

Substance Use Trends in Maine: Key Findings



By Tim Diomedede, MPPM

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State Epidemiological Outcomes Workgroup www.MaineSEOW.com

Purpose (SEOW What?)

***The State Epidemiological Outcomes Workgroup (SEOW)** serves as a clearing house for substance use and mental health related data indicators. 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



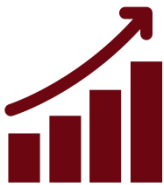
Data Notes/Disclaimers



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.

Executive Summary

Consumption

- Progress continues in reducing rates of substance use among Maine's youth. For the past several years, the following rates of use among high school students have steadily declined:
 - *Past month use of any alcohol*
 - *Past month use of tobacco products (cigarettes, cigars, and smokeless tobacco)*
 - *Lifetime use of inhalants*
- In general, 18 to 35 year olds have the highest rates of substance use and are more prone to engage in risky substance use.
- Alcohol remains the substance most often used by Mainers across the lifespan.
- Tobacco use among youth continues to decline, but remains consistently high among 26 to 49 year olds.

Executive Summary

Consumption

- Rates of cigarette use during the last trimester of pregnancy have plateaued and were highest among younger women as well as among those with lower levels of education.
- Electronic vaping is an emerging trend and must be monitored closely, particularly among youth and young adults.
- Maine has one of the highest rates of marijuana use among young adults in the nation; rates have been steadily increasing among adults in general in recent years.
- Past month rates of prescription drug misuse as well as marijuana use among high school students have remained relatively stable.
- Approximately 5,000 Mainers reported using heroin in past year; rates are highest among young adults.

Executive Summary

Consequences

- The number of drug affected babies (substance exposed infant) reports have begun to decline.
- Consequences arising from synthetic opiates have declined as those related to use of heroin and other non-pharmaceutical opioids (e.g., illicitly manufactured fentanyl) have increased steadily.
- Drug related overdose deaths are being driven primarily by illicit drugs, particularly non-pharmaceutical fentanyl.
- Drugs such as methamphetamine, cocaine, and other addictive and dangerous prescription drugs (e.g., benzodiazepines, stimulants) have had a progressively negative impact in Maine.
- Cocaine has become more prevalent in drug overdose deaths as well as drug trafficking arrests.
- As Maine and the Northeast confront the opiate/opioid epidemic, it is crucial to monitor other trends as well.
- We should not lose sight of the toll that more traditional substances like alcohol and tobacco are taking on Mainers and their families.

Executive Summary

Contributing Factors

- Availability and potential for diversion continue to be a concern among Maine's youth.
- There is discrepancy between parental perceptions of their child's behaviors compared to the actual behaviors reported by youth.
- 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.
 - 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 both youth and adults.
- It is imperative that we continue to track the dispensation of prescription drugs that have a greater potential for diversion and misuse.
- As prescriptions for pain relief have begun to stabilize and/or decrease, medicated assisted treatment prescriptions (e.g., buprenorphine) have increased substantially.

Executive Summary

Mental Health

- We must remain aware of the relationship between mental health and substance use. Depression and higher rates of substance use are strongly associated.
 - Comorbidity of substance use and mental illness is a common phenomenon in Maine.
- Data suggest that the prevalence of substance use, suicide ideation and feelings of sadness and helplessness are lower among high school students who report certain protective factors.
- Rates of depression among 18 to 25 year olds have been increasing steadily. Maine and the northeast have some of the highest rates of major depressive episodes among 18 to 25 year olds in the Nation.
- Protective factors, such as sleep, social support, and familial support, which taken together may mitigate the risk of substance use behaviors and mental health issues among youth.
- We must continue to study how substance use and mental health interact with one another so that prevention and intervention efforts can better address the needs of both.

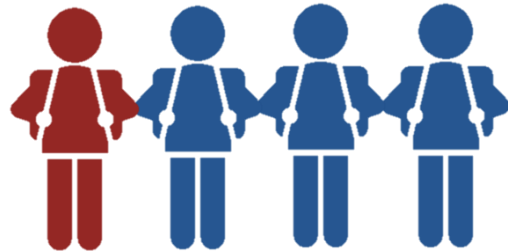
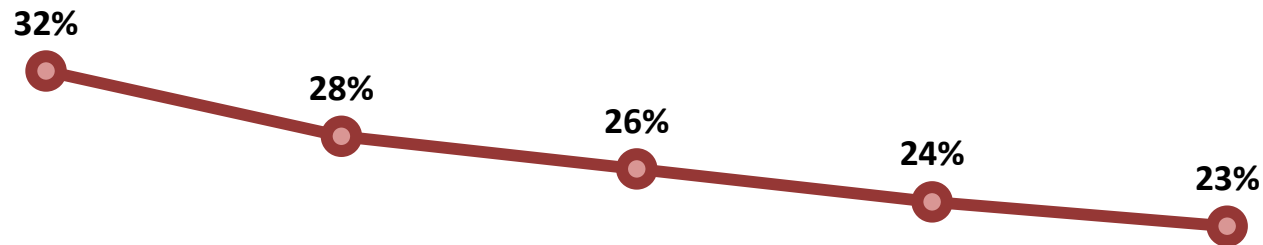
Consumption

(Surveillance Data)



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

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



2009
Source: MIYHS

2011

2013

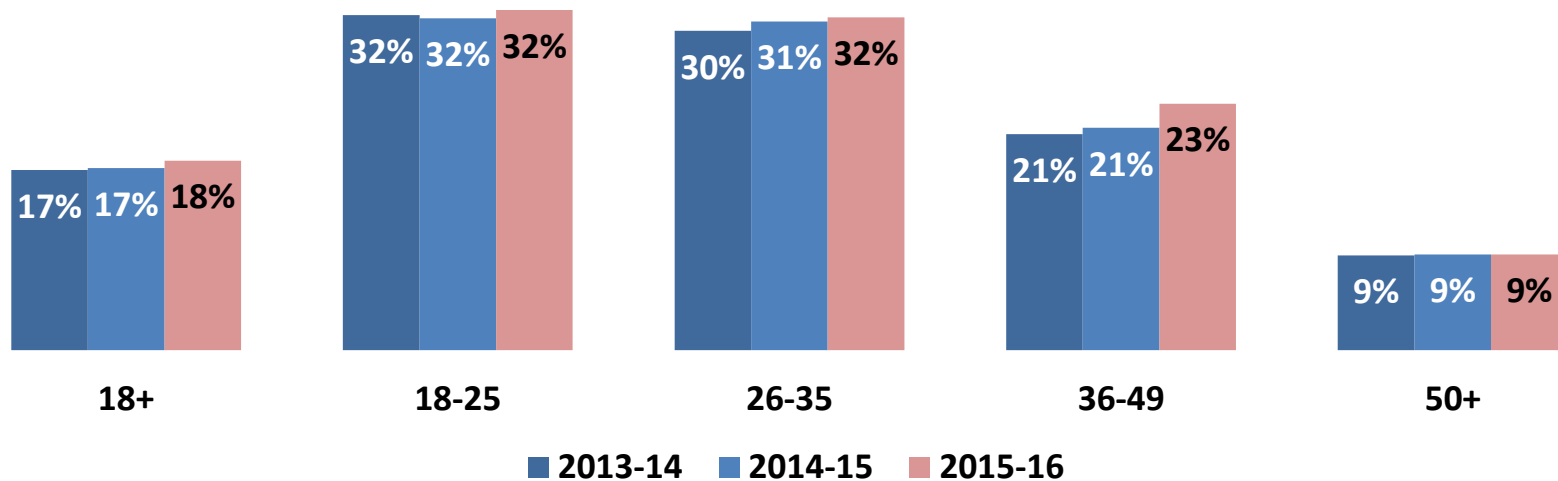
2015

2017

Maine adults reporting binge* drinking in the past 30 days, by age group: 2015-16

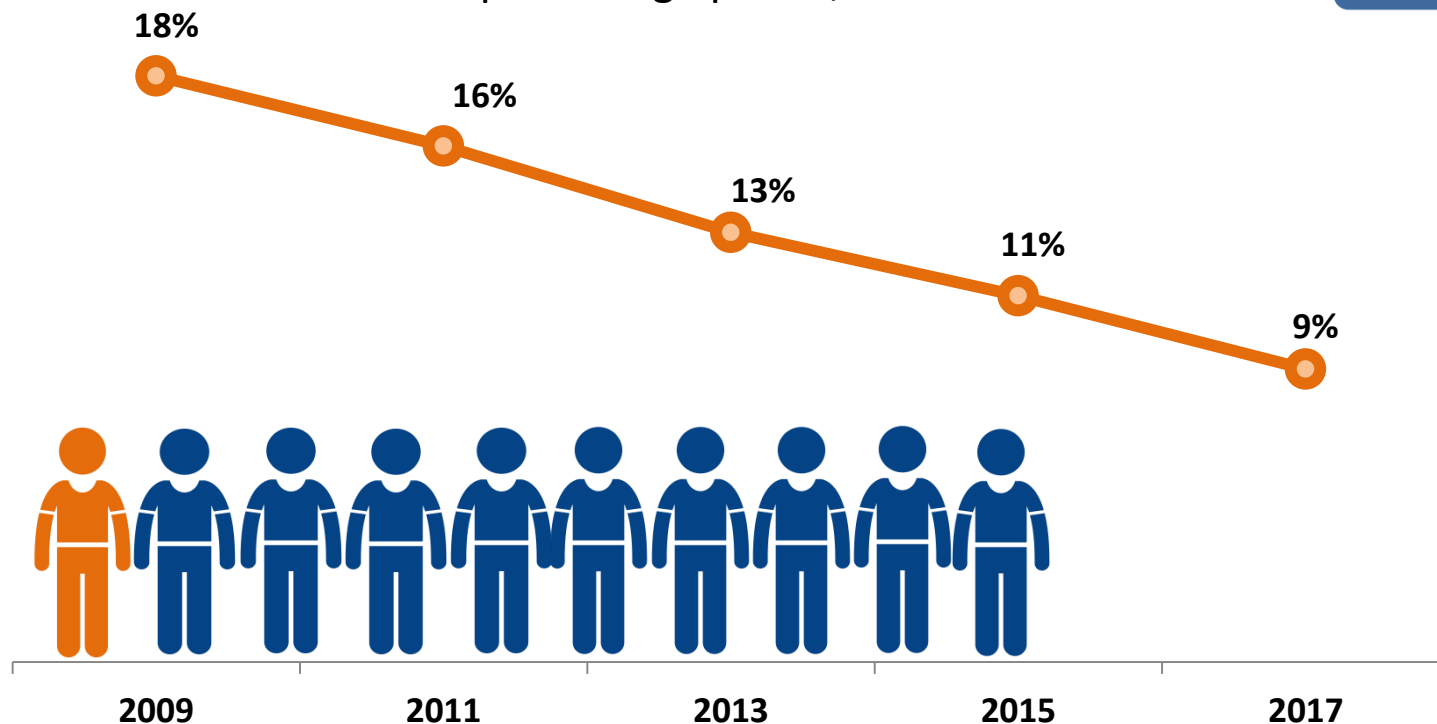
**BRFSS defines binge drinking as five or more drinks in one sitting for a male and four or more drinks in one sitting for a female.*

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



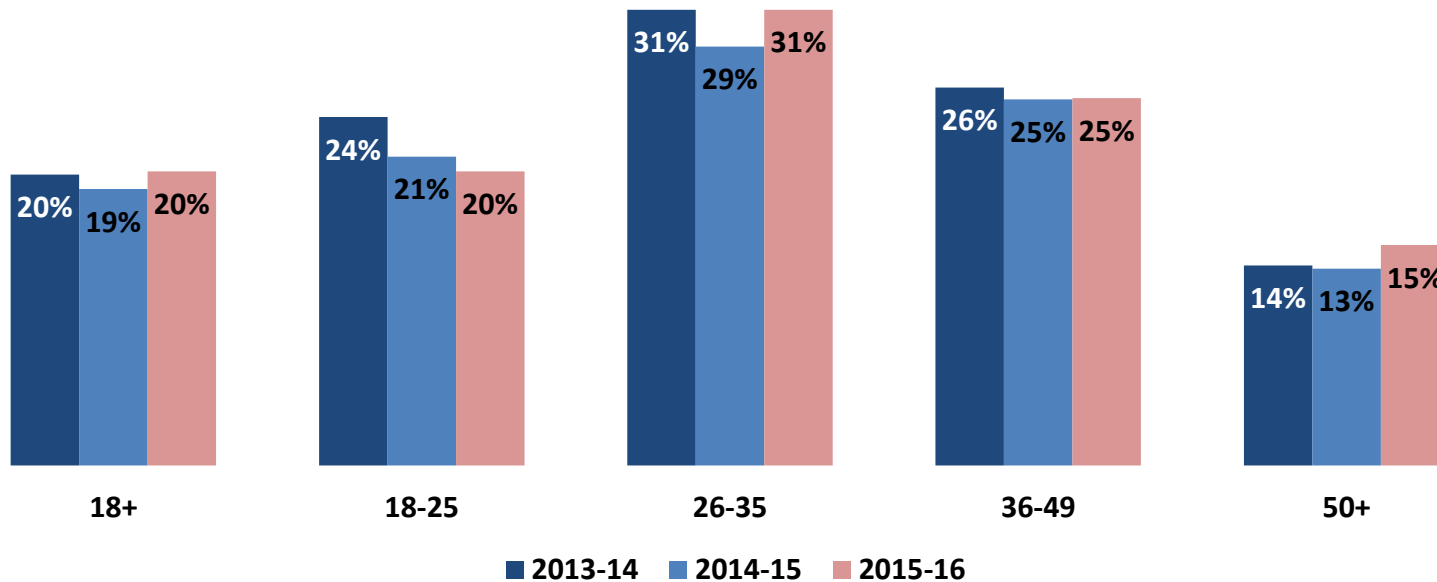
High school students who smoked at least one cigarette during the past month: 2009–2017

The proportion of high school students who reported having smoked any cigarettes on at least one day during the past 30 days decreased by nine percentage points, from 2009 to 2017.



Past month cigarette use among Maine adults, by age group: 2013–14 to 2015–16

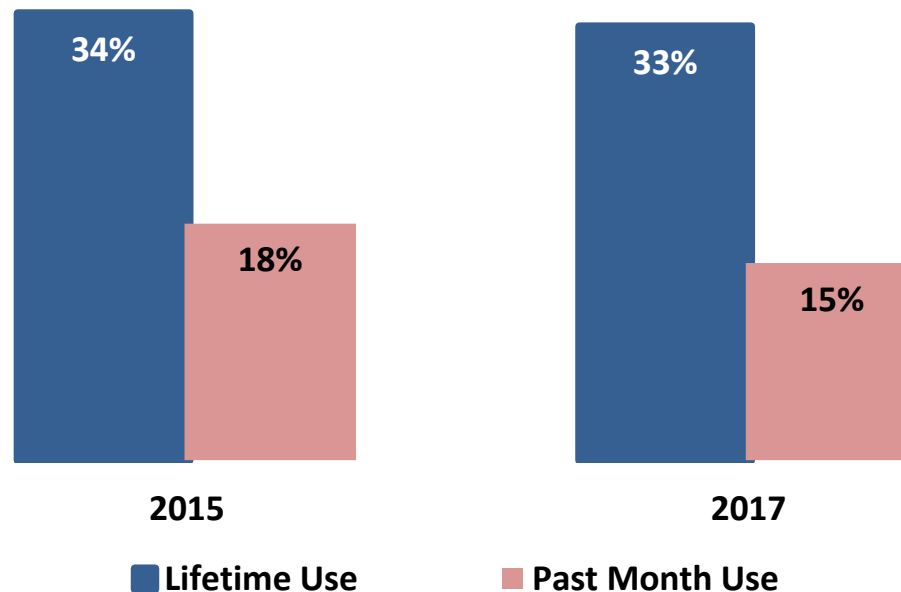
In 2015-16, 20 percent of Maine's adults reported being current cigarette smokers. Mainers ages 26 to 35 reported the highest rate of cigarette use at 31 percent.



Maine high school students who used an electronic vapor product* in the past month or lifetime: 2015-17



One in three high school students have used an electronic vapor product in their lifetime and one in six have used one in the past month. This is consistent with data from 2015.

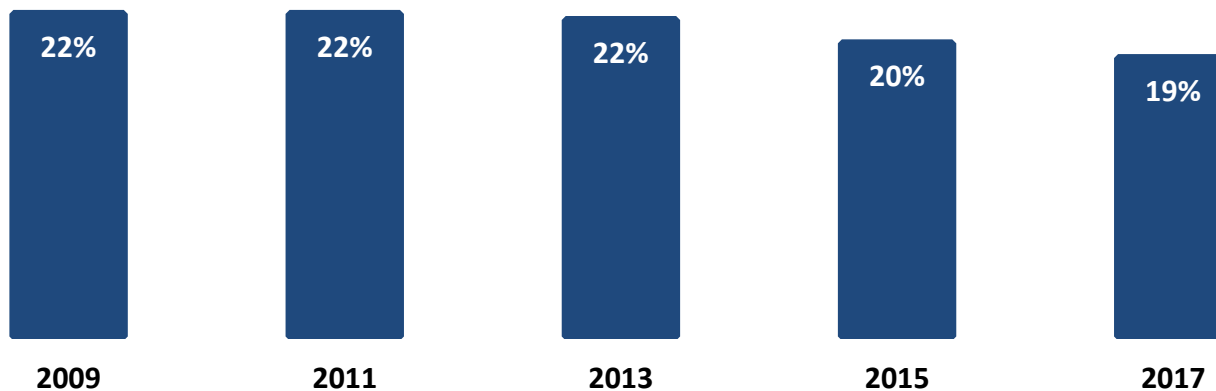


**Electronic vapor products refer to devices used to vaporize active ingredients of plant material, commonly tobacco, cannabis, or herbs for the purpose of inhalation.*

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



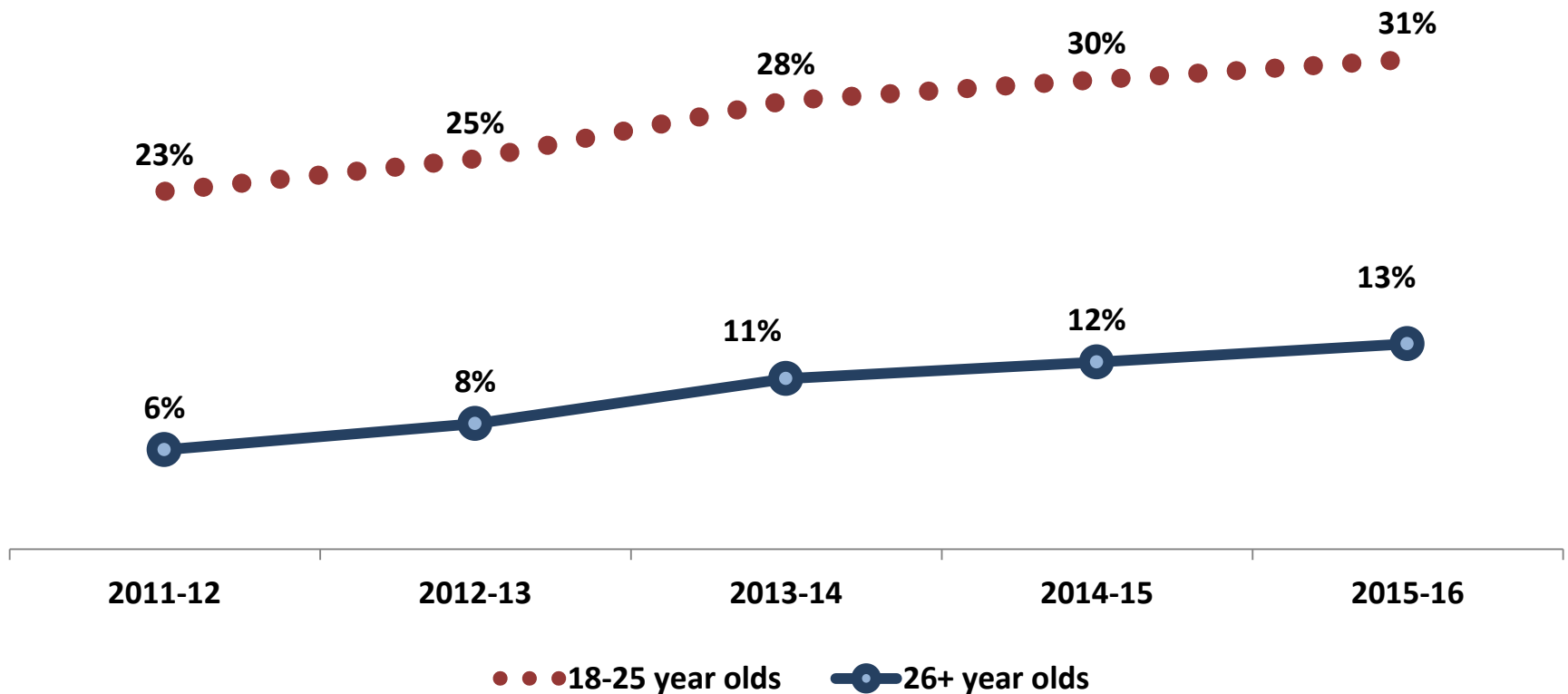
In 2017, one in five high school students reported using marijuana within the past month. Rates have been stable over time.



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

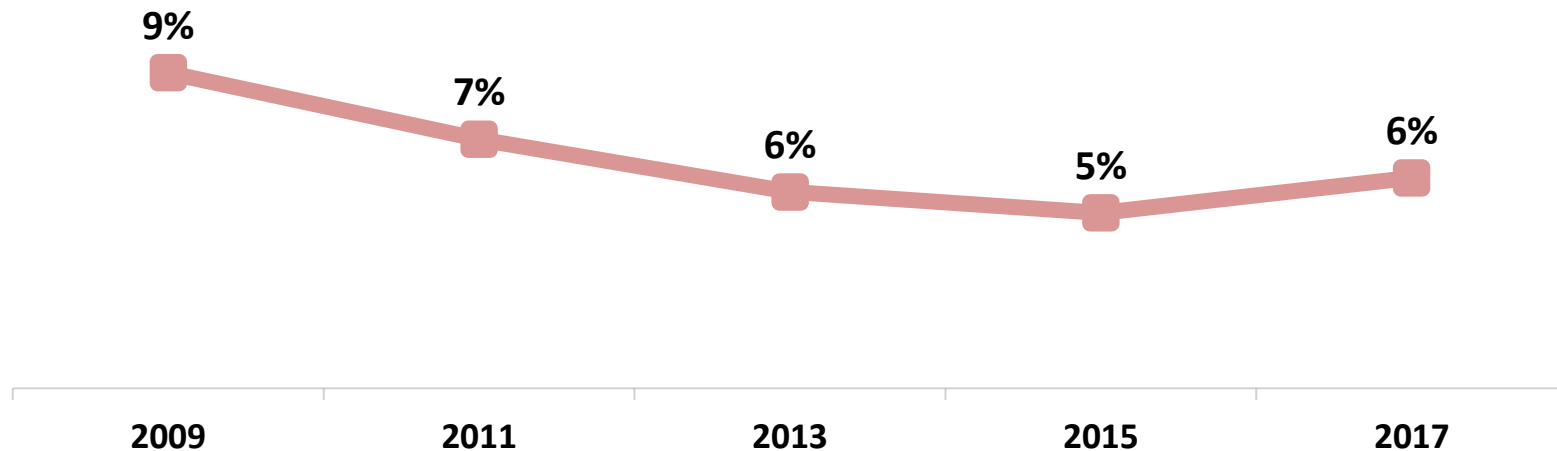


Nearly one in three Mainers ages 18 to 25 used marijuana in the past month in 2015-16, an increase of eight percentage points since 2011-12.



Maine high school students who have taken prescription drugs (any type) that were not prescribed to them in the past month: 2009-2017

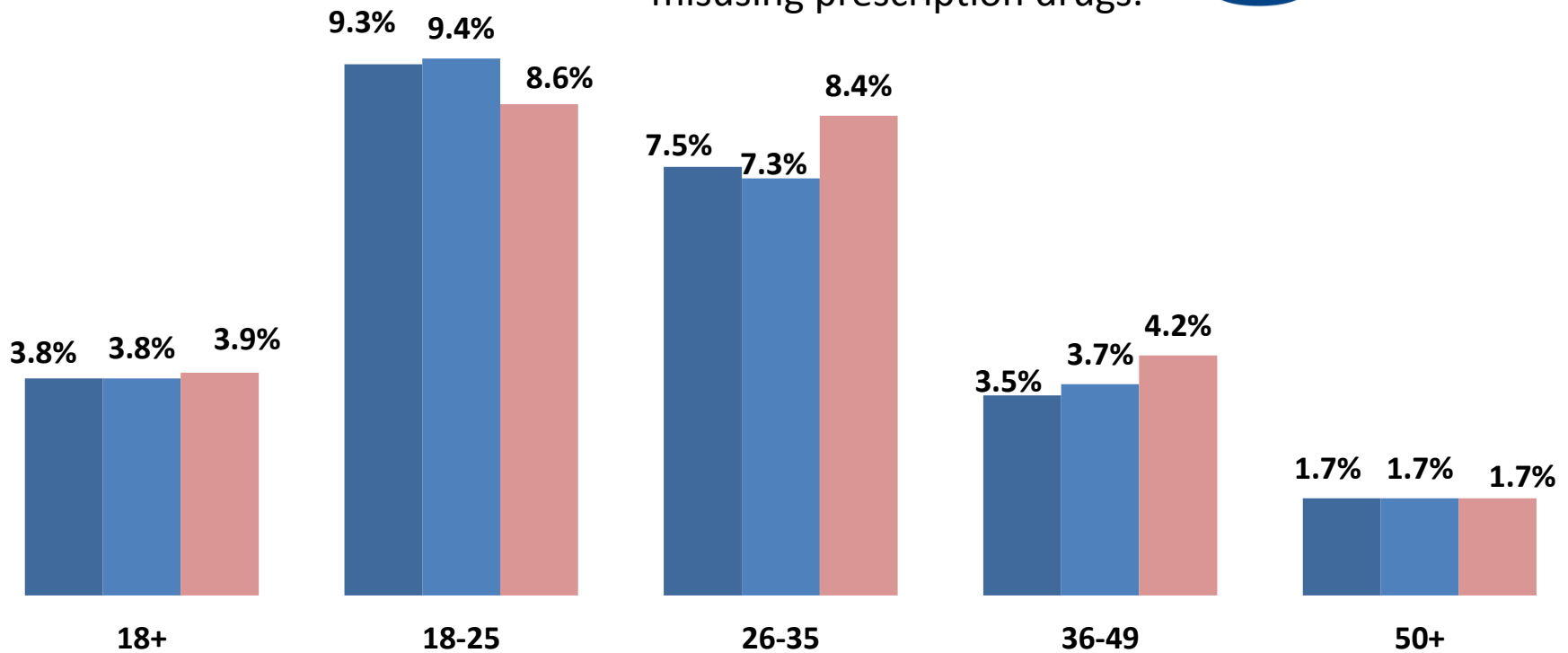
After decreasing from 2009 (9%) to 2015 (5%), the percentage of high school students reporting that they have misused a prescription medication in the past month has increased slightly to 6%.



Note: Although not shown, about one in ten high school students reported having ever misused a pain medication (e.g., codeine, Vicodin, OxyContin).

Misuse of prescription drugs among adults in their lifetime, by age group: 2012–14 and 2013–15

During 2014-16, the highest rate of lifetime prescription drug misuse was among 18 to 25 year olds; nearly one in ten reported ever misusing prescription drugs.



Source: BRFSS

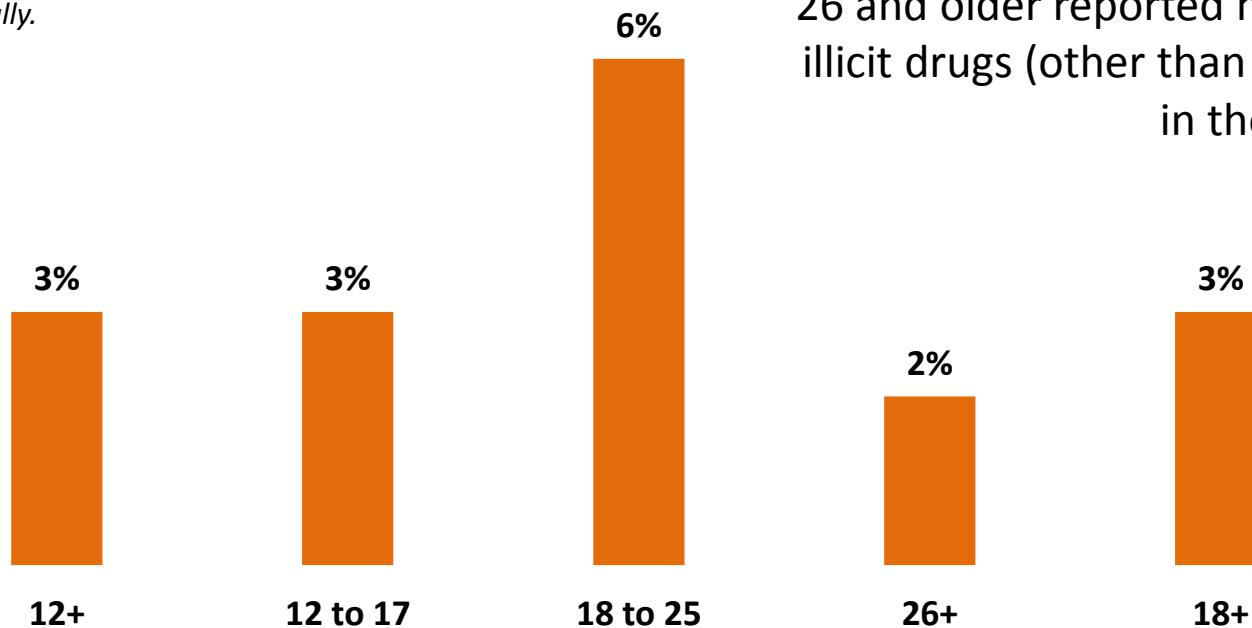
■ 2012-14 ■ 2013-15 ■ 2014-16

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Illicit drug use (other than marijuana)* in the past month, by age group: 2015-16

**Illicit drugs other than marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.*

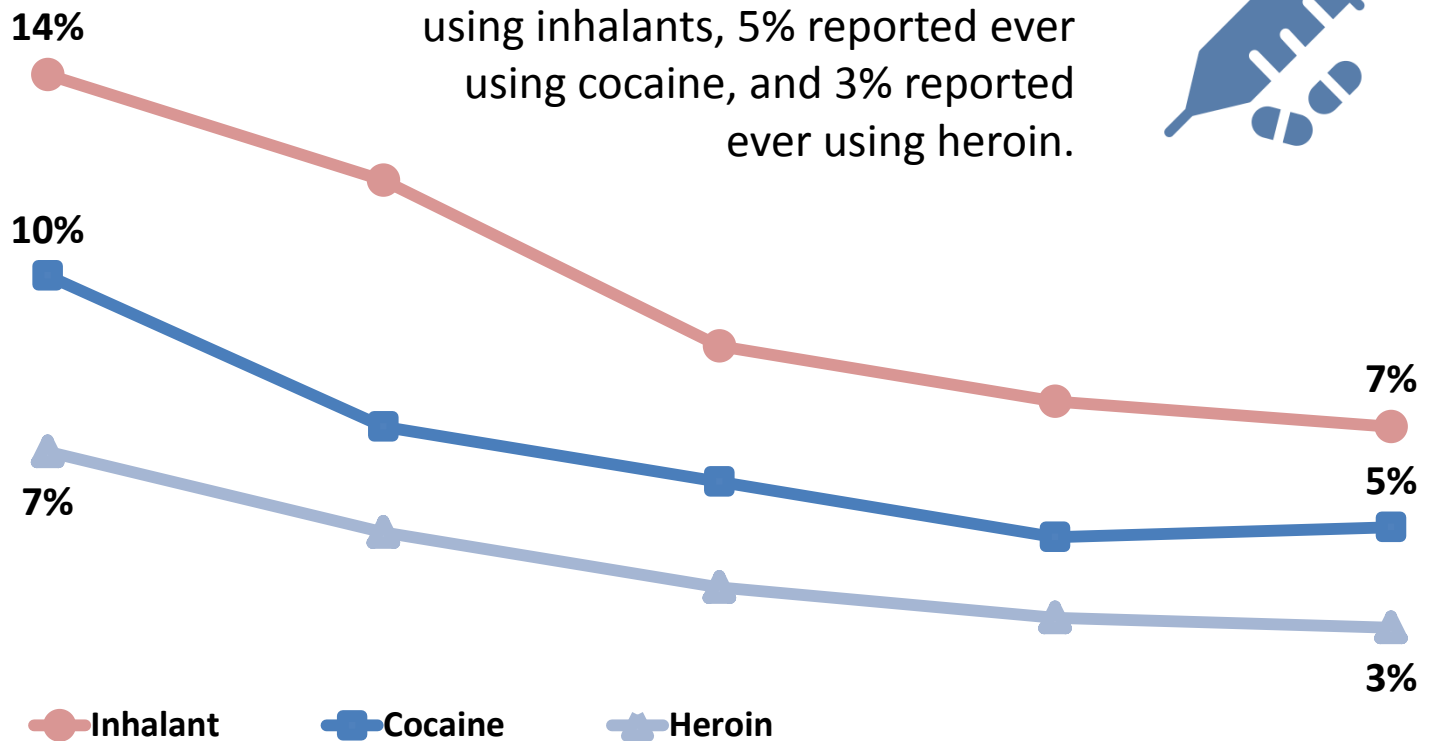
In 2015–16, six percent of 18 to 25 year olds, three percent of youth 12 to 17, and two percent of those 26 and older reported having used illicit drugs (other than marijuana) in the past year.



Source: NSDUH

Lifetime drug use among high school students in Maine, by drug type: 2009-2017

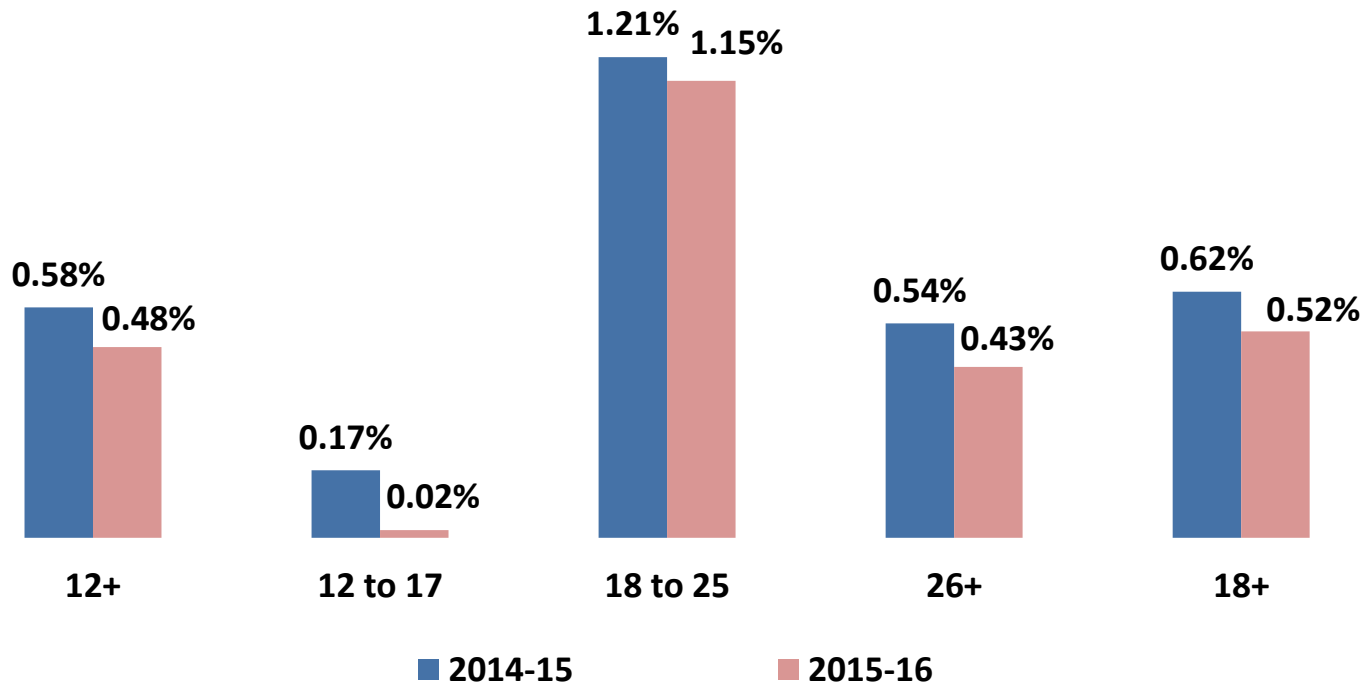
In 2017, seven percent of high school students reported ever using inhalants, 5% reported ever using cocaine, and 3% reported ever using heroin.



Heroin use in Maine in the the past year, by age group: 2014-15 to 2015-16



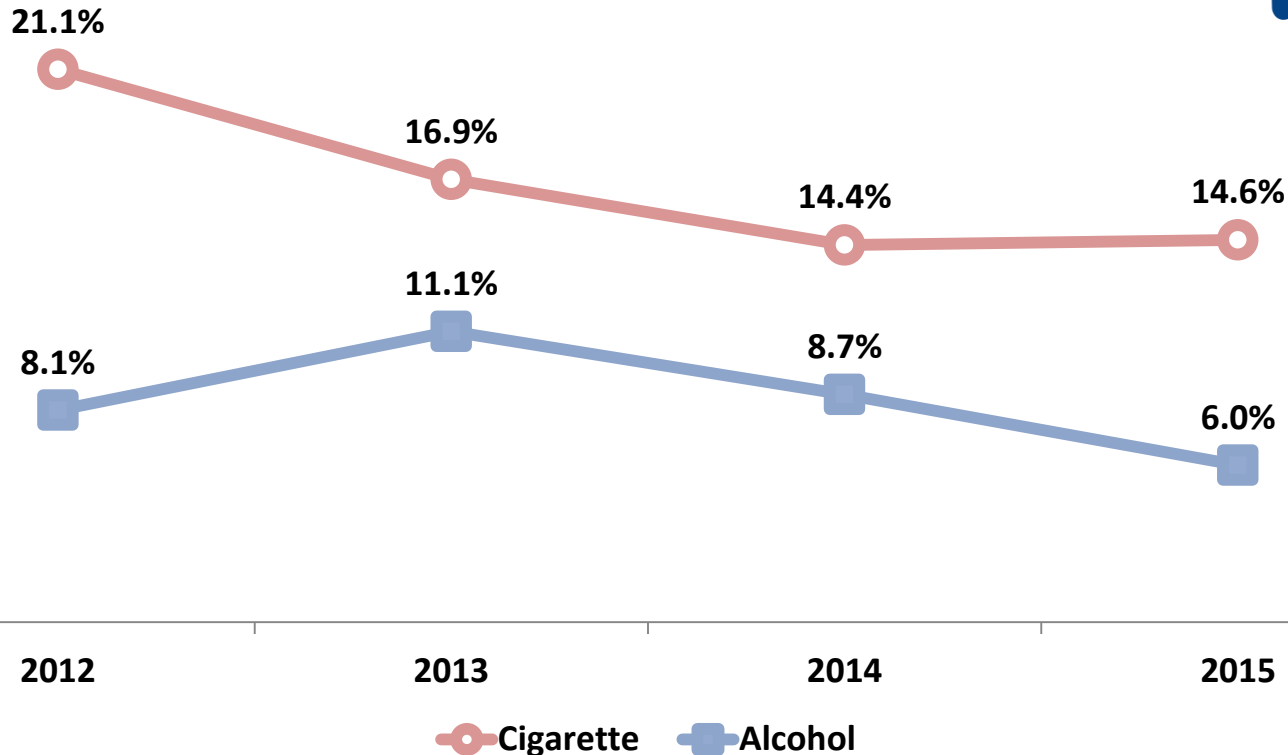
Overall, it was estimated that about 5,000 (0.48%) Maine residents 12 and older reported using heroin in the past year. The highest rate of use was observed among Mainers 18 to 25 (1.15%).



Source: NSDUH

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

Cigarette use among women during their last trimester decreased by six percentage points from 2012 to 2015, while alcohol use decreased by five percentage points since 2013.

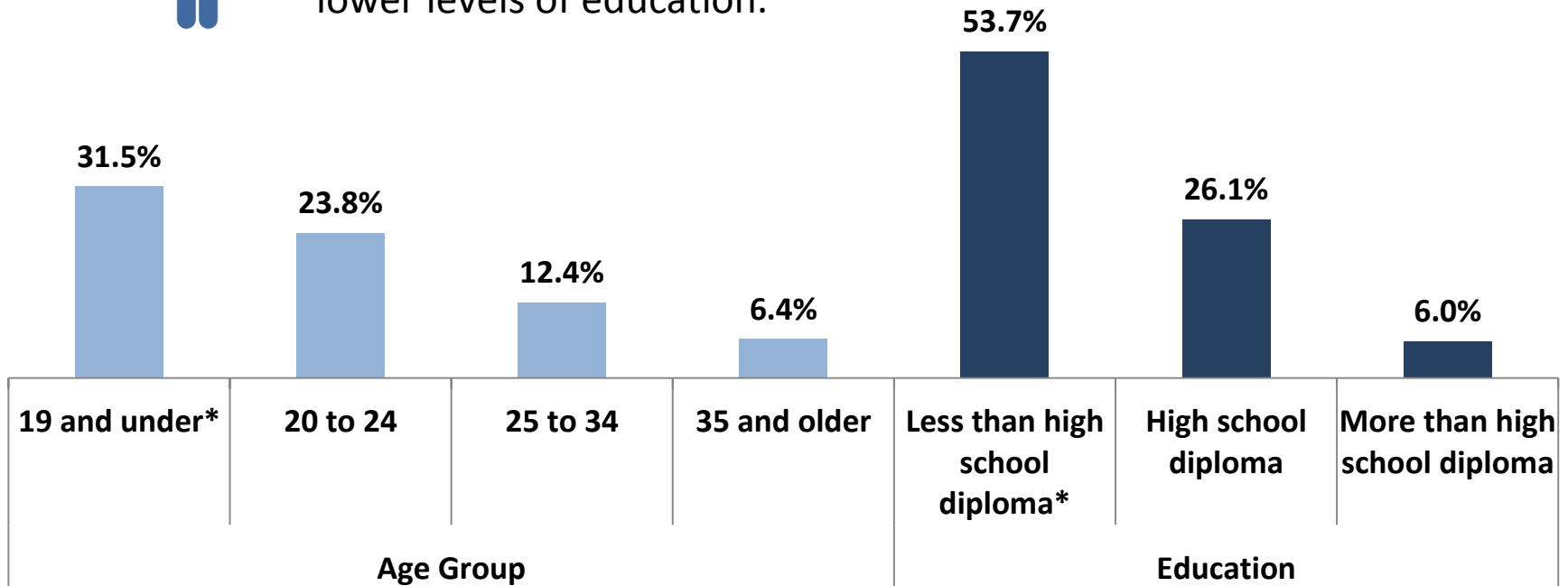


Source: PRAMS

Women reporting cigarette use during the last trimester of pregnancy, by age and education: 2015



Rates of cigarette use during the last trimester of pregnancy were highest among younger women as well as among those with lower levels of education.



**indicates variable had less than 60 respondents and may not be a reliable estimate*

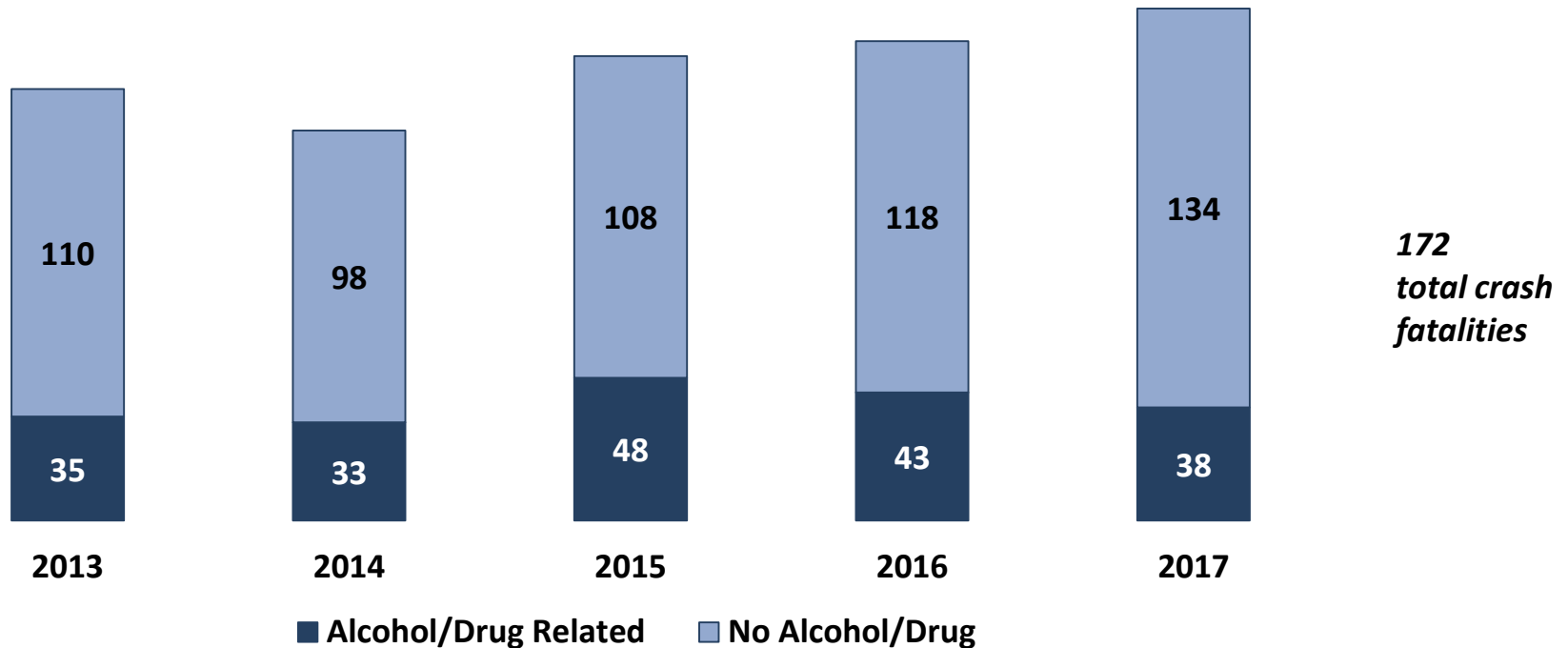
Consequences/Impact



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

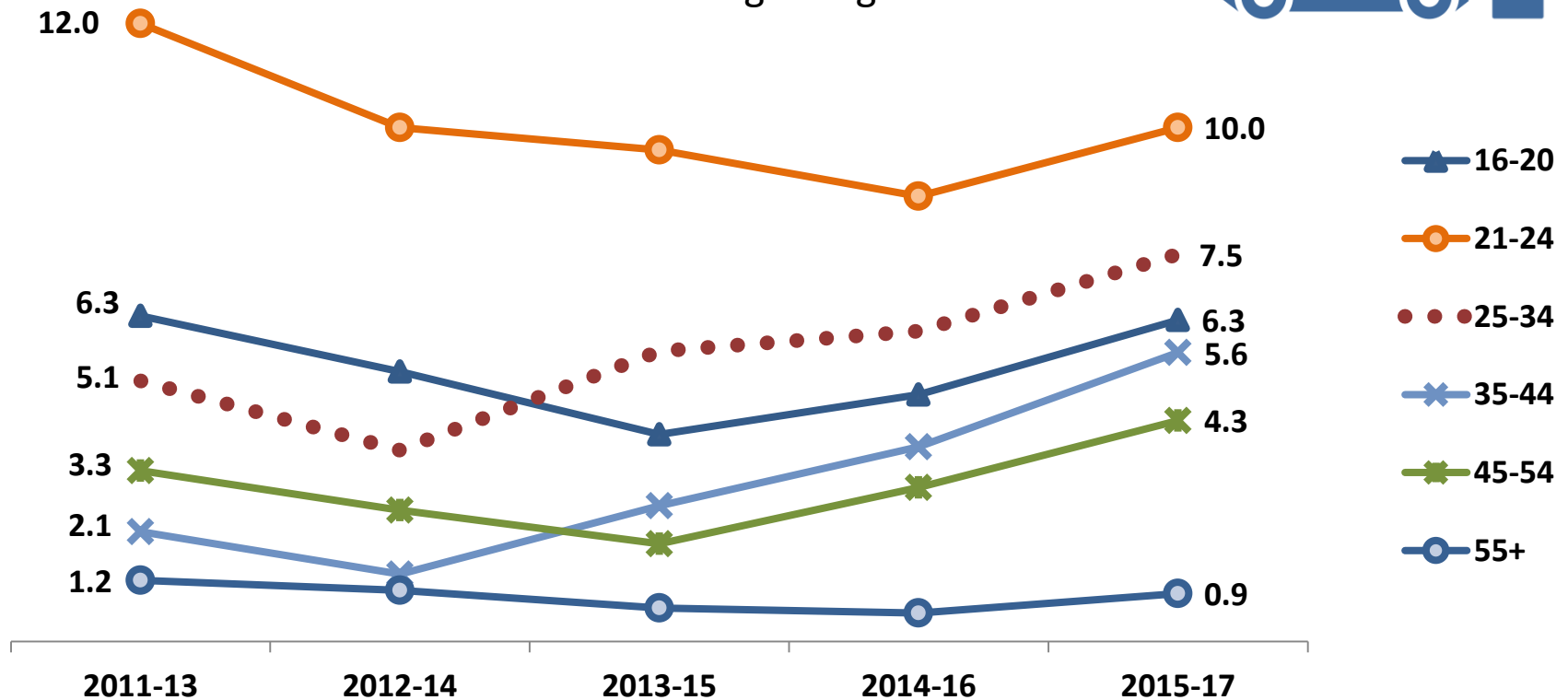


In 2017, nearly one in four (22%) fatal motor vehicle crashes involved alcohol and/or drugs.



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.

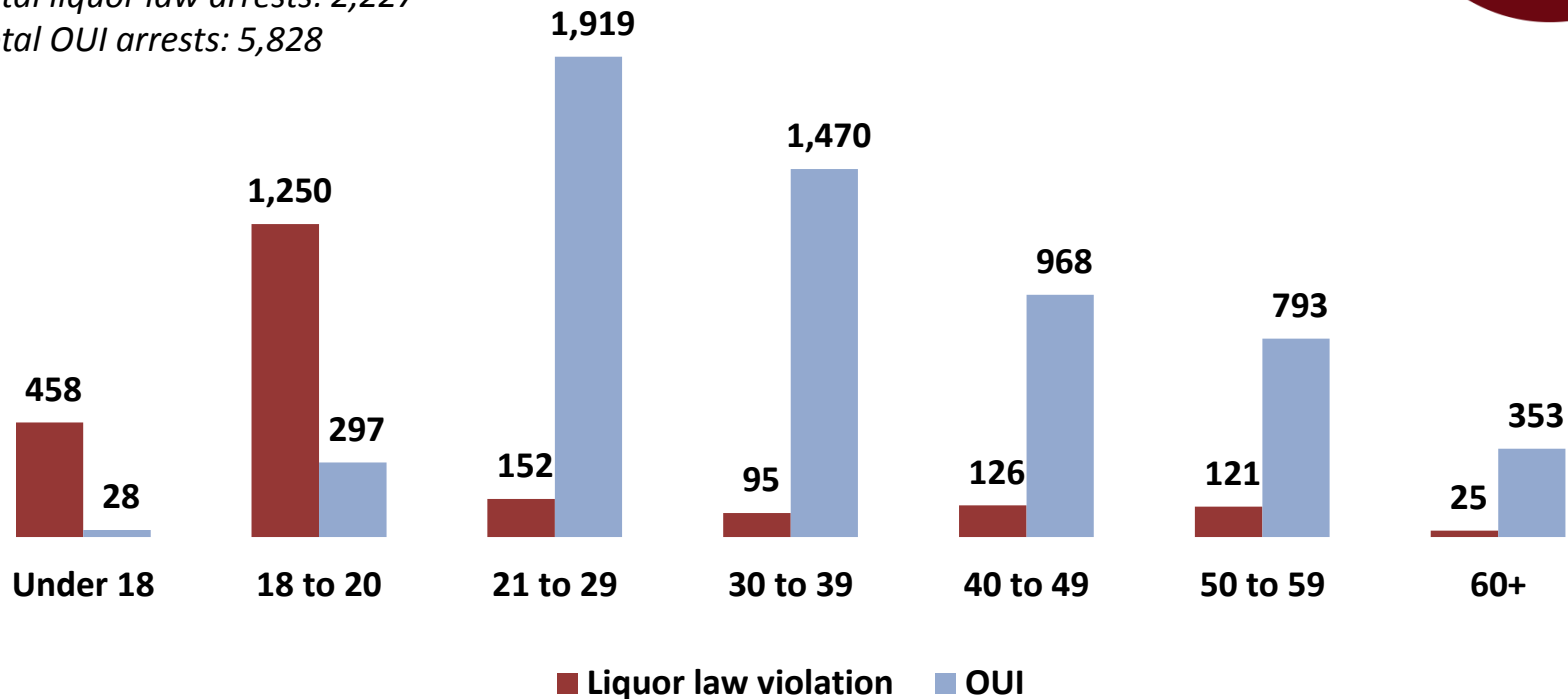


Arrests related to alcohol, by age group: 2016

Eighteen to 21 year olds observed the most arrests for liquor violations whereas 21 to 29 year olds observed the most arrests for OUIs. Although not shown, liquor law violations among both youth and adults have been decreasing steadily.



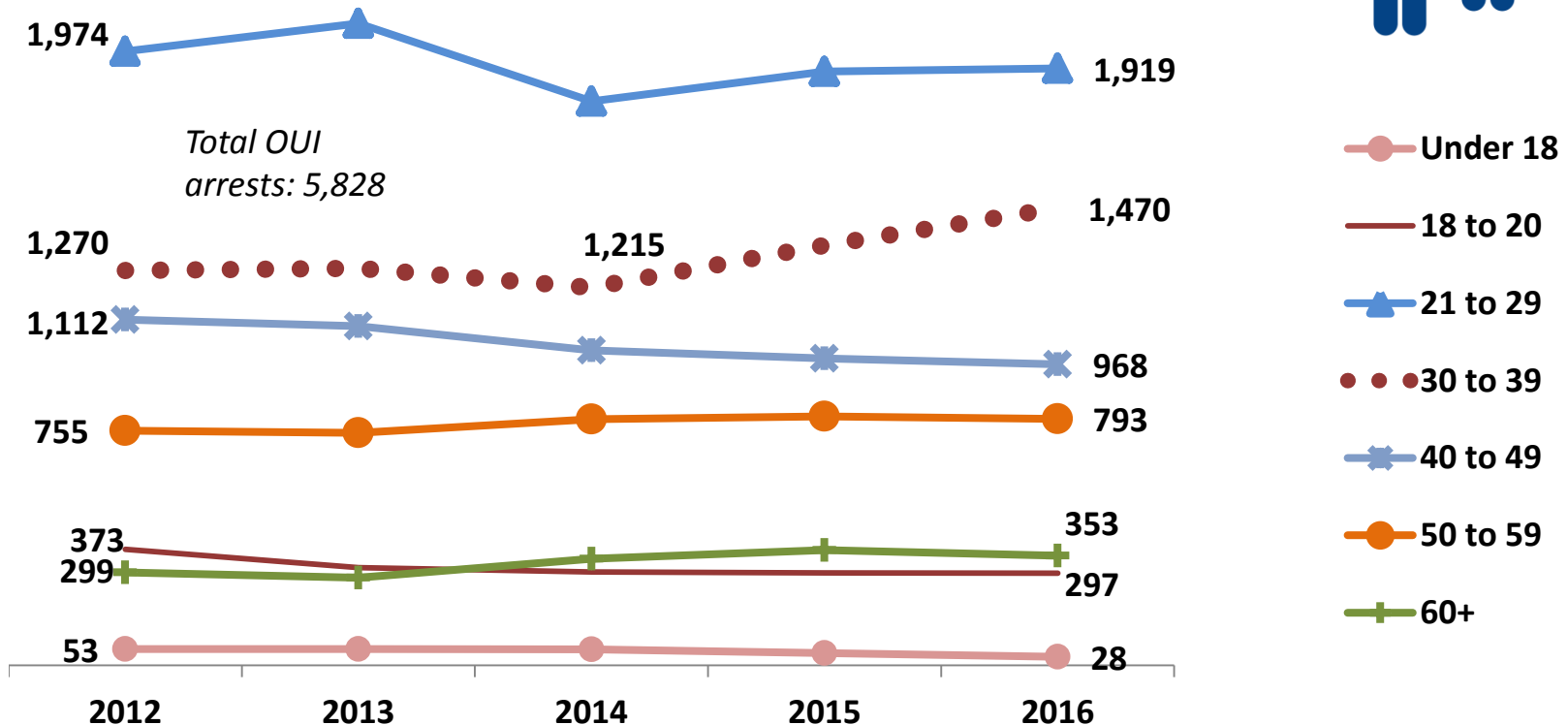
Total liquor law arrests: 2,227
Total OUI arrests: 5,828



Source: DPS-UCR

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

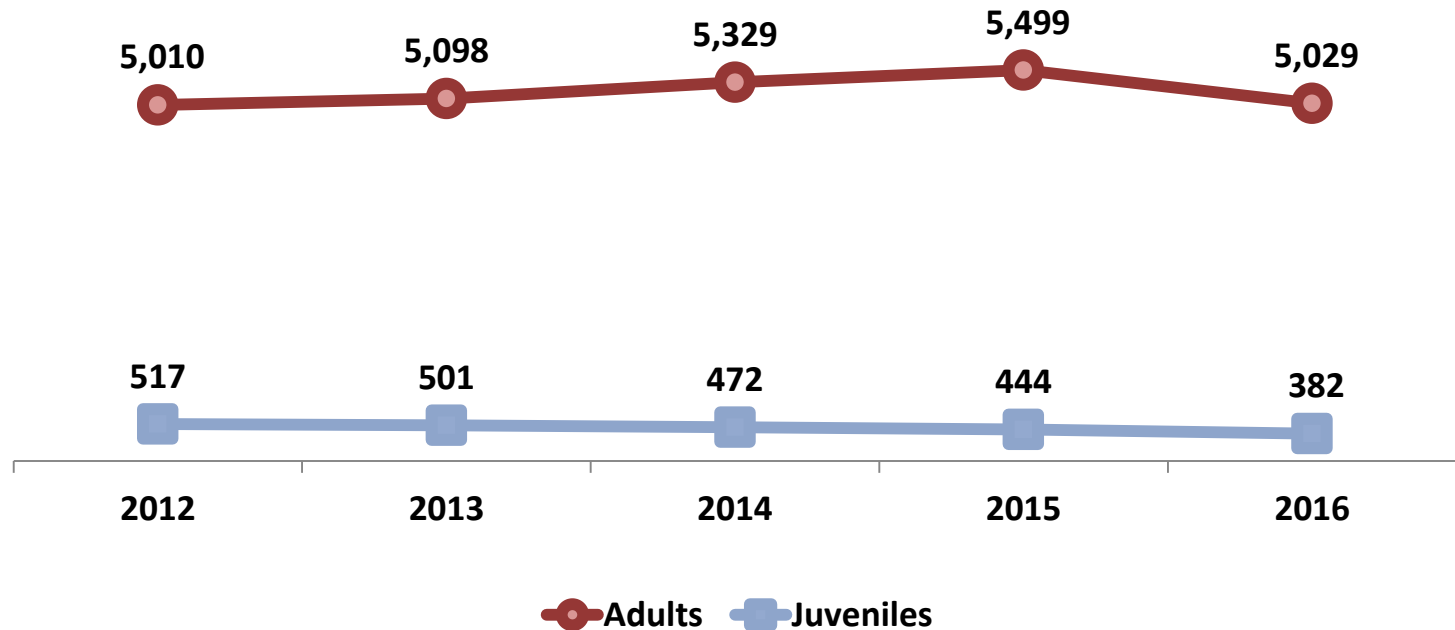
While the count of OUI arrests appears to be stable among most age groups, Mainers between the ages of 30 and 39 observed a 21 percent increase in OUI arrests from 2014 to 2016.



Total drug offense arrests, by age group: 2012–2016

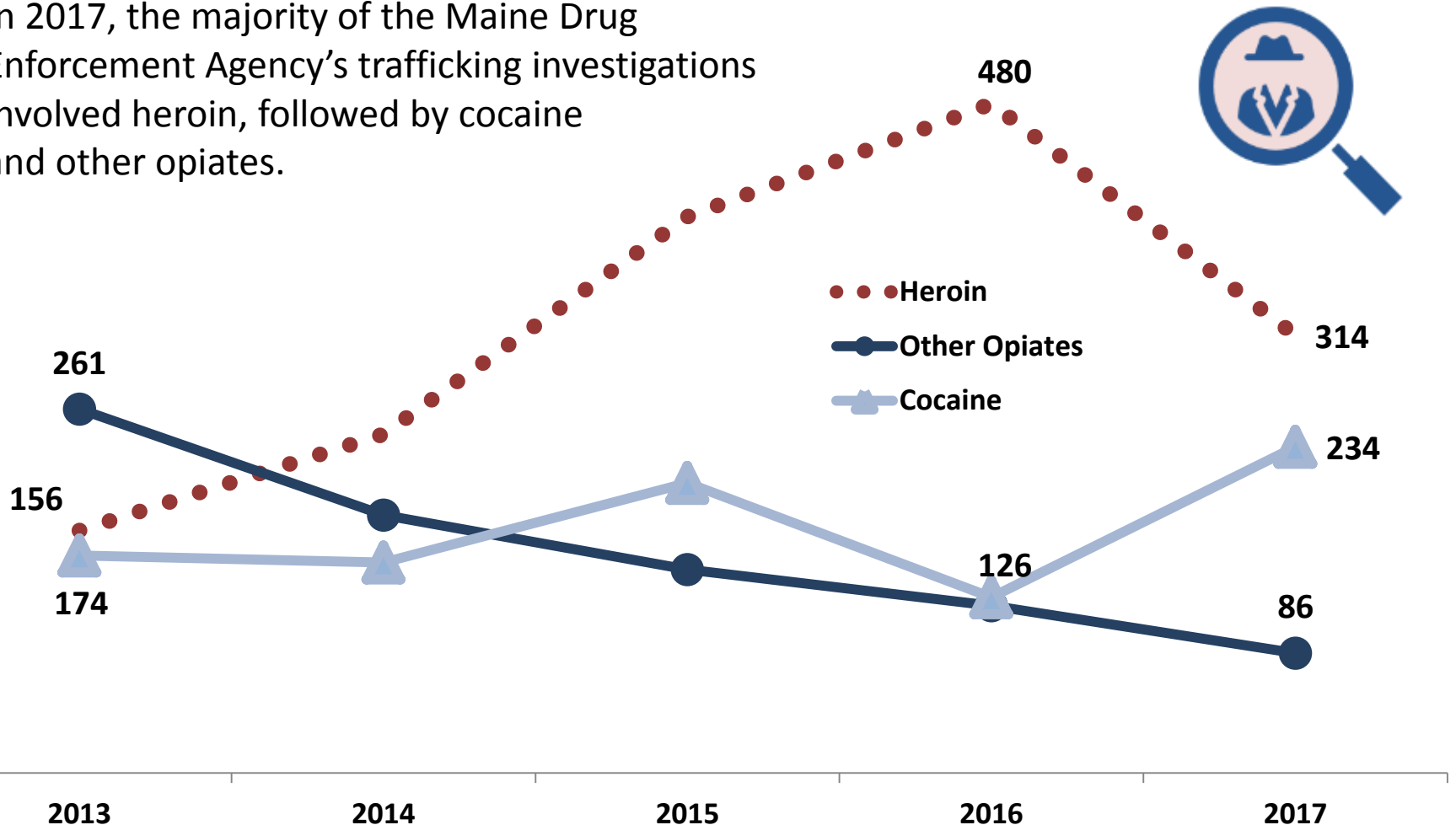


The total number of drug arrests for adults and juveniles declined during 2016. Adult arrests decreased by over eight percent and juvenile arrests decreased by 14 percent since 2015.



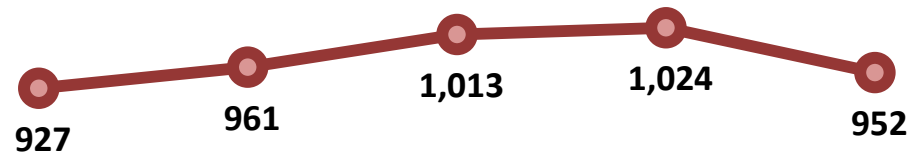
MDEA drug trafficking investigations, by drug type: 2012–2017

In 2017, the majority of the Maine Drug Enforcement Agency's trafficking investigations involved heroin, followed by cocaine and other opiates.



Number of drug affected baby (substance exposed infants) reports:* 2015 – 2017

- In 2017, there were 952 reports regarding infants born exposed to substances.
- After steadily increasing from 2013 to 2016, the number of drug affected baby reports declined by seven percent from 2016 to 2017.



**This measure reflects the number of infants born in Maine where a healthcare provider reported to OCFS that there was reasonable cause to suspect the baby may be affected by illegal substance use or was demonstrating withdrawal symptoms resulting from prenatal drug exposure (illicit or prescribed appropriately under a physician's care for the mother's substance use treatment) or who have fetal alcohol spectrum disorders.*

2013

2014

2015

2016

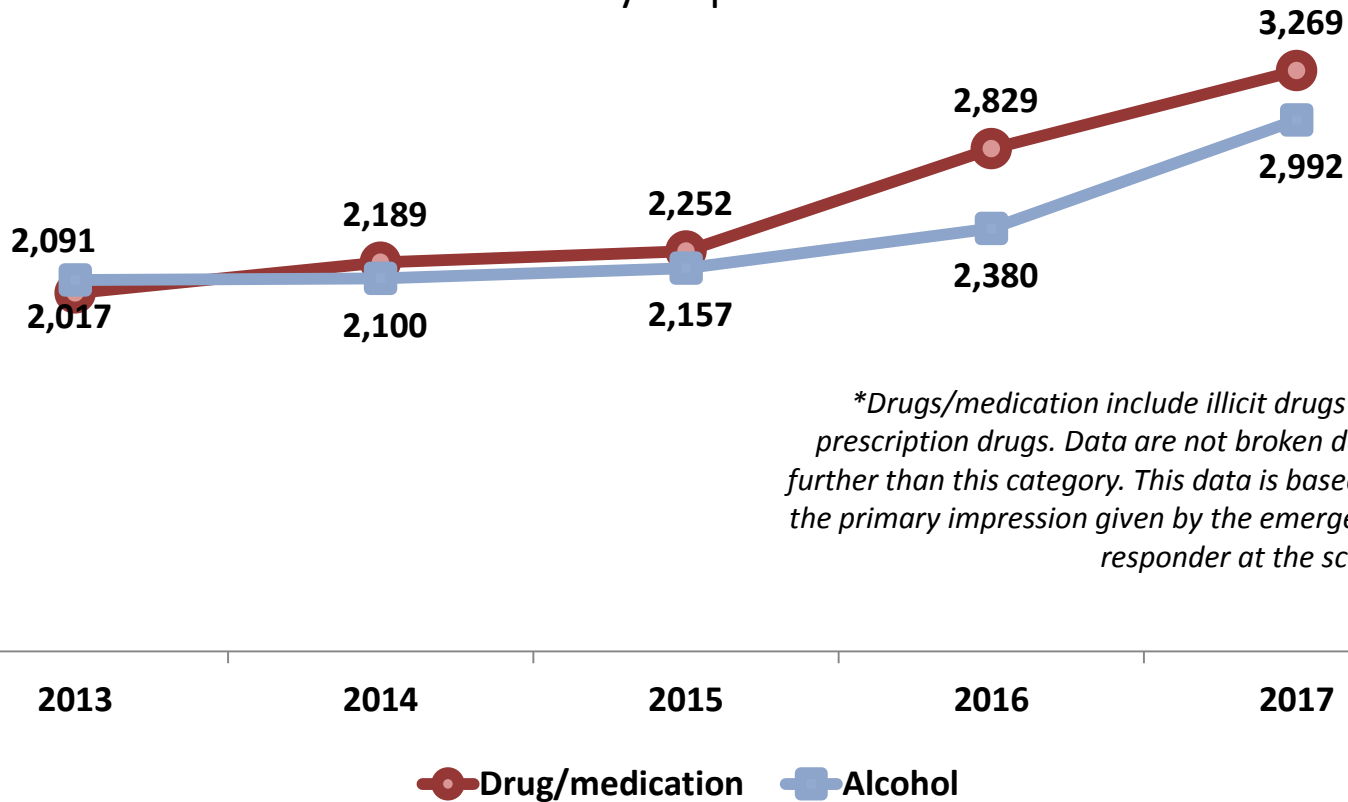
2017

Source: Office of Child and Family Services (OCFS),
Maine Automated Child Welfare Information System
(MACWIS).

Number of overdose EMS responses, by substance type: 2013 - 2017

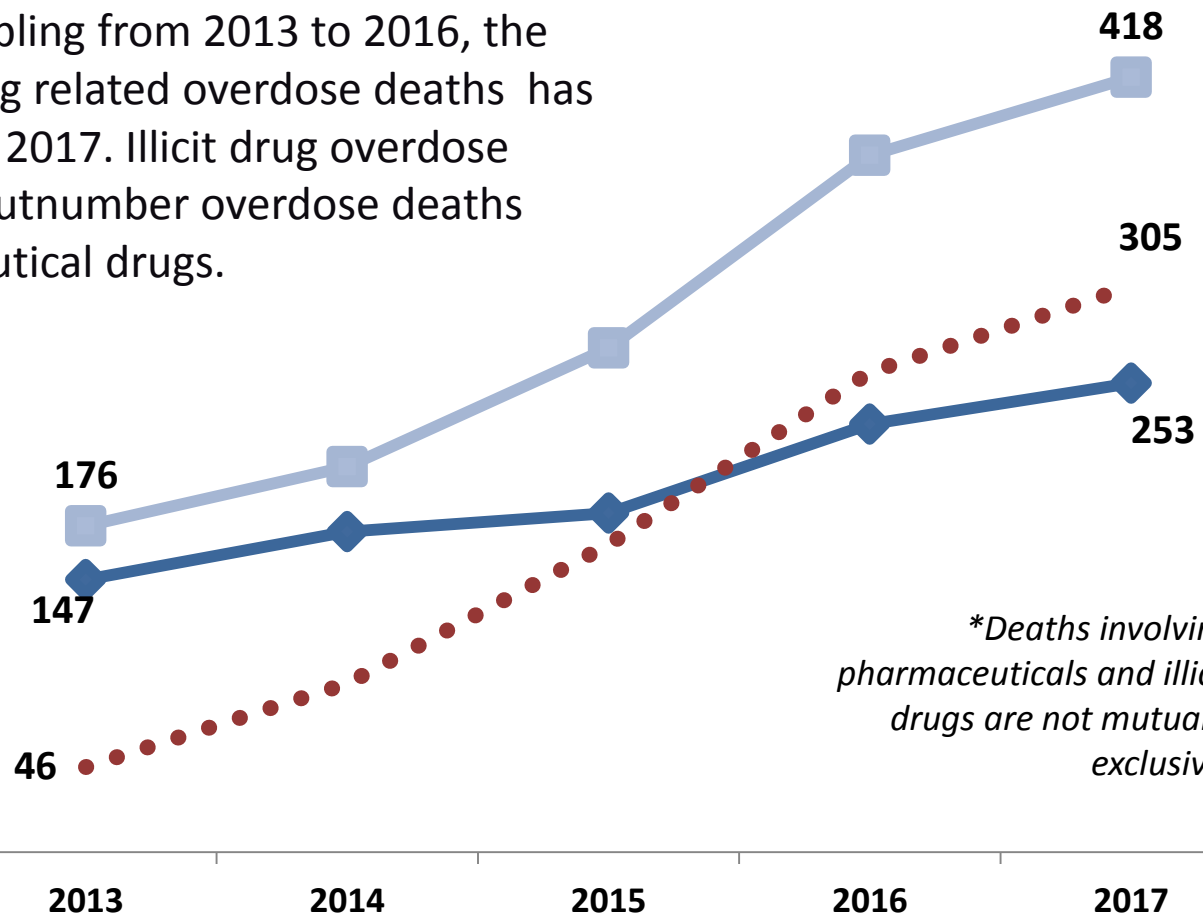


From 2013 to 2017, drug/medication overdoses increased by 62 percent while those related to alcohol overdose increased by 43 percent.



Number of deaths* caused by pharmaceuticals and/or illicit drugs, alone or in combination: 2013–2017

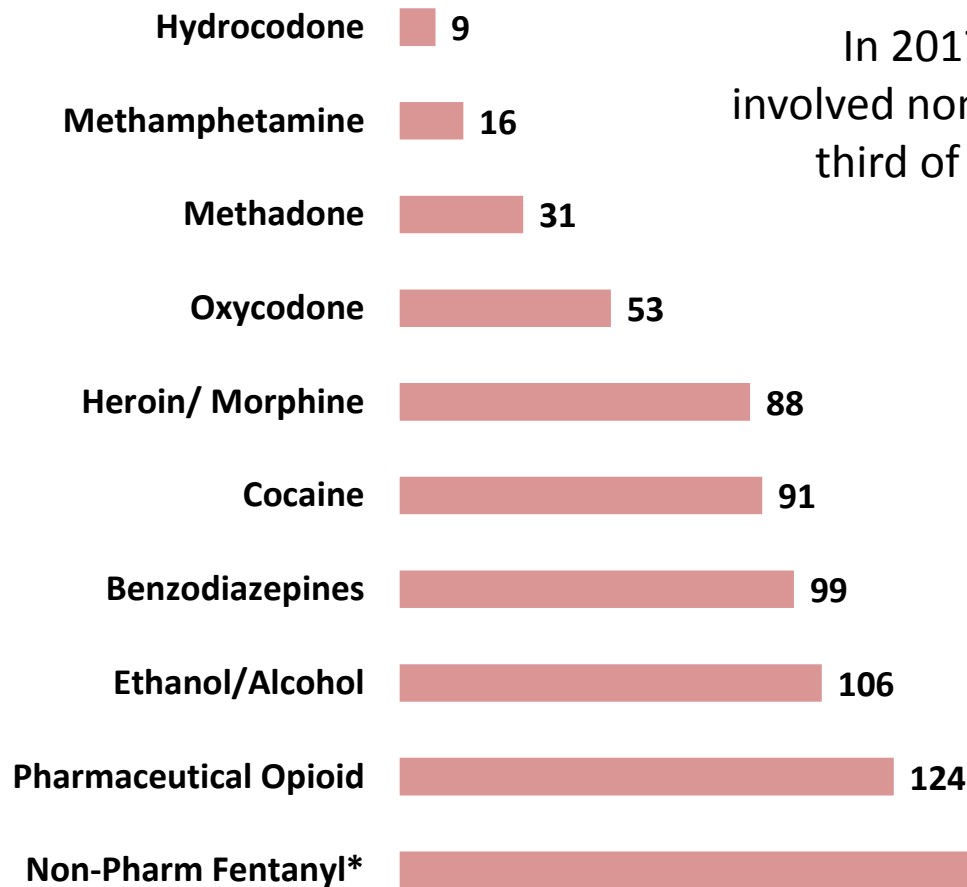
After more than doubling from 2013 to 2016, the rate of change of drug related overdose deaths has slowed from 2016 to 2017. Illicit drug overdose deaths continue to outnumber overdose deaths related to pharmaceutical drugs.



**Deaths involving pharmaceuticals and illicit drugs are not mutually exclusive.*

Source: Dr. Marcella Sorg/OCME

Number of drug deaths involving specific drug types:* 2017



In 2017, six out of ten overdose drug deaths involved non-pharmaceutical fentanyl.** Nearly a third of the deaths involved a pharmaceutical opioid.



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

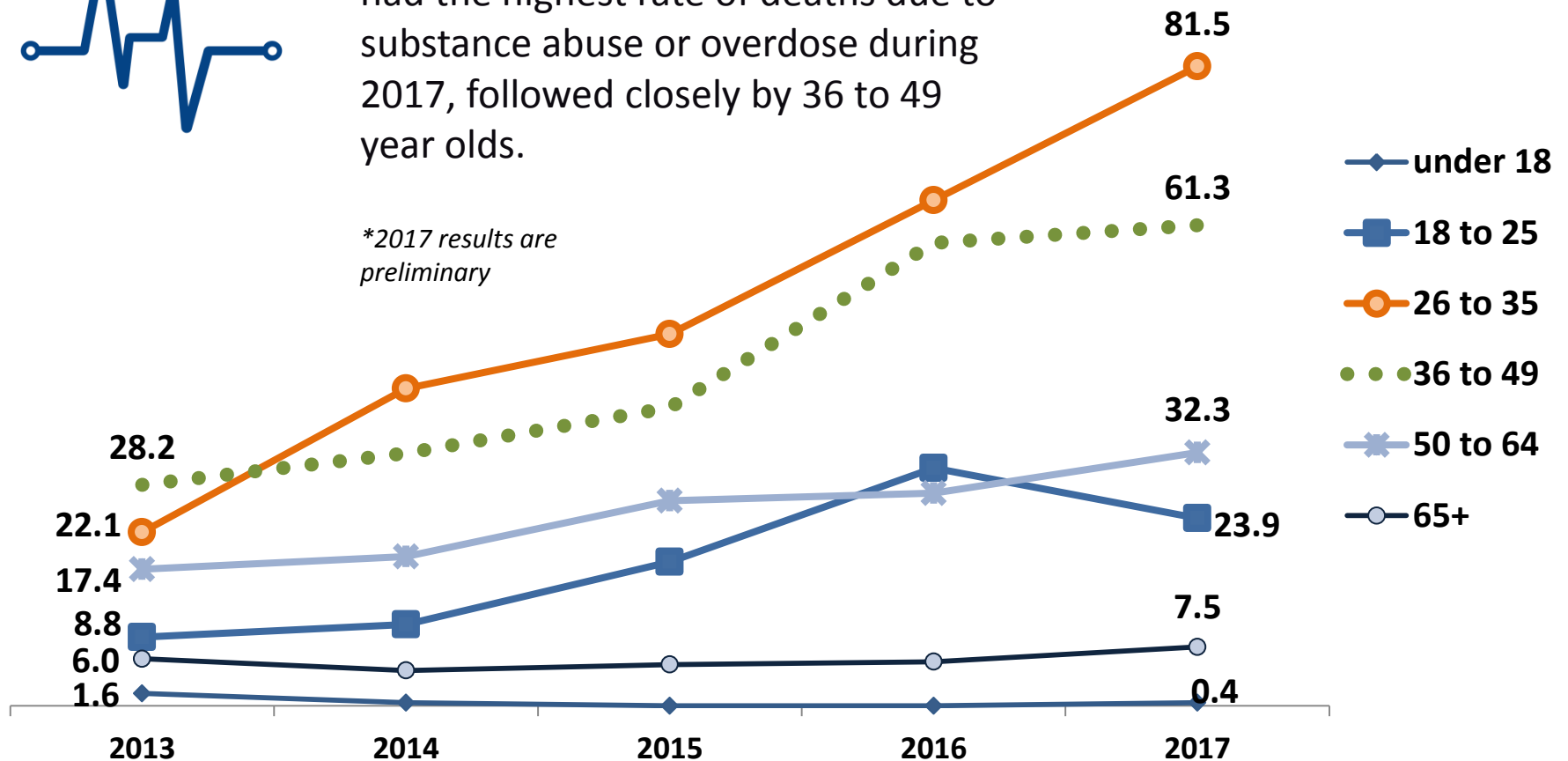
***Non-pharmaceutical fentanyl includes illicitly manufactured fentanyl and fentanyl analogs but excludes pharmaceutical fentanyl (e.g., fentanyl patches).*

Substance use and overdose deaths, per 100,000 residents, by age group: 2013–2017*



Adults between the ages of 26 and 35 had the highest rate of deaths due to substance abuse or overdose during 2017, followed closely by 36 to 49 year olds.

**2017 results are preliminary*



Source: DRVS

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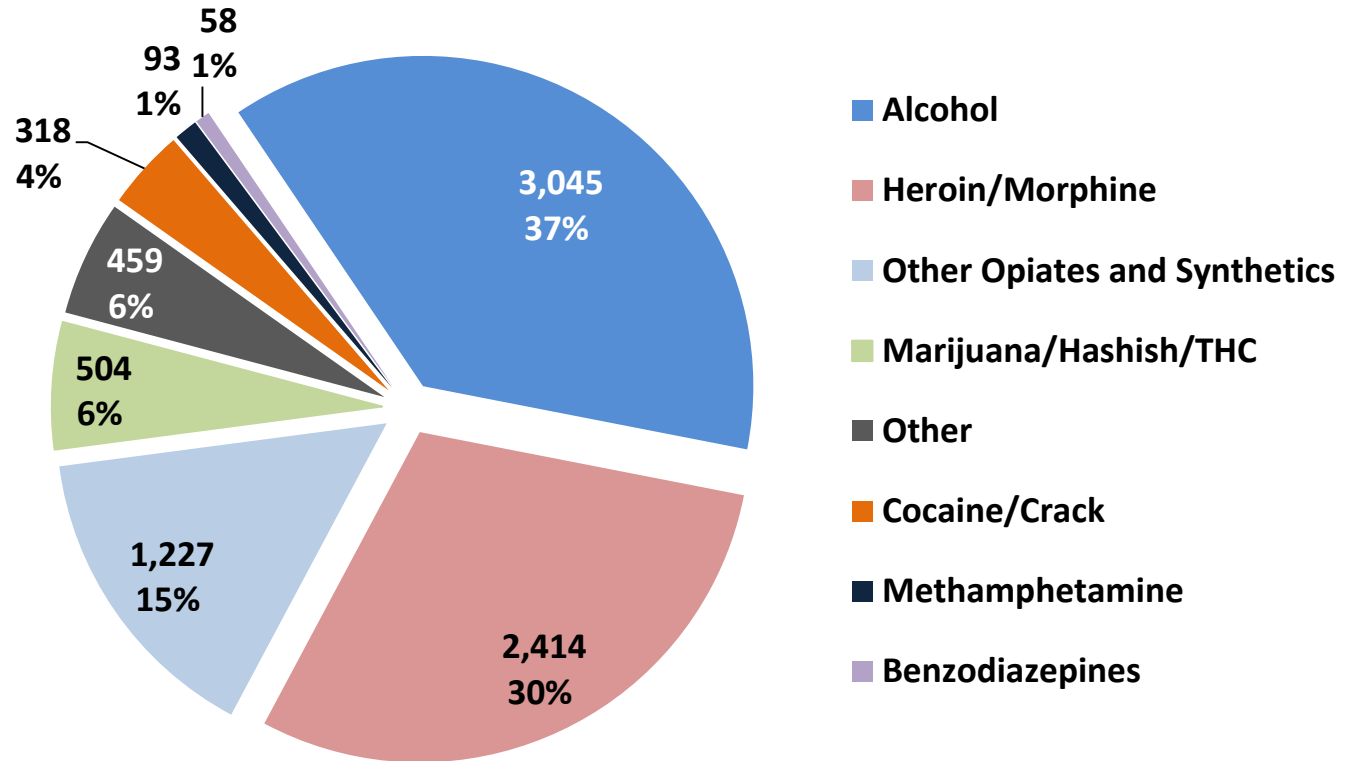
Treatment

(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.

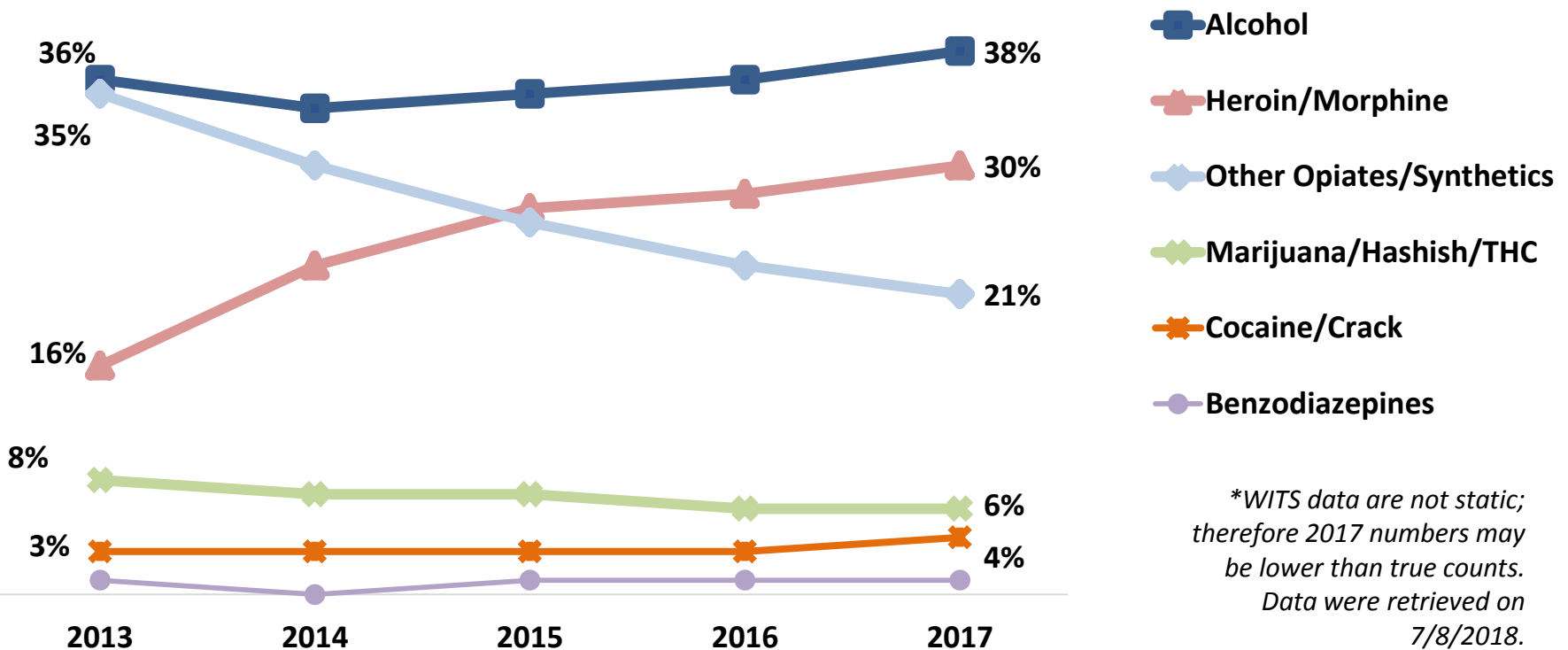


NOTE: WITS does not capture data from all treatment facilities or services provided in Maine and therefore is not a complete representation of ALL substance use treatment services provided in the state. There are many organizations and private practitioners such as primary care practitioners and independent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



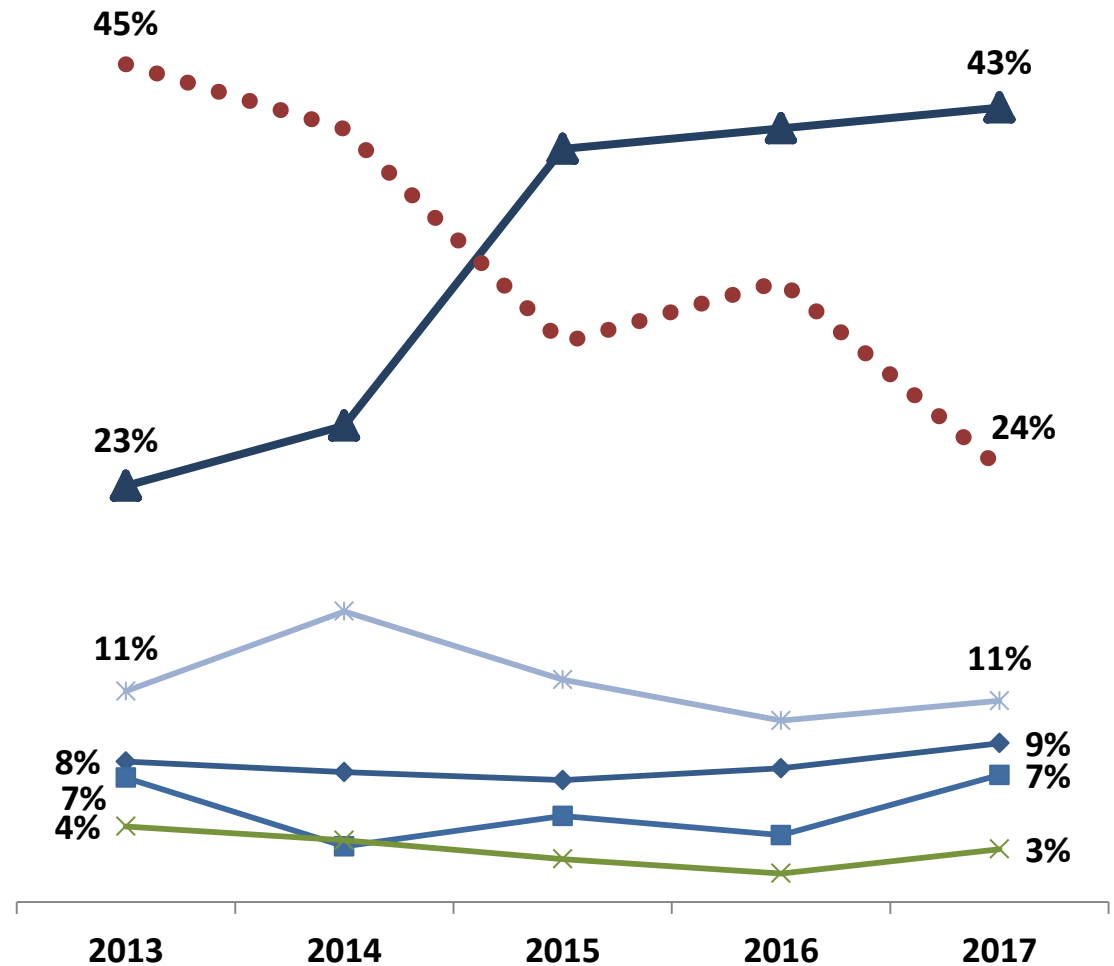
**WITS data are not static; therefore 2017 numbers may be lower than true counts. Data were retrieved on 7/8/2018.*

Treatment admissions of pregnant women, by primary substance: 2013–2017*

In 2017, about eight out of ten treatment admissions for pregnant women were related to illicit or prescription opiates.



- ◆ Alcohol
- Cocaine/Crack
- ▲ Heroin/Morphine
- × Marijuana/Hashish/THC
- * Methadone/Buprenorphine
- Other Opiates and Synthetics



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

Source: WITS

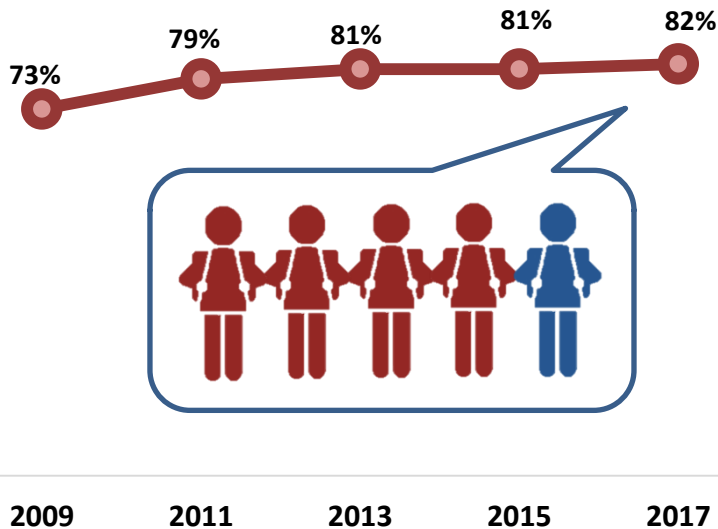
Contributing Factors

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



Perception of harm: binge drinking weekly

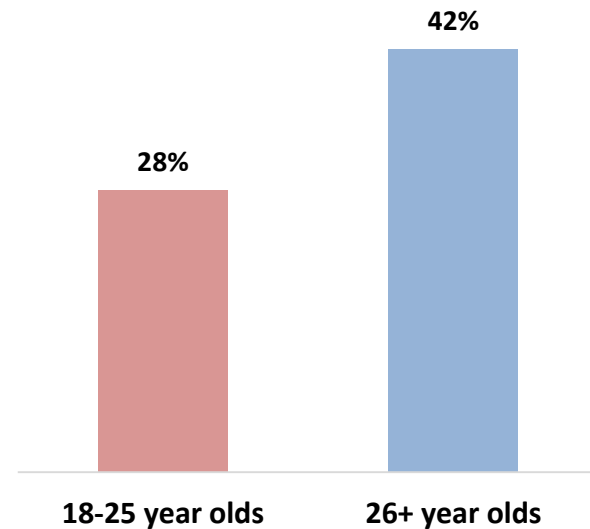
High school students perceiving harm from binge drinking weekly



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

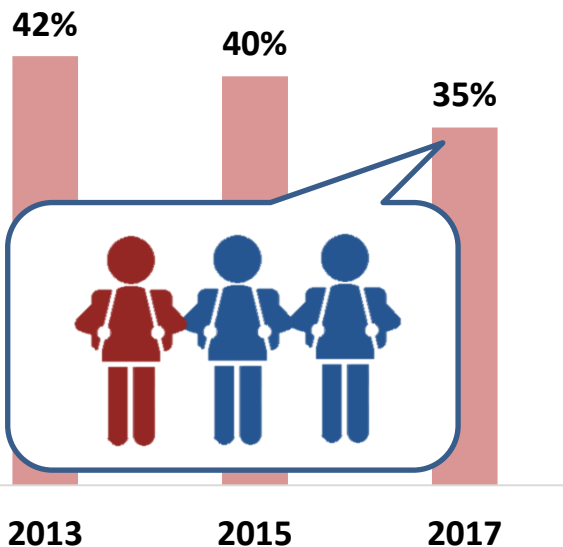


Source: NSDUH

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

Perception of harm: marijuana use

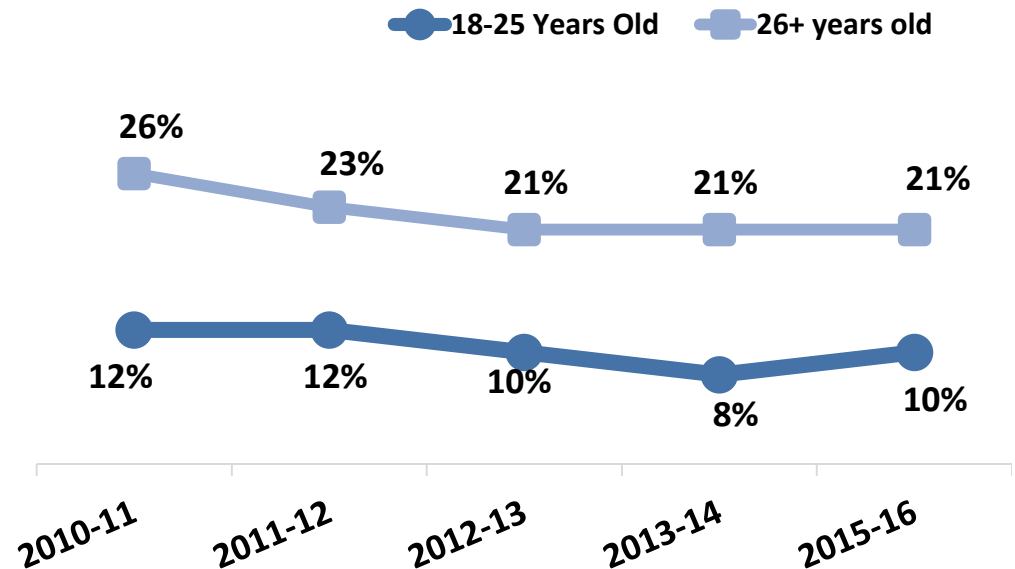
High school students perceiving risk from smoking marijuana once or twice a week



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

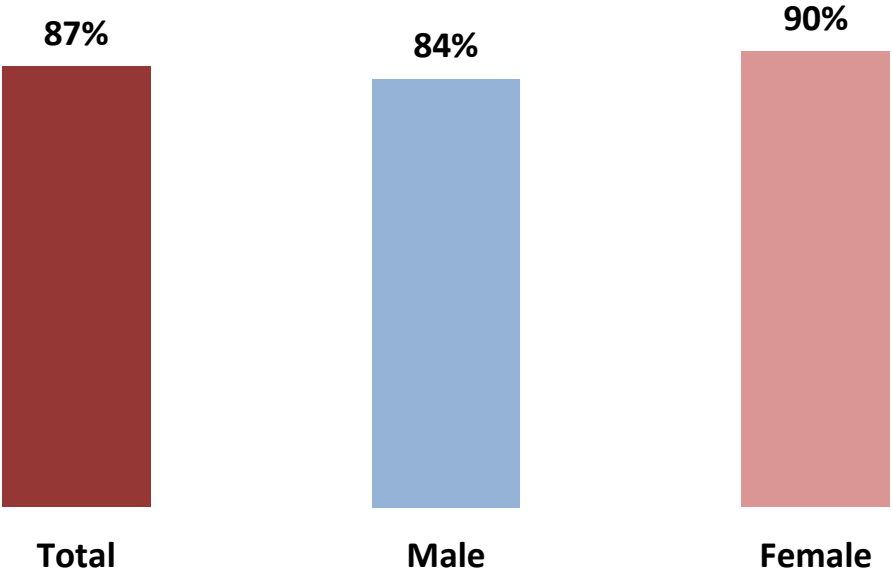


Source: NSDUH

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

High school students who felt using a prescription drug not prescribed to them was harmful, by age group: 2017

Most high school students (87%) reported that it would be harmful if they took a prescription drug that was not originally prescribed to them. Female students were more likely to perceive a risk than males.



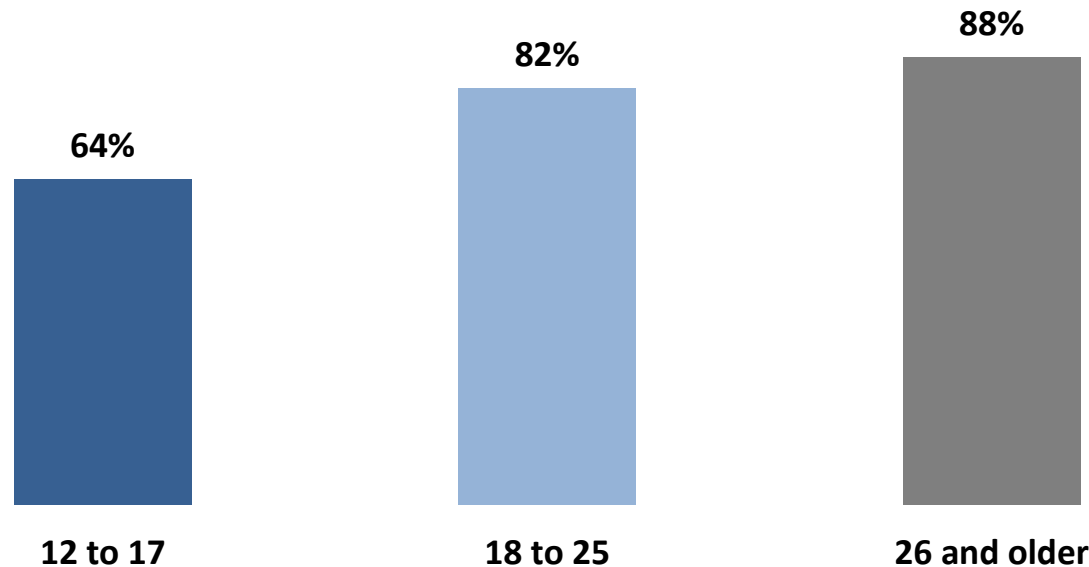
Although not shown, students who do not believe there is moderate-to-great risk in misusing prescription drugs are three times as likely to have ever misused prescription pain relievers as their peers who do perceive risk of harm.

Source: MIYHS

Mainers perceiving great risk from trying heroin once or twice, by age group: 2015-16



In 2015-16, the vast majority of adults reported that trying heroin once or twice was risky. Youth 12 to 17 were much less likely to perceive a risk; about six out of ten thought there was great risk from trying heroin once or twice.



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.



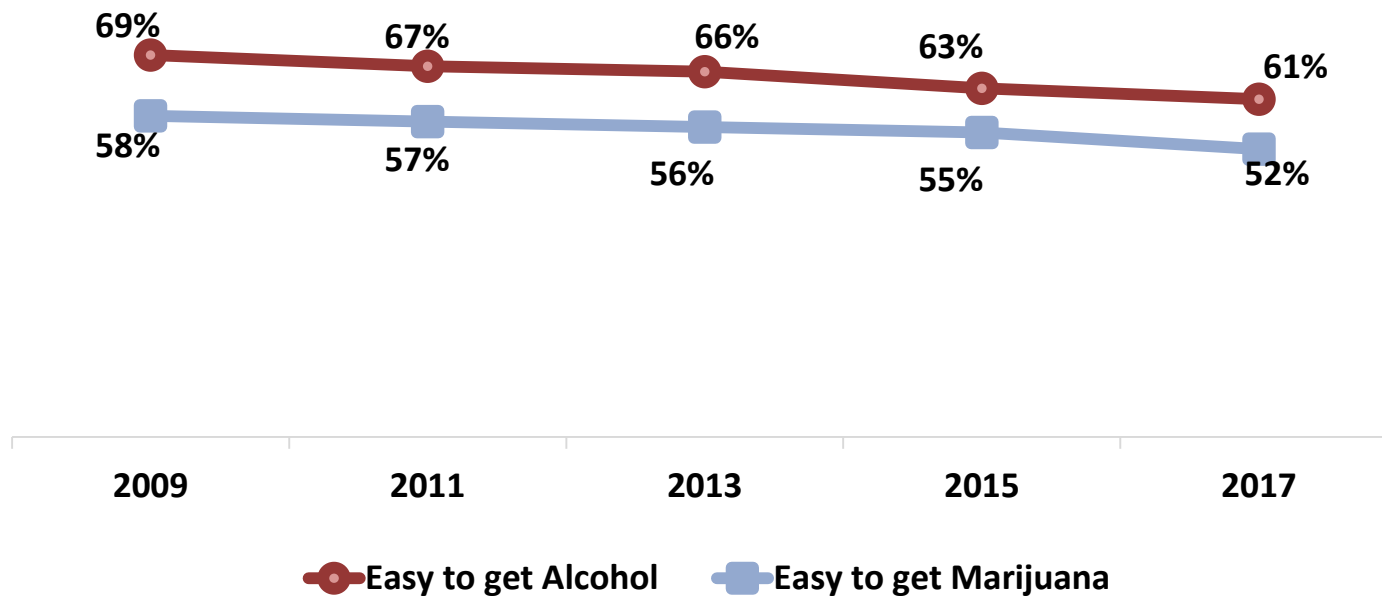
thought there was a **moderate-to-great risk in smoking marijuana** regularly were almost 7X less likely to smoke marijuana in the past month.



thought there was a **moderate-to-great risk in misusing prescription drugs** were 3X less likely to have ever misused prescription pain relievers.

Perception of access among high school to alcohol and marijuana

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

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.*



*thought **prescription drugs were NOT easy to get** were 4x less likely to have ever misused prescription pain relievers.*

Attribution Statements (Perception of Access)

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



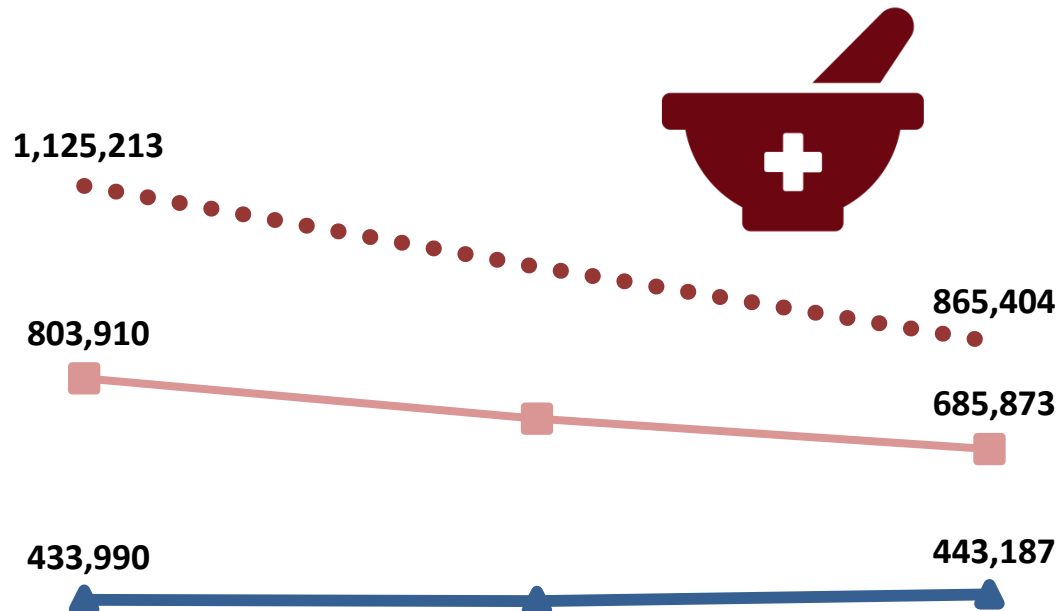
- *thought **cigarettes were NOT easy to obtain** were 6x less likely to report smoking cigarettes in the past month.*
- *thought **cocaine and amphetamines were NOT easily accessible** were 8x less likely to have ever used cocaine.*

Number of prescriptions dispensed in Maine, by type: 2015–2017

● Prescriptions for opiate agonists decreased by 23% from 2015 to 2017

■ Prescriptions for sedatives decreased by 15% from 2015 to 2017.

▲ Prescriptions filled for stimulants have remained stable since 2015.



**Opiate agonists only include opiates that activate opioid receptors within the body. This analysis does not contain opiate antagonists (e.g., buprenorphine), medications that are commonly used to block opioid receptors and prevent the body from responding to opiates.*

2015

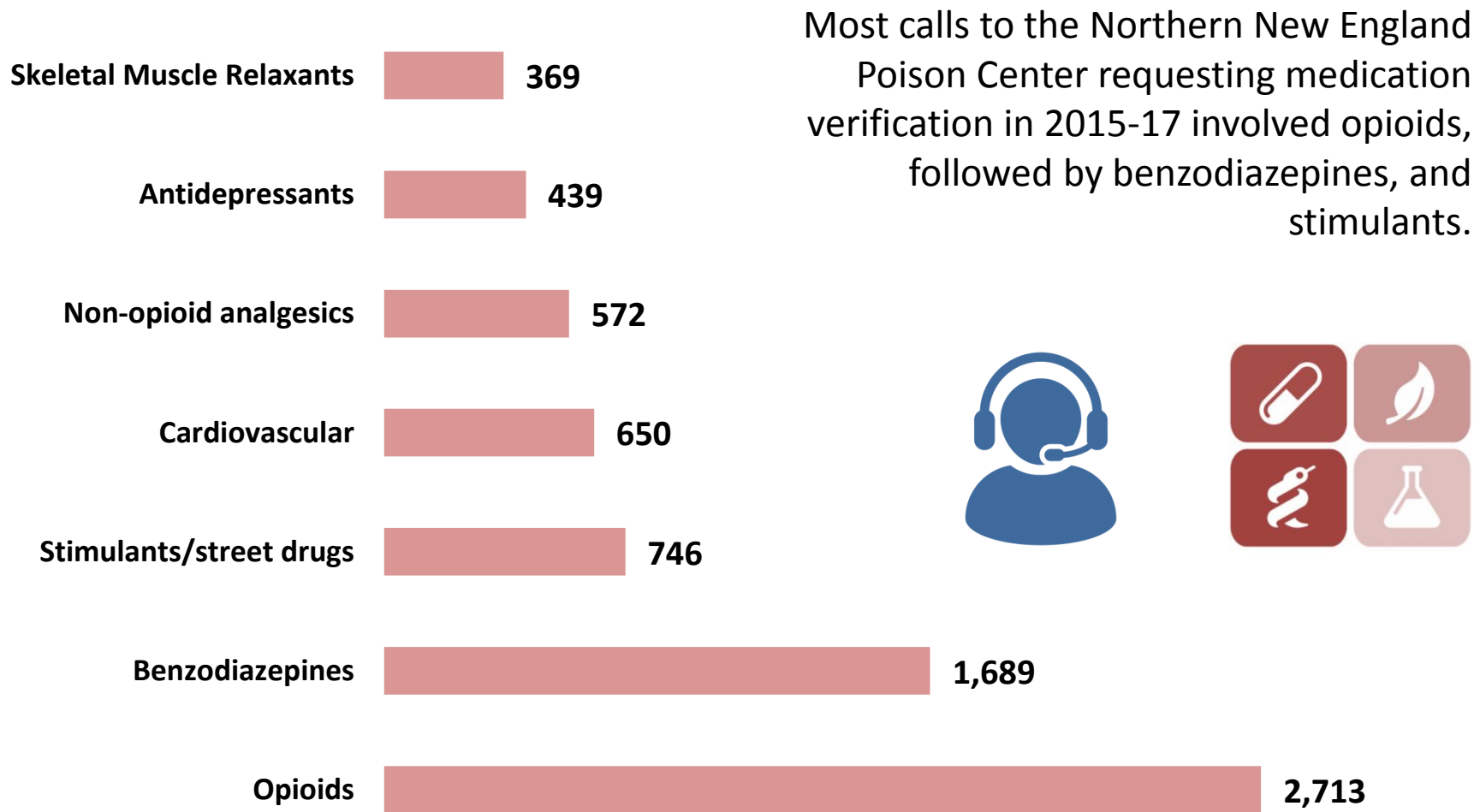
2016

2017

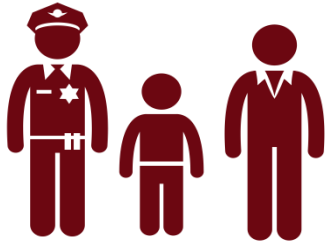
■ Sedative ▲ Stimulants ●●● Opiate Agonists*

Source: PMP

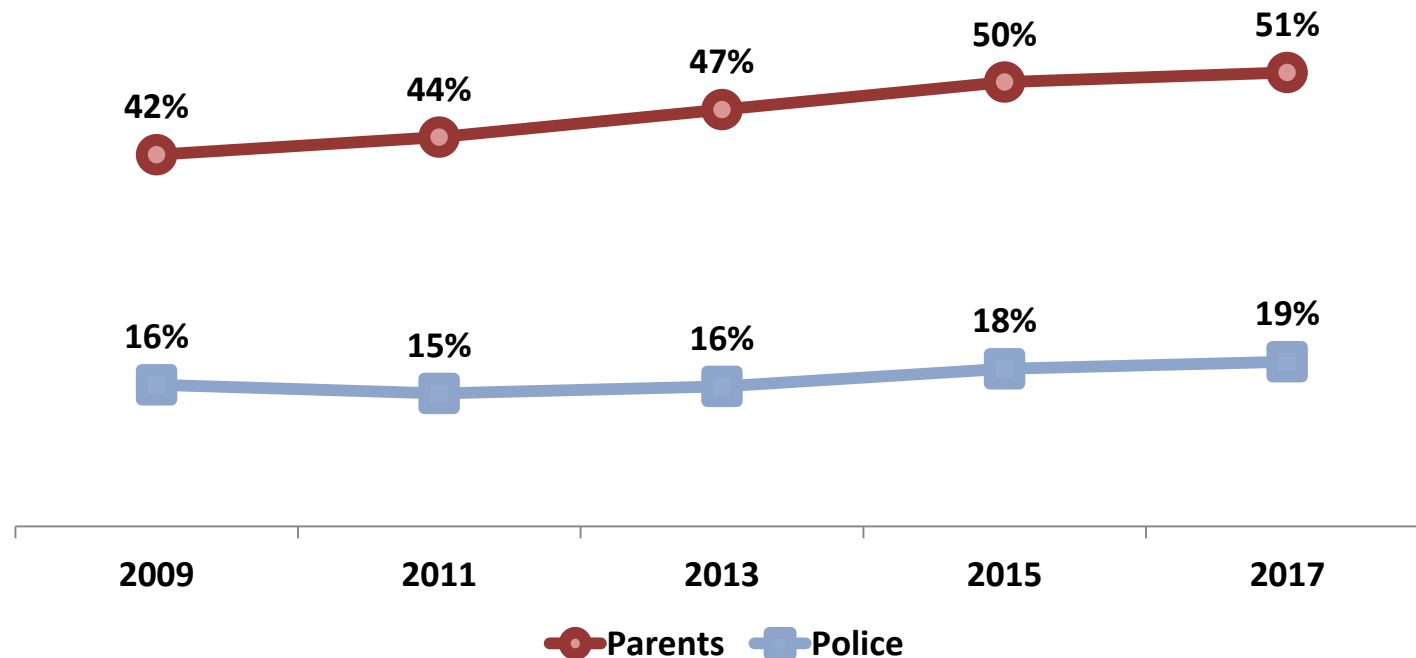
Substances most frequently requested for medication verification by non-law enforcement, by type: 2015–17



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.



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.*

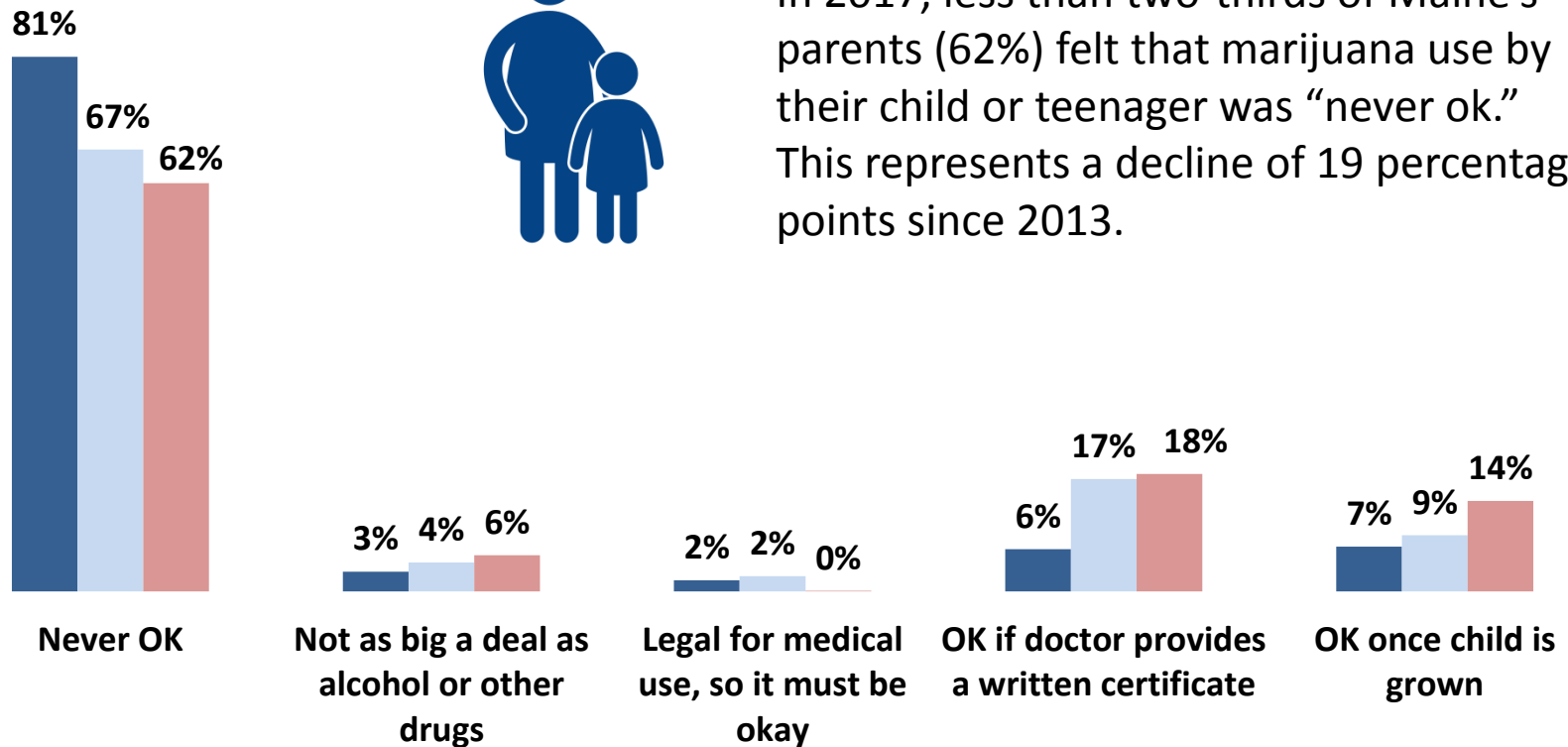


*believed they would be **caught by the police for smoking marijuana** in their neighborhood were 5x less likely to smoke marijuana in the past month.*

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.



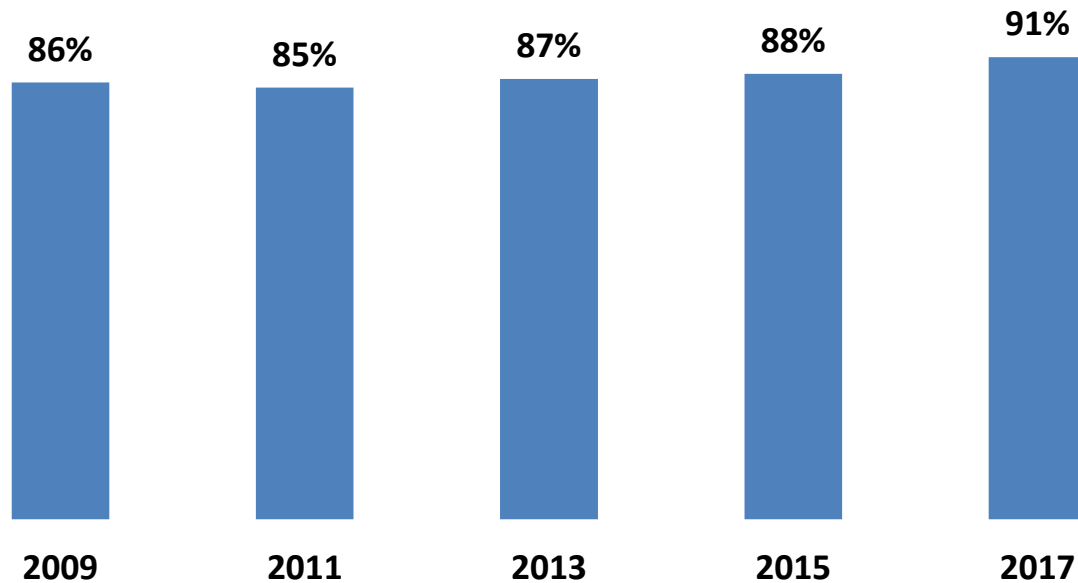
Source: Parent Survey, 2013–2017

■ 2013 ■ 2015 ■ 2017

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



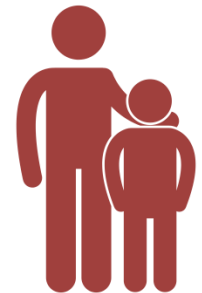
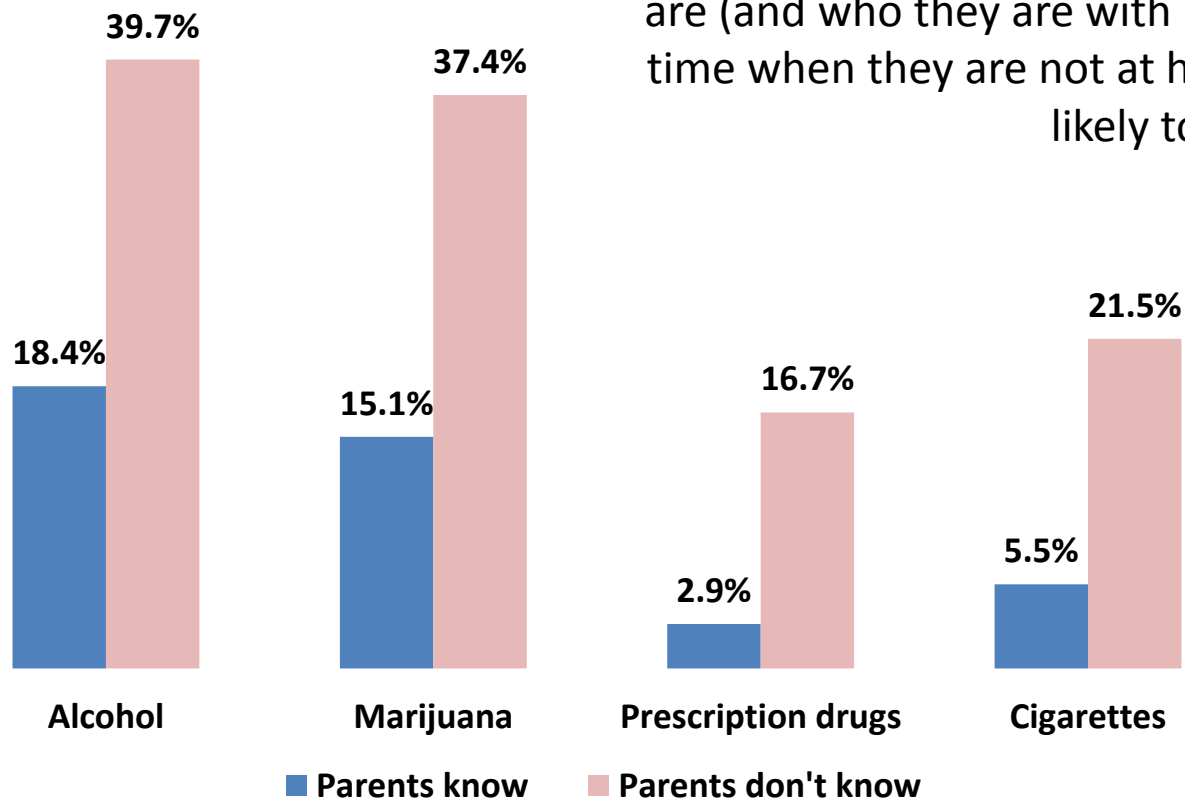
In 2017, nine in ten high school students reported that their family has clear rules around alcohol and drug use. Rates have been steadily increasing.



Source: MIYHS

Past month high school substance use by whether or not their parents know where they are: 2017

High school students who stated that their parents or guardians did not know where they are (and who they are with most or all of the time when they are not at home) were more likely to use substances.



Attribution Statements (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 4x less likely to have used marijuana in the past month.



believe their parents have clear rules about substance use are half as likely as their peers to drink alcohol.



believe their parents would feel it would be wrong for them to drink were half as likely to drink alcohol in the past month.

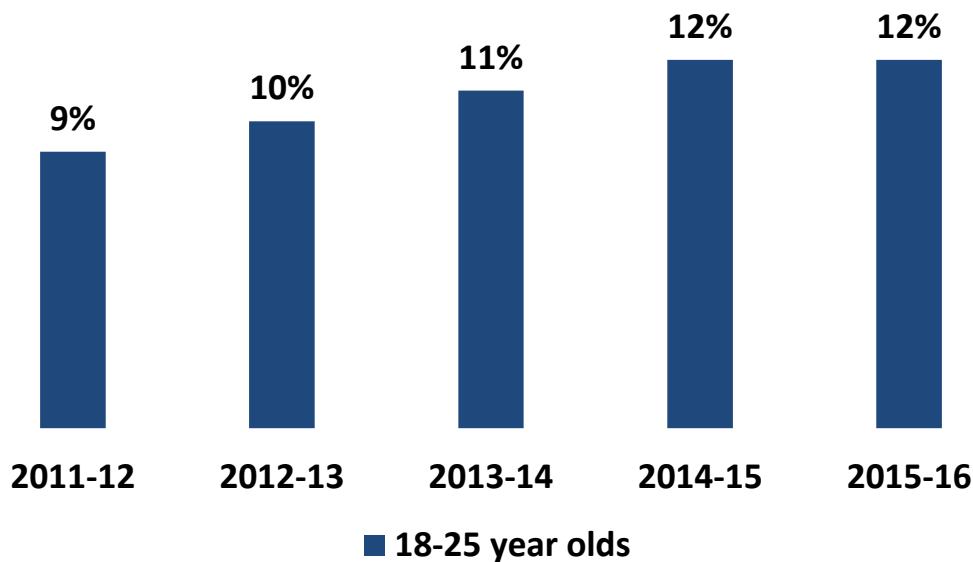
Mental Health



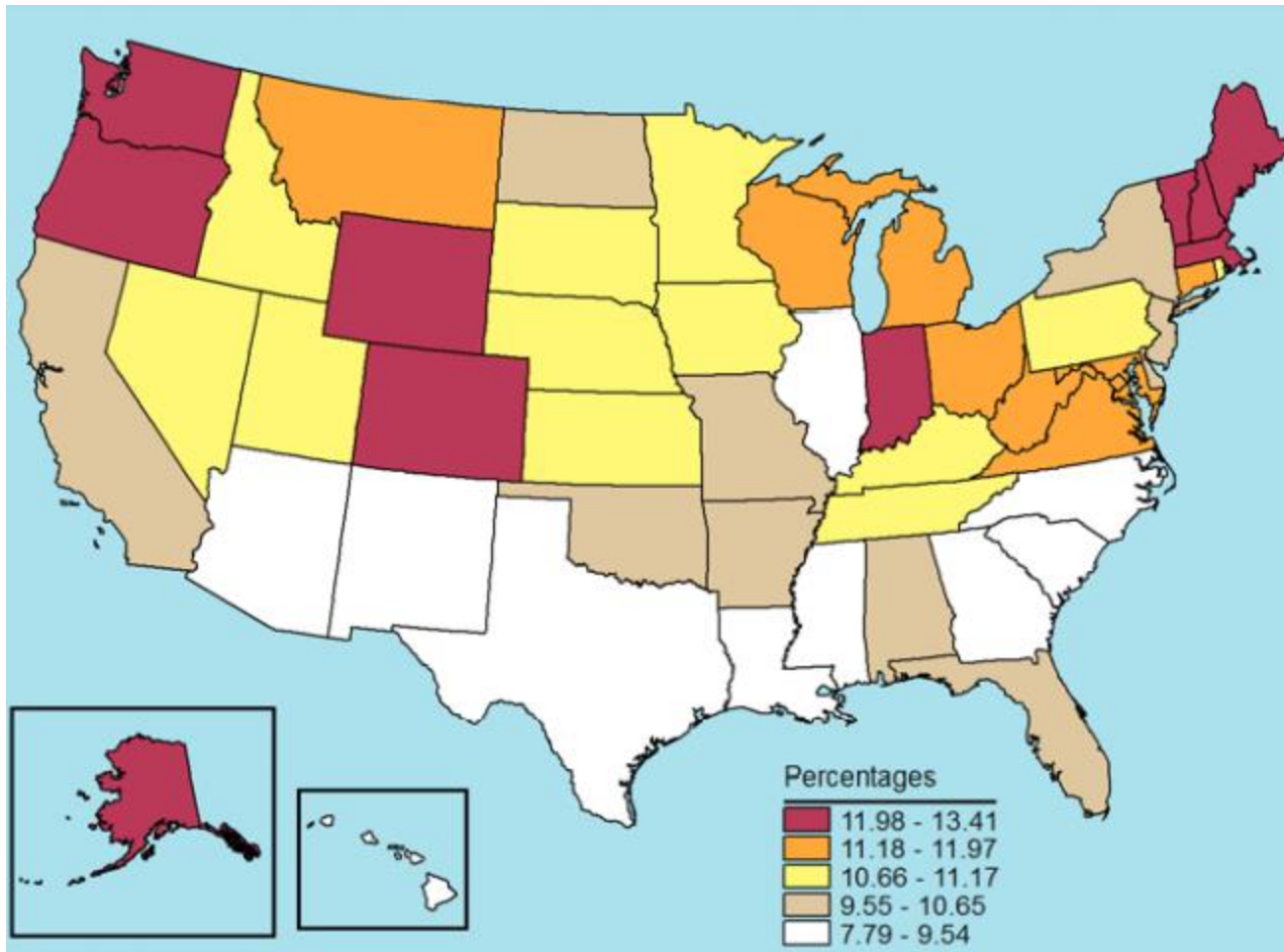
Young adults (18 to 25) experiencing at least one major depressive episode* in the past year: 2011–12 to 2015–16

**Major depressive episode (MDE) is defined as in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), which specifies a period of at least two weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms.*

Major depressive episodes in Maine are most prevalent among young adults 18 to 25 (12%); rates have been increasing over the past several years.



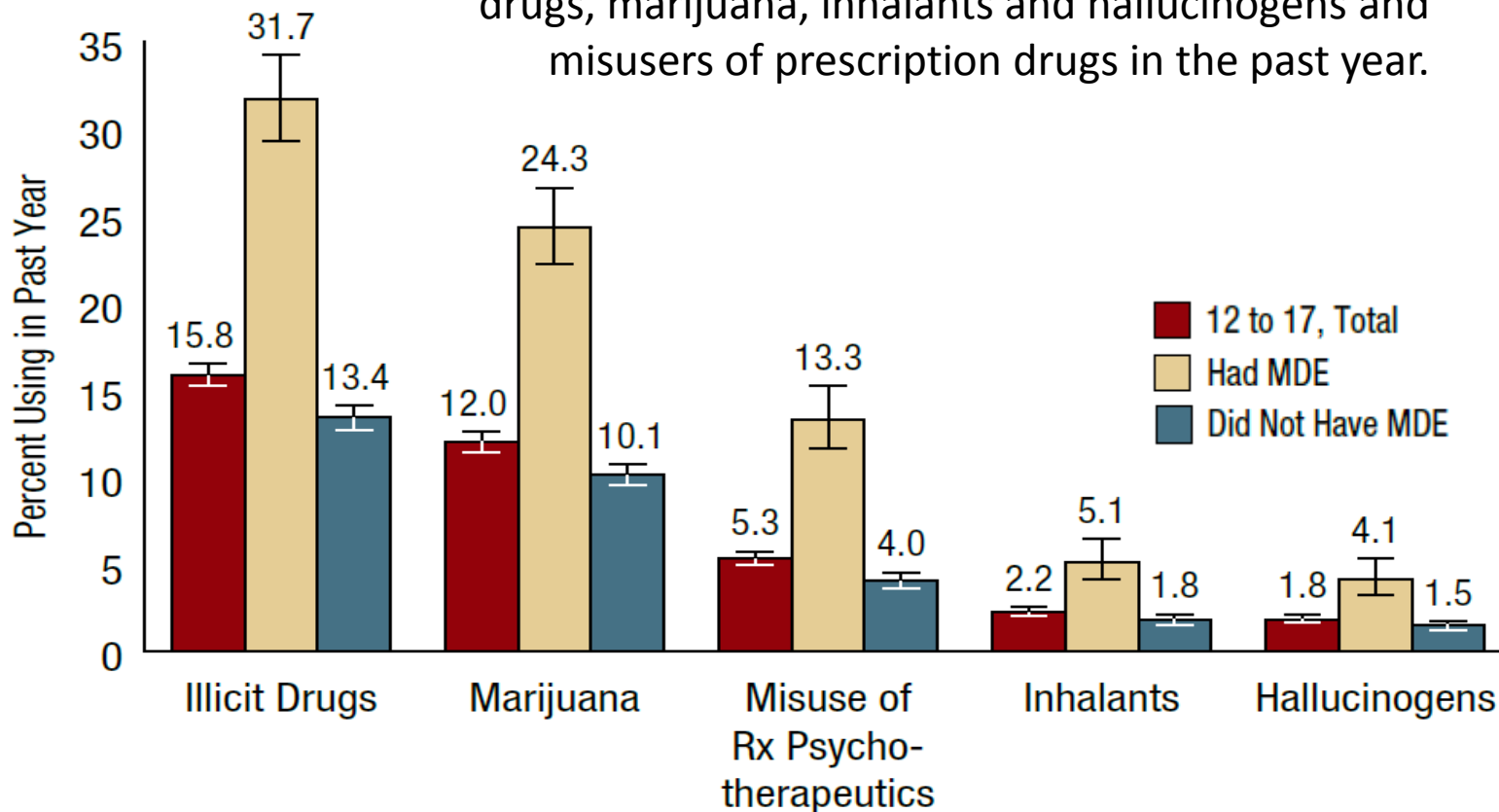
Major depressive episodes in the past year among young adults 18 to 25, by state: 2015-16



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

Past year illicit drug use among youth 12 to 17 years old, by the past year major depressive episode (MDE) status Nationwide: 2016

Youth in 2016 with a MDE in the past year were more likely than those without an MDE to be users of illicit drugs, marijuana, inhalants and hallucinogens and misusers of prescription drugs in the past year.

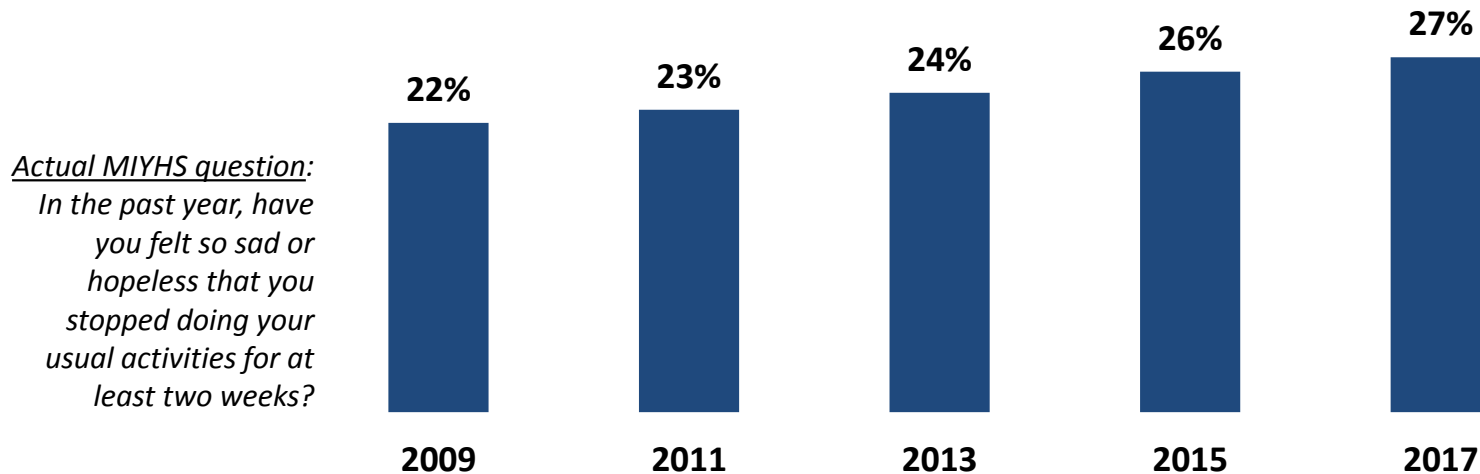


Source: NSDUH

High school students who reported feeling sad or hopeless in the past year: 2009–2017



In 2017, more than one in four high school students reported feeling sad or helpless for at least two weeks in the past year. Rates have been steadily increasing over the past several years.



Source: MIYHS

High school students who reported feeling sad or hopeless in the past year: 2017

Students who reported feeling hopeless or sad for at least two weeks within the past twelve months were:



- **2x** as likely to have used marijuana or to have engaged in binge drinking in the past 30 days, and
- **3x** as likely to have misused prescription drugs during the past 30 days.

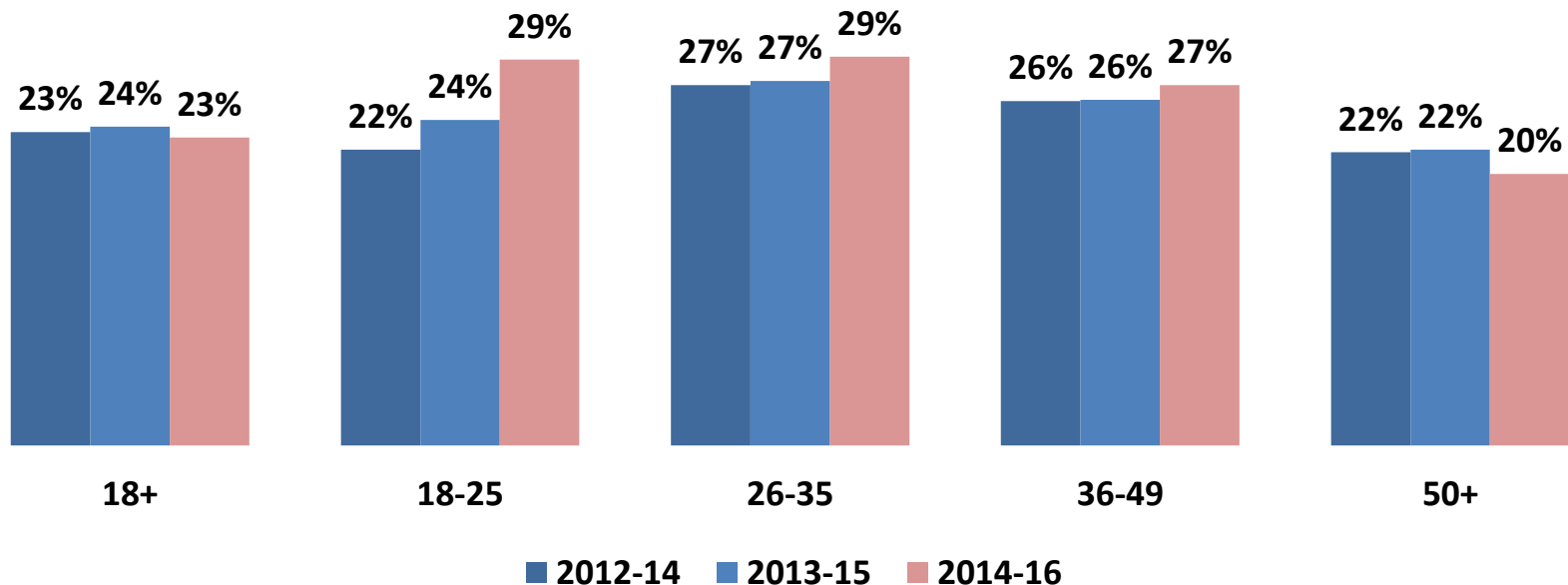
Source: MIYHS

Actual MIYHS question: In the past year, have you felt so sad or hopeless that you stopped doing your usual activities for at least two weeks?

Adults who have been told they have a depressive disorder by age group: 2012-14 to 2014-16



In 2014-16, nearly a quarter of adults in Maine reported having ever been diagnosed with a depressive disorder. Rates among 18 to 25 year olds have been steadily increasing.

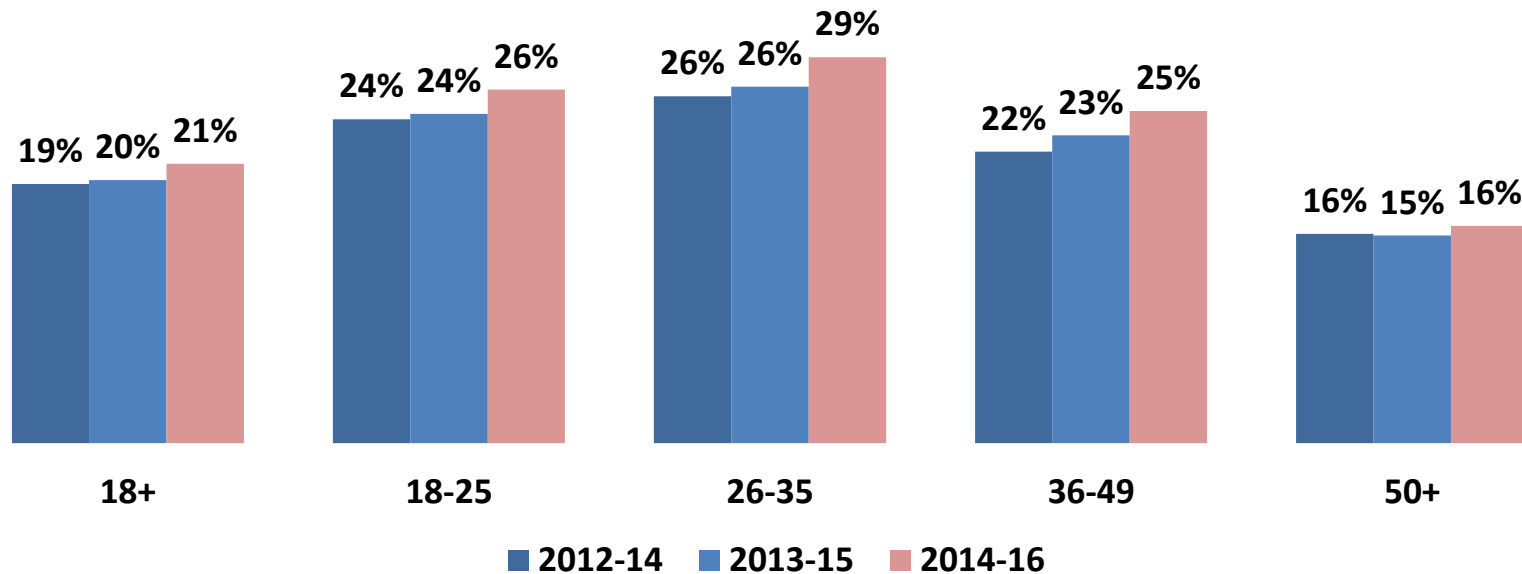


Source: BRFSS

Adults who have been told they have an anxiety disorder by age group: 2012-14 to 2014-16



In 2014–16, approximately one in five adults in Maine reported having ever been diagnosed with an anxiety disorder. Rates were highest among Mainers 26 to 35 and have been increasing among adult age groups.

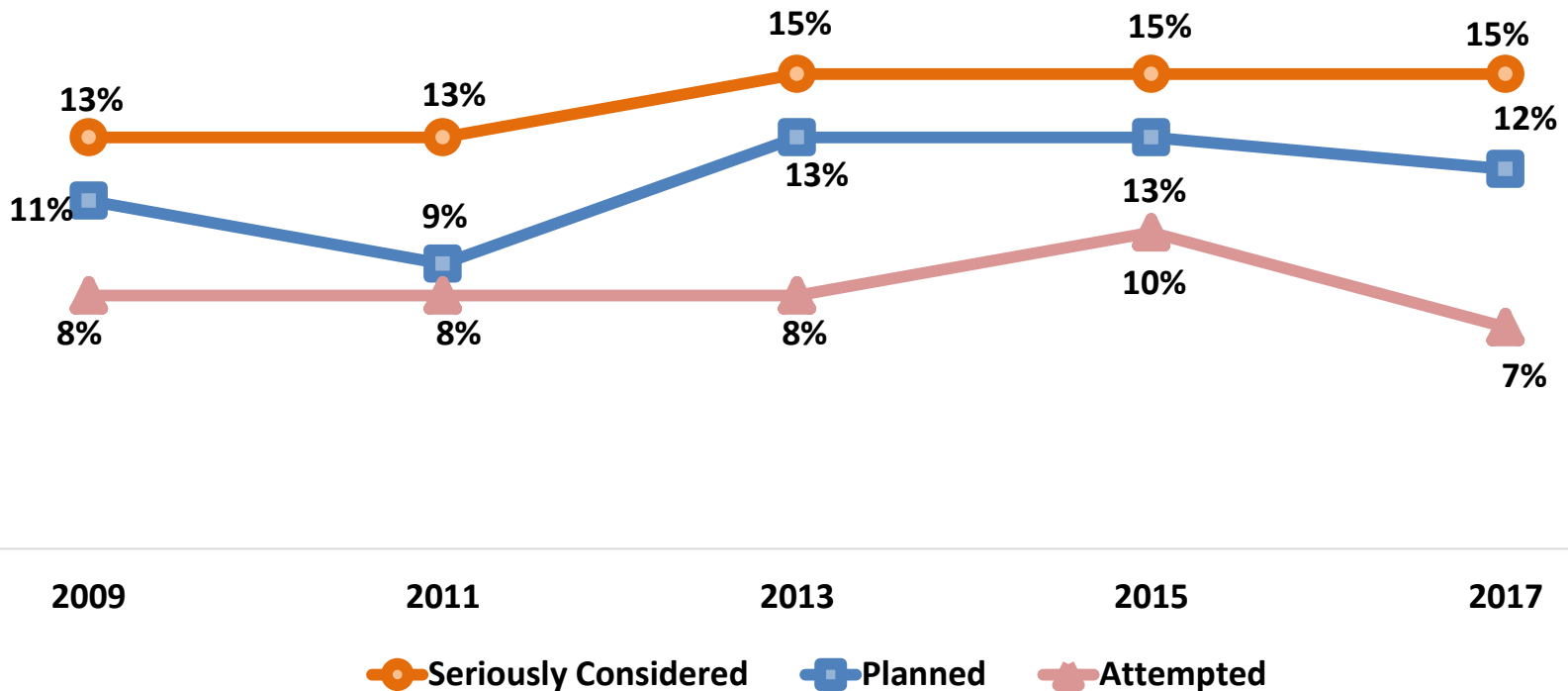


Source: BRFSS

High school students who considered, planned, or attempted suicide in the past year: 2009–2017

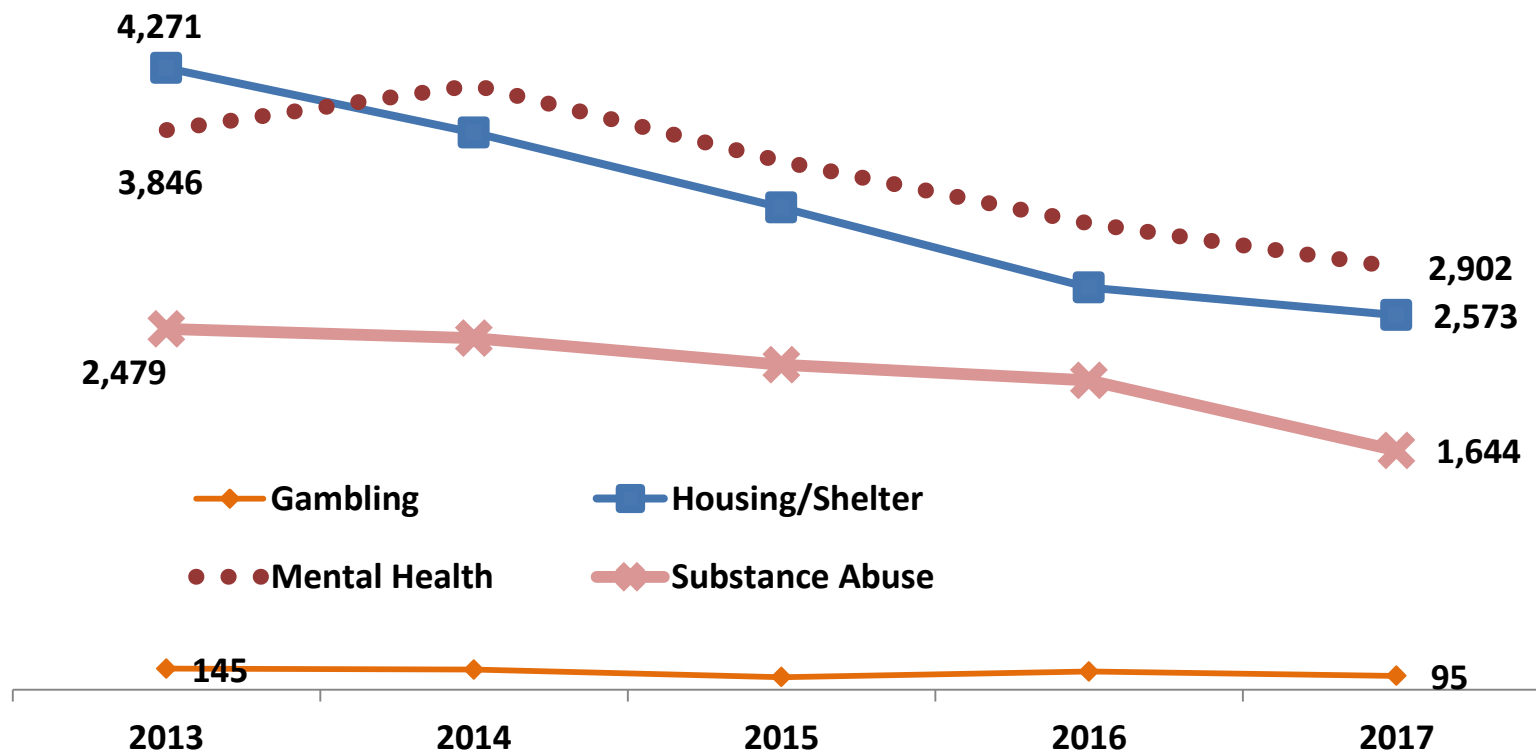


In 2017, an average of one in seven (15%) Maine high school students considered suicide and a little more than one in ten (12%) had actually made a plan for suicide



Number of 2-1-1 Maine referral calls, by service type: 2013–2017

Referral calls for mental health, housing/shelter, and substance use have observed steady declines in recent years while calls related to gambling have remained relatively stable.



Source: 211 Maine

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*

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Contact

Timothy Diomedede, MPPM
SEOW Coordinator/Prevention Data Analyst

Timothy.Diomedede@maine.gov

www.maine-seow.com

