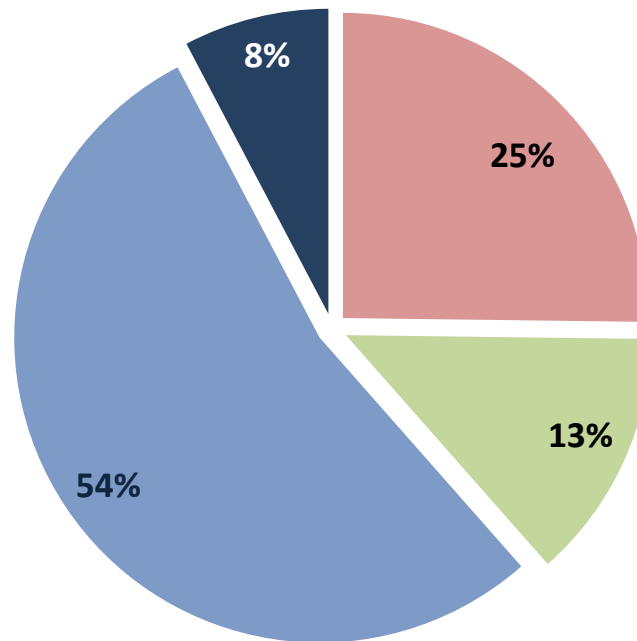


The highest rate of past month marijuana use was among 18 to 25 year olds (24%), followed by 26 to 35 year olds (20%). Rates increased in all age groups since 2012-14.



# Type of vapor product last used by high school students (last time they had used): 2017

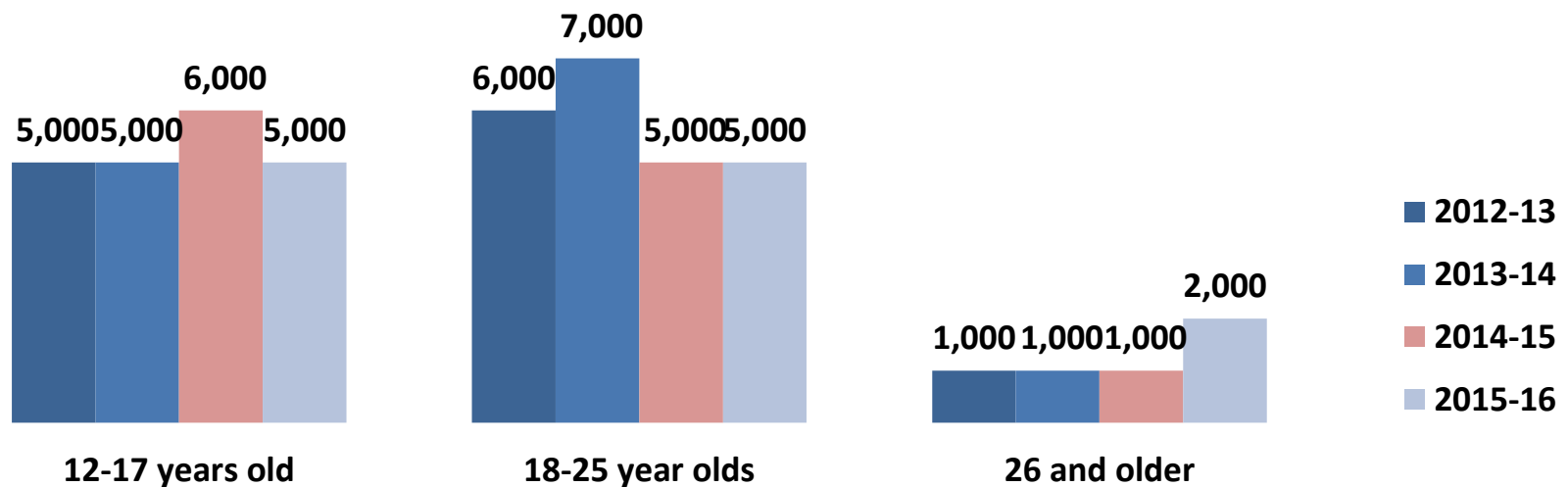
In 2017, among high school students who reported ever vaping, most (54%) were vaping with just flavoring, 24% were using nicotine and 13% were using marijuana .



- Nicotine
- Marijuana or hash oil
- Just flavoring
- Not sure

# Average annual number of marijuana initiates in Maine, by age group: 2012-13 to 2015-16

In 2015–16, there was an annual average of 12,000 marijuana initiates 12 and older who used marijuana for the first time in their life. There appears to be more adults 26 and older initiating use than in prior years.

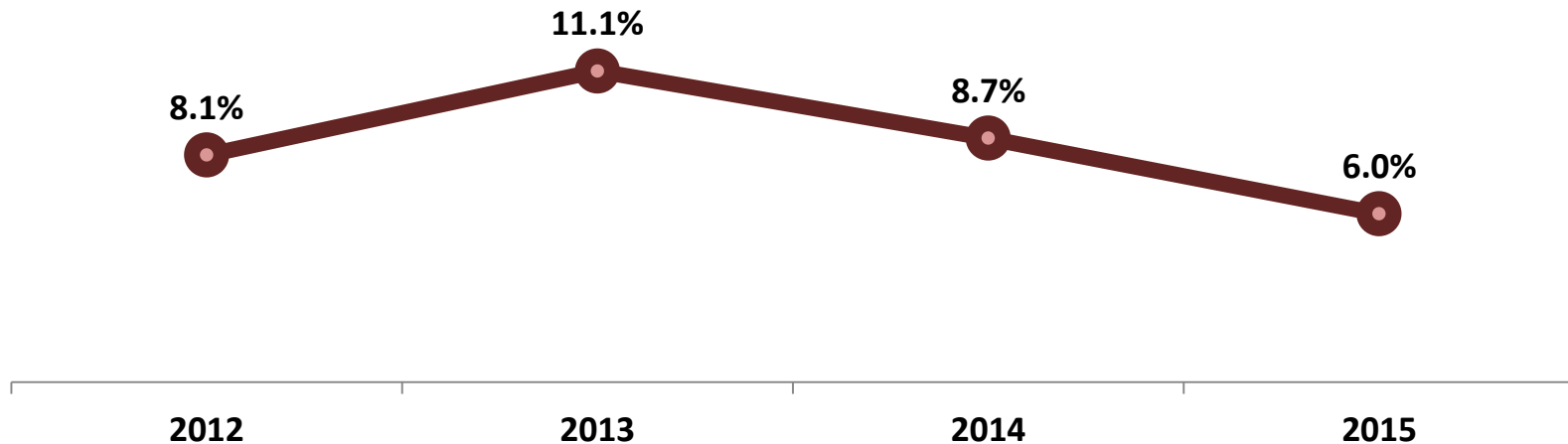


Source: NSDUH

# Women reporting alcohol use during the last trimester of pregnancy: 2012–2015



Alcohol use among women during their last trimester decreased by five percentage points from 2013 (11%) to 2015 (6%).



Source: PRAMS

# Section Summary

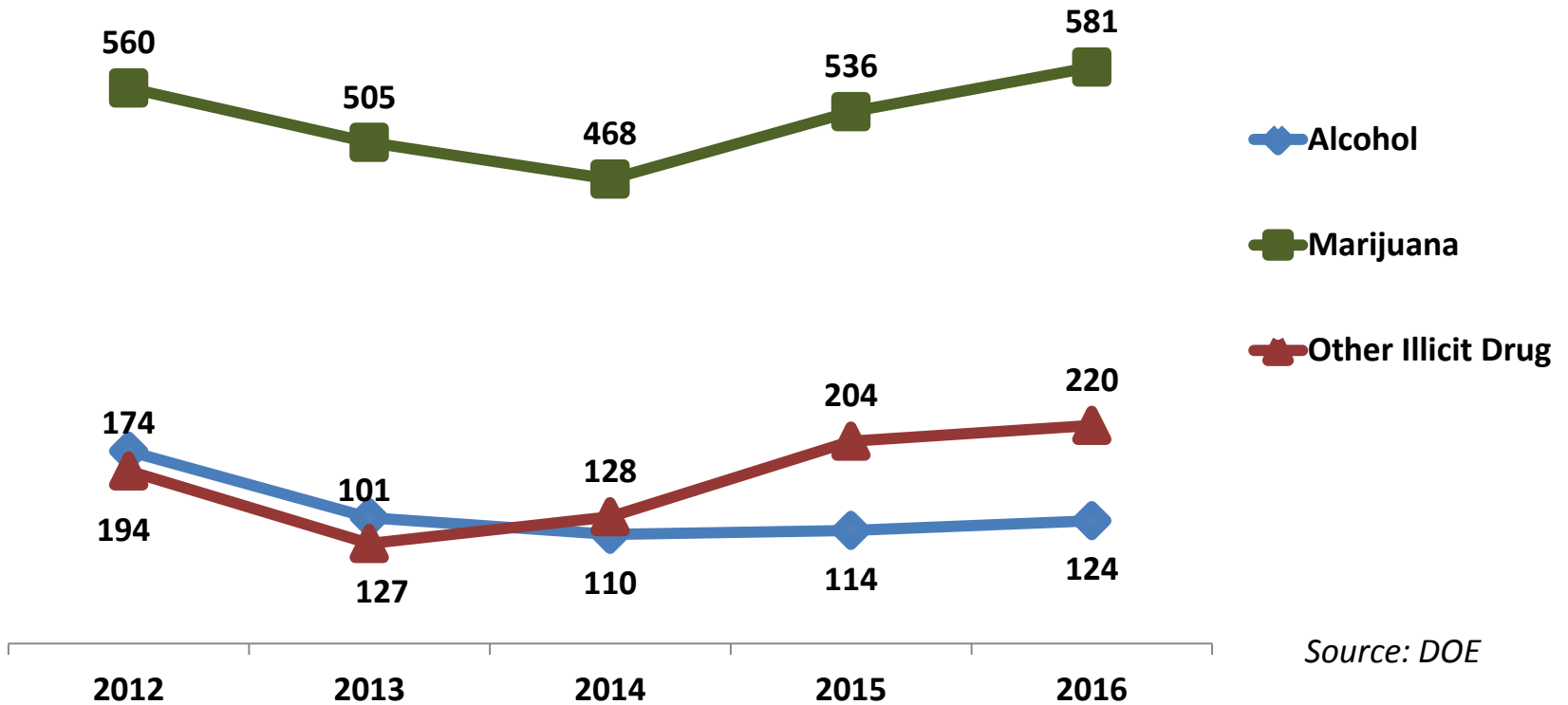
## Consumption

- Progress continues in reducing rates of alcohol use among Maine's youth for the past several years.
- Among high school student who drank in the past month, one in three reported they had also binge drank in the past month.
- Rates of binge drinking differ widely between 10<sup>th</sup> (29%) and 11<sup>th</sup> (38%) graders.
- In general, 18 to 35 year olds have the highest rates of alcohol and marijuana use.
- Alcohol remains the substance most often used by Mainers across the lifespan.
- About 65,000 Mainers qualify as having an alcohol disorder.
- Approximately one in ten (12%) 18 to 25 year olds qualified as having an alcohol use disorder.
- One in five high school students have used marijuana in the past month.
- Maine has one of the highest rates of marijuana use among young adults in the nation; rates have been steadily increasing among all adults in recent years.
- About one in seven teens who have ever used a vapor product did so with marijuana oil.

# Consequences/Impact



# Drug and alcohol related school suspensions, by substance type: 2012-2016

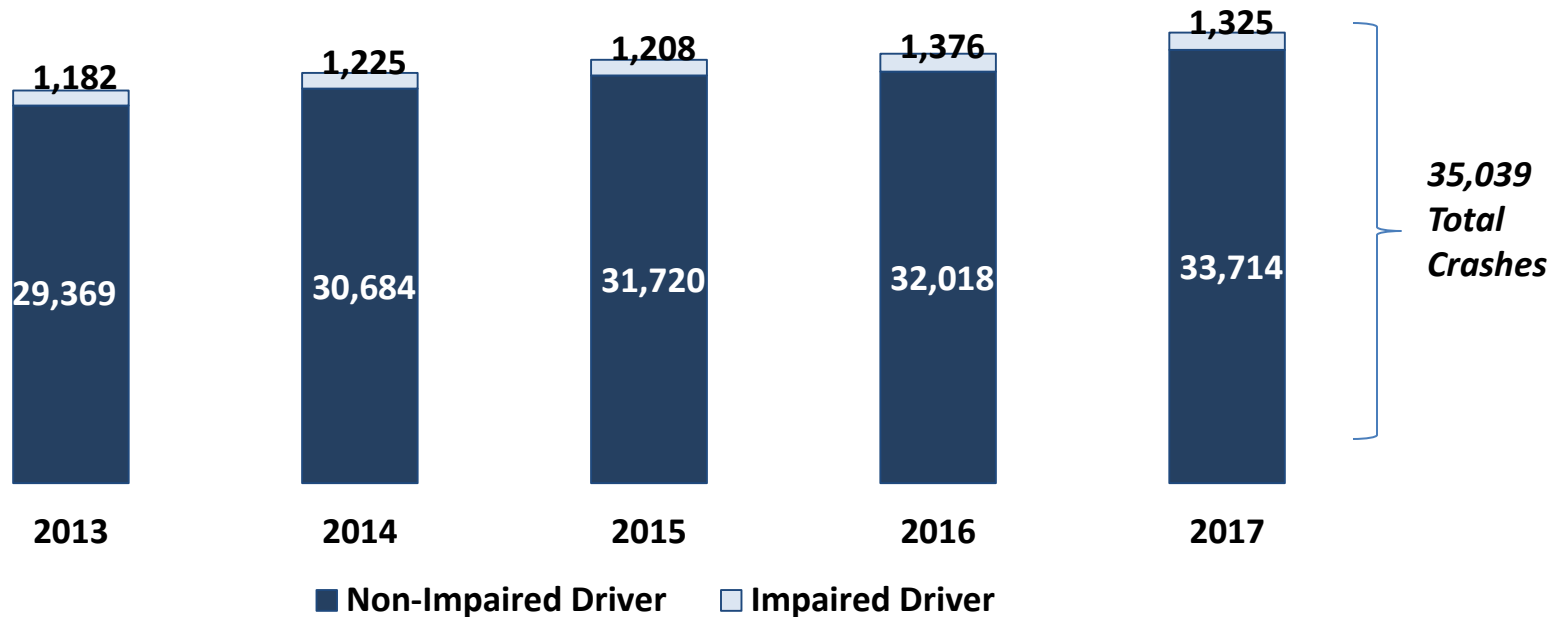


Marijuana related school suspensions increased from 468 in 2014 to 581 in 2016. Illicit drug related suspensions increased from 128 in 2014 to 220 in 2016. Alcohol suspensions remained stable.



# Number of motor vehicle crashes, by whether they involved impaired drivers: 2013–2017

While the overall number of alcohol/drug-related motor vehicle crashes has increased by 12% from 2013 to 2017, the proportion of alcohol and or drug related motor vehicle crashes has remained stable at 4%.

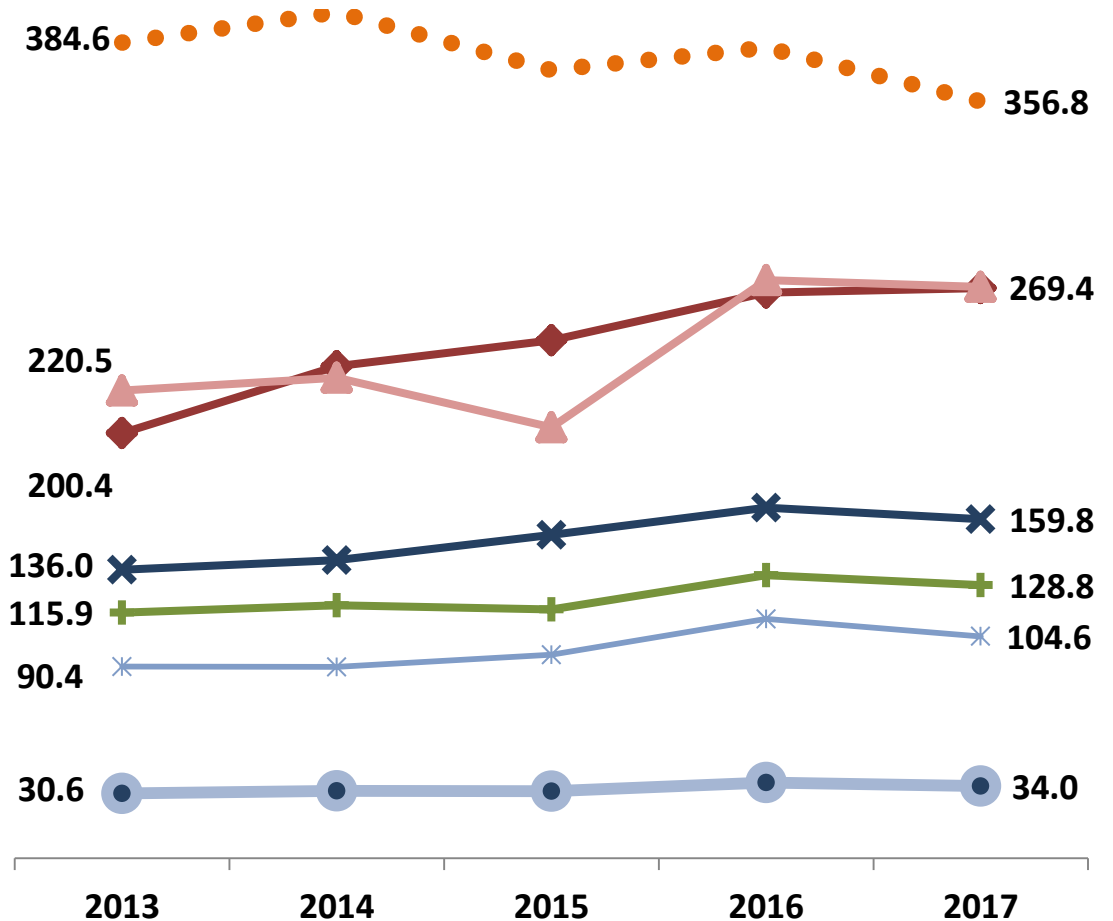


Source: MDOT

# Alcohol/drug-related motor vehicle crash rate per 100,000 licensees, by age group: 2013–2017

In 2017, drivers between the ages of 21 and 24 had the highest alcohol/drug-related crash rates.

In recent years, 25 to 34 year olds as well as 16 to 20 year olds observed increased rates involving impaired driving crashes.



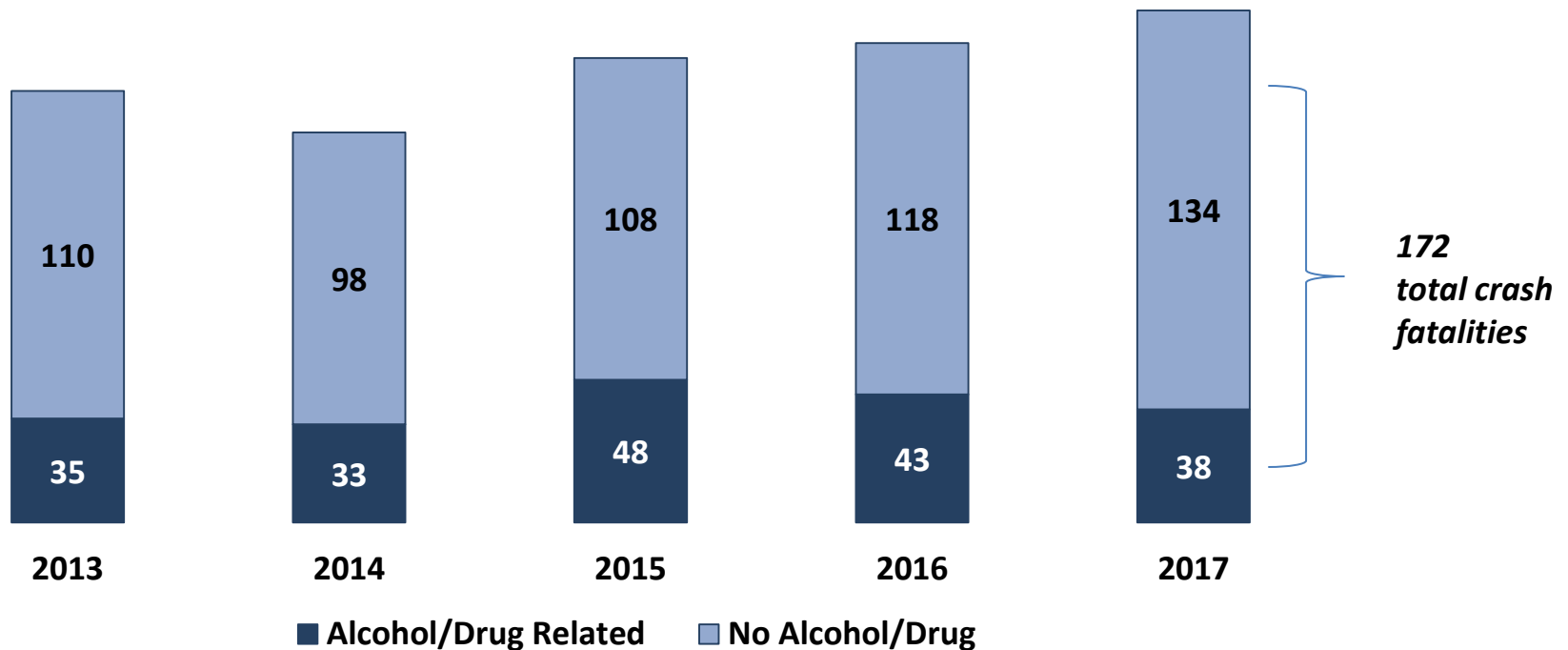
- ◆ 16-20
- 21-24
- ▲ 25-34
- ✕ 35-44
- \* 45-54
- 55+
- + 16+

Source: MDOT

# Number of fatal motor vehicle crashes, by whether they involved alcohol and/or drugs: 2012–2017

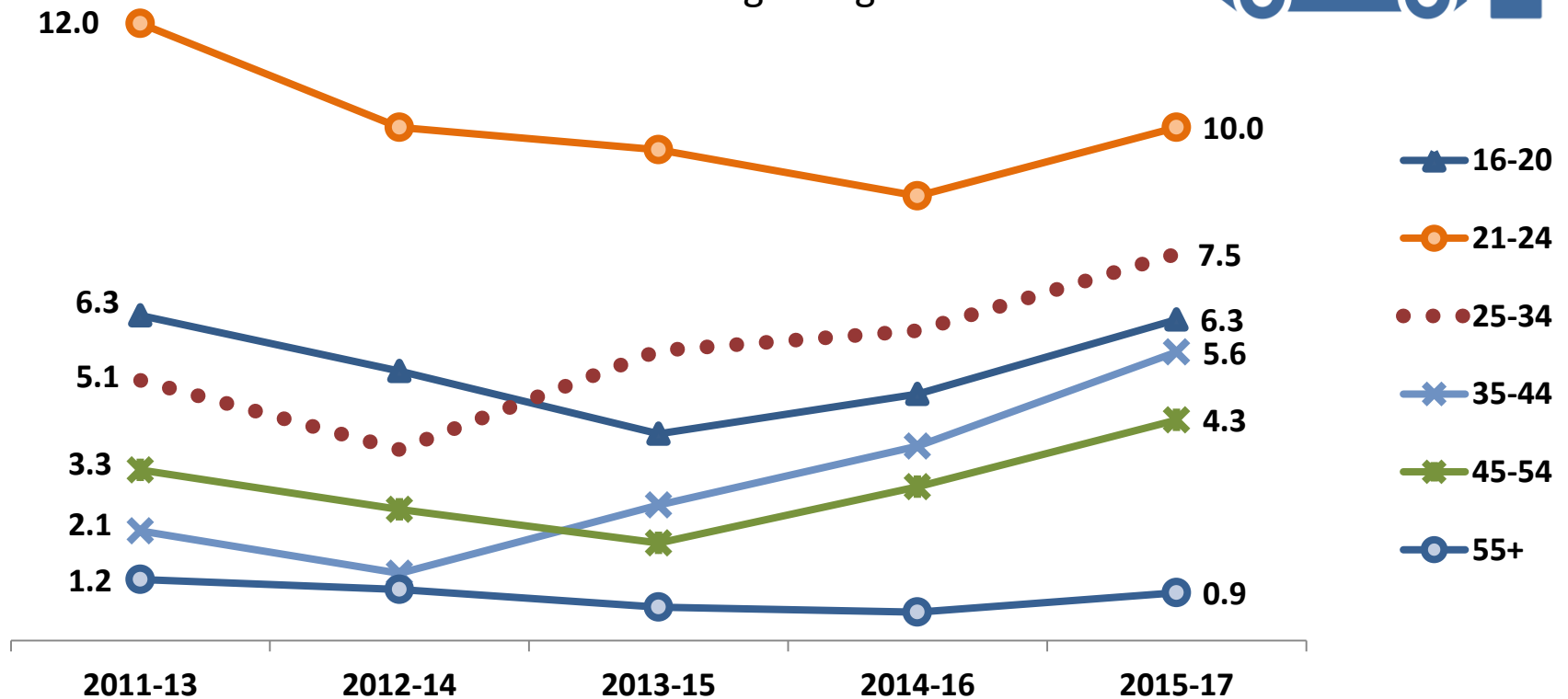


In 2017, nearly one in four (22%) fatal motor vehicle crashes involved alcohol and/or drugs.



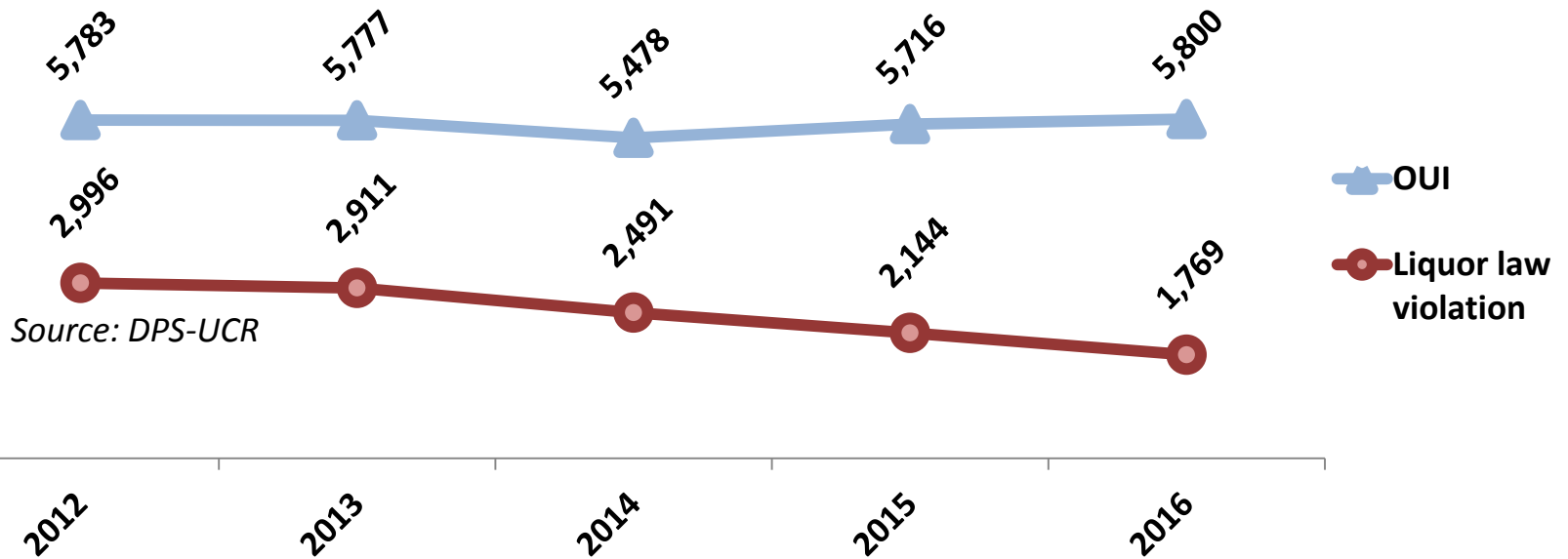
# Alcohol/drug related motor vehicle crash fatality rate per 100,000 licensees, by age: 2011–13 to 2015–17

In 2015-17, the rates of alcohol/drug motor vehicle crash fatalities were highest among 21 to 24 year olds, followed by 25 to 34 year olds. Rates of alcohol/drug related fatalities have increased across all age ranges since 2014-16.



# Adult arrests (18+ years old) related to alcohol, by arrest type: 2012–2016

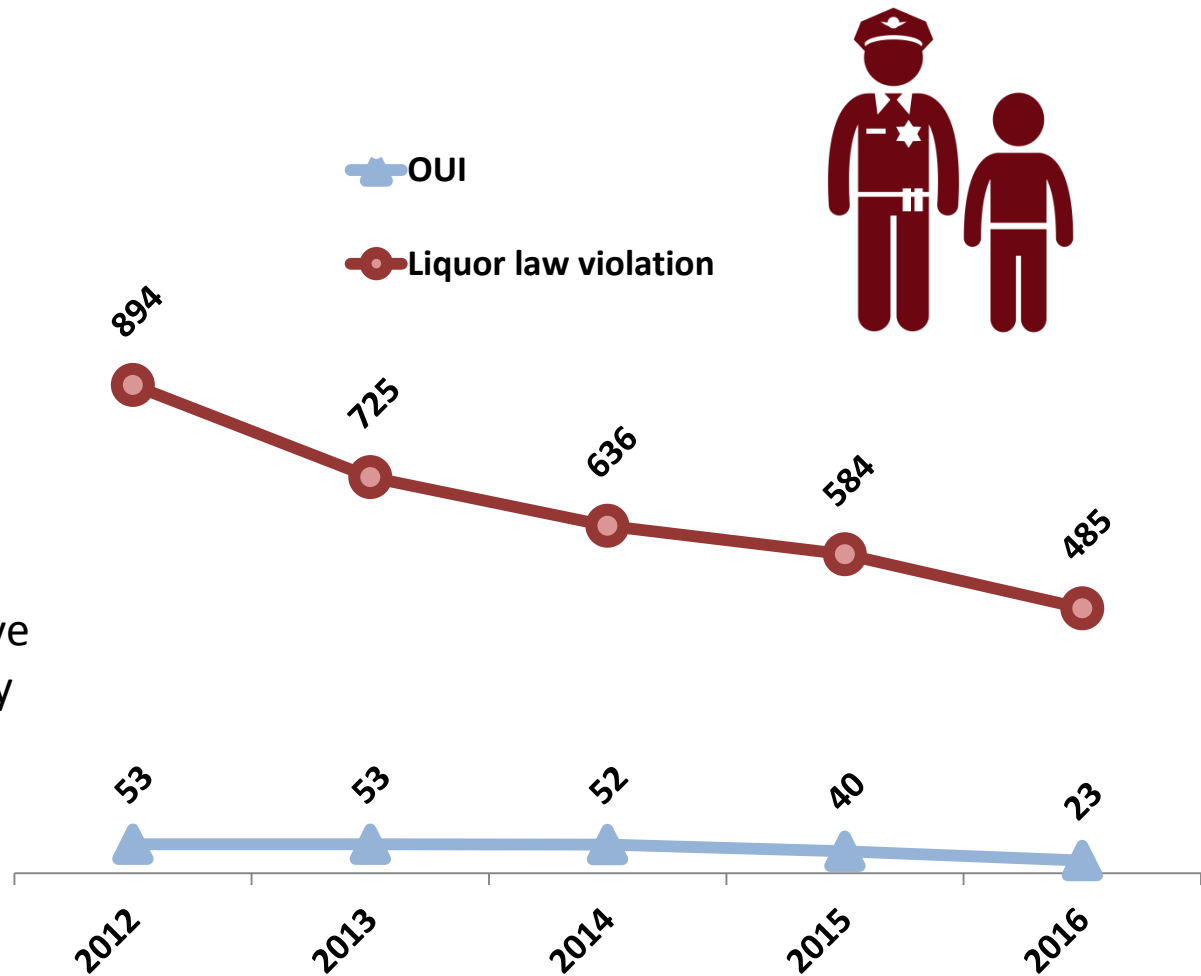
In 2016, there were 5,800 adult arrests for OUIs compared to 1,769 arrests for breaking liquor laws. Adult OUI arrests have remained relatively stable, while the number of adult liquor violations decreased by 41% since 2012.



# Juvenile arrests (<18 years old) related to alcohol, by arrest type: 2011–2016

● Juvenile liquor law violations have decreased by 46% from 2012 to 2016.

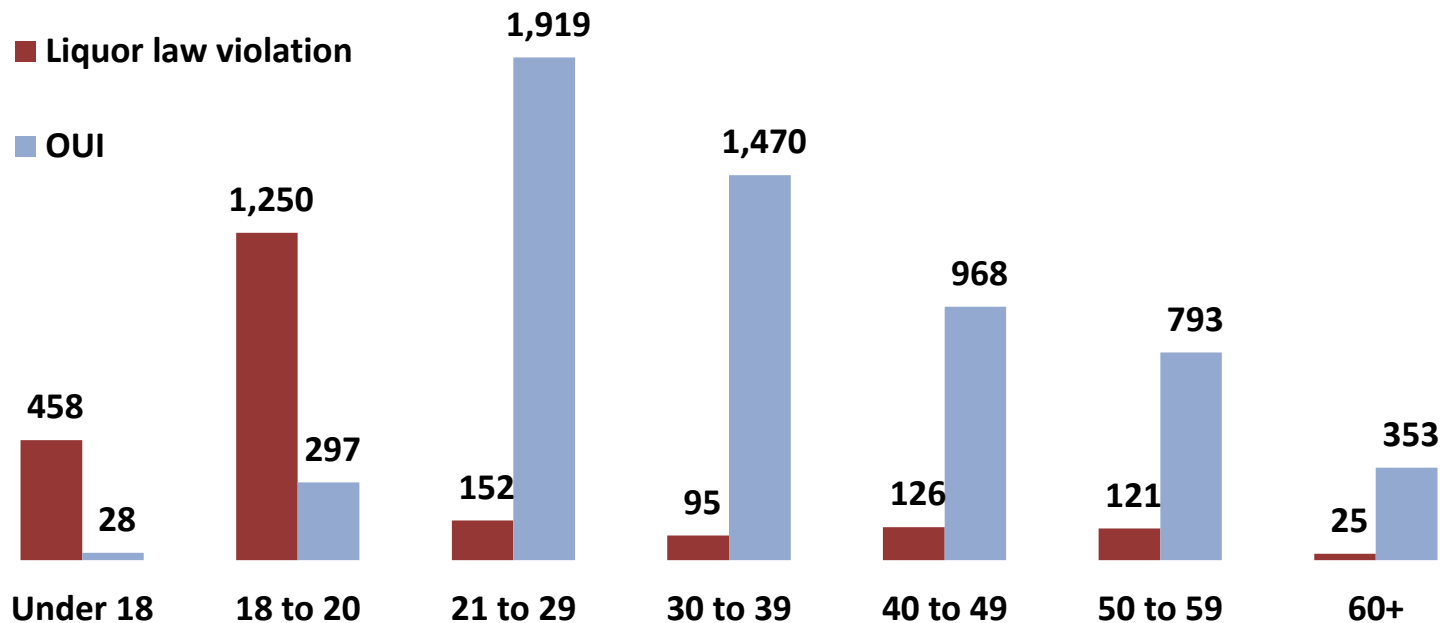
▲ Juvenile OUI arrests have remained comparatively low and decreased by 57% since 2012.



Source: DPS/Uniform  
Crime Report [www.MaineSEOW.com](http://www.MaineSEOW.com)

# Arrests related to alcohol, by type and age group: 2016

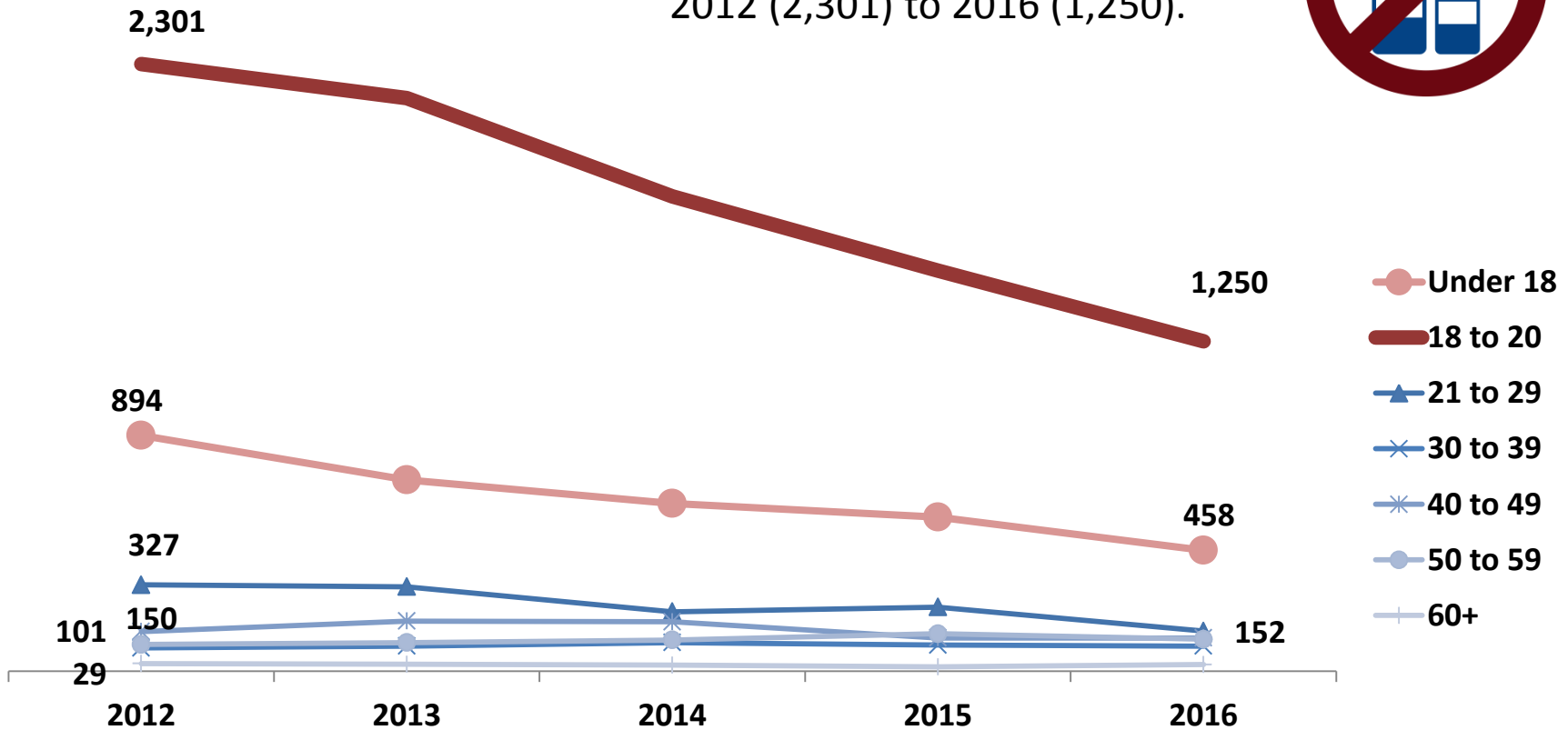
Eighteen to 20 year olds observed the most arrests for liquor violations whereas 21 to 29 year olds observed the most arrests for OUIs.



Source: DPS-UCR

# Arrests related to liquor law violations, by age group: 2012 to 2016

Liquor law violations among 18 to 20 year olds decreased by 46% from 2012 (2,301) to 2016 (1,250).

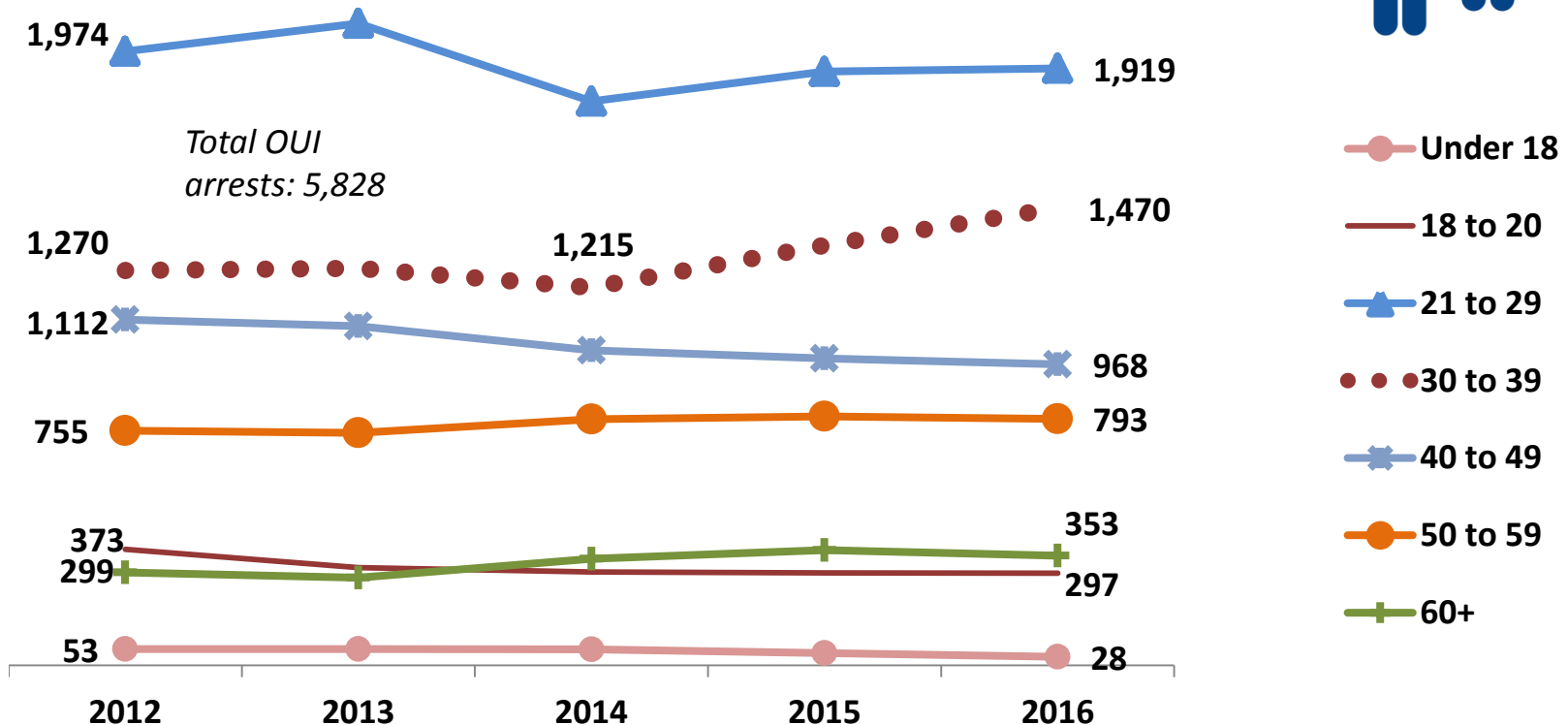


Source: DPS-UCR



# Arrests related to operating under the influence, by age group: 2012 to 2016

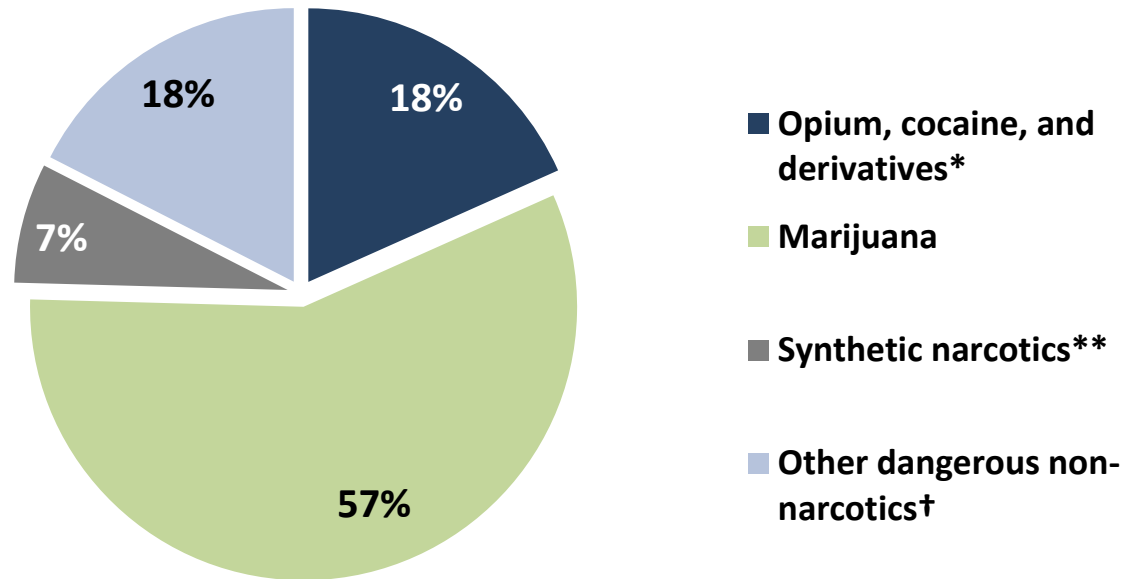
While the count of OUI arrests appears to be stable among most age groups, Mainers between the ages of 30 and 39 observed a 21 percent increase in OUI arrests from 2014 to 2016.



# Drug offense arrests (all ages) for possession, by drug type: 2016



Marijuana comprised the largest portion of drug arrests for possession in 2016 at 57%, followed by opium, synthetic narcotics, and other dangerous non-narcotics.



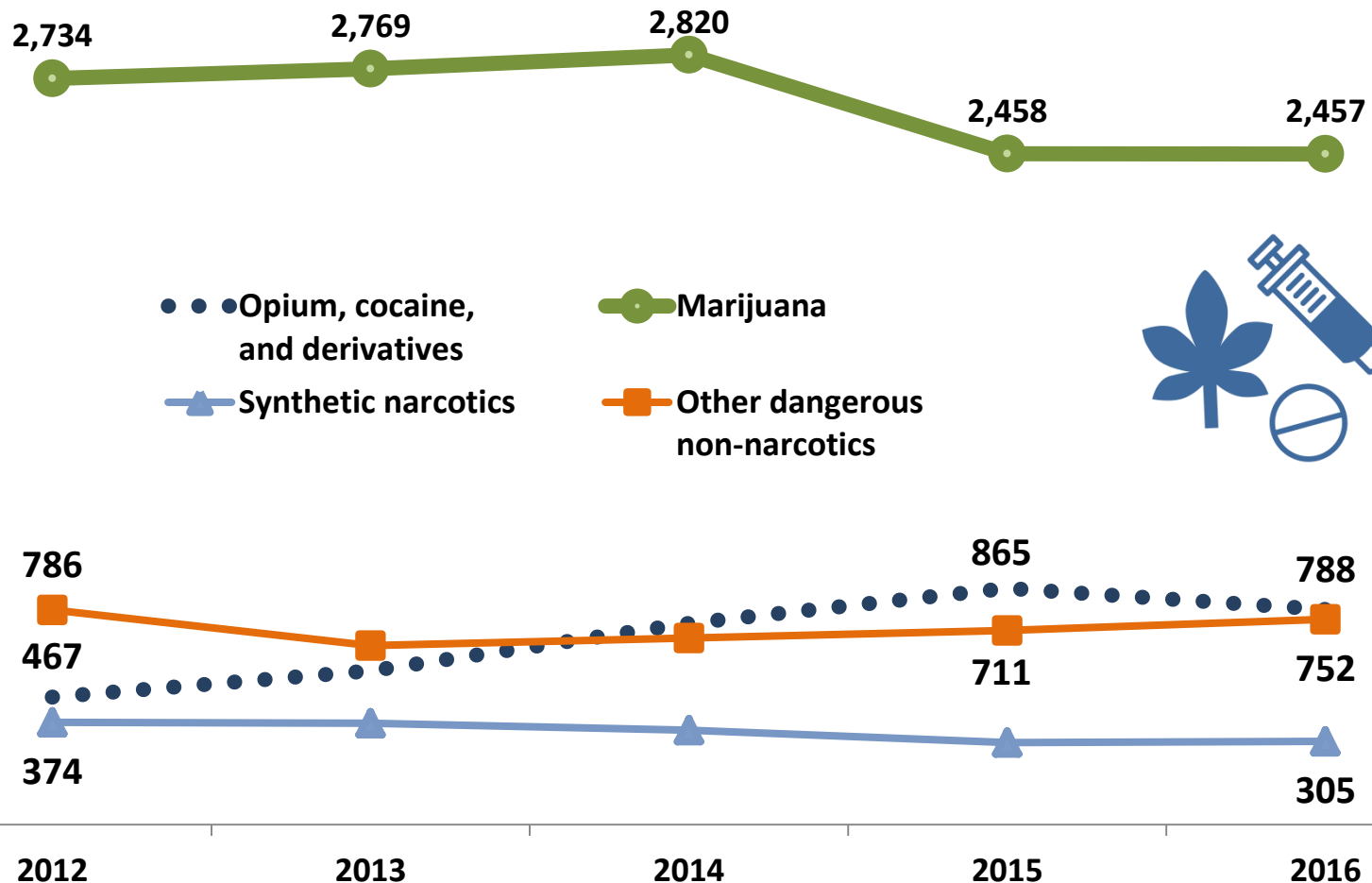
*\*heroin/morphine, cocaine/crack*

*\*\*prescription drug opiates*

*†barbiturates/sedatives and  
benzedrine/amphetamines*

Source: DPS-UCR

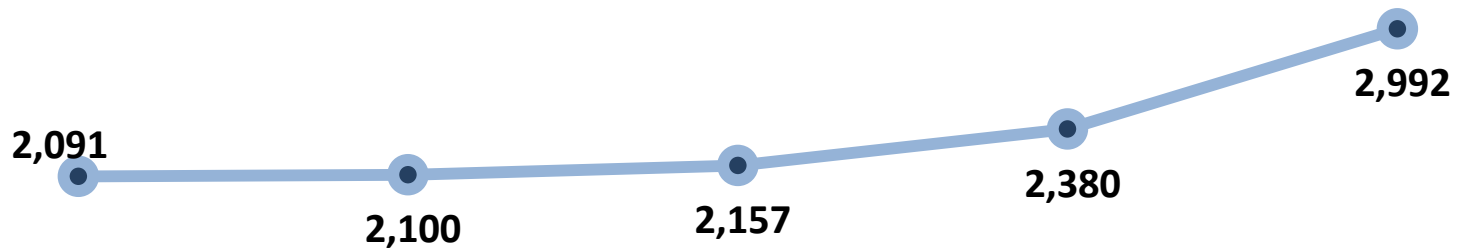
# Drug offense arrests (all ages) for possession, by drug type: 2012–2016



# Number of alcohol overdose EMS responses: 2013 - 2017



EMS overdose responses related to alcohol increased by 43% from 2013 (2,091) to 2017 (2,992).



*The data are based on the primary impression of the emergency responder at the scene.*

2013

2014

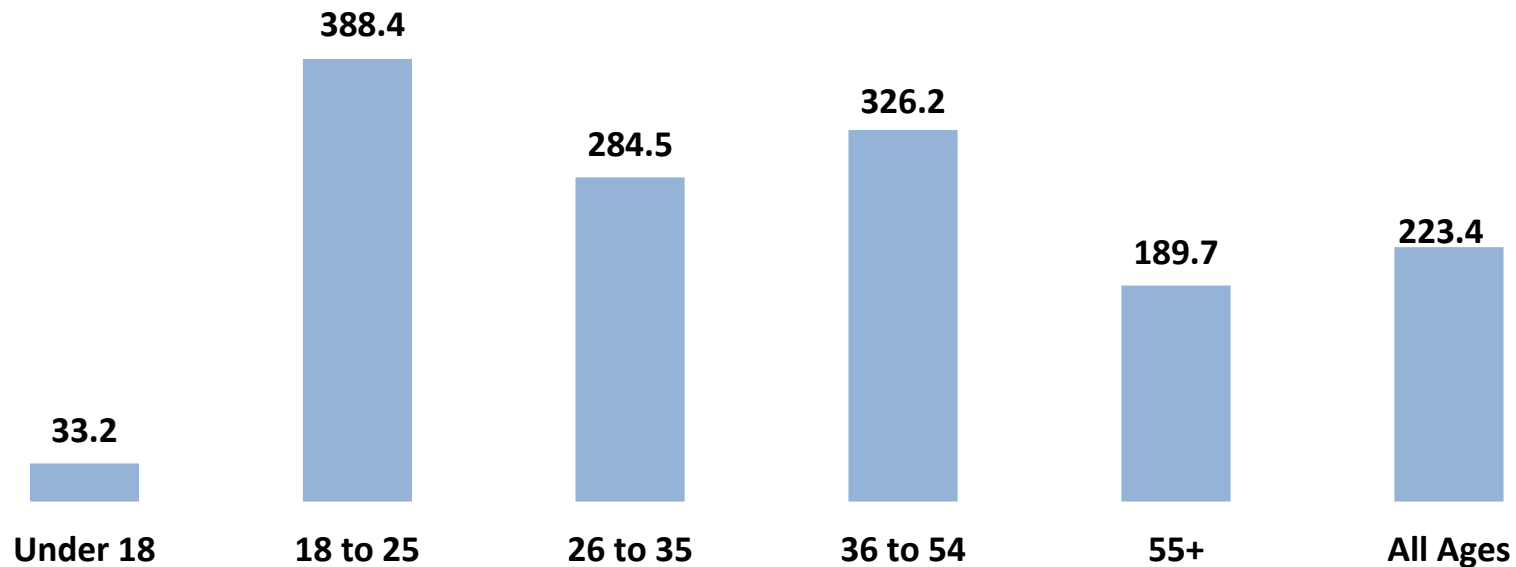
2015

2016

2017

# EMS responses related to alcohol (per 100,000 residents), by age: 2017

The highest rates of EMS responses related to alcohol were observed among 18 to 25 year olds and 36 to 54 year olds.



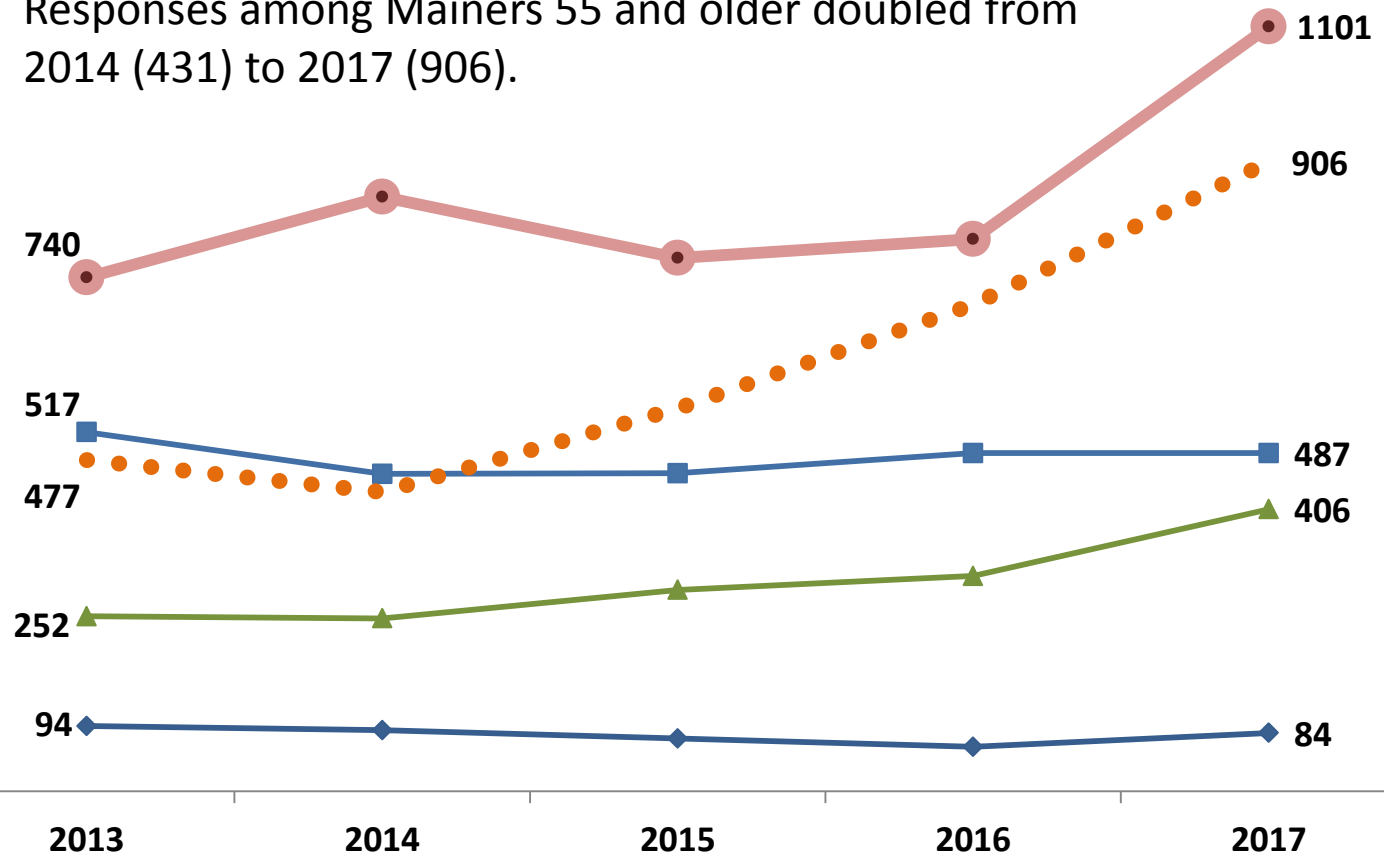
Source: EMS

# Number of overdose EMS responses related to alcohol, by age group: 2013–2017

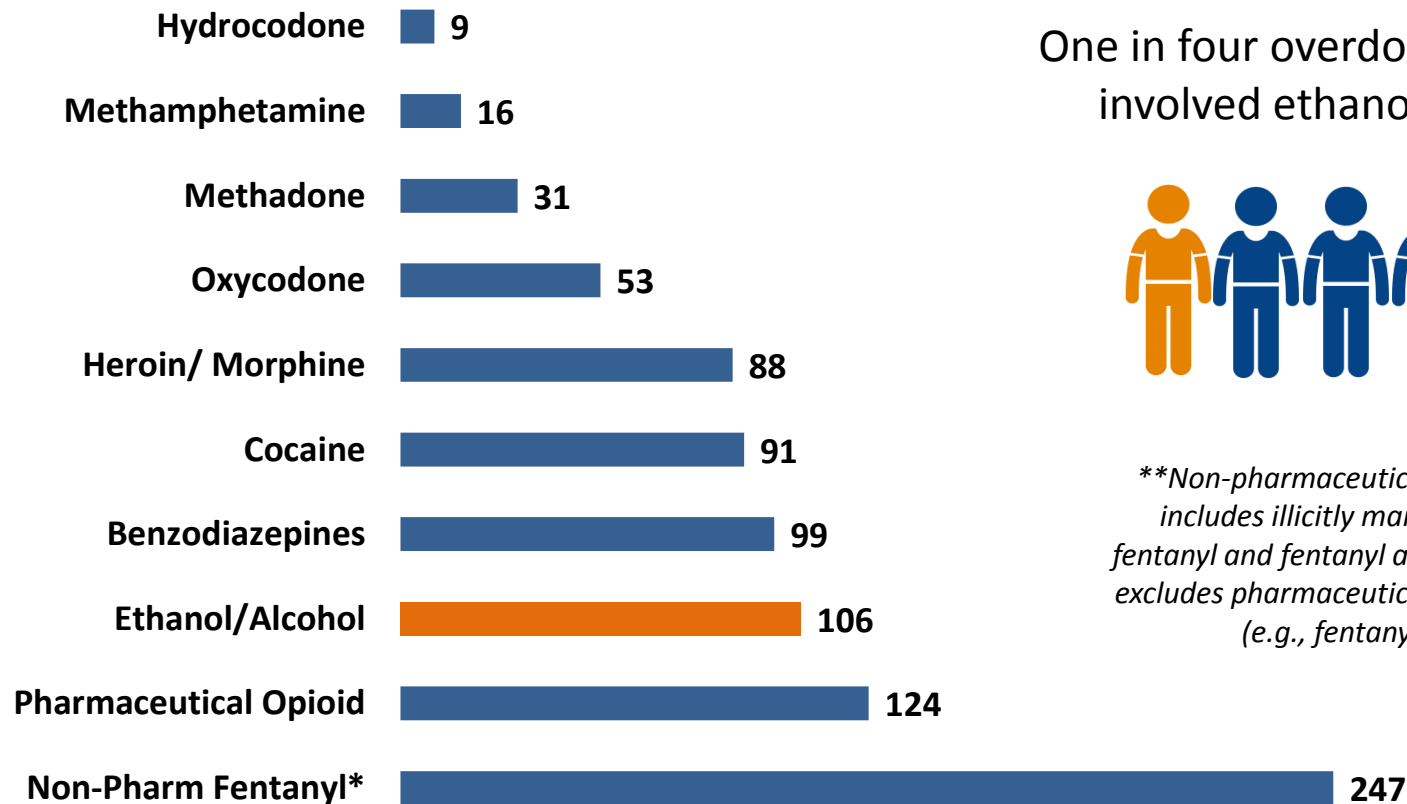


EMS alcohol overdose responses among 36 to 54 year olds increased by 38% from 2016 (795) to 2017 (1,101). Responses among Mainers 55 and older doubled from 2014 (431) to 2017 (906).

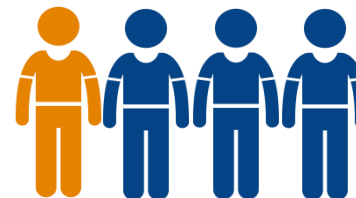
- ◆ Under 18
- 18 to 25
- ▲ 26 to 35
- 36 to 54
- 55+



# Number of drug related deaths involving specific drug types:\* 2017



One in four overdose deaths involved ethanol/alcohol.



*\*\*Non-pharmaceutical fentanyl includes illicitly manufactured fentanyl and fentanyl analogs but excludes pharmaceutical fentanyl (e.g., fentanyl patches).*

Source: Dr. Sorg/OCME

Total drug related overdose deaths: **418**

*\*Some deaths may be caused by more than one key drug.*

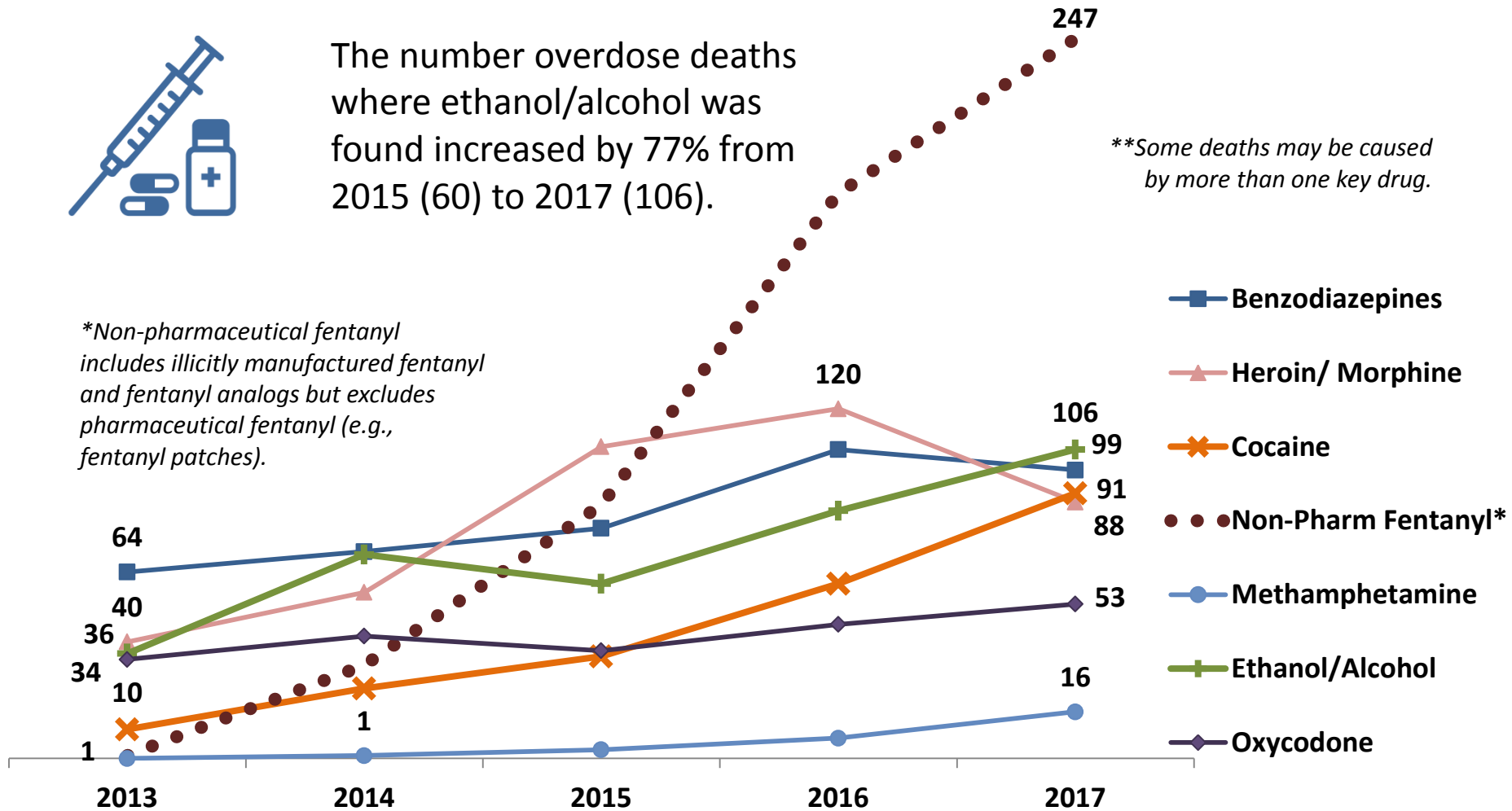
# Number of drug overdose deaths involving specific drug types:\*\* 2013–2017



The number overdose deaths where ethanol/alcohol was found increased by 77% from 2015 (60) to 2017 (106).

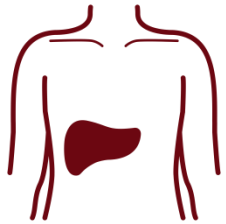
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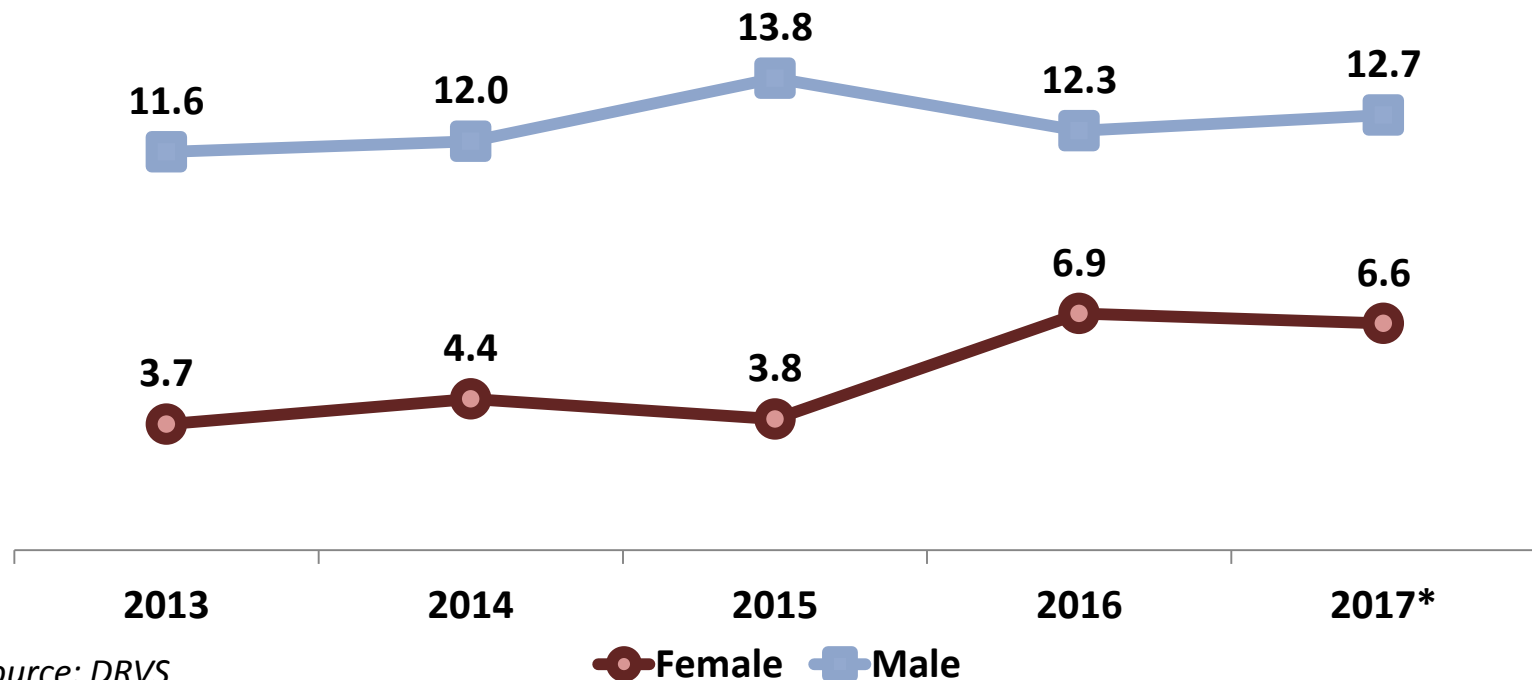




# Deaths from alcoholic cirrhosis and liver disease per 100,000 of the population, by gender: 2013–2017\*



In 2017, deaths related to alcoholic cirrhosis and liver diseases were nearly twice as likely among men (12.7 deaths per 100,000 residents) compared to women (6.6 deaths per 100,000 residents).



Source: DRVS

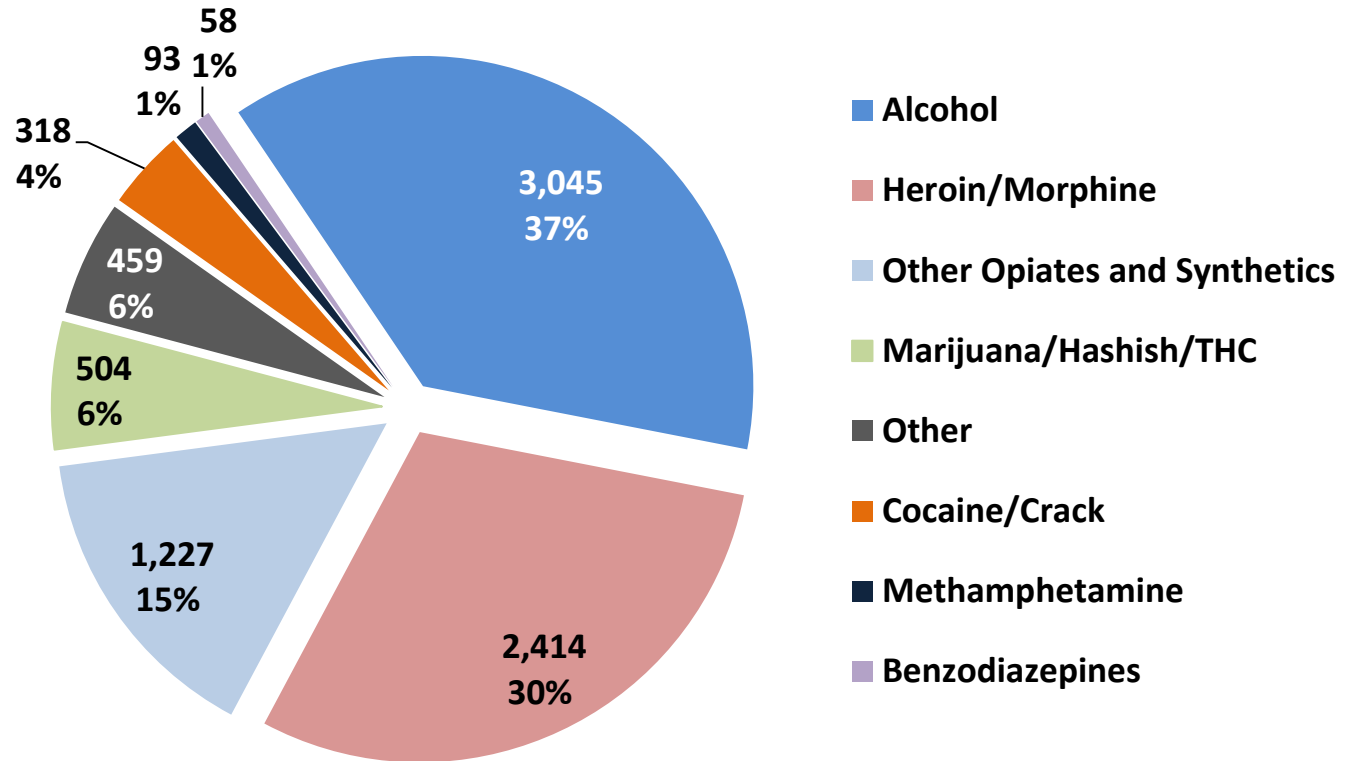
# Treatment

(for substance use)



# Number and percentage of primary treatment admissions, by substance type: 2017\*

\*WITS data are not static; therefore 2017 numbers may be lower than true counts. Data were retrieved on 7/8/2018.

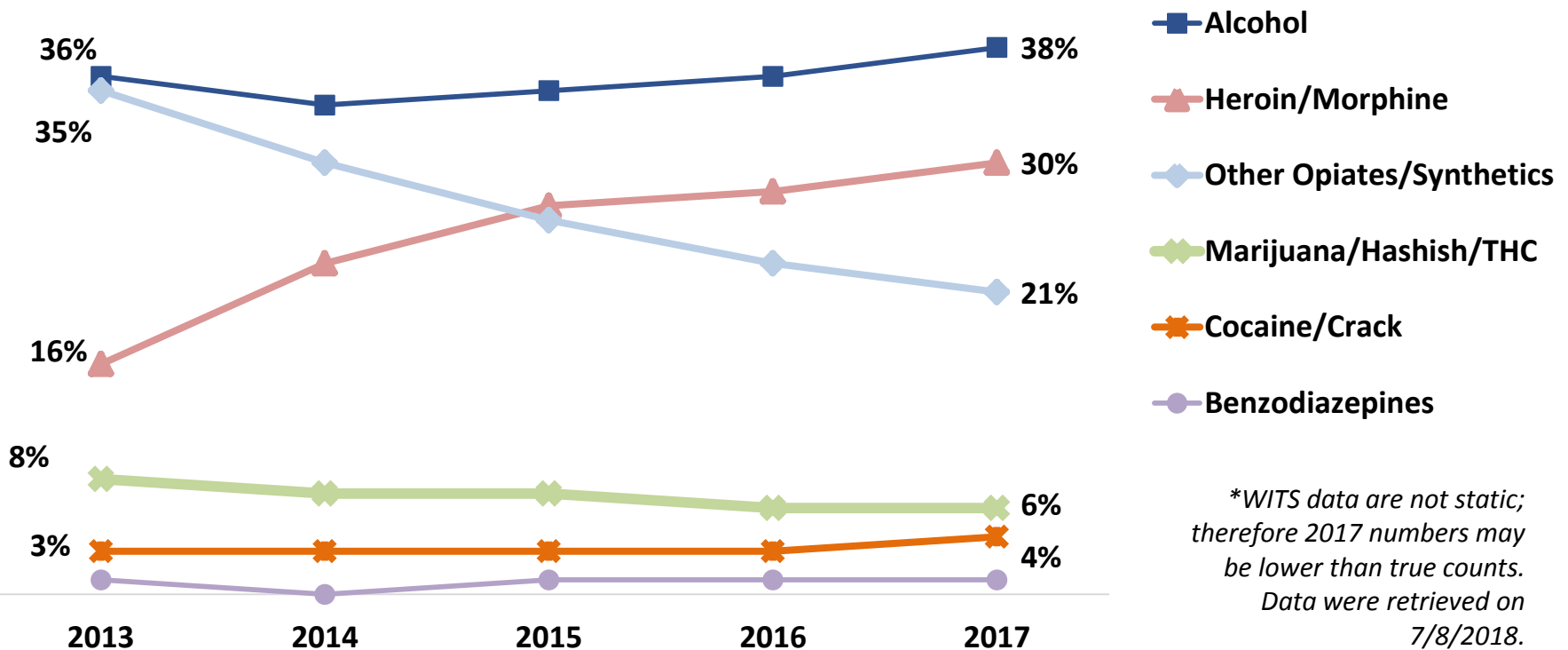


*NOTE: WITS does not capture data from all treatment facilities or services provided in Maine and therefore is not a complete representation of ALL substance use treatment services provided in the state. There are many organizations and private practitioners such as primary care practitioners and independent substance use licensed counselors who are not mandated to enter data in to the system.*

# Percent of primary treatment admissions, by substance type: 2013–2017



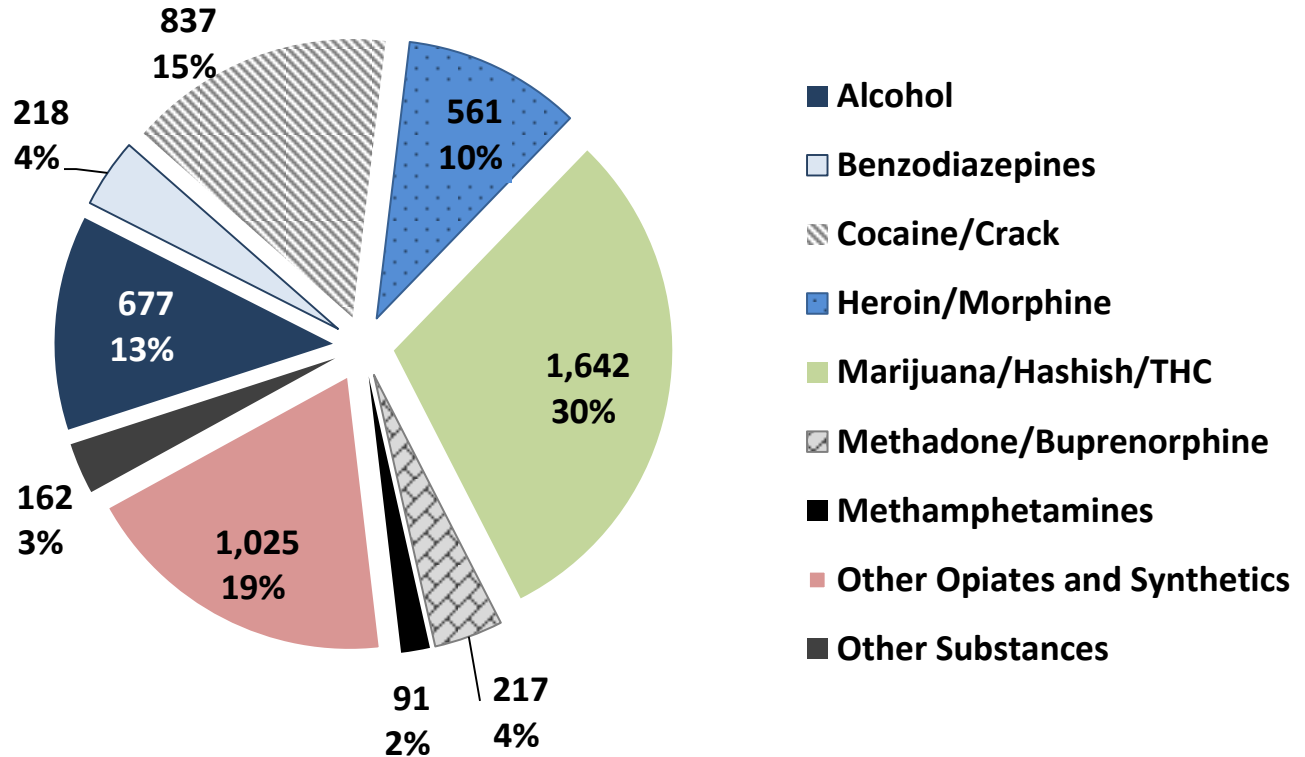
In 2017, about half of the primary treatment admissions were related to either heroin/morphine or opiates. More than one third (38%) were related to alcohol.



*\*WITS data are not static; therefore 2017 numbers may be lower than true counts. Data were retrieved on 7/8/2018.*

# Number and percentage of secondary treatment admissions, by substance type: 2017\*

\*WITS system is not static; therefore 2017 numbers may be lower than true counts. Data were retrieved 7/8/2018



Source: WITS

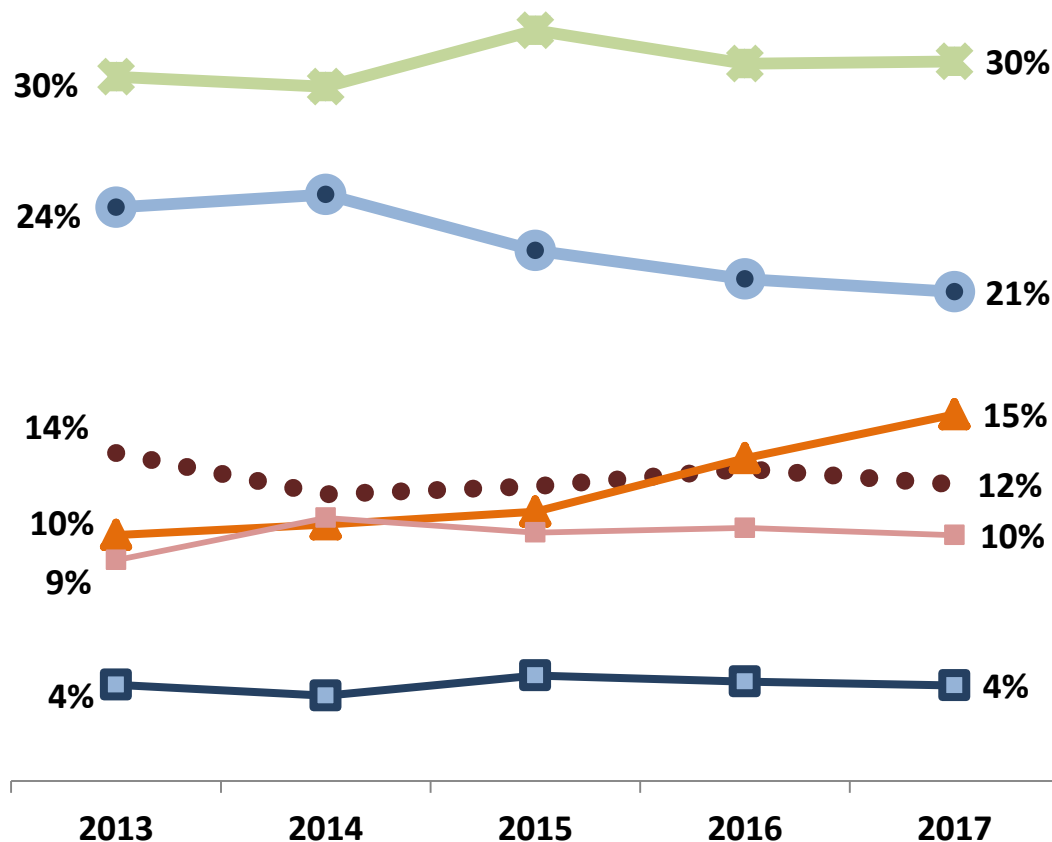
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# Percent of secondary treatment admissions, by substance: 2013–2017\*

Nearly a third of secondary treatment admissions are related to marijuana. The proportions of admissions related to marijuana and alcohol have remained stable.

*\*WITS data are not static; therefore 2017 numbers may be lower than true counts. Data were retrieved on 7/8/2018.*

- ● ● Alcohol
- Benzodiazepines
- ▲ Cocaine/Crack
- Heroin/Morphine
- ◆ Marijuana/Hashish/THC
- Other Opiates and Synthetics



# Section Summary

## Consequences

- 18 to 35 year olds have the highest rates of impaired driving crashes/fatalities.
- Overdoses involving ethanol/alcohol appear to be on the rise.
- While liquor violations among youth and adults have decreased markedly in the past several years, arrests related to operating under the influence have remained stable.
- EMS responses related to alcohol overdoses have increased among Mainers 36 and older in recent years.
- Over half of arrests for drug possession were related to marijuana.
- More than a third of primary treatment admissions are related to alcohol.
- Most drug related school expulsions are related to marijuana and appear to be increasing.
- The vast majority of drug possession arrests are related to marijuana.
- One third of secondary treatment admissions were related to marijuana.
- We should not lose sight of the toll that more traditional substances like alcohol, tobacco, and marijuana are taking on Mainers and their families.

# Contributing Factors

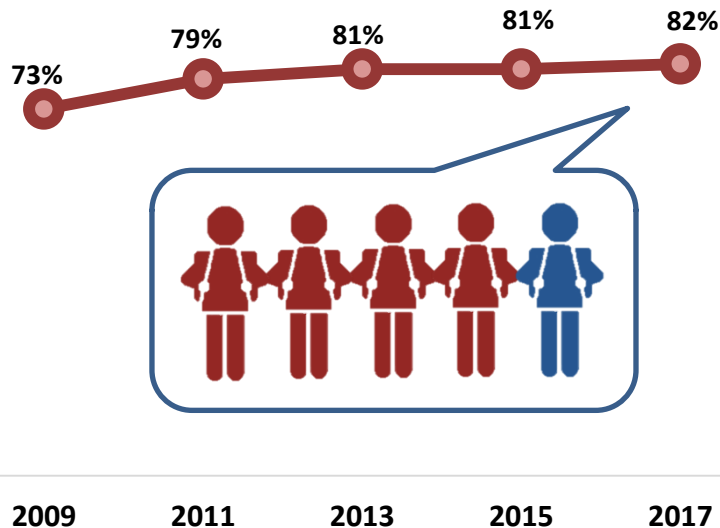
(e.g., Availability, Perceptions, Social Norms)





# Perception of harm: binge drinking weekly

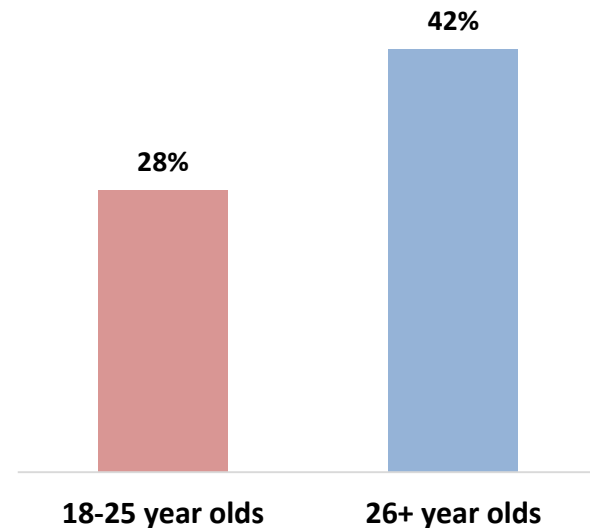
High school students perceiving harm from binge drinking weekly



Source: MIYHS

Four out of five high school students think binge drinking once or twice a week is harmful.

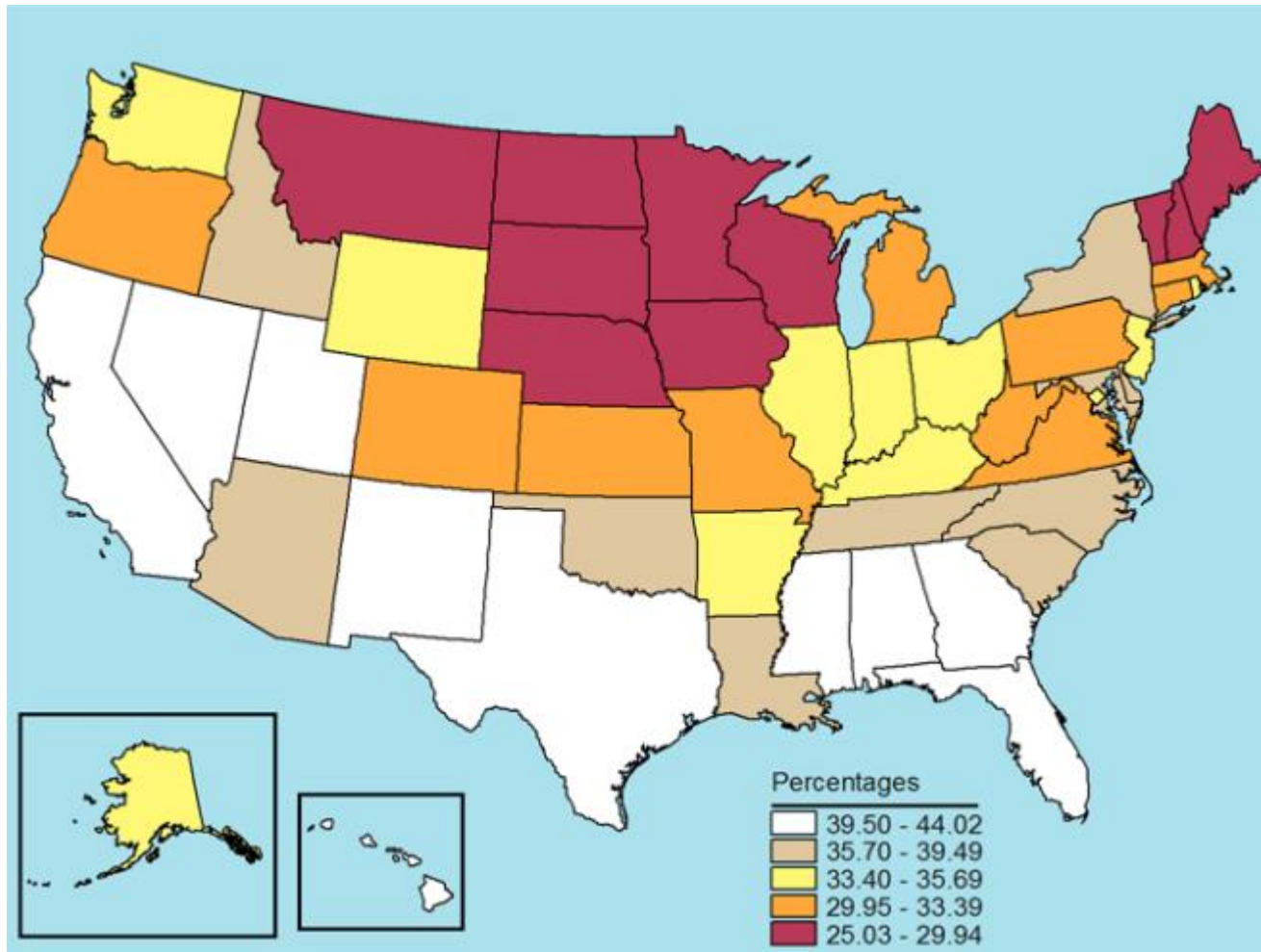
Adults perceiving great risk from binge drinking weekly, by age group



Source: NSDUH

Less than a third of young adults (18 to 25) thought that binge drinking a few times a week was risky.

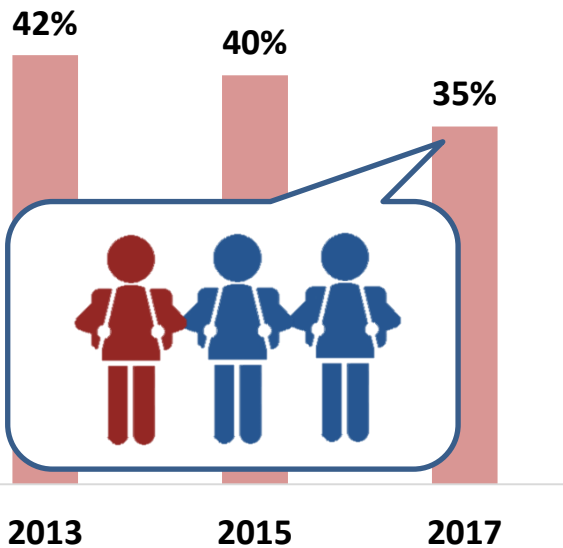
# Perceptions of great risk from having five or more drinks of alcohol once or twice a week among adults 18 to 25, by state: 2015-16



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH

# Perception of harm: marijuana use

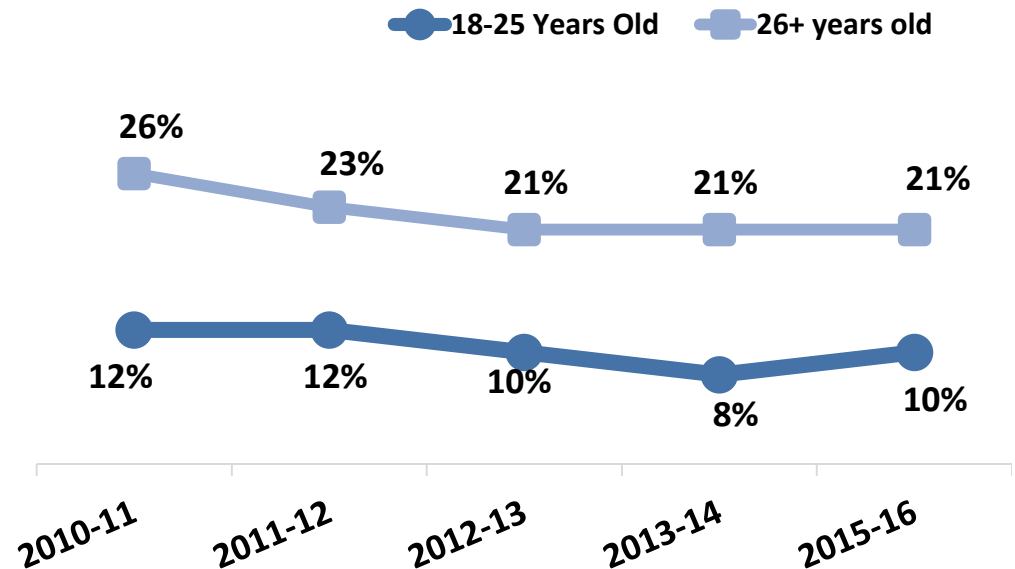
High school students perceiving risk from smoking marijuana once or twice a week



Source: MIYHS

Only about a third of Maine's high school students believe smoking marijuana (once or twice a week) was risky in 2017.

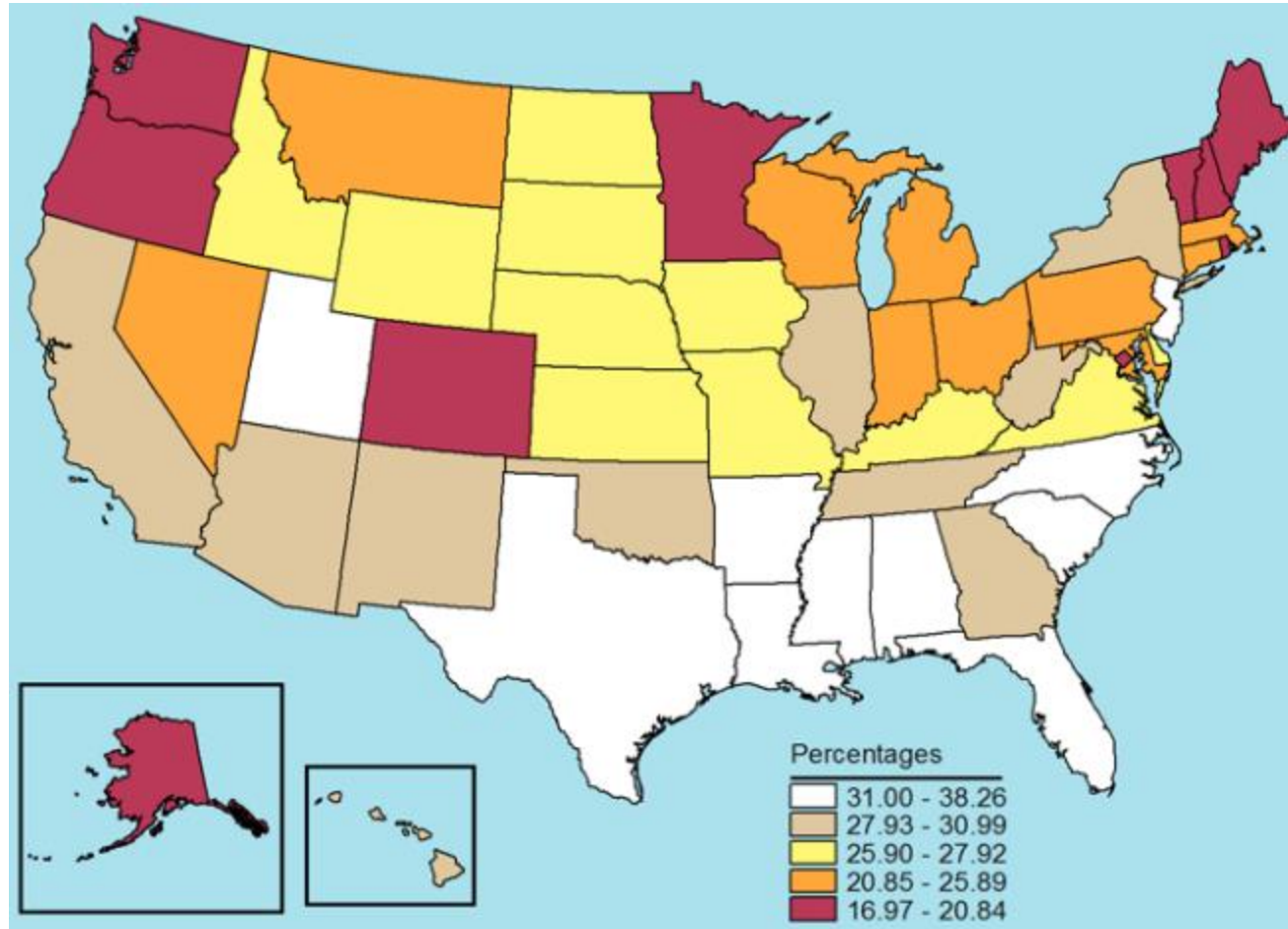
Adults perceiving risk from smoking marijuana at least once per month



Source: NSDUH

One in ten 18 to 25 year olds believe that smoking marijuana at least once a month is harmful.

# Perceived great risk of harm from smoking marijuana once a month among people aged 12 or older, by state: 2015-16



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2015 and 2016.

# Attribution Statements (Perception of Harm)

*According to the 2017 Maine Integrated Youth Health Survey, high students who :*



*thought there was **moderate-to-great risk of harm from binge drinking** once or twice a week were half as likely to drink in the past month.*



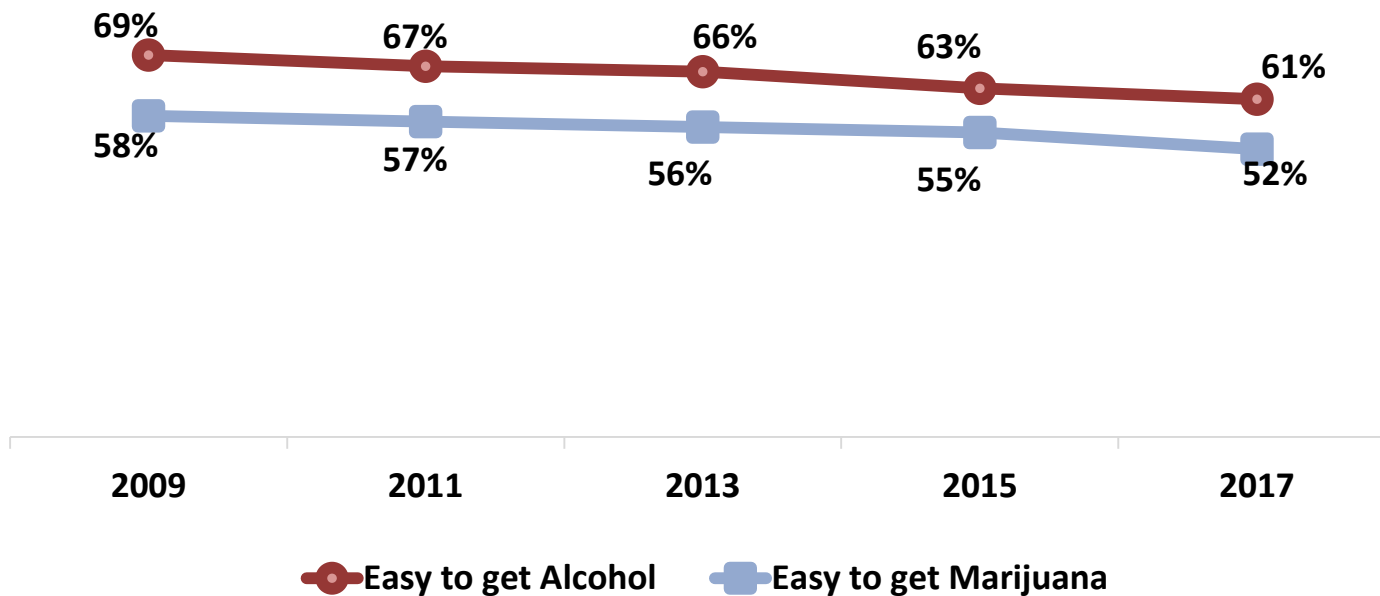
*perceive **regular alcohol use (one to two drinks per day) as risky** were about half as likely to drink in the past month.*



*thought there was a **moderate-to-great risk in smoking marijuana** regularly were almost 7X less likely to smoke marijuana in the past month.*

# Perception of access among high school students to alcohol and marijuana: 2009 to 2017

In 2017, over half of Maine's high school students believed that alcohol as well as marijuana was easy to obtain. Rates have decreased over time.

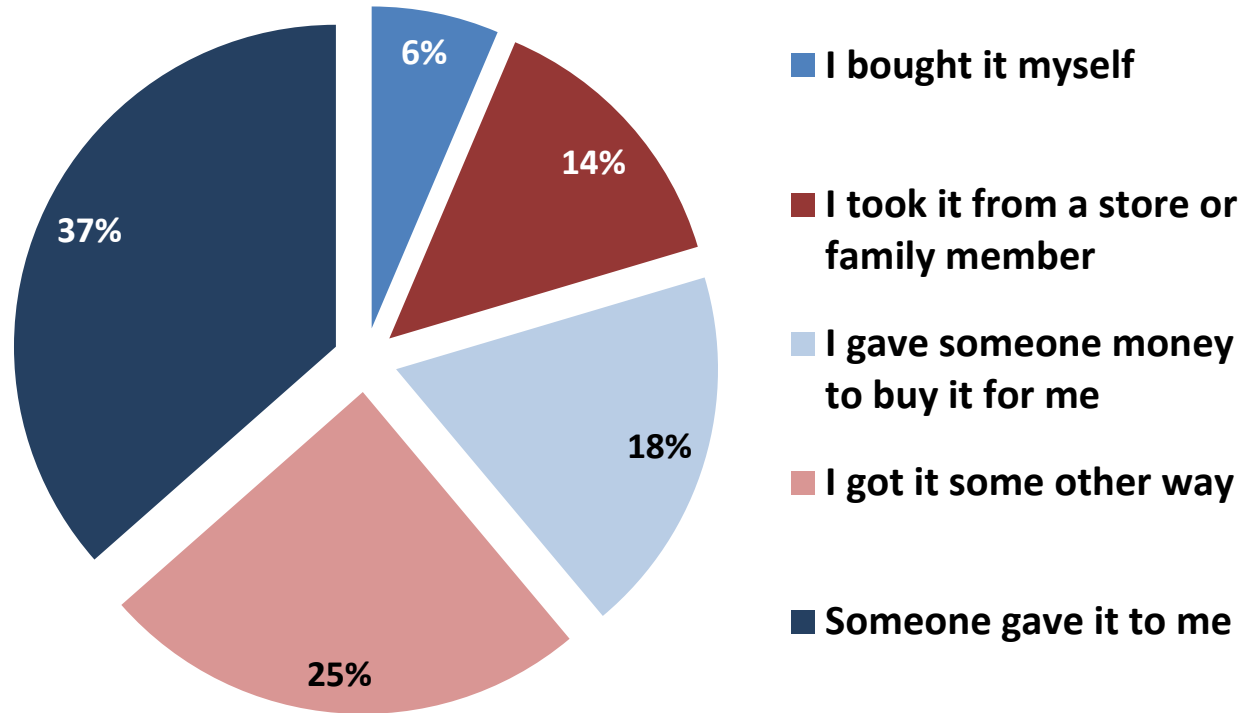


Source: MIYHS

# Where did you get alcohol (among students who reported drinking in the past 30 days): 2017



Among students who drank alcohol in the past month, more than a third reported someone had given it to them. One in five said they gave someone money to buy it for them.

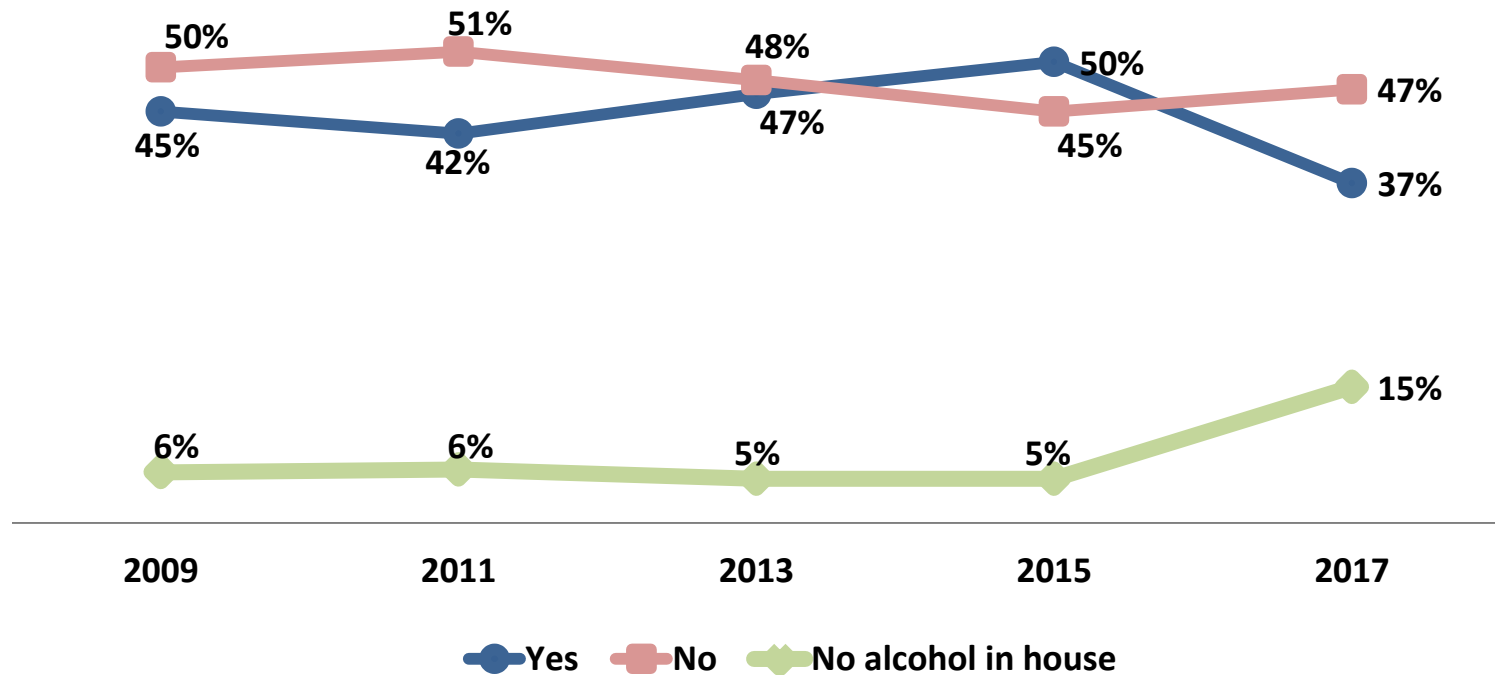


Source: MIYHS

# Parent's perception of youth access to alcohol: 2009-2017



In 2017, nearly half of Maine's parents (47%) believe that their child could not access alcohol they had purchased without their knowledge.





# Attribution Statements (Perception of Access)

*According to the 2017 Maine Integrated Youth Health Survey, high students who:*

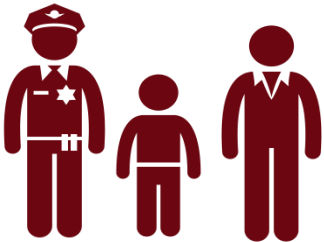


*thought **alcohol was NOT easy to obtain** were nearly 4x less likely drink alcohol within the past month.*

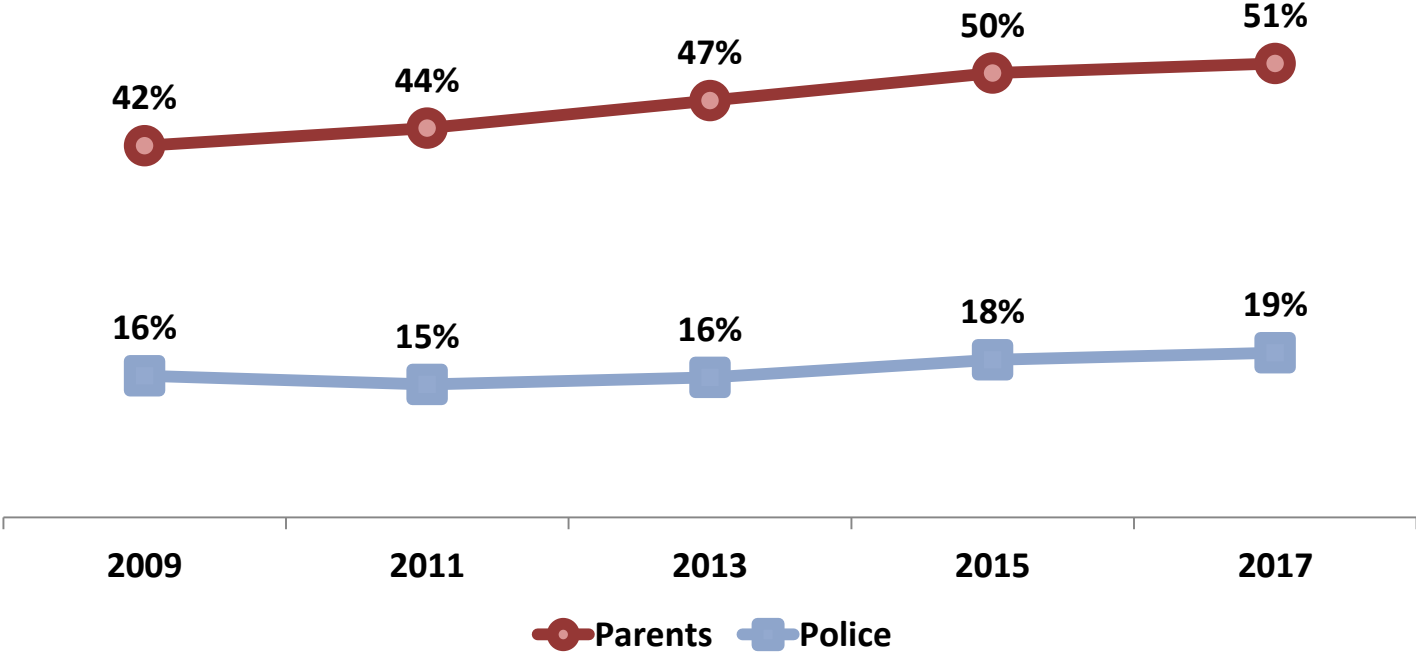


*thought **marijuana was NOT easy to obtain** were 9x less likely to use marijuana in the past 30 days.*

# High school students reporting they would be caught by parents or the police if they drank: 2009–2017



In 2017, half of Maine’s high school students thought they would be caught by their parents for drinking alcohol while one in five felt they would be caught by the police. Rates of perceptions for getting caught by parents or police have been steadily increasing.

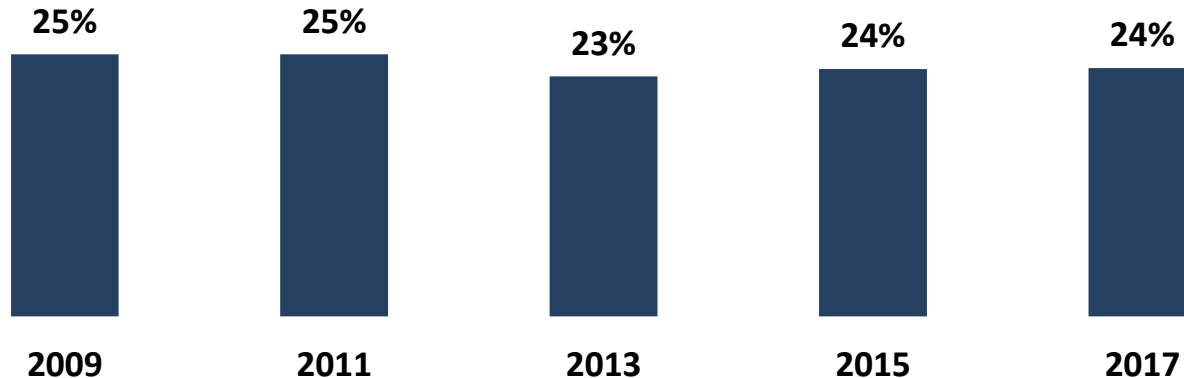


Source: MIYHS

# High school students reporting they would get caught by the police if they smoked marijuana: 2009–2017



In 2017, about one quarter of high school students thought they would be caught by police for smoking marijuana.



Source: MIYHS

# Attribution Statements (Perception of Enforcement)



**According to the 2017 Maine Integrated Youth Health Survey, high students who :**



*believed they would be **caught by their parents for drinking alcohol** were 5x less likely to drink in the past month.*



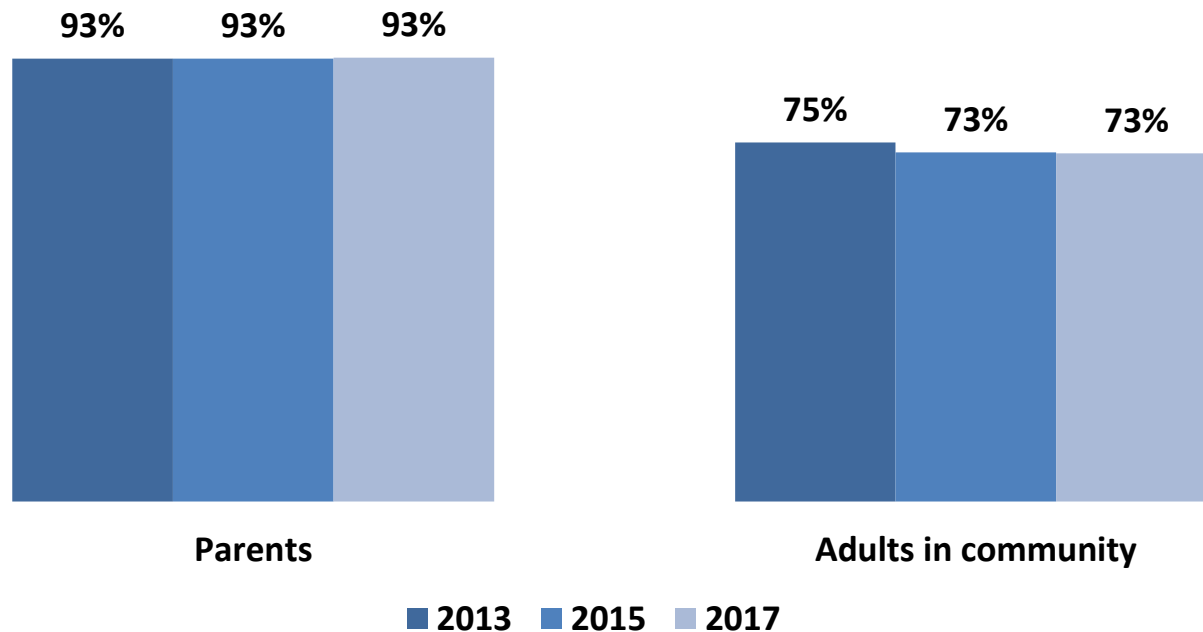
*believed they would be **caught by the police for drinking alcohol** were 3x less likely to drink in the past month.*



*believed they would be **caught by the police for smoking marijuana** in their neighborhood were 5x less likely to smoke marijuana in the past month.*

# High school students who reported perceiving that their parents and adults in their community think student alcohol use is wrong: 2009–2017\*

High school students largely believe that their parents and the adults in their community think it is wrong for them to drink alcohol.

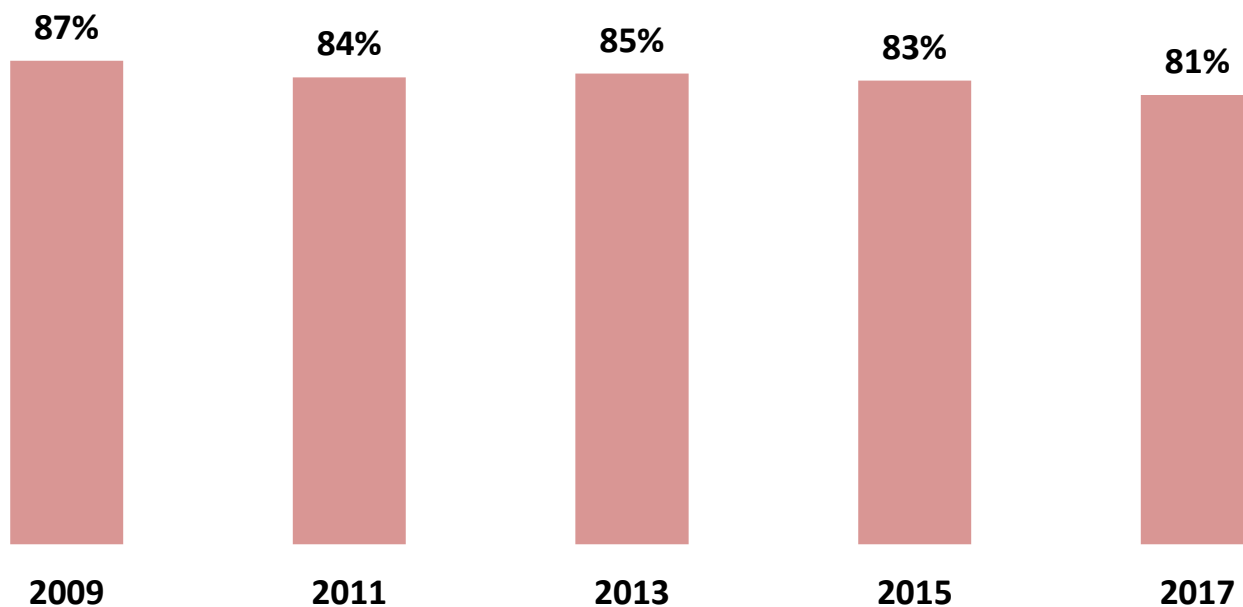


Source: MIYHS

# High school students who reported that parents would think it was wrong for students to use marijuana: 2009–2017



Perceptions of disapproval for high school students using marijuana have slowly decreased from 2009 to 2017. About one in five high school students felt their parents would NOT disapprove.

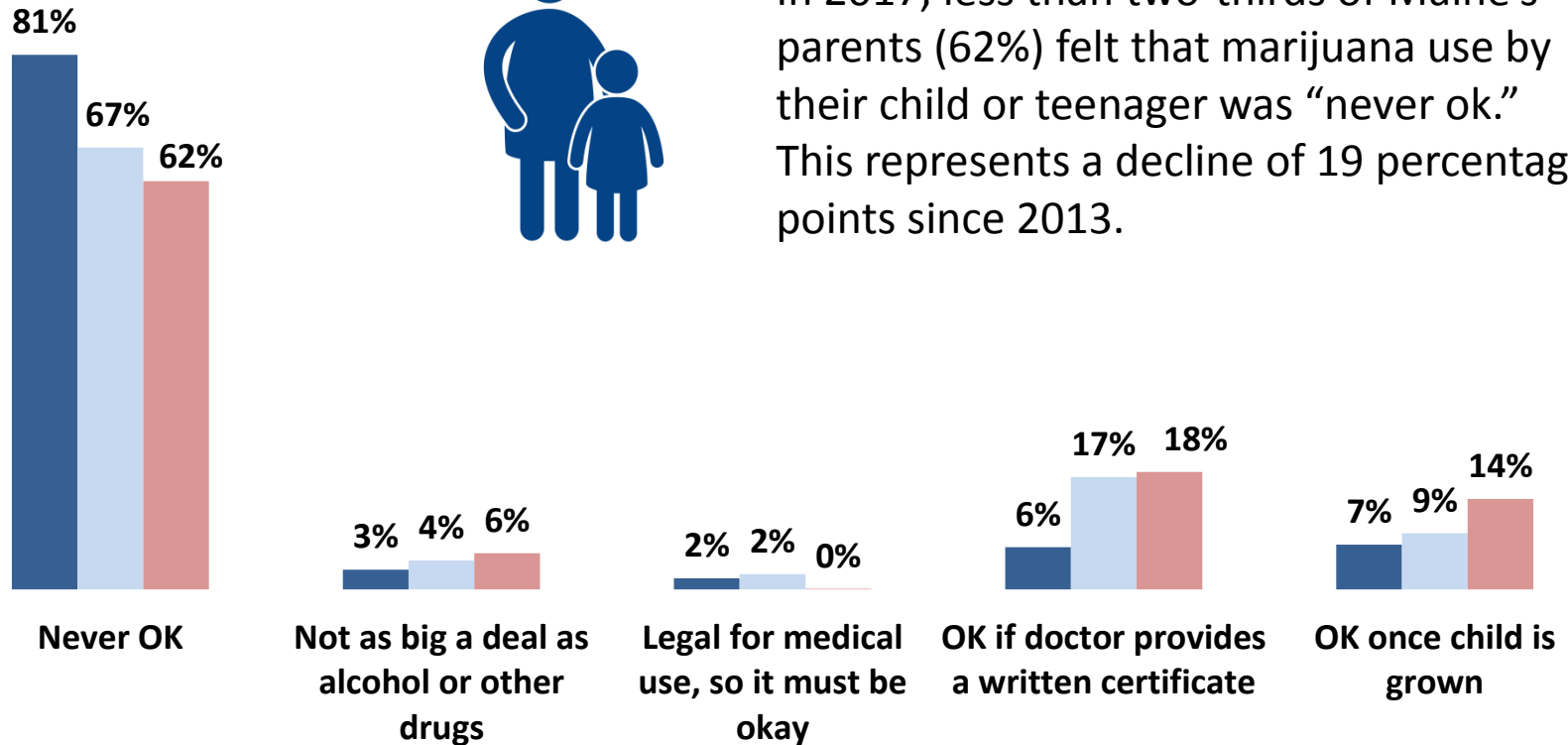


Source: MIYHS

# Parental attitudes regarding their teen using marijuana: 2013 – 2017



In 2017, less than two-thirds of Maine's parents (62%) felt that marijuana use by their child or teenager was "never ok." This represents a decline of 19 percentage points since 2013.



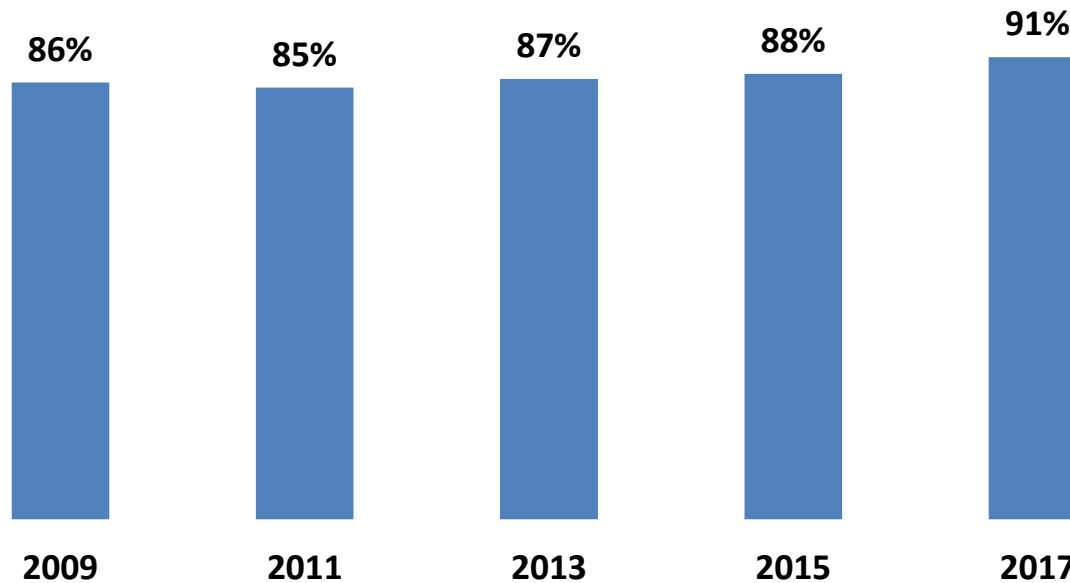
Source: Parent Survey, 2013–2017

■ 2013 ■ 2015 ■ 2017

# High school students who reported their family has clear rules about alcohol and drug use: 2009–2017



In 2017, nine in ten high school students reported that their family has clear rules around alcohol and drug use. Rates have been steadily increasing.



Source: MIYHS



# Attribution Statements (Community and Family Norms)

*According to the 2017 Maine Integrated Youth Health Survey, high students who:*



*believe their parents feel it is wrong for them to smoke marijuana are **four times less likely to use marijuana in the past month.***



*believe their parents have clear rules about substance use are **half as likely as to drink alcohol in the past month.***



*believe their parents feel it is wrong for them to drink were more than **half as likely to drink alcohol.***

# Executive Summary

## Contributing Factors

- There is a discrepancy between parental perceptions of their child's behaviors and the actual behaviors reported by youth.
- Most students feel that their parents and community would not approve of substance use.
- Perception of harm from risky drinking remains high among youth and low among young adults.
- Perception of harm from marijuana use has been declining steadily among youth and adults. Maine has some of the lowest rates of perception of harm from marijuana use in the nation.
- Parental disapproval of marijuana use by their child has decreased in recent years.
- Changing policies, culture, and availability of marijuana are likely to continue to influence Mainers perceptions and usage.
- Availability and the potential for diversion continue to be a concern among Maine's youth; most teens still feel it is easy to get alcohol and marijuana.
- Factors such as perception of harm from using a substance can have a significant impact in determining whether an individual will initiate or continue use.

# Appendix A (Data Sources)

- *Behavioral Risk Factor Surveillance System (BRFSS)*
- *Maine Department of Public Safety (DPS), Bureau of Highway Safety (BHS), Maine Department of Transportation (MDOT)*
- *Maine Department of Public Safety (DPS), Uniform Crime Reports (UCR)*
- *Maine Department of Education (MDOE)*
- *Maine Drug Enforcement Agency (MDEA)*
- *Maine Emergency Medical Services (EMS)*
- *Maine Integrated Youth Health Survey (MIYHS)*
- *Maine Office of the Chief Medical Examiner (OCME)*
- *Marcella Sorg, Margaret Chase Smith Policy Center at the University of Maine*
- *National Survey on Drug Use and Health (NSDUH)*
- *Northern New England Poison Center (NNEPC)*
- *Office of Child and Family Services (OCFS), Maine Automated Child Welfare Information System (MACWIS)*
- *Office of Data, Research and Vital Statistics (ODRVS)*
- *SAMHS Parent Survey (administered by Pan Atlantic)*
- *Prescription Monitoring Program (PMP)*
- *Web Interactive Treatment System (WITS) 2-1-1 Maine*
- *Youth Risk Behavioral Surveillance System (YRBSS)*



*\*For more information including a source description and source contact information please visit [www.maineSEOW.com](http://www.maineSEOW.com)*

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