Substance Use Trends in Maine
State Epidemiological Profile 2019

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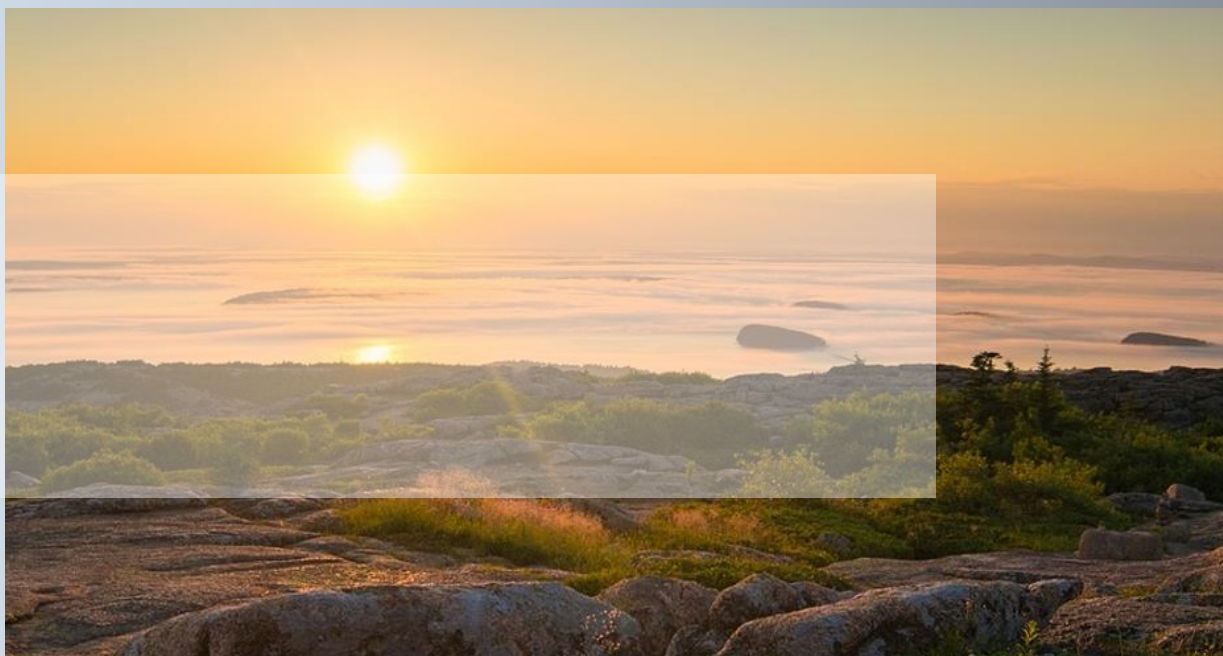
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September 2019

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Executive Summary

This report considers the objectives of the Maine Department of Health and Human Services (DHHS), Maine Center of Disease Control and Prevention (CDC): to identify substance use patterns in defined geographical areas, establish substance use trends, detect emerging substances, and provide information for policy development and program planning. It also highlights all the prevention priorities identified in the Maine CDC strategic prevention plan: underage drinking, high-risk drinking among 18- to 25-year-olds, misuse of prescription drugs among 18- to 25-year-olds, and marijuana use in 12- to 25-year-olds; it also monitors the progress being made to address these priorities. This report includes data available through the 2018 calendar year. Key findings of this report are highlighted below. All indicators and data source information are provided in the full report.

Consumption of Substances

Alcohol

- In 2017, among high school students who reported drinking in the past month (one in four), approximately one-third reported they had five or more drinks in a row at least once in the past month. Males appear more likely than females to participate in this behavior, as are older students relative to younger students.

- The highest binge drinking rates continue to be observed among the 18- to 25-year-olds, with about one in three reporting binge drinking within the past month.

- In 2017, one in ten pregnant women reported consuming any alcohol in their last trimester. Alcohol use rates observed an increase from 2015 to 2017.

- In 2016–17, 65,000 (6%) Mainers 12 and older qualified as having an alcohol use disorder. A little over one in 10 (11%) 18- to 25-year-olds qualified as having an alcohol use disorder in 2016–17.

Tobacco and Vaping Product Use

- Rates of cigarette use among youth and young adults have steadily decreased for the past several years.

- In 2017, nearly 14 percent of pregnant women reported smoking cigarettes in their last trimester. Cigarette use rates observed a slight decrease from 2015 to 2017 and were highest among younger women, as well as among those with lower levels of education.

- About one in three high school students reported having ever used a vaping product and about one in seven reported using tobacco in the past month. Among students who had ever used a vaping product, half reported that the last time they had used it was flavoring, a quarter reported it to be tobacco-based oil, one in eight reported it was Marijuana-based oil, and 8 percent were unsure.

- E-cigarette use increased among adults 18 and over from 2016 (18%) to 2017 (21%). E-cigarette use has surpassed cigarette use in adult Mainers.

Marijuana

- In 2017, about one in five high school students reported using marijuana within the past month; rates have decreased slightly in recent years.

- The highest rates of marijuana use among adults were observed among 18- to 25-year-olds (34%). Marijuana use rates among adult Mainers have been steadily increasing over the past several years.

Prescription Drugs

- The percentage of high school students reporting they have misused a prescription medication in the past month increased from 2015 (5%) to 2017 (6%). In 2017, about one in 10 high school students reported to have misused a prescription pain medication during their lifetime.

- Non-medical use of prescription pain relievers is more likely among young adults between the ages of 18 and 25 compared to adults age 26 and older. Seven percent of 18- to 25-year-olds reported having misused pain relievers in the past year.

Other Illegal Drugs

- In 2017, 7 percent of high school students reported ever using inhalants, 5 percent reported ever using cocaine, and 3 percent reported ever using heroin. Lifetime rates for inhalant use continue to decrease, but the lifetime use rates of cocaine and heroin have remained unchanged since 2015.

- In 2016–17, 6 percent of 18- to 25-year-olds, 2 percent of youth aged 12 to 17, and 2 percent of those 26 and older reported having used illicit drugs other than marijuana in the past year.

- In 2016–17, almost 7 percent of 18- to 25-year-olds and 1 percent of Mainers 26 and older reported they had used cocaine at least once in the past year and 0.51 percent of Mainers 12 and older (approximately 6,000 residents) self-reported that they had used heroin within the past year.

Consequences Resulting from Substance Use and Misuse

Substance-Exposed/Drug-Affected Babies

- In 2018, there were 904 reports to Child Protective Services regarding infants born exposed to substances (drug-affected babies); this accounted for about 7 percent of the live births in Maine. After steadily increasing from 2014 to 2016, the number of drug-affected baby reports began to decline in 2017 and continued to decline by 7 percent from 2017 to 2018.

Criminal Justice Involvement

- Total Operating Under the Influence (OUI) arrests have remained stable over the past several years; whereas arrests pertaining to violating liquor laws (excluding OUIs) have decreased substantially.

- In 2017, about seven out of 10 drug-related offenses were for possession rather than sale and manufacturing. From 2016 to 2017, adult and juvenile arrests related to drugs declined by 37 percent.

- In 2018, the majority of Maine Drug Enforcement Agency (MDEA) trafficking investigations involved cocaine, followed by heroin and other opiates. From 2017 to 2018, MDEA trafficking investigations related to heroin and other opiates decreased by one-fifth, and investigations involving cocaine increased 27 percent.

Motor Vehicle Crashes Involving Alcohol/Drugs

- The proportion of alcohol and/or drug-related motor vehicle crashes has remained stable at 4 percent.

- In 2018, drivers between 21 and 24 had the highest rate of alcohol/drug-related crash rates. Males were almost three times as likely to be the driver in an impaired crash in 2017.

- In 2018, nearly one in four (22%) fatal motor vehicle crashes involved alcohol and/or drugs.

- In 2015–17, the rates of alcohol/drug-related motor vehicle crash fatalities were highest among 21- to 24-year-olds, followed by adults aged 25 to 34. Following a decline in past years, recent rates of alcohol/drug-related fatalities have increased across all age ranges.

Overdoses and Related Deaths

- In 2018, drug/medication overdoses decreased for the first time since 2014, while those related to alcohol overdose increased slightly. Rates of drug/medication overdose responses were highest among Mainers between 36 and 54 years old and the same trend is seen in alcohol overdose rates.

- In 2018, there were a total of 354 overdose deaths due to substance use in Maine. From 2017 to 2018, overall overdose deaths decreased by 15 percent. In 2018, seven out of 10 overdose deaths were related to illicit drugs, while nearly six out of 10 involved a pharmaceutical drug.

- Non-pharmaceutical fentanyl continues to play a major role in drug-related deaths—comprising about six out of 10 total deaths—whereas the influence of heroin, benzodiazepine, and methadone began to decline in 2017. However, alcohol, benzodiazepines, cocaine and heroin still made up a large proportion of drug-related deaths in 2018.

Factors Contributing to Substance Use and Misuse

Availability and Accessibility

- Social access continues to be a primary way that underage youth obtain alcohol. Of those students who obtained alcohol, nearly two out of five reported that someone had given it to them.

- In 2017, about one in five parents felt that, at home, their child would be able to access prescription medications that were not prescribed to them, without permission. This is a decrease from 2015, when nearly a third of parents felt their child could access prescriptions.

- More than half of high school students believed that marijuana is easy to obtain. This rate has steadily declined from 2009 (58%) to 2017 (52%).

- From 2016 to 2018, the number of prescriptions prescribed for opiate agonists (excluding partial agonists such as buprenorphine) decreased by 21 percent, the number of prescriptions for sedatives decreased by 9 percent, and prescriptions for stimulants increased by 7 percent.

- Most calls to Northern New England Poison Center requesting medication verification in 2016–18 involved opioids, followed by benzodiazepines, and stimulants.

Perceived Harm

- Four out of five high school students think binge drinking once or twice a week is harmful. Perception of harm from binge drinking remains much lower among young adults. More than seven out of 10 young adults (aged 18 to 25) thought that binge drinking a few times a week was not risky.

- In 2017, about one-third of high school students felt smoking marijuana once or twice a week was risky. In 2016–17, less than one in 10 adults between 18 and 25 years old perceived smoking marijuana at least once per month as risky. Perceptions of harm regarding marijuana use have decreased among both youth and adults over the past several years.

- In 2016–17, more than eight out of 10 adults reported that trying heroin once or twice was of moderate-to-great risk. However, youth aged 12 to 17 were much less likely to perceive a risk. Only about one in three 12- to 17-year-olds thought there was great risk from trying heroin once or twice.

Perceived Enforcement

- In 2017, half of high school students thought they would be caught by their parents for drinking alcohol, while only about one in five felt they would be caught by the police. Perceptions of getting caught by parents or police have increased over the past several years.

- In 2017, about one quarter of high school students thought they would be caught by police for smoking marijuana. Rates have remained relatively stable over the past several years.

Community and Cultural Norms

- High school students largely believe that their parents and adults in their community think it would be wrong for them to drink alcohol regularly. In 2017, more than nine out of 10 students perceived that their parents would think it was wrong for them to use alcohol.

- Although high school students generally believe that their parents think it would be wrong for them to smoke marijuana; perceptions of disapproval have slowly decreased from 2009 to 2017; about one in five high school students felt their parents would not disapprove.

- The percentage of parents who felt it was never okay for their teen to use marijuana has substantially decreased from 2013 (81%) to 2017 (62%). In 2017, about one in six parents felt it would be okay if their teen used marijuana if they had a written certificate from a doctor or if the child is grown.

- In 2017, nine in 10 high school students reported that their family has clear rules around alcohol and drug use. Rates of perception of clear rules around drug use have been steadily increasing since 2011.

Mental Health, Suicide and Co-occurring Disorders

Mental Illness, Depression, and Anxiety

- From 2015–16 to 2016–17, 18- to 25-year-olds who experienced at least one major depressive disorder in the past year increased by 3 percentage points.

- Nearly one in five adults in Maine reported experiencing any mental illness in the past year, with adults between 18 and 25 years old experiencing the highest rate (27%).

- In 2015–17, nearly one in four adults in Maine reported having ever been diagnosed with depression, compared to about one in five reporting to have been diagnosed with anxiety. Adults ages 26 to 35 reported the highest rates of anxiety.

- The percentage of Maine high school students who reported feeling sad or helpless for at least two weeks in the past year has steadily increased, from 22 percent in 2009 to 27 percent in 2017.

Suicidal Ideation

- In 2017, an average of one in seven (15%) Maine high school students considered suicide, and a little more than one in 10 (12%) had planned for suicide; these rates have remained relatively stable. Students who had reported they had attempted suicide decreased from 2015 (10%) to 2017 (7%).

- In 2017, the percentage of high school students who had consumed alcohol in the past month and also had serious thoughts of suicide within the past year continues to be nearly one in four (24%); this is more than double the rate compared to students who did not drink.

Mental Health and Substance Use Co-occurrence

- In 2016, over half (51%) of all substance use treatment admissions also involved a mental health disorder.

- *2-1-1 Maine* referral calls for mental health, housing/shelter, and substance use observed increases from 2017 to 2018.

- The prevalence of substance use, suicidal ideation, and feelings of sadness and helplessness are higher among high school students who report certain risk factors. Children are much more likely to report feelings of sadness and helplessness if they have not had eight hours or more of sleep, report three or more adverse childhood experiences, or feel that they don't matter.

Treatment Admissions for Substance Use

Primary Treatment Admissions

- Nearly four in ten substance use treatment admissions listed alcohol as the primary reason for treatment in 2018, followed by heroin/morphine, and other opiates/ synthetics. In 2018, nearly half (47%) of primary admissions were related to either opioids or opiates, which is consistent with previous years. The proportion of primary admissions related to synthetic opiates continues to decrease as primary admissions involving heroin/morphine continue to increase.

Secondary Treatment Admissions

- Out of the admissions that listed a secondary substance, nearly one in three was related to marijuana and about one in five was related to synthetic opiates. Rates related to synthetic opiates have steadily decreased, while rates involving cocaine/crack have gradually increased.

Treatment Admissions and Pregnant Women

- In 2017, nearly 80 percent of pregnant substance use treatment admissions were related to opioids/opiates. In recent years, the percentage of pregnant treatment admissions primarily due to other synthetic opioids has steadily declined, while the proportion related to heroin has increased.

- The proportion of pregnant women who were admitted for treatment primarily due to other synthetic opiates has been declining since 2013, from 57 percent to 39 percent. Over the same period, the proportion of pregnant women admitted for heroin increased from 22 percent in 2013 to 43 percent in 2017.

Introduction

Demographics of Maine

The state of Maine had an estimated population of 1,338,404 people in 2018. With 20 percent of the population being 65 years old and older, a higher proportion than the overall US population (16%), Maine is considered an "aging" state. However, 19 percent of the state's population is under the age of 18 years old, a lower proportion than the average for the United States (23%). According to the 2017 U.S. Census estimate, 95 percent of Maine's population is White, non-Hispanic, followed by 1.6 percent who are Hispanic, 1.6 percent who are Black, 1.2 percent who are Asian, and 0.7 percent who are American Indian. There are five Native American tribal communities in Maine: the Penobscot, the Passamaquoddy (Pleasant Point and Indian Township), the Maliseet and the Micmac, but their numbers are likely underreported on the census. Washington, Androscoggin, and Cumberland are the most racially diverse counties, each home to communities made up of people from many ethnic backgrounds and national origins; this is due in large part to refugee resettlement programs located within these counties.

Maine has four metropolitan areas throughout the state, numerous small towns and communities, and vast areas that are virtually unpopulated. While the average number of people per square mile was 43.1 in 2018, this greatly varies by county. The most densely populated counties were Cumberland (with 337.2 people per square mile) and Androscoggin (with 230.2 persons per square mile), while the least densely populated counties were Piscataquis with 4.4, Aroostook with 10.8, and Washington with 12.8 persons per square mile.

Maine is also an economically diverse state. The median household income was $53,024 for the period of 2013–17, lower than the United States median income of $57,652. This varies greatly by location within the state. The southern coastal counties, such as Cumberland (where most of the population is located) have much higher median incomes than the northern, rural, and less densely populated counties, such as Piscataquis and Washington. At $65,702, Cumberland has the highest median household income, and is one of only two Maine counties where the median income is higher than the national median income (the other is York at $62,618). At the other end of this range, Piscataquis County has the lowest median income of $38,797. Aroostook County has the second-lowest median income at $39,021 a year.

It is within the context of these demographic and socioeconomic characteristics that substance use in Maine must be examined.

Purpose of this Report

This report considers the primary objectives to identify substance use patterns in defined geographical areas, examine substance use trends, detect emerging substance use, and provide information for policy development and program planning. It also highlights prevention priorities such as underage drinking, high-risk drinking among 18- to 25-year-olds, misuse of prescription drugs among 12- to 25-year-olds, marijuana use in 12- to 25-year-olds, and slowing the spread of methamphetamine use; it also monitors the progress being made to address these priorities.

This report includes data available through June 2019. Older and unchanged data are included when more recent data were not available. Five major types of indicators are included: self-reported substance consumption, consequences related to substance use, factors contributing to substance use, indicators related to mental health and substance use, and treatment admissions. For additional data and resources please visit the Maine State Epidemiological Outcomes Workgroup (SEOW) data dashboard at www.MaineSEOW.com.

Organization of the Report

This report is used by a variety of people for many reasons. Some need a snapshot of the status of a substance, while others are looking for longer-term trends. Still others may be seeking information on a population. Sometimes these points of view do not require new data, but rather special comparisons or presentations. To accommodate these diverse needs, the report is organized as follows:

- The **Executive Summary** provides the reader with a brief overview of the larger report. It includes statistics and findings, but does not contain graphical illustrations, long-term trends or comparative findings.
- The section **Data Sources, Indicators and Selection Criteria** describes the data sources and indicators that are included in the profile, as well as the process used to determine which indicators should be included in the profile.
- The **Full Report** presents the reader with more in-depth comparative and trend analyses for indicators that are critical to substance use and is broken into five major sections.
  - *Consumption* trends and patterns among some of the most used substances, to provide the reader a deeper understanding of those substances.
  - *Consequences* related to substance use, such as traffic accidents and poisonings.
  - *Factors* that contribute to substance use overall, such as norms and perceptions.
  - *Mental Health* indicators and how they relate to substance use.
  - Recent trends in *substance use treatment* admissions.

Data Sources, Indicators and Selection Criteria

This report includes data that were gathered from a multitude of sources. A detailed description of each source is provided below, consisting of information about the data included in each source, the strengths and weaknesses, and retrieval or contact information. This report includes data available through the 2018 calendar year.

A number of criteria are used annually to determine what information should be included in this report. A small SEOW workgroup applies these standards to each indicator and selects the best possible data source (or sources) to be included. Indicators that are determined to be redundant, no longer useful, or too confusing are updated to provide the reader with a streamlined and more comprehensive report. Each criterion is defined below:

- **Relevance:** To be included, each of the indicators must be directly related to substance use. The indirect effects of substance use reach throughout society in such areas as crime, health and education. However, this report limits indicators to those which can be directly related to substance use (*e.g.*, ambulance responses in which substance use was recorded as a factor, rather than generating an estimate of the percentage of all responses that could be related to substance use).

- **Timeliness:** Each of the indicators includes the most updated data available from the source. The timeliest data included are from the previous six months or year, but some data as old as three years may be included; this happens when the most recently collected data from the source are not yet available due to the timing of data collection and the publication of this report. The sources that reflect older information are included when they meet other important criteria. For example, the National Survey on Drug Use and Health, for which the most recent data available are from 2015–16, provides data that are highly relevant and reliable.

- **Availability:** For an indicator to be included in this report, data regarding its use must be available from a reliable source. That is, a question must be asked on a representative survey or an office must record incidents, and the source must be willing to release the results either to the general population, or the SEOW and/or its members. As stated above, the most recent data available from those sources are included in this report.

- **Reliability:** In order to include trended data in this report, the data available for each indicator must be reliable and comparable from year to year. They need to reflect the same indicator in the same manner for the same population each year.

- **Trending:** Trends are included in this survey for indicators in which reliable and comparable data are available from multiple years. In some instances, trending is limited or not possible due to limited availability of the data, changes in the way in which the data were collected, or changes in the survey question. For example, questions regarding the use of specific substances have been included and discontinued in use surveys as those substances have become more or less of a concern. Therefore, trending is only available for their use in the years those questions were included in the survey.

As described previously, there are multiple purposes for this report. One is to provide a snapshot of the most recent data regarding substance use, while another is to examine trends over time. Therefore, each indicator may have multiple sources of data that are included. While each indicator provides a unique and important perspective on substance use in Maine, none should individually be interpreted as providing a full picture of trends related to substance use in Maine. That is to say, the percentages and figures from one data source do not always align with the data and percentages from a similar source. Older data are often included to examine an indicator among a specific population or to identify trends over time. When discussing rates of prevalence, however, the user should rely upon the most recent data source available.

Description of Data Sources

Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a national survey administered on an ongoing basis by the National Centers for Disease Control and Prevention (CDC) to adults in all 50 states, several districts and territories. The instrument collects data on adult risk behaviors, including alcohol and drug use. The most recent data available are from 2017. **2017 BRFSS estimates are preliminary.** Due to methodological changes in weighting and sampling, data prior to 2011 cannot be trended with more current data. In some instances, due to smaller sample sizes, multiple years of data are combined in efforts to produce more reliable estimates. **Contact:** Melissa Damren, Maine BRFSS Coordinator; melissa.damren@maine.gov; (207) 287-1420.

Maine Department of Public Safety (DPS), Bureau of Highway Safety (BHS), Maine Department of Transportation (MDOT). The Bureau of Highway Safety is responsible for tracking all fatalities that occur on Maine's highways and reporting this information through the Fatal Analysis Reporting System (FARS). The data represented provide information on highway crashes and fatalities. Much of this information is gathered from the FARS system, which records data on fatal crashes in Maine for input into a larger national record-keeping system of statistical data. FARS data are also used by BHS and the Maine State Police to analyze enforcement priorities and schedules. Impaired driving is one of the most serious traffic risks facing the nation, killing thousands every year. **Contact:** For FARS data/fatal crashes, contact Lauren Stewart, Highway Safety Director; lauren.v.stewart@maine.gov; (207) 626-3841. For all other crash data, contact the Maine DOT; (207) 624-3000.

Maine Department of Public Safety (DPS), Uniform Crime Reports (UCR). UCR data include drug and alcohol arrests. Drug arrests include sale and manufacturing as well as possession of illegal substances. Liquor arrests include all liquor law violations. OUI arrests are arrests for operating a motor vehicle under the influence of a controlled substance. DPS data are now available from 2017. Arrest data may reflect differences in resources or focus of law enforcement efforts, so may not be directly comparable from year to year.
Available at: http://www.maine.gov/dps/cim/crime_in_maine/cim.htm

For UCR statistical purposes, "arrests" also include those persons cited or summonsed for criminal acts in lieu of actual physical custody. These forms categorize the arrests by offense classification (both Part I and Part II crimes), and by age, sex and race. The same individual may be arrested several times over a period of time; each separate arrest is counted. A person may be arrested on several charges at one time; only one arrest is counted and is listed under the most serious charge. For UCR purposes, a juvenile is counted as "arrested" when the circumstances are such that if he or she were an adult, an arrest would result; in fact, there may not have been a formal charge.

Maine Drug Enforcement Agency (MDEA). The MDEA through its regional multi-jurisdictional task forces is the lead state agency in confronting drug trafficking crime. The data included in this report represent those arrested for a drug offense but do not indicate what other drug(s) may have been seized. For example, a person may be arrested for the sale of cocaine but also be in possession of oxycodone and marijuana. It is important to note that arrests and multi-jurisdictional drug enforcement are resource-dependent; such funds fluctuate from year to year, and must be reallocated to combat highest priority threats. **Contact:** Roy E. McKinney, Director; roy.e.mckinney@maine.gov; (207) 626-3852.

Maine Emergency Medical Services (EMS). Maine EMS is a bureau within the Maine Department of Public Safety (DPS) and is responsible for the coordination and integration of all state activities concerning Emergency Medical Services and the overall planning, evaluation, coordination, facilitation and regulation of EMS systems. EMS collects data statewide from the 272 licensed ambulance and non-transporting services. It is mandated that services submit an electronic patient care report to Maine EMS within one business day of patient contact. Data are compiled upon request. **Contact:** Timothy Nangle, Maine Emergency Medical Services; timothy.e.nangle@maine.gov; (207) 626-3860.

Maine Integrated Youth Health Survey (MIYHS). The MIYHS is a statewide survey administered biennially since 2009 through a collaborative partnership between Maine Department of Health and Human Services and Maine Department of Education. Its purpose is to quantify health-related behaviors and attitudes of 5th through 12th graders by direct student survey. The survey collects information on student substance use, risk factors related to substance use, as well as consequences, perceptions and social risk factors related to substances, and information on many other health factors. MIYHS defines binge-drinking as consuming five or more drinks in a row. As of the date of this report, the most recent data available are from 2017. **Contact:** Korey Pow, Center for Disease Control and Prevention; korey.pow@maine.gov; (207) 287-5084.

Maine Office of the Chief Medical Examiner. The Maine Office of the Chief Medical Examiner investigates all deaths associated with drug overdose. Analysis of these cases is currently funded by the Office of Attorney General. The death data are reported on a quarterly and an annual basis after cases are finalized, and released through the Attorney General's Office. Drug categories reported to SEOW include methadone, cocaine, benzodiazepines, oxycodone, fentanyl, and heroin/morphine. **Contact**: Dr. Marcella Sorg, Director, Rural Drug & Alcohol Research Program, Margaret Chase Smith Policy Center, University of Maine mhsorg@maine.edu.

National Survey on Drug Use and Health (NSDUH). The NSDUH is a national survey administered annually by the Substance Abuse and Mental Health Services Administration (SAMHSA) to youth grades 6 through 12 and adults ages 18 and older. The instrument collects information on substance use and health at the national, regional and state levels. The advantage of NSDUH is that it allows comparisons to be made across the lifespan (that is, ages 12 and up). However, NSDUH is not as current as other data sources; as of this report, data at the state level are available from 2016–17.

Older data are included for trending and comparative purposes. In 2016, several changes were made to the NSDUH questionnaire and data collection procedures, resulting in the establishment of a new baseline for many measures. Therefore, estimates for several measures included in prior reports are not available. For details, see Section A of SAMHSA's "2015–2016 National Survey on Drug Use and Health: Guide to State Tables and Summary of Small Area Estimation Methodology" at https://www.samhsa.gov/data/report/2015-2016-nsduhguide-state-tables-and-summary-sae-methodology.

NSDUH defines "Illicit Drugs" as marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or any prescription-type psychotherapeutic used non-medically; "Binge Alcohol Use" as drinking five or more drinks on the same occasion (*i.e.,* at the same time or within a couple of hours of each other) on at least one day in the past 30 days; "Dependence" or "Abuse" based on definitions found in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)*; and "Serious Mental Illness" (SMI) as a diagnosable mental, behavioral, or emotional disorder that met the criteria found in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)* and resulted in functional impairment that substantially interfered with or limited one or more major life activities. Available at: https://www.samhsa.gov/data/report/2016-national-survey-drug-use-and-healthmethodological-summary-and-definitions

Northern New England Poison Center (NNEPC). The Northern New England Poison Center provides services to Maine, New Hampshire, and Vermont. A poisoning case represents a single individual's contact with a potentially toxic substance. Intentional poisoning includes those related to substance use, suicide and misuse. Data include the number of confirmed cases where exposures are judged to be substance use-related (*i.e.,* an individual's attempt to get high). NNEPC collects detailed data on specific substances involved in poisonings, including the

categories of stimulants/street drugs, alcohol, opioids, asthma/cold and cough medications, benzodiazepines, antidepressants, and pharmaceuticals, as well as other substances. The category of stimulants/street drugs includes marijuana and other cannabis, amphetamine and amphetamine-like substances, cocaine (including salt and crack), amphetamine/ dextroamphetamine, caffeine tablets/capsules, ecstasy, methamphetamine, GHB, and other/ unknown stimulants/street drugs. The category alcohol includes alcohol-containing products such as mouthwash. The opioid category includes Oxycodone, Hydrocodone, buprenorphine, methadone, tramadol, morphine, propoxyphene, codeine, hydromorphone, stomach opioids, Meperidine (Demerol), heroin, Fentanyl, and other/unknown opioids. Data available from the poison center are reported on a continual daily basis and are included through December 2018. These data are only reflective of cases in which the Poison Center was contacted. **Contact:** Colin Smith, Northern New England Poison Center; SMITHC12@mmc.org; (207) 662-7085.

Office of Child and Family Services (OCFS), Maine Automated Child Welfare Information System (MACWIS). The Office of Child and Family Services (OCFS) assists Maine's children and families by providing Child Welfare, Children's Behavioral Health, Early Childhood, and Preventive services and supports. The Maine Child Welfare Information System (MACWIS) is the single electronic repository for Maine child welfare information and aids in the recording, tracking, and processing of all child welfare duties and functions. **Contact:** Lori Geiger, Information Service Manager; lori.geiger@maine.gov; (207)-624-7911.

Data, Research and Vital Statistics (DRVS). DRVS is an office within the Maine CDC. Death certificates are the source documents for the data on the vital events in Maine. The data include either all deaths occurring in Maine or only deaths to Maine residents depending upon the indicator. Based on death certificate database ICD-10 codes for alcohol or drug related deaths. Data include unintentional, self-inflicted, assault and undetermined intent deaths. **Contact:** Anne Rogers, Data, Research and Vital Statistics; anne.rogers@maine.gov; (207) 287-5468.

Parent Survey. In 2006, the Maine Office of Substance Abuse and Mental Health Services (SAMHS) commissioned Pan Atlantic Research, a Maine-based marketing research and consulting firm, to conduct baseline quantitative market research with parents of teenagers throughout the state on a range of issues related to underage drinking. The 2006 research was a component of a broader project being conducted in preparation for a social marketing campaign aimed at parents, the objective of which was to reduce teenage drinking in the State of Maine through improved parenting techniques and enhanced parental involvement. Pan Atlantic Research has subsequently conducted benchmarking research on this project for SAMHS and the Maine Center for Disease and Control in 2007, 2008, 2009, 2011, 2013, 2015 and most recently in 2017. In 2008, many changes were made to better align with/reflect existing surveys and the state's public health service infrastructure. These include research designed to be more directly comparable to the 2009 (and future) Maine Integrated Youth Health Surveys (MIYHS), the sample being stratified on a statewide basis according to Maine's eight Public Health Districts (150 completed surveys per PHD), and the sample composition including parents of 7th to 12th graders (200 per grade, for 1,200 total). The survey was

redesigned in 2017 to increase its emphasis on questions relating to teenage use of marijuana and prescription drugs. **Contact:** Jason Edes, Director of Research, Pan Atlantic Research; jedes@panatlanticresearch.com; (207) 221-8877 ext. 100.

Pregnancy Risk Assessment Monitoring System (PRAMS). PRAMS is an ongoing, population-based surveillance system designed to identify and monitor selected maternal behaviors and experiences before, during, and after pregnancy among women who have recently given birth to a live infant. Data are collected monthly from women using a mail/telephone survey. **Contact:** Thomas Patenaude, PRAMS Coordinator, Maine CDC; Thomas.Patenaude@maine.gov; (207) 287-5469.

Prescription Monitoring Program (PMP). PMP maintains a database of all transactions for class C–II through C–IV drugs dispensed in the state of Maine. Drug categories used in this report include opiates, sedatives, and stimulants. The counts included in this report represent the number of prescriptions and doses dispensed between 2016 and 2018. **Contact:** Office of Substance Abuse and Mental Health Services; SAMHS.PMP@maine.gov; (207) 287-2595.

Web Infrastructure for Treatment Services (WITS). 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 Maine. WITS is the State system that all licensed substance use treatment agencies are required by licensing rule to submit all substance use treatment services rendered into. However, 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 into the system. Analyses in this report are based on client-reported primary, secondary and tertiary drug(s) of choice, as well as other demographic and background information that is collected at intake. It is important to note that the WITS system is not static; therefore, 2017 numbers may be artificially low. Drug categories included in this report are alcohol, marijuana, cocaine, heroin, synthetic opiates, methadone/buprenorphine and benzodiazepines. **Contact:** Office of Substance Abuse and Mental Health Services; SAMHS.PMP@maine.gov; (207) 287-2595.

2-1-1 Maine. *2-1-1 Maine* is a free, confidential resource for individuals to connect to thousands of health and human services in Maine. *2-1-1 Maine* maintains a statewide directory of resources including services for substance use, mental health, gambling addiction, housing, childcare and more. Individuals can contact *2-1-1 Maine* and access needed information and referrals by calling 2-1-1 and speaking with a trained specialist in Maine, by texting their ZIP code to 898-211 and communicating with a Maine-based specialist, or by visiting www.211maine.org. *2-1-1 Maine*'s Contact Center operates 24 hours a day, seven days a week, 365 days a year. *2-1-1 Maine* is a collaborative effort of the Maine Department of Health and Human Services, the United Ways of Maine, and The Opportunity Alliance as the Contact Center partner. **Contact:** info@211maine.org; Dial 2-1-1 or 1-866-811-5695; Text your zip code to 898-211.

Consumption of Substances

Consumption of alcohol, cigarettes, marijuana, prescription and other drugs can have detrimental effects on an individual's well-being, including increased risks of morbidity, addiction, chronic diseases, and mortality. In addition, it has a harmful effect on society, including increased motor vehicle accidents and crime. It is the manner and frequency with which people drink, smoke, and use drugs that are often linked to substance-related consequences. To understand the magnitude of substance use consequences, it is important to first understand the prevalence of substance consumption itself. Consumption includes overall use of substances, any use (ever/lifetime and in the past month), heavy consumption (such as binge drinking), and consumption by high-risk groups (*e.g.,* youth, college students, 18- to 25-year-olds).

Alcohol remains the substance most often used by Mainers across the lifespan, especially youth and young adults. Risky alcohol use, such as binge drinking, remains a concern among adults 18 to 35, with nearly one in three reporting such behavior in the past month. Alcohol use among Maine's high school students has slowly declined since 2009; however, approximately a third of students who drank in the past month reported having five or more drinks in a row at least once in the past month. Two out of five underage adults (18- to 20-year-olds) reported having a drink in the past month, which has remained consistent for the past several years. One quarter of underage adults reported binge drinking within the past month. Furthermore, young adults (aged 18 to 25) who qualify as having an alcohol use disorder decreased from 2015–16 to 2016–17; however, they were still the most likely age group to have an alcohol use disorder in 2016–17, with an estimate of 11 percent.

After alcohol, cigarettes, marijuana, vapor products, and prescription drugs are the next most commonly used substances in Maine. Parents report that they believe their children are honest with their consumption of substances, but there continues to be a gap between self-reported use and parental perception. Youth are continuing to use more often than parents appear to know. Apart from cigarettes, the 18- to 25-year-old population ranks highest in their rate of use for these substances among adults in Maine.

Marijuana use among young adult Mainers, as well as use by those 26 and older, has been steadily increasing over the past several years. About one in three young adults (18- to 25-year-olds) and one in six residents 26 years and older reported use within the past month. There was a slight increase in the number of individuals 26 years and older who initiated use, and marijuana users also appear to be starting earlier in life.

In terms of tobacco use, 29 percent of Mainers between 26 and 35 years old reported smoking cigarettes within the past month, compared to 18 percent of adults aged 18 to 25; rates of tobacco use have progressively declined among youth and young adults in Maine but remain somewhat consistent among more mature age groups. In addition, tobacco use among pregnant women continues to be a concern; nearly one in seven reported cigarette use in their last trimester.

Since emerging as an alternative form of smoking, vapor products have overtaken cigarettes as a preferred form of consumption for high school students who reported use in the past month. Approximately one in seven high school students have used a vapor product in the past month, and at least half of the time the product was just flavoring. High school students reported that a quarter of the time they vaped nicotine-based oil, 13 percent of the time it was marijuana or hash oil-based, and 8 percent were not sure what they had vaped. This last category, while concerning, is accounted for by the fact that a large portion of high school students had borrowed the vapor product from a friend instead of procuring their own. Adults of all ages saw an increase in the rate of those using e-cigarettes from 2016 to 2017. In 2017, the number of Mainers using e-cigarettes surpassed those smoking cigarettes.

In recent years, rates of prescription drug misuse among youth and adults have remained relatively stable. In recent years, approximately one in 10 adults between the ages of 26 and 35 reported misuse of any type of prescription drug at least once in their lifetime and 7 percent of 18- to 25-year-olds reported having misused pain relievers in the past year. According to NSDUH, in 2016–17, less than 1 percent of Mainers aged 12 and older reported that they had used heroin in the past year, with use highest use among young adults between 18 and 25 years old (1.24%).

Rates of cocaine use among Mainers aged 18 to 25 have increased slightly from 2012–13 (5.0%) to 2016–17 (6.6%). Conversely, rates of use among adults 26 and older have remained relatively stable around 1 percent. From 2009 to 2017, the rate of high school students using cocaine has declined from 10 percent to 5 percent.

ALCOHOL

Alcohol: *Current Use Among Youth*

Indicator Description: This measure shows the percentage of high school students who reported having had one or more alcoholic drinks on one or more days within the past month.

Why Indicator is Important: Alcohol is the most often-used substance among youth in Maine. While alcohol consumption carries risk for adults, developing adolescent brains are especially susceptible to the health risks of alcohol consumption. Adolescents who consume alcohol are more likely to have poor grades and be at risk for experiencing social problems, depression, suicidal thoughts, assault, and violence.

Data Source(s): MIYHS, 2009–2017

Summary: In 2017, fewer than one in four high school students reported consuming alcohol in the past month. The rate of consumption has been decreasing steadily since 2009.

Figure 1. High school students reporting alcohol use in the past month: 2009–2017
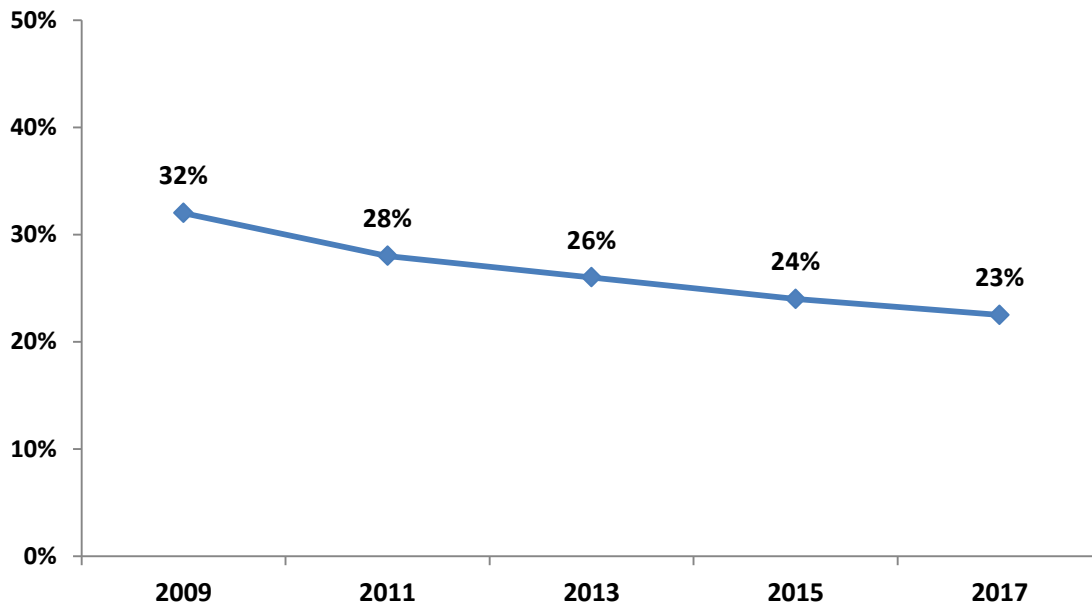
Source: MIYHS, 2009–2017

- The percentage of high school students consuming alcohol in the past month has declined from 32 percent in 2009 to 23 percent in 2017.
- Although not shown, 25 percent of high school students who have ever consumed alcohol reported having their first drink of alcohol before the age of 13.

Alcohol: *Current High-Risk Use Among Youth*

Indicator Description: This indicator displays the percentage of youth who reported having had five or more alcoholic drinks in a row in the past two weeks and on at least one day within the past month. In 2017, the MIYHS redesigned the question asked of students regarding the frequency of binge drinking. Therefore, 2017 data cannot be compared to previous years for trending purposes.

Why Indicator is Important: Youth are more likely to binge drink than adults when they consume alcohol. High-risk alcohol use contributes to violence and motor vehicle crashes and can result in negative health consequences for the consumer, including injury and chronic liver disease. Youth who engage in high-risk drinking are also more likely to use other substances and engage in risky behavior.

Data Source(s): MIYHS, 2017

Summary: In 2017, among high school students who reported drinking in the past month, approximately one-third reported they had five or more drinks in a row at least once in the past month. Although not shown, this accounts for approximately 8 percent of all high school students. Males appear more likely than females to participate in this behavior, as are older students relative to younger students.

Figure 2. High school students (among those who reported drinking in the past month) who had five or more drinks in a row at least once in the past month: 2017
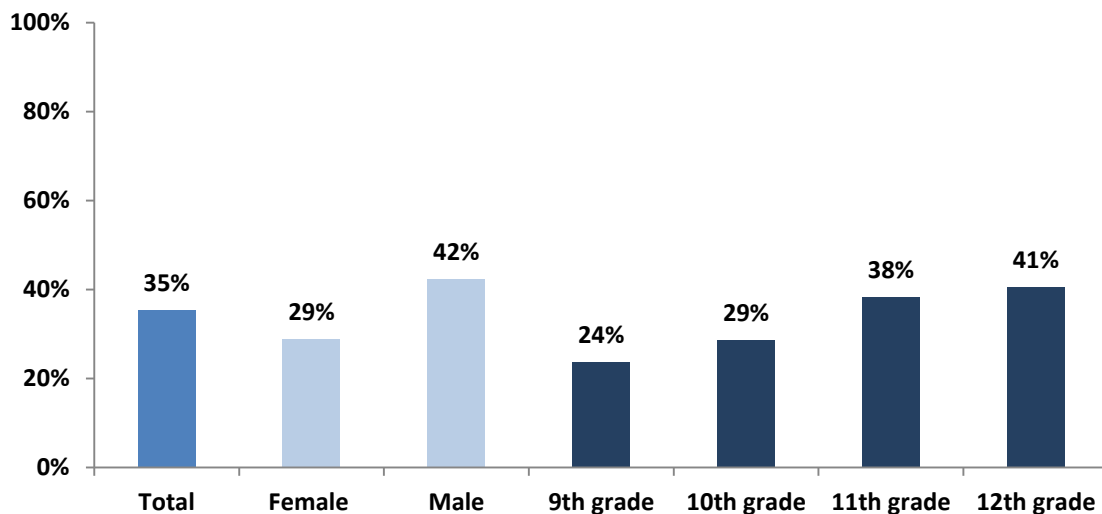
Source: MIYHS, 2017

- Among high school students who reported drinking in the past month, nearly a quarter of 9th graders reported that they had engaged in binge drinking within the past month compared to more than a third of 12th graders reporting the same.

Alcohol: *Current Use Among Underage Adults*

Indicator Description: This indicator portrays the alcohol use patterns among adults between the ages of 18 and 20; specifically, those who reported consuming any alcohol in the past month.

Why Indicator is Important: Alcohol is one of the most often-used substances by underage adults in Maine. Excessive and high-risk alcohol use may contribute to violence and result in many negative health consequences for the consumer. Drinking alcohol can also have negative health effects and lead to such consequences as alcohol-related motor vehicle crashes and increased injuries.

Data Source(s): BRFSS, 2013–15 to 2015–17

Summary: Among adults 18 to 20 years of age, about two in five reported consuming any alcohol in the past month; rates have remained steady from 2013–15 to 2016–17. As for binge drinking, rates have decreased slightly over the same time frame, with about one in five reporting such use in the past month.

Figure 3. Adults ages 18 to 20 reporting drinking in past 30 days by type of drinking: 2013–15 to 2015–17
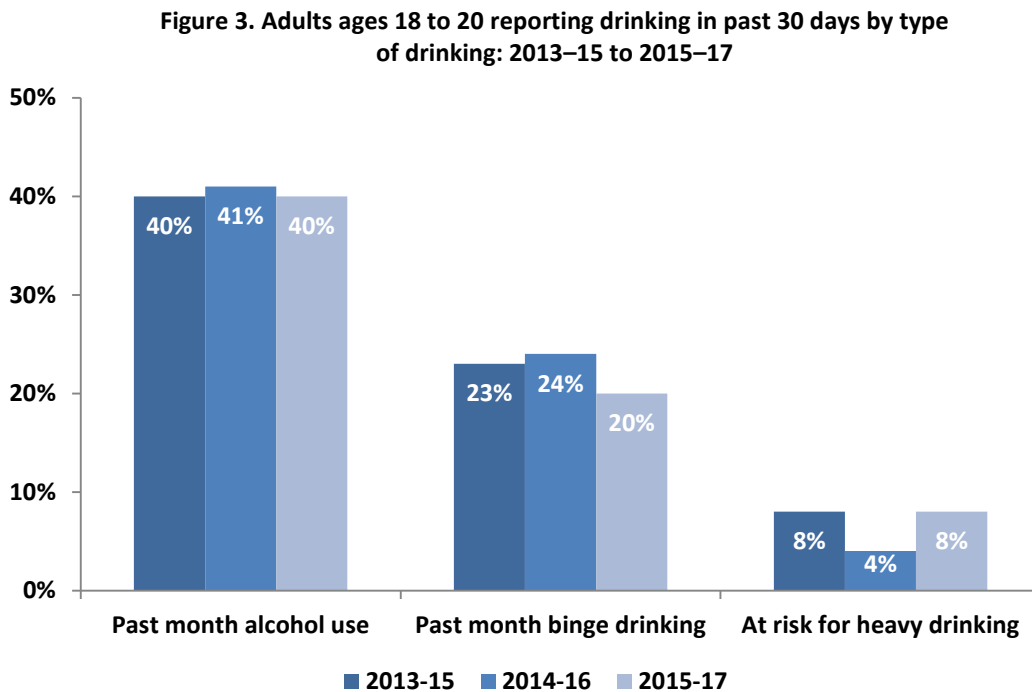
Source: BRFSS, 2013–15 to 2015–17

- During the 2015–17 period, among Mainers between 18 and 20 years old, 45 percent reported consuming any alcohol in the past 30 days, 20 percent reported binge drinking, and 8 percent were at risk from heavy alcohol use.

Alcohol: *At Risk of Heavy Use*

Indicator Description: This indicator examines the percentage of Maine residents who are at risk of suffering consequences from heavy drinking in the past month. "At risk of heavy drinking" is defined as more than two drinks per day (14 per week) for a man or more than one drink per day for a woman (seven per week).

Why Indicator is Important: People who consume alcohol frequently are at increased risk for a variety of negative health consequences, including alcohol use and dependence, liver disease, certain cancers, pancreatitis, heart disease, and death. It has also been found that the more heavily a person drinks the greater the potential for problems at home, work, and with friends.[1]

Data Source(s): BRFSS, 2014–15 to 2016–17

Summary: Risk of heavy alcohol use among 18- to 25-year-olds has remained stable from 2014–15 to 2016–17. However, the risk for heavy use among all other age groups has increased slightly in the same time period.

Figure 4. Adults at risk of heavy alcohol use in past 30 days, by age group: 2014–15 to 2016–17
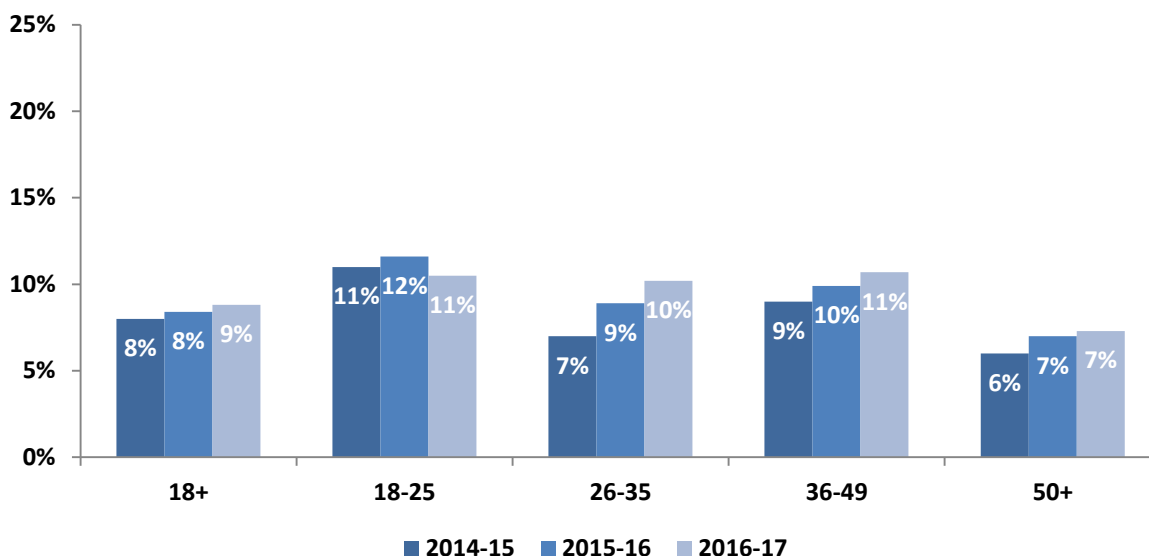
Source: BRFSS, 2014–15 to 2016–17

- During the period 2016–17, 9 percent of adults 18 and over reported having consumed alcohol daily, putting them at risk from heavy alcohol use.

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[1] Citation from Alcoholscreening.org, a service of *Join Together* and the Boston University School of Public Health. Retrieved from http://www.alcoholscreening.org/Learn-More.aspx?topicID=8&articleID=26 on 8/8/2019

Alcohol: *Current High-Risk Use Among Adults*

Indicator Description: This indicator reflects the percentage of adults who reported consuming several alcoholic beverages in a row for at least one day within the past month.[2]

Why Indicator is Important: Binge drinking is a type of high-risk drinking, meaning it increases the risk for many health- and social-related consequences. High-risk alcohol use has been linked to injury (such as falls, fights, and suicides), violence, crime rates, motor vehicle crashes, stroke, chronic liver disease, addiction, and some types of cancer.

Data Source(s): BRFSS, 2014–15 to 2016–17

Summary: The highest binge drinking rates continue to be observed among 18- to 25-year-olds and 26- to 35-year-olds, with about one in three reporting binge drinking within the past month. While rates among most age groups have remained relatively stable, 36- to 49-year-olds have observed a steady increase.

Figure 5. Adults reporting binge drinking in past 30 days, by age group: 2014–15 to 2016–17*
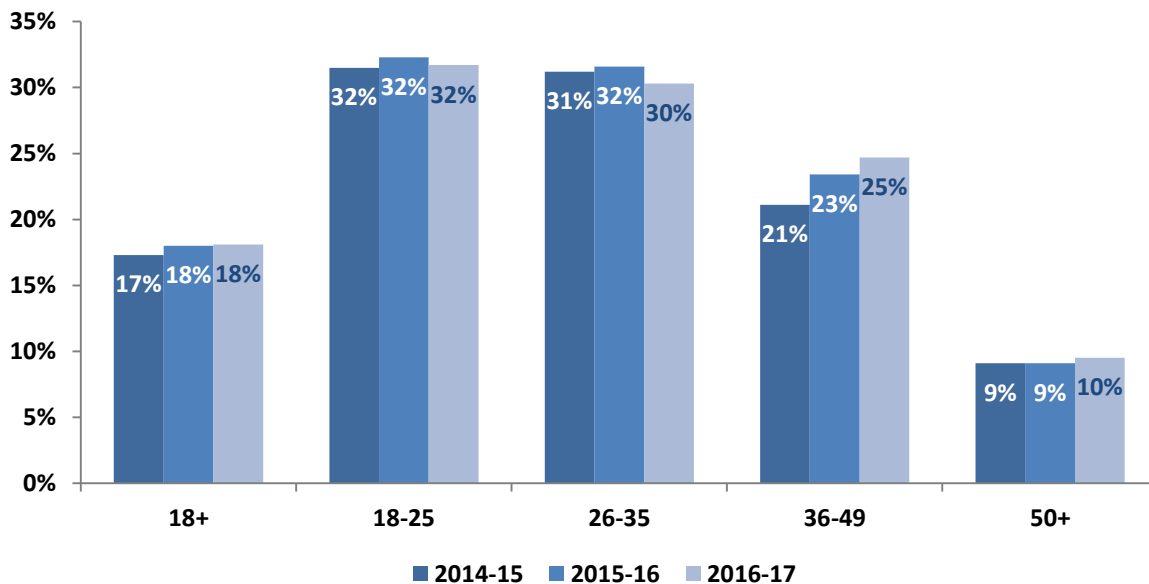
Source: BRFSS, 2014–15 to 2016–17
*2017 BRFSS estimates are preliminary.

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[2] 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.

Alcohol: *Alcohol Use Disorder*

Indicator Description: Alcohol Use Disorder is defined as meeting criteria for alcohol dependence or abuse. Dependence or abuse is based on definitions found in the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)*.

Why Indicator is Important: Alcohol use and dependence increase the risk for many health and social related consequences. High-risk alcohol use has been linked to injury (such as falls, fights, and suicides), violence, crime rates, motor vehicle crashes stroke, chronic liver disease, addiction, and some types of cancer.

Data Source(s): NSDUH, 2014–15 to 2016–17

Summary: In 2016–17, 65,000 (6%) Mainers 12 and older qualified as having an alcohol use disorder. Just over one in 10 (11%) 18- to 25-year-olds qualified as having an alcohol use disorder in 2016–17; this is a slightly lower estimate than in previous years.

Figure 6. Alcohol use disorder in the past year, by age: 2016–17
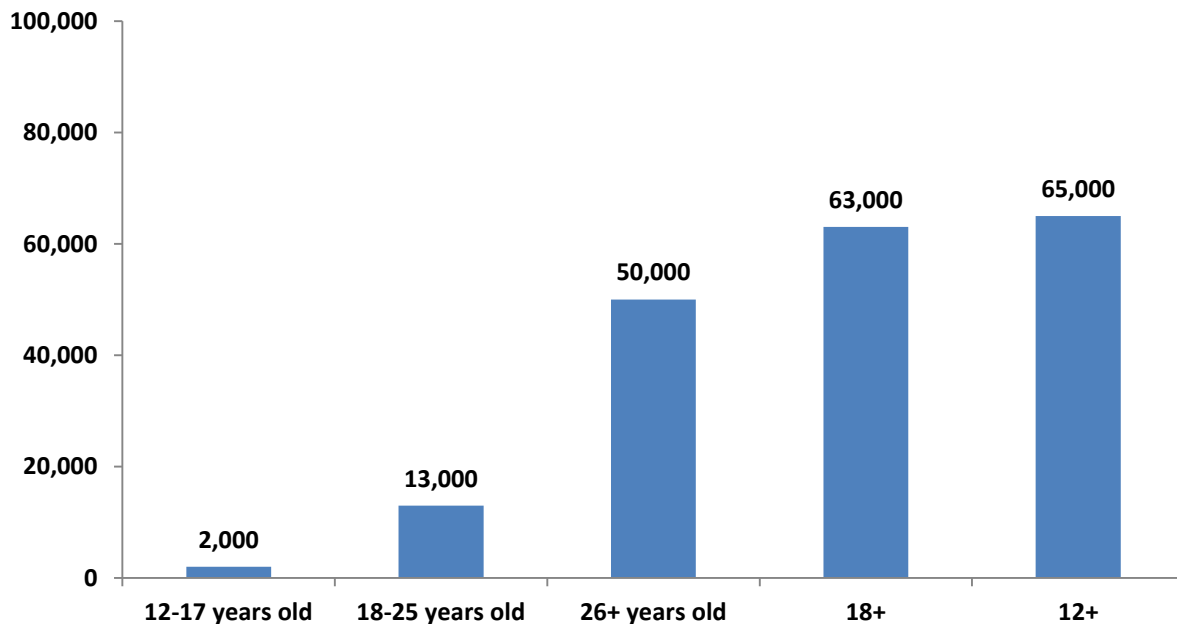
Source: NSDUH, 2016–17

- According to NSDUH estimates, during 2016–17, 63,000 Maine residents 18 and older qualified as having an alcohol use disorder within the past year.

Figure 7. Percent of alcohol use disorder in the past year, by age: 2014–15 to 2016–17
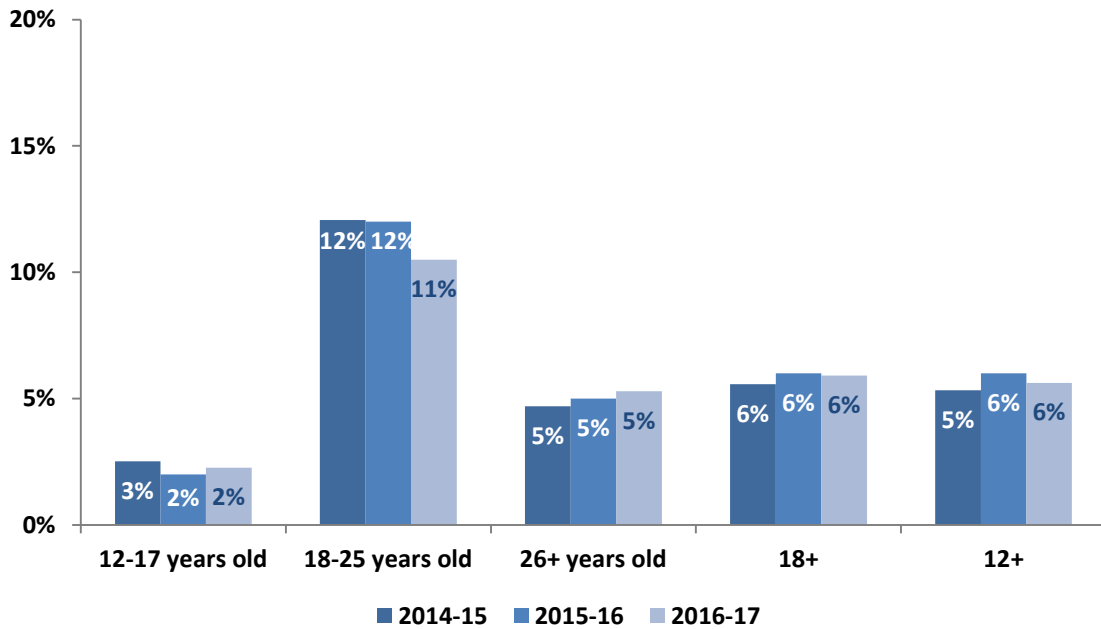
Source: NSDUH, 2014–15 to 2016–17

- Maine residents aged 18 to 25 were the age group most likely to have an alcohol use disorder in 2016–17, with an estimate of 11 percent. During the period of 2016–17, 2 percent of Mainers between 12 and 17 years old qualified as having an alcohol use disorder; this was a decrease of 1 percentage point from 2014–15 (3%). All other age categories remained consistent from 2014–15 and 2016–17.

Tobacco and Vaping Product Use: *Current Use Among Youth*

Indicator Description: This indicator illustrates the percentage of youth who reported using cigarettes, cigars, smokeless tobacco, and vapor products (*e.g.,* electronic cigarettes, vaporizers).

Why Indicator is Important: Use of tobacco is associated with greater risk of negative health outcomes, including cancer, cardiovascular, chronic respiratory diseases, and can lead to death. In addition, there is a growing amount of research that suggests electronic vapor products may not be a safe alternative to traditional tobacco products and can also contribute to respiratory problems.

Data Source(s): MIYHS, 2009–2017

Summary: The use of tobacco products among high school students continues to steadily decline. In 2017, less than one in 10 students reported having smoked a cigarette within the past month. About one in three high school students reported having ever used a vaping product and about one in seven reported using in the past month. Among students who had ever used a vaping product, half reported that the last time they had used it was just flavoring, a quarter reported it to be tobacco-based oil, one in eight reported it was Marijuana-based oil, and 8 percent were unsure.

Figure 8. High school students who smoked at least one cigarette during past month: 2009–2017
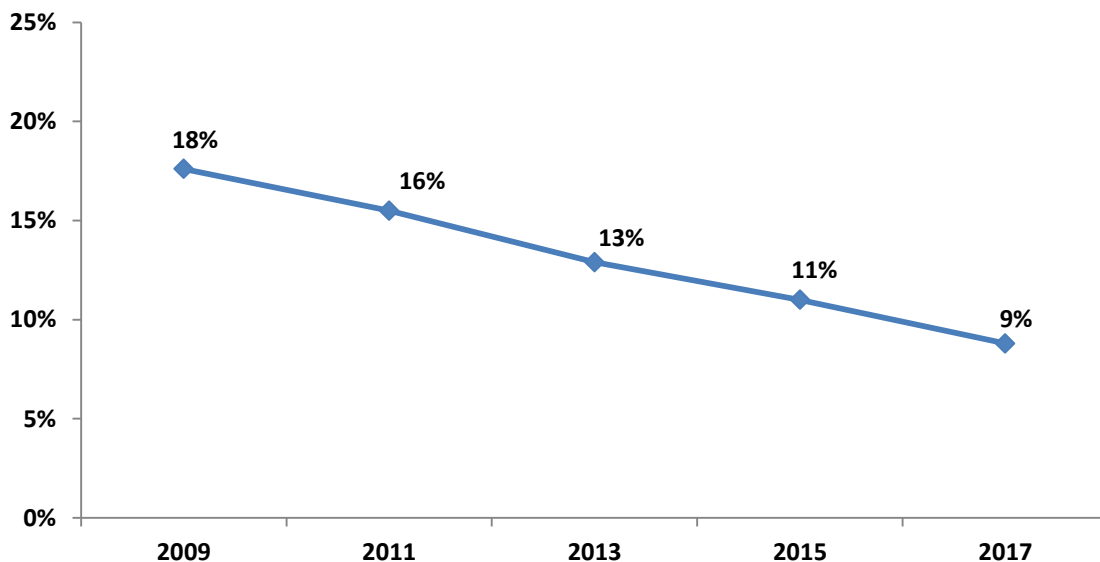
Source: MIYHS, 2009–2017

- The proportion of high school students who reported having smoked any cigarettes on at least one day during the past 30 days decreased by 9 percentage points from 2009 (18%) to 2017 (9%).
- Although not pictured, among students who reported current cigarette use in 2017, 12 percent reported smoking more than 10 cigarettes per day. In addition, among students who have ever smoked an entire cigarette, 28 percent reported having done so before age 13. Furthermore, students are three times as likely to have smoked in the past month if they live with someone else that smokes than if they live with only nonsmokers.

Figure 9. High school students who used an electronic vapor product* in the past 30 days or lifetime: 2015–2017

Legend: ■ Lifetime use ■ Past month use
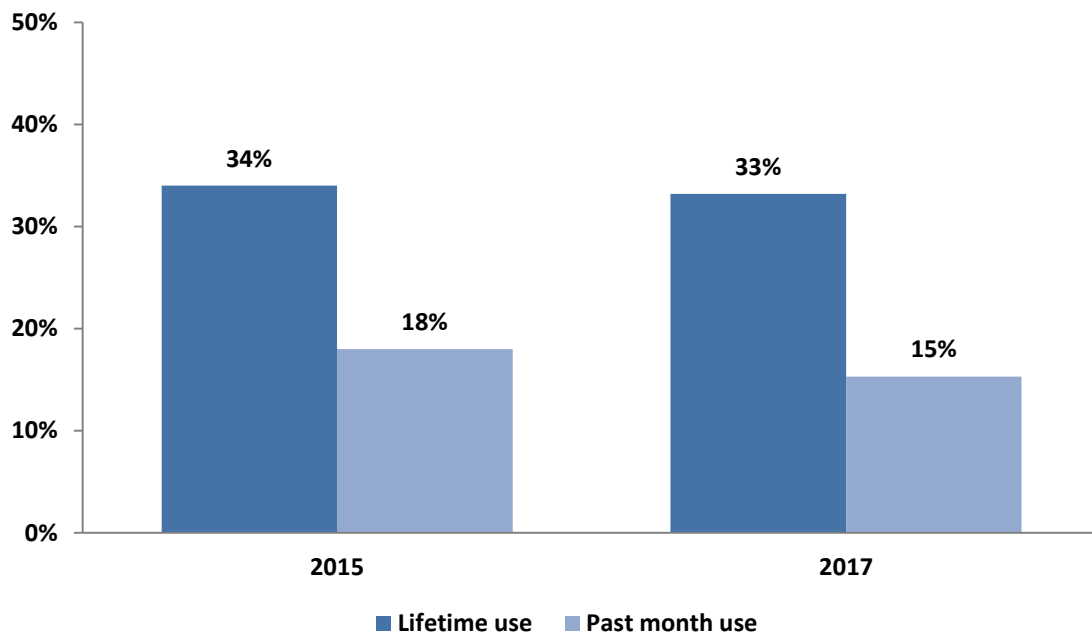
Source: MIYHS, 2015–2017

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

- In 2017, about one in three high school students reported having ever used an electronic vapor product and about one in six reported having done so in the past month. This is relatively consistent with 2015 reports.

Figure 10. Type of Vapor Product Used by High School Students (among those who reported ever using): 2017
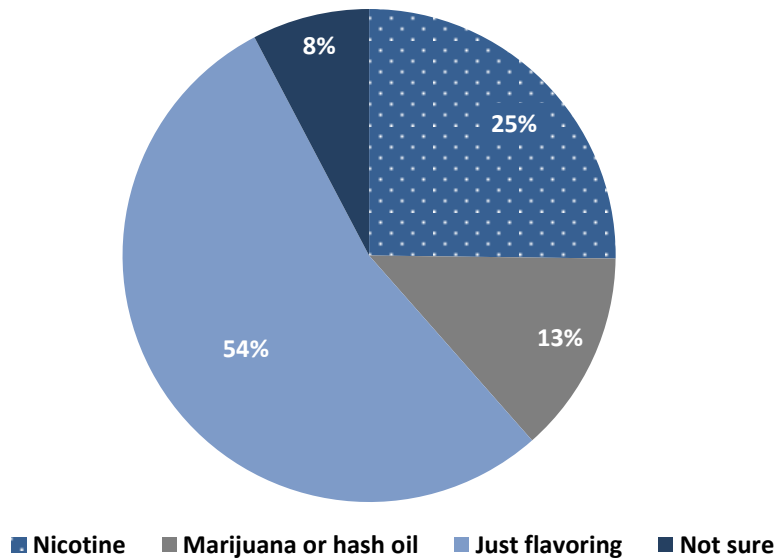
Source: MIYHS, 2017

- In 2017, among high school students who reported ever using a vapor product, most reported that the last time they had vaped, the liquid/product was just flavoring (54%). One in four were using nicotine (25%) and about one in eight were using marijuana (13%). Eight percent were not sure what kind of liquid was in the vapor product.

- Although not pictured, most high school students who used a vapor product reported that they obtained it by borrowing it from someone else (40%). Smaller percentages were attributed to buying one at a convenience store.

Figure 11. High school students who used tobacco during past month, by tobacco type: 2009–2017
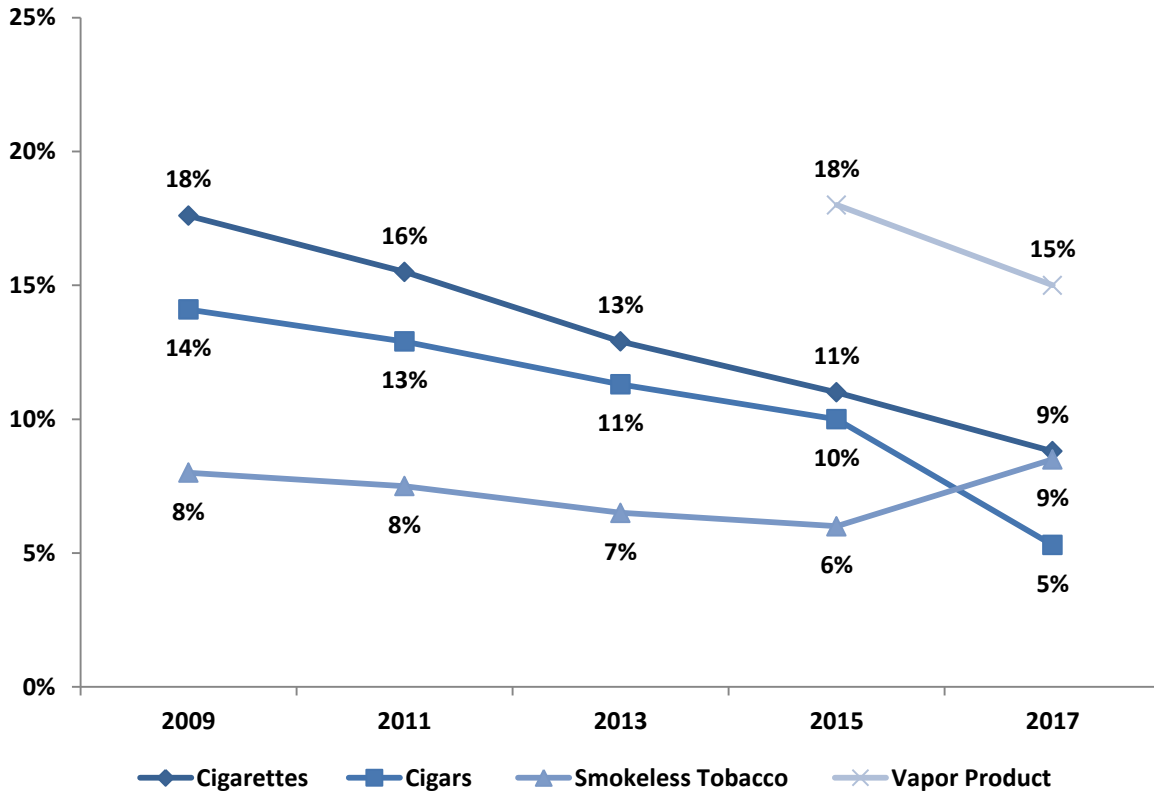
Source: MIYHS, 2009–2017

- Since emerging as an alternative form of smoking, vapor products have overtaken cigarettes as a preferred form for high school students who reported use in the past month; however, the preference of all tobacco types continues to decrease, except for smokeless tobacco which experienced a 3-percentage point increase from 2015 (6%) to 2017 (9%).

Tobacco and Vaping Product Use: *Cigarette Use Among Adults*

Indicator Description: This indicator depicts cigarette use among adults who reported smoking at least 100 cigarettes in their lifetime and currently smoke cigarettes either every day or every couple of days.

Why Indicator is Important: Tobacco use has been linked to several negative health outcomes, including cancer, cardiovascular, chronic respiratory diseases, and can lead to death. Second-hand smoke is also associated with many negative health outcomes, such as increased colds, flu, asthma, bronchitis, lung cancer, and low birth weight babies.

Data Source(s): BRFSS, 2014–15 to 2016–17

Summary: The rate of cigarette use among Mainers 18 and older has remained similar since 2014 but there has been a notable decrease in Mainers 18 to 25.

Figure 12. Past month cigarette use among adults, by age group: 2014–15 to 2016–17*
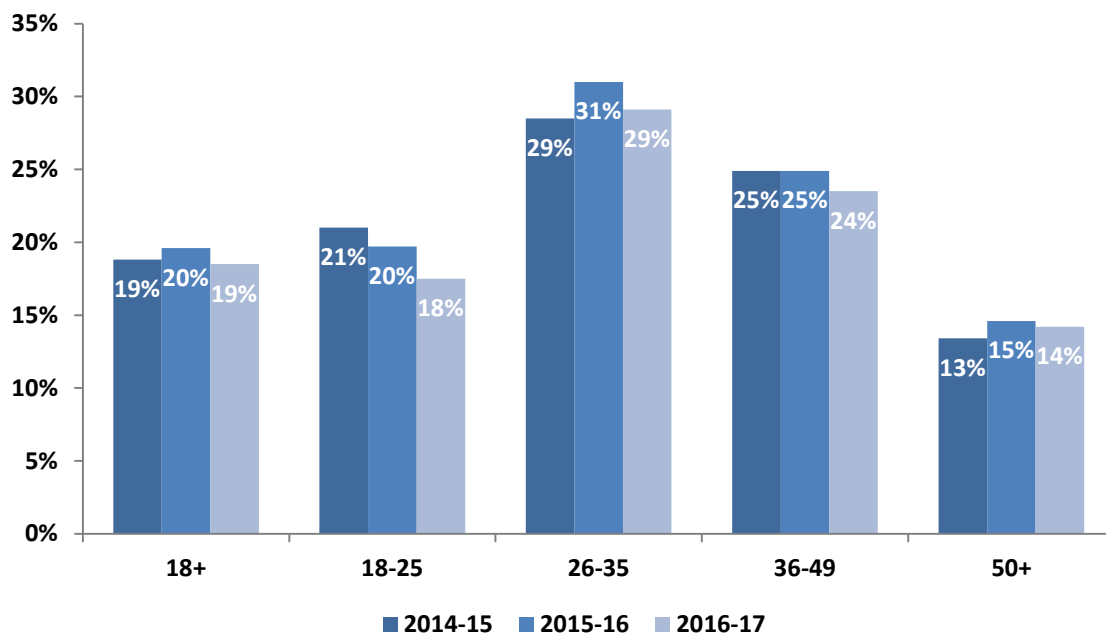
Source: BRFSS, 2014–15 to 2016–17
*2017 BRFSS estimates are preliminary.

- During 2016-17, 19 percent of Maine adults reported being current cigarette smokers. Mainers aged 26 to 35 continue to report the highest rate of cigarette use at 29 percent, followed by 36- to 49-year-olds (24%), 18- to 25-year-olds (18%), and Mainers 50 and older (14%).

Tobacco and Vapor Use: *E-Cigarette Use Among Adults*

Indicator Description: This indicator depicts current electronic or e-cigarette use among adults.

Why Indicator is Important: While often portrayed as a safer form of smoking, use of electronic cigarettes is also associated with negative health outcomes, like nicotine addiction and lung disease.

Data Source(s): BRFSS, 2016–2017

Summary: In 2017, approximately one in five Mainers 18 and older reported current use of e-cigarettes. Use of electronic cigarettes increased slightly for every age group between 2016 and 2017. However, this increase in e-cigarette use appears to correlate to a decrease in traditional cigarette smoking during the same time period.

Figure 13. Current e-cigarette use among adults, by age group: 2016–2017*
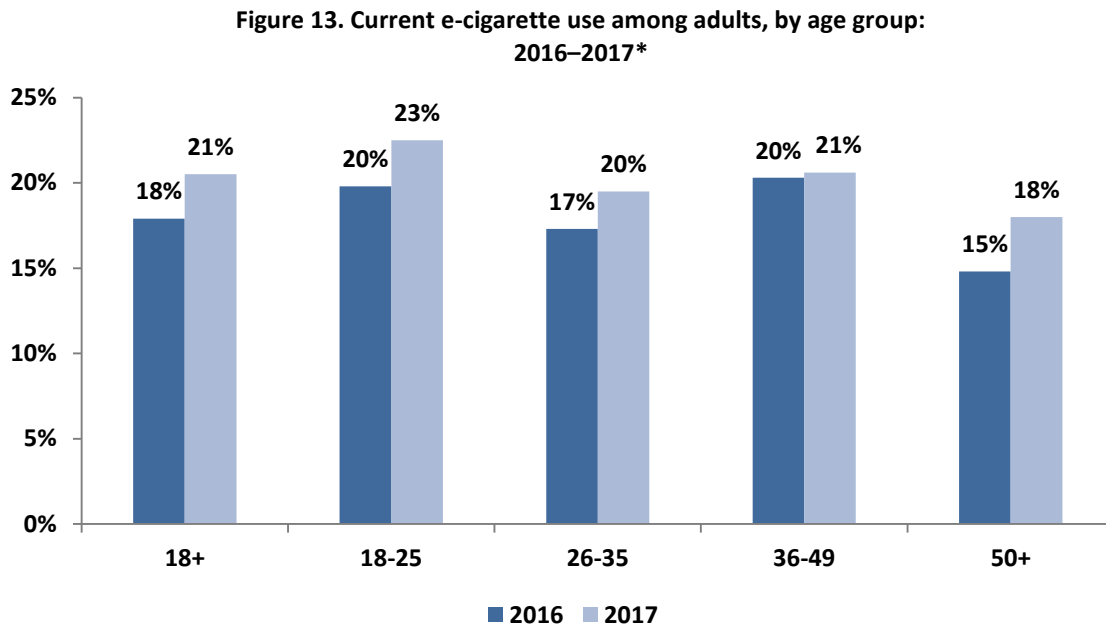
Source: BRFSS, 2016–2017
*2017 BRFSS estimates are preliminary.

- In 2017, 21 percent of Maine adults reported being current e-cigarette smokers. Mainers between 18 and 25 years old reported the highest rate of e-cigarette use, at 23 percent.

Figure 14. Current adult e-cigarette and cigarette usage, by type: 2016–2017*
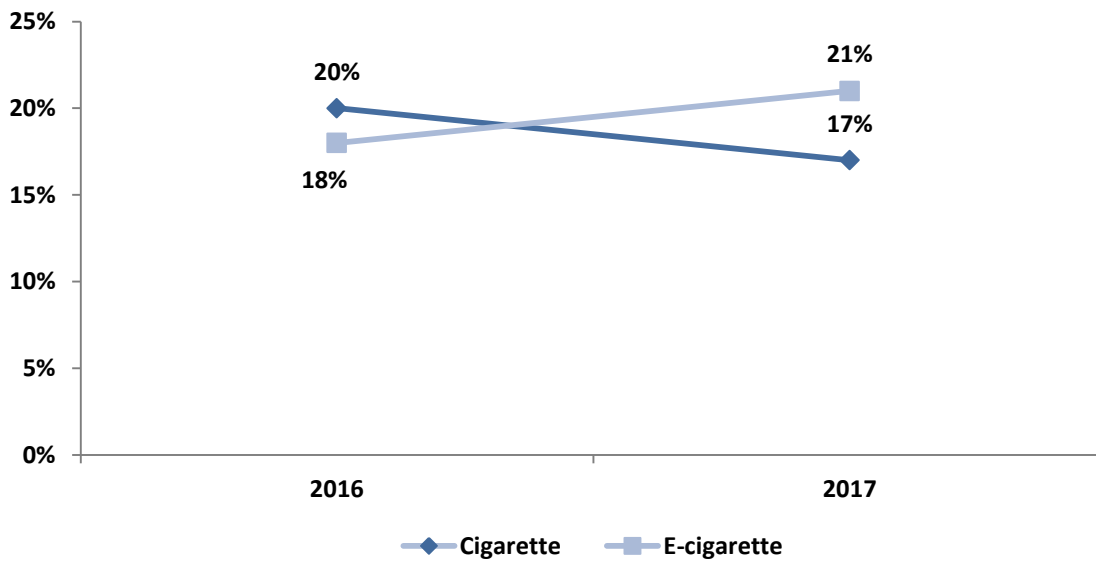
Source: BFRSS, 2016–2017
*2017 BRFSS estimates are preliminary.

- Similar to high school student usage of vapor products, electronic cigarettes are also increasing in popularity among adults over traditional cigarettes.

MARIJUANA

Marijuana: *Current Marijuana Use*

Indicator Description: This measure shows the percentage of Mainers who reported using marijuana in the past month. This is presented for high school students and across the lifespan (*i.e.*, among Mainers over the age of 12).

Why Indicator is Important: Marijuana can be addictive and is associated with increased risk for respiratory illnesses and memory impairment. Also, youth who begin smoking marijuana at an early age are more likely to develop a substance use disorder and dependence later in life.[3]

Data Source(s): MIYHS 2009–2017; NSDUH, 2012–13 to 2016–17; BRFSS, 2017

Summary: In 2017, about one in five high school students reported using marijuana within the past month; rates have decreased slightly in recent years. The highest rates of marijuana use among adults were observed among 18- to 25-year-olds (34%). Marijuana use rates among adult Mainers have been steadily increasing over the past several years.

Figure 15. High school students who have smoked marijuana at least once in the past month: 2009–2017
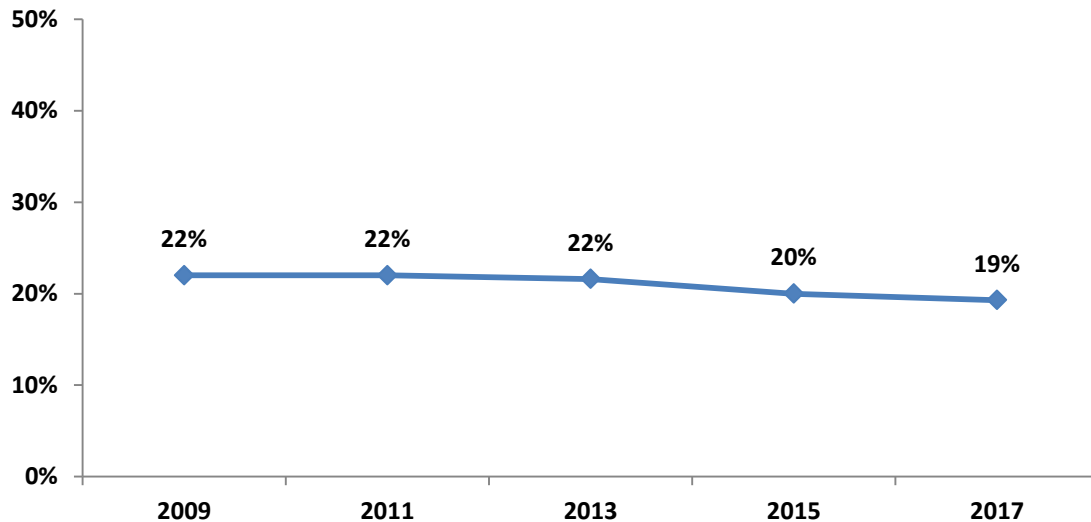
Source: MIYHS, 2009–2017

- The percentage of high school students who used marijuana one or more times during the past month decreased from 2013 (22%) to 2017 (19%). Conversely, according to the 2017 Parent Survey, nearly 95 percent of parents of middle school and high school students believed their child had not used marijuana in the past 30 days.

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[3] Kosterman, R., Hawkins, J. D., Guo, J., Catalano, R. F., & Abbott, R. D. (2000). The dynamics of alcohol and marijuana initiation: Patterns and predictors of first use in adolescence. *American Journal of Public Health, 90*, 360-366.

- Although not pictured, in 2017, among high school students who had ever used marijuana, 19 percent did so before the age of 13.

Figure 16. Adults reporting marijuana use in past month, by age group: 2012–13 through 2016–17
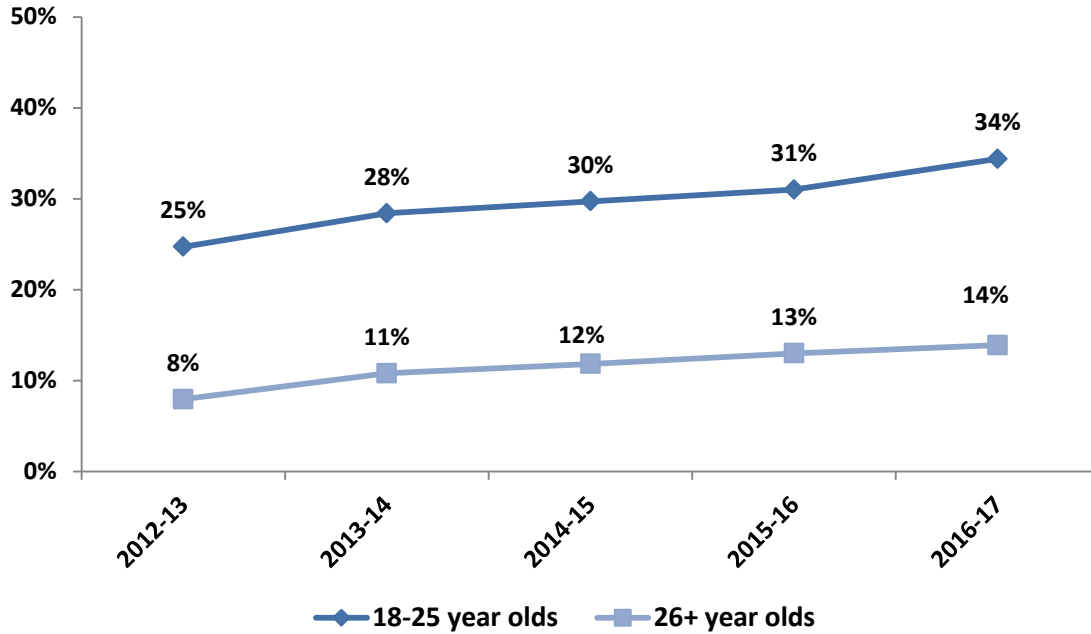
Source: NSDUH, 2012–13 to 2016–17

- According to NSDUH, 34 percent of Maine residents between 18 and 25 years old used marijuana in the past month in 2016–17, an increase of 9 percentage points since 2012–13. Marijuana use rates among those aged 26 and older increased by 6 percentage points, from 8 to 14 percent, in same time period.

Figure 17. Adults reporting marijuana use in past month, by age group: 2017[4]*
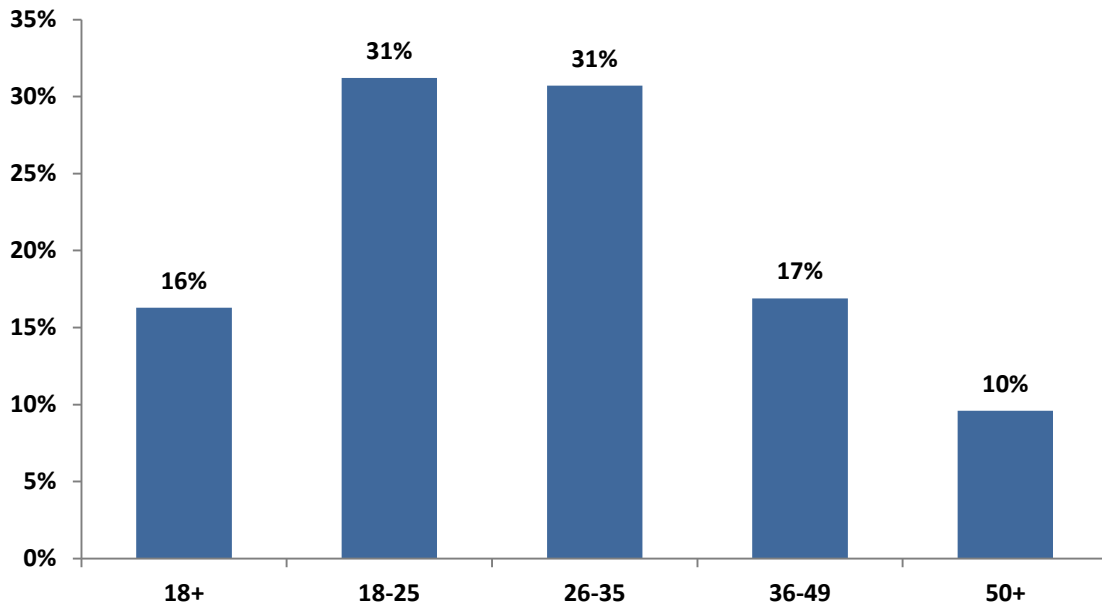
Source: BRFSS, 2017
2017 BRFSS estimates are preliminary.

- In 2017, 16 percent of Maine adults (18 and older) reported using marijuana within the past 30 days. The highest rates were observed among 18- to 25-year-olds and 26- to 35-year-olds, at 31 percent.

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[4]BRFSS changed the survey question to ask respondents about their use of marijuana and hashish in 2017, not just marijuana use. Therefore, data from previous years could not be trended for this variable.

Indicator Description: This measure shows the average number of Mainers that used marijuana for the first time in their life. Average annual number of marijuana initiates = $X_1 \div 2$, where X_1 is the number of marijuana initiates in the past 24 months.

Why Indicator is Important: Marijuana can be addictive and is associated with increased risk for respiratory illnesses and memory impairment. Also, youth who begin smoking marijuana at an early age are more likely to develop substance use and dependence later in life.[5]

Data Source(s): NSDUH, 2014–15 to 2016–17

Summary: In 2016–17, 13,000 Mainers 12 and older reported using marijuana for the first time in their life. Five thousand initiates were between 12 and 17 and 5,000 were between 18 and 25. The numbers of initiates 26 and older has tripled since 2014–15.

Figure 18. Average annual number of marijuana initiates, by age group: 2014–15 to 2016–17
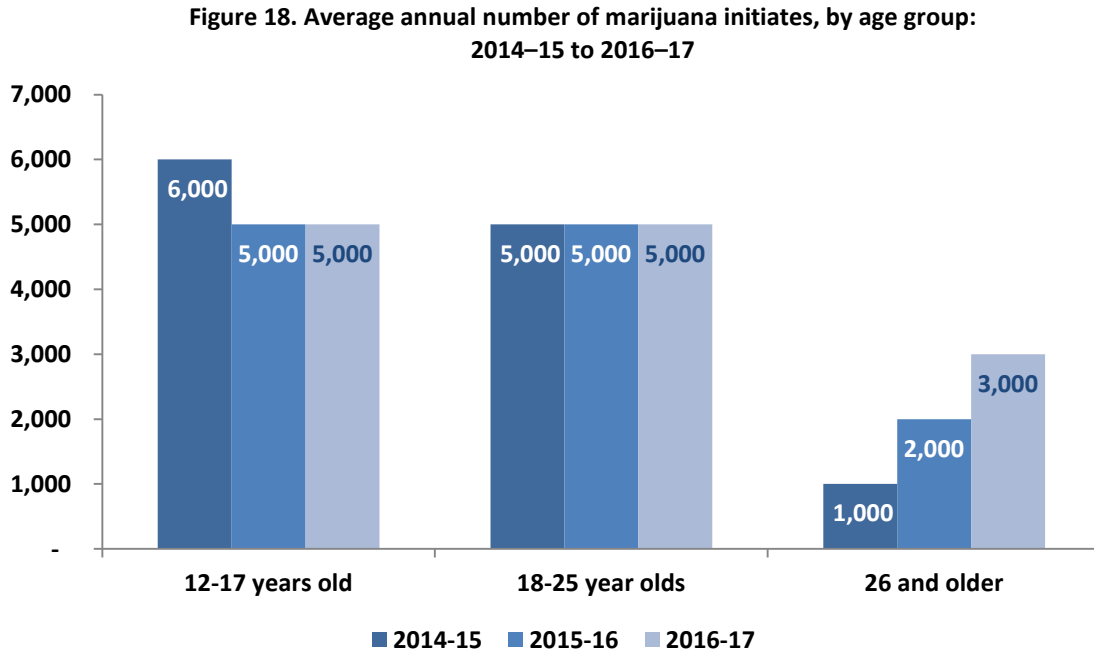
Source: NSDUH, 2014–15 to 2016–17

- During 2016–17, there was an annual average of 5,000 marijuana initiates between the ages of 12 and 17 and 18 to 25. From 2015–16 to 2016–17, the average annual number of initiates 26 and older increased by 1,000.

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[5] Kosterman, R., Hawkins, J. D., Guo, J., Catalano, R. F., & Abbott, R. D. (2000). The dynamics of alcohol and marijuana initiation: Patterns and predictors of first use in adolescence. *American Journal of Public Health, 90*, 360-366.

PRESCRIPTION DRUGS

Prescription Drugs: *Misuse of Prescription Drugs Among Youth*

Indicator Description: This indicator presents the percentage of youth who reported using prescription medications (any type) that were not prescribed to them by a doctor.

Why Indicator is Important: Misuse of prescription drugs may lead to consequences such as unintentional poisonings or overdose, which could lead to death, automobile crashes, addiction, and increased crime.

Data Source(s): MIYHS, 2009–2017.

Summary: The percentage of high school students reporting that they had misused a prescription medication in the past month increased slightly from 2015 (5%) to 2017 (6%). In 2017, about one in 10 high school students reported they misused a prescription pain medication during their lifetime.

Figure 19. High school students reporting misuse of prescription drugs (any type) in in the past month: 2009–2017
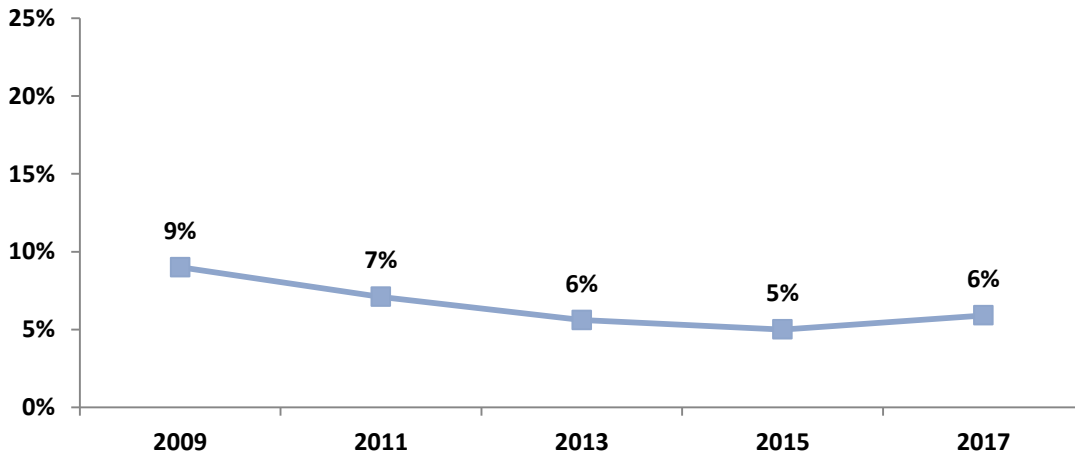
Source: MIYHS, 2009–2017

- From 2009 to 2017, the proportion of students who reported misusing prescription drugs (any type) increased slightly from 2015 (5%) to 2017 (6%). Although not shown, about 10 percent of high school students reported having ever misused a pain medication (*e.g.,* codeine, Vicodin, OxyContin).
- Although not shown, in 2017, high school students who did not perceive a moderate to great risk of harm from taking prescription drugs that were not prescribed to them were nearly five times as likely to take them in the past month as high school students who did perceive a risk of harm.

Prescription Drugs: *Nonmedical Use of Pain Relievers Among Adults*

Indicator Description: This indicator reflects the percentage of adults who reported using prescription pain relievers, specifically for reasons other than their intended purpose in the past year. In 2015–16, the pain reliever misuse indicator was redesigned to incorporate use in any way not directed by a doctor, including use without a prescription of one's own; use in greater amounts, more often, or longer than told; or use in any other way not directed by a doctor. Prescription psychotherapeutic subtypes were revised in 2016; one effect was the comparability of codeine products between 2015 and 2016. Therefore, the data before 2015–16 could not be trended with the data collected using the new indicator.

Why Indicator is Important: Misuse of prescription drugs may lead to consequences such as unintentional poisonings, overdose, which could lead to death, dependence and increased crime.

Data Source(s): NSDUH, 2015–16 and 2016–17

Summary: Non-medical use of prescription pain relievers is more likely among young adults between the ages of 18 and 25 compared to adults age 26 and older. In 2016–17, 7 percent of 18- to 25-year-olds reported having misused pain relievers in the past year. This is consistent with 2015–16.

Figure 20. Non-medical use of pain relievers among adults in the past year, by age group: 2015–16 and 2016–17
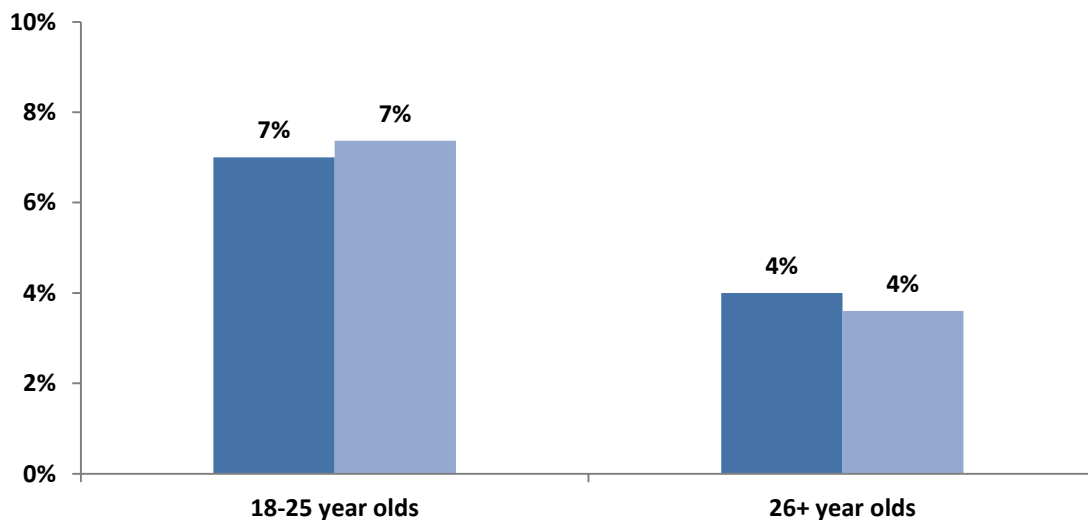
Source: NSDUH, 2015–16 and 2016–17

- Among Mainers 18 to 25, 7 percent reported non-medical use of pain relievers in the past year compared to 4 percent of adults 26 years and older.

Prescription Drugs: *Misuse of Prescription Drugs Among Adults*

Indicator Description: This measure reflects the percentage of adults in Maine who reported using prescription drugs (any type) not prescribed to them by a doctor or using them in a way other than the way in which they were prescribed, at least once in their lifetime.

Why Indicator is Important: Misuse of prescription drugs may lead to consequences such as unintentional poisonings, overdose, which may lead to death, dependence and increased crime.

Data Source(s): BRFSS, 2013–15 to 2015–2017

Summary: During 2015–17 the highest rates of lifetime prescription drug misuse were observed among adults between the ages of 26- to 35-year-olds; about one in 10 (10%) reported misusing prescription drugs within their lifetime. Lifetime prescription drug misuse among 18- to 25-year-olds appears to have decreased over the past several years.

Figure 21. Misuse of prescription drugs (any type) among adults in their lifetime, by age group: 2013–15 to 2015–17*
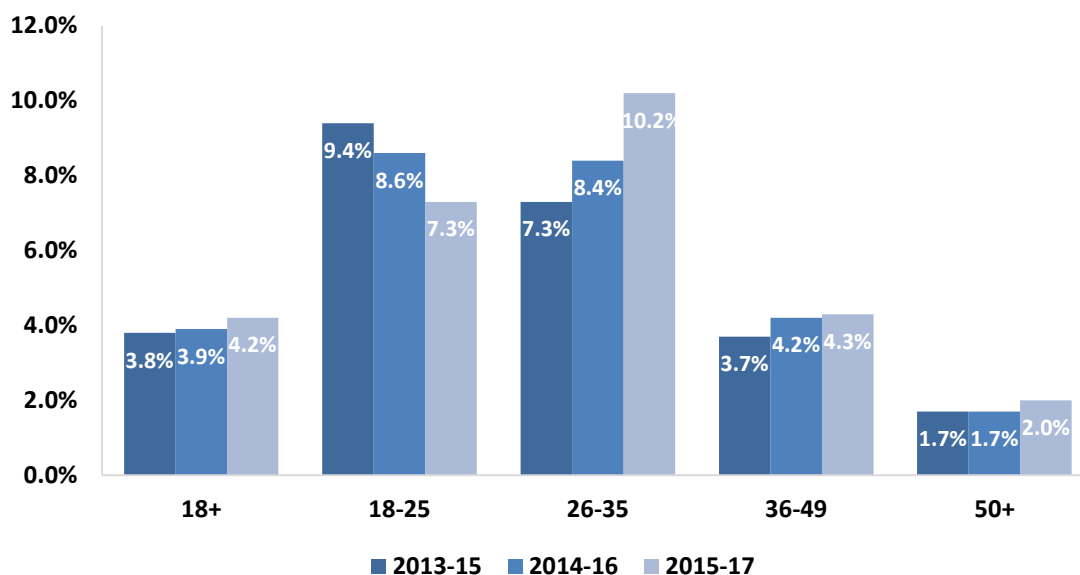
Source: BRFSS, 2013–15 to 2015-17
*2017 BRFSS estimates are preliminary.

- During the 2015–17 period, about 4 percent of adults 18 and older in Maine reported having misused prescription drugs during their lifetime. Rates of lifetime prescription drug misuse among Mainers ages 26 to 35 have observed a steady increase since 2013–15, while rates in 18- to 25-year-olds have decreased in the same period. Other age groups remained relatively stable in their reported misuse.

Other Illegal Drugs: *Illicit Drug Use (Other Than Marijuana)*

Indicator Description: This indicator reflects the percentage of individuals who used illicit drugs (other than marijuana) within the past month. Illicit drugs other than marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.

Why Indicator is Important: Use of illicit drugs can cause impaired brain function and damage to the nervous system and other organs. Even occasional use may cause heart attack, suffocation, or death.

Data Source(s): NSDUH, 2016–17

Summary: In 2016–17, 7 percent of 18- to 25-year-olds, 2 percent of youth 12 to 17 years old, and 2 percent of those 26 and older reported having used illicit drugs (other than marijuana) in the past year. Rates among 18- to 25-year-olds have increased 1 percentage point since 2015–16.

Figure 22. Illicit drug use (other than marijuana)* in past month, by age group: 2016–17
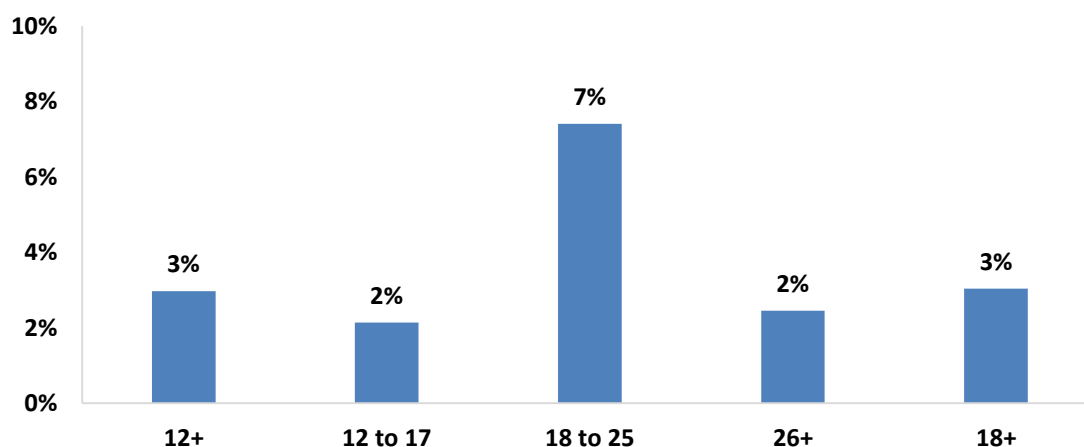
Source: NSDUH, 2016–17

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

- Although not shown, rates among 18- to 25-year-olds have decreased slightly since 2011–12, while rates among youth and adults 26 and older have remained relatively unchanged.

Other Illegal Drugs: *Cocaine Use Among Adults*

Indicator Description: This indicator illustrates the percentage of Maine residents who have used cocaine. The measure reflects rates of use within the past year.

Why Indicator is Important: Cocaine is highly addictive. Use of cocaine is associated with adverse health effects such as cardiac events, seizures, and stroke. It also increases the risk of cognitive impairment, injury, and crime.

Data Source(s): NSDUH, 2012–13 to 2016–17; MIYHS, 2009–2015

Summary: In 2016–17, nearly 7 percent of 18- to 25-year-olds and 1 percent of Mainers 26 and older reported they had used cocaine at least once in the past year.

Figure 23. Adults reporting cocaine use in past year, by age group:
2012–13 to 2016–17
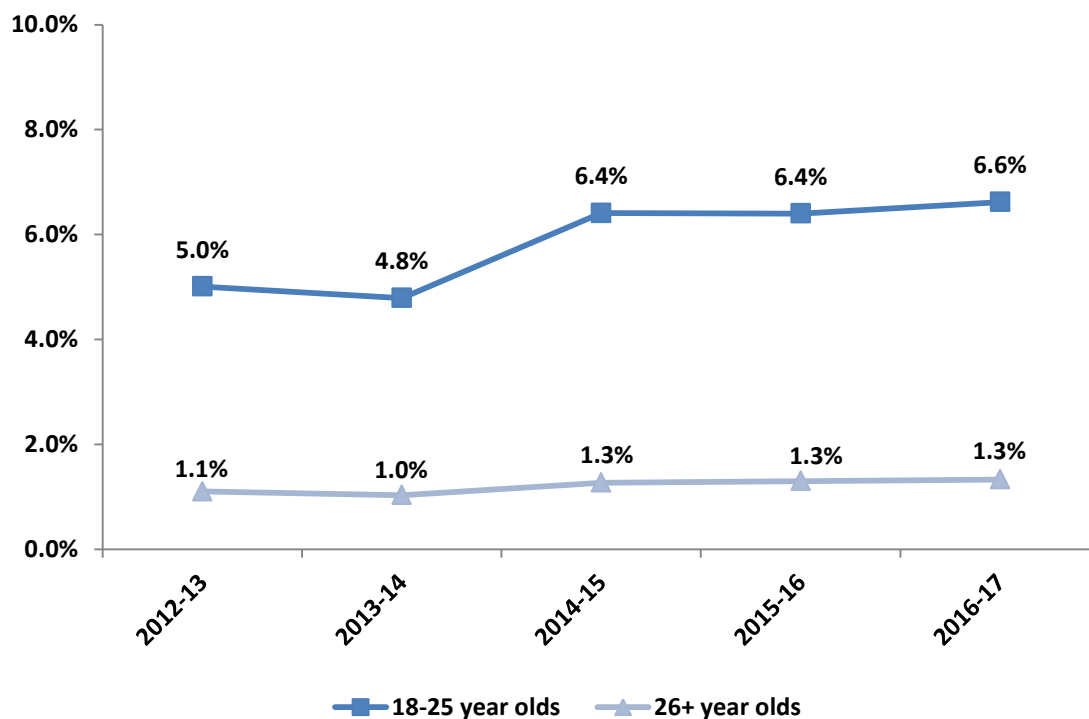
Source: NSDUH, 2012–13 to 2016–17

- In 2016–17, more than 6 percent of young adults ages 18 to 25 reported cocaine use in the past year, compared to 1 percent among those 26 and older. Rates among Mainers aged 18–25 have increased slightly from 2015–16 (6.4%) to 2016–17 (6.6%), while rates among those 26 years and older have remained stable.

Other Illegal Drugs: *Inhalant, Cocaine/Crack, and Heroin Use Among Youth*

Indicator Description: This indicator depicts the percentage of high school students who reported having used inhalants, cocaine/crack, or heroin in their lifetime. Inhalants include substances such as glue, aerosol spray cans, paints or sprays.

Why Indicator is Important: Use of drugs such as inhalants, cocaine/crack, and heroin can cause impaired brain function and damage to the nervous system and other organs. Even occasional use may cause heart attack, suffocation, or death.

Data Source(s): MIYHS, 2009–2017

Summary: In 2017, 7 percent of high school students reported ever using inhalants, 5 percent reported ever using cocaine, and 3 percent reported ever using heroin. Lifetime rates for inhalant use continue to decrease, but the lifetime use rates of cocaine and heroin have remained unchanged since 2015.

Figure 24. High school students reporting inhalant, cocaine/crack, or heroin use in their lifetime: 2009–2017
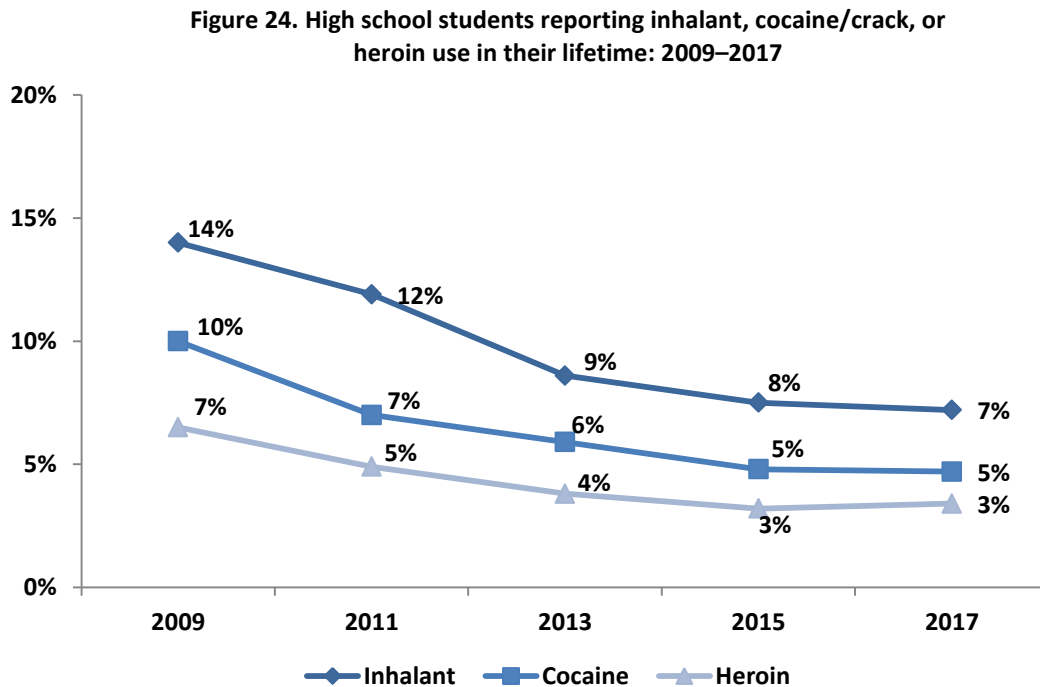
Source: MIYHS, 2009–2017

- From 2009 to 2017, the lifetime rate of inhalant use declined by 7 percentage points while the lifetime rate of cocaine/crack use decreased by 5 percentage points, and the lifetime rate of heroin decreased by 4 percentage points.

Other Illegal Drugs: *Heroin Use Among Youth and Adults*

Indicator Description: This indicator depicts the percentage and approximate number of Mainers who reported heroin use in the past 12 months.

Why Indicator is Important: Use of drugs such as heroin can cause impaired brain function and damage to the nervous system and other organs. Even occasional use may cause heart attack, suffocation, or death. Long term effects from heroin use can include but are not limited to irreversible damage to the liver or kidneys and risk of contracting communicable diseases.

Data Source(s): NSDUH, 2015–16 and 2016–17

Summary: In 2016–17, 0.51 percent of Mainers aged 12 and older (approximately 6,000 residents) self-reported that they had used heroin within the past year. The highest prevalence was observed among 18- to 25-year-olds, reporting a rate of 1.24%.

Figure 25. Heroin use in the past year, by age group (percentage and approximate number in thousands): 2015–16 to 2016–17
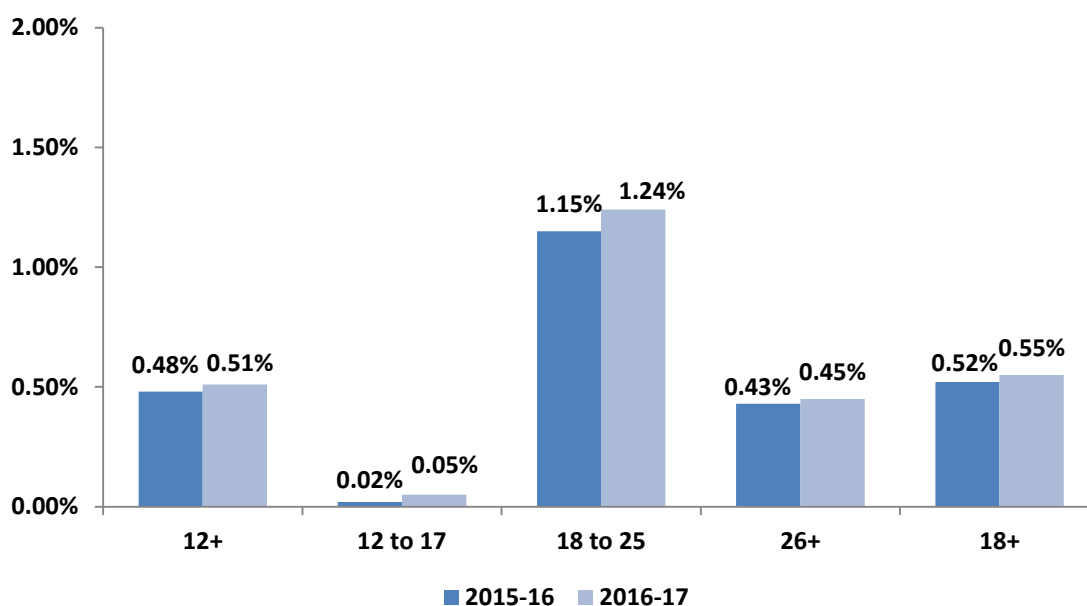
Source: NSDUH, 2015–16 to 2016–17

- The highest rate of heroin use was observed among 18- to 25-year-olds (1.24%); this was followed by residents 26 and older (0.45%), and 12- to 17-year-olds (0.05%).

Substance Use and Pregnancy: *Alcohol and Cigarette Use During the Last Trimester*

Indicator Description: This indicator reflects the percentage of mothers who reported smoking cigarettes or drinking any alcohol during the last three months of pregnancy.

Why Indicator is Important: Exposure to alcohol can cause damage to the fetus during all stages of pregnancy. Because the minimum quantity of alcohol required to produce those damaging effects is unknown, the American Academy of Pediatrics recommends complete abstinence from alcohol for pregnant women. Babies born to mothers who smoked during pregnancy can have lower birth weights than those whose mothers did not smoke. The U.S. Surgeon General warns against smoking during pregnancy. Substance use during pregnancy can cause a host of short-term and long-term developmental delays to the fetus and child.

Data Source(s): PRAMS, 2013–2017

Summary: In 2017, about 14 percent of pregnant women reported smoking cigarettes in their last trimester, and one in 10 women reported consuming any alcohol. Cigarette use rates observed a slight decrease from 2015 to 2017. Alcohol use rates have increased nearly 4 percentage points in the same time period. 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.

Figure 26. Women reporting alcohol or cigarette use during last trimester of pregnancy: 2013–2017
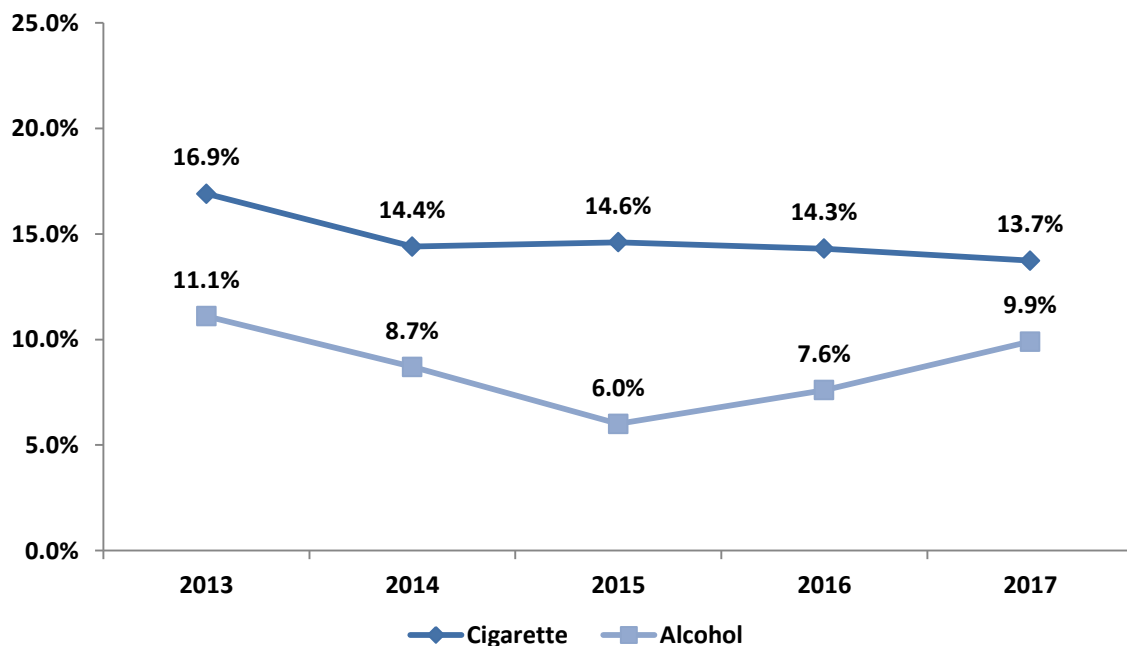
Source: PRAMS, 2013–2017

- Cigarette use among women during their last trimester decreased by just over 3 percentage points from 2013 to 2017. Alcohol use during pregnancy decreased from 2013 to 2015 but has been on the rise since. Rates of alcohol use in the last trimester of pregnancy are still roughly 1 percentage point lower than they were in 2013.

Figure 27. Women reporting cigarette use during last trimester of pregnancy, by age and education: 2016 and 2017
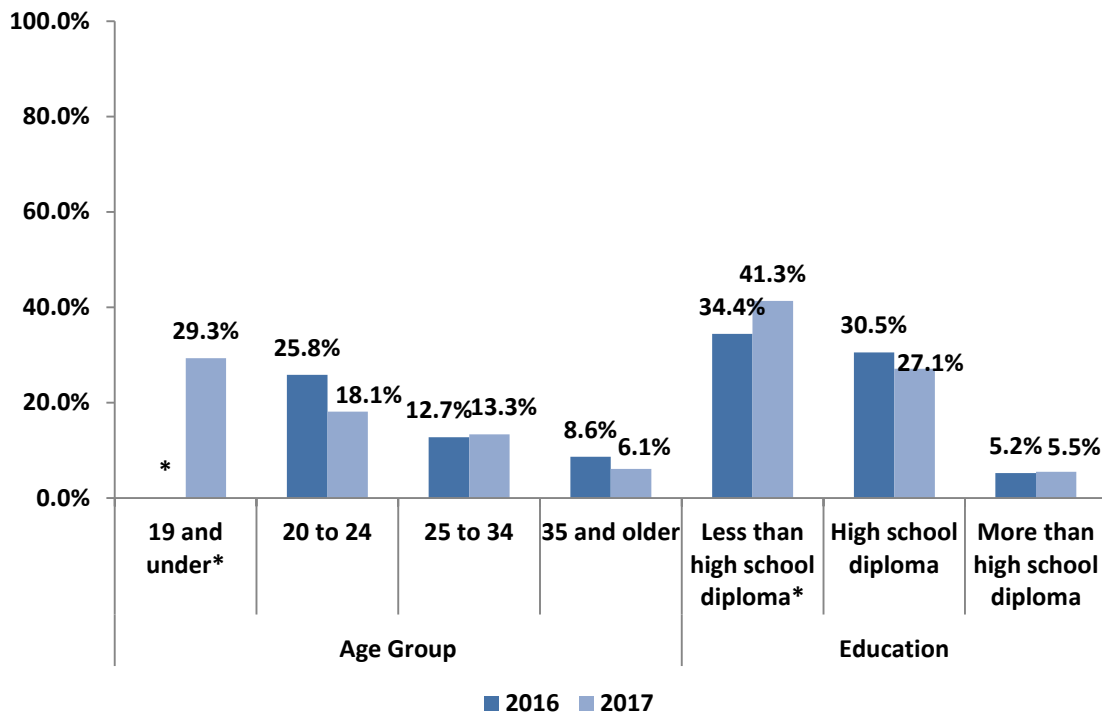
Source: PRAMS, 2016 and 2017

indicates variable had less than 10 respondents and has been suppressed

- In 2017, rates of cigarette use were highest among women 19 years old and under (29.3%), followed by 20- to 24-year-olds (18.1%), 25- to 34-year-olds (13.3%), and women 35 and older (6.1%). 2016 data showed the same trend except for those 19 and under, whose rate is suppressed due to low number of responses. In both 2016 and 2017, cigarette use rates were highest among those without a high school diploma, followed by those with only a high school diploma; rates were lowest among those with more than a high school diploma.

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Consequences Resulting from Substance Use and Misuse

Both individuals and communities suffer the consequences of substance use in terms of increased health care need and criminal justice involvement, as well as increased resources and costs. While a great deal of information regarding substance use can be obtained from the data described in the previous section (consumption), information on the effects of that use on individuals and communities can be derived from what has come to be called "consequence" data. Consequences are defined as the social, economic, and health problems associated with the use of alcohol and illicit drugs. Examples of these include illnesses related to alcohol, drug overdose deaths, property and personal crimes, as well as driving accidents, poisonings, and suicides.

Risky alcohol use continues to have detrimental effects on the health and safety of Mainers, particularly among youth and young adults. Alcohol/drug-related crash fatalities are a major consequence of alcohol consumption. Nearly one in four fatal motor vehicle crashes in 2018 involved alcohol/drugs. From 2014 to 2018, the total number of motor vehicle crashes increased by 11 percent, while the number of crashes involving impaired drivers increased by 6 percent from 2014. While the overall number of motor vehicle crashes has increased by 10 percent from 2014 to 2018, the proportion of alcohol and or drug related motor vehicle crashes has remained stable at 4 percent. Arrests related to operating under the influence have remained stable. Fortunately, liquor law violations among youth in Maine have been steadily decreasing over the past several years.

For the past several years, consequences arising from synthetic opiates (*e.g.,* prescription pain relievers) have declined as those related to illicit opioids (*e.g.,* heroin, non-pharmaceutical fentanyl) have dominated. This overall shift to more potent and volatile opioids has had a profound impact on overdoses, crime, and health in Maine. Recently, Maine has begun to see some relief in terms of morbidity and mortality issues arising from illicit drugs. In 2018, there were 217 fatal overdoses involving non-pharmaceutical fentanyl (illicitly manufactured) reported, a decrease of twelve percent from 2017. Non-pharmaceutical fentanyl continues to play a major role in drug-related deaths, comprising about a third of total deaths, whereas the influence of heroin, benzodiazepines, and methadone began to decline in 2016. Furthermore, about one in four overdose deaths involve alcohol while another quarter of deaths involved cocaine. The proportion of overdoses involving cocaine has increased significantly in the past few years. Most overdose deaths occur among Mainers between 26 and 49.

Trafficking investigations conducted by the Maine Drug Enforcement Agency (MDEA) related to heroin have decreased by nearly 50 percent since 2016. Additionally, the number of MDEA manufacture investigations as well as the number of lab incidents linked to methamphetamines has decreased drastically over the past few years. MDEA investigations related to the trafficking of cocaine increased by 136 percent from 2016 to 2018. As Maine and the Northeast grapple with the opiate/opioid epidemic, it is crucial to monitor other emerging drugs as well. Drugs such as methamphetamine, cocaine, and other potentially addictive and dangerous prescription drugs (*e.g.,* benzodiazepines, stimulants) have had a progressively grave impact in Maine.

As for drug possession arrests, those related to opium, cocaine and derivatives increased by 11 percent from 2013 to 2017, while arrests for the possession of marijuana decreased by 72 percent from 2013 to 2017. In 2018, one-third of drug offense arrests for possession were for marijuana. It is anticipated that the shifting landscape of Maine's laws and regulations regarding the medicinal and recreational use of marijuana will continue to have a significant impact on drug possession arrests in Maine.

EMS responses related to drugs and/or alcohol haven been increasing for the past several years. From 2014 to 2018, drug/medication overdoses increased by 43 percent while those related to alcohol overdose increased by 45 percent. Rates of drug/medication overdose responses were disproportionately highest among Mainers between 26 and 54 years old, while those related to alcohol overdose were highest among adults aged 36 and older. The number of 26- to 35-year-olds involved in an EMS response related to drugs/medication more than doubled from 2013 to 2018; individuals in this group were more than twice as likely to have been involved in an EMS response related to a drug overdose as opposed to an alcohol overdose. After more than doubling from 2014 to 2017, the number of EMS-administered naloxone administrations have begun to decrease. In 2018, nearly seven out of 10 individuals receiving naloxone by the EMS were male. Rates are disproportionately higher among males between 26 and 54 years old.

Substance use during pregnancy can cause a host of short-term and long-term developmental delays to the fetus and child. In 2018, over 900 live births in Maine had reports stating the infant had been exposed and/or affected by substances; this accounted for about 7 percent of the live births in Maine. After steadily increasing from 2014 to 2016, the number of drug-affected baby reports declined by 12 percent from 2016 to 2018.

SUBSTANCE EXPOSED/DRUG AFFECTED BABIES

Substance Exposed/Drug Affected Babies: *Babies Born Exposed to/Affected by Substances*

Indicator Description: This indicator reflects the number of infants born in Maine where a healthcare provider reported to the Office of Child and Family Services (OCFS) that there was reasonable cause to suspect the baby may be either affected by illegal substance use, demonstrating withdrawal symptoms resulting from prenatal drug exposure (illicit or prescribed), or have fetal alcohol spectrum disorders. This measure potentially excludes instances where the infant was exposed to substances and did not show withdrawal symptoms after birth, instances where the birth of an infant affected by substances was not reported to OCFS, and any other instances in which there were discrepancies between reporters when interpreting the law.[6]

Why Indicator is Important: Prenatal exposure to alcohol, tobacco, and illicit drugs has the potential to cause a wide spectrum of physical, emotional, and developmental problems for these infants. The harm caused to the child can be significant and long-lasting, especially if the exposure is not detected and the effects are not treated as soon as possible.

Data Source(s): OCFS/MACWIS, 2014–2018

Summary: In 2018, there were 904 reports to Child Protective Services regarding infants born exposed to substances (drug-affected babies); this accounted for over 7 percent of the live births in Maine. After steadily increasing from 2014 to 2016, the number of drug-affected baby reports declined by 12 percent from 2016 to 2018.

Figure 28. Number of drug-affected (substance-exposed) baby reports: 2014–2018
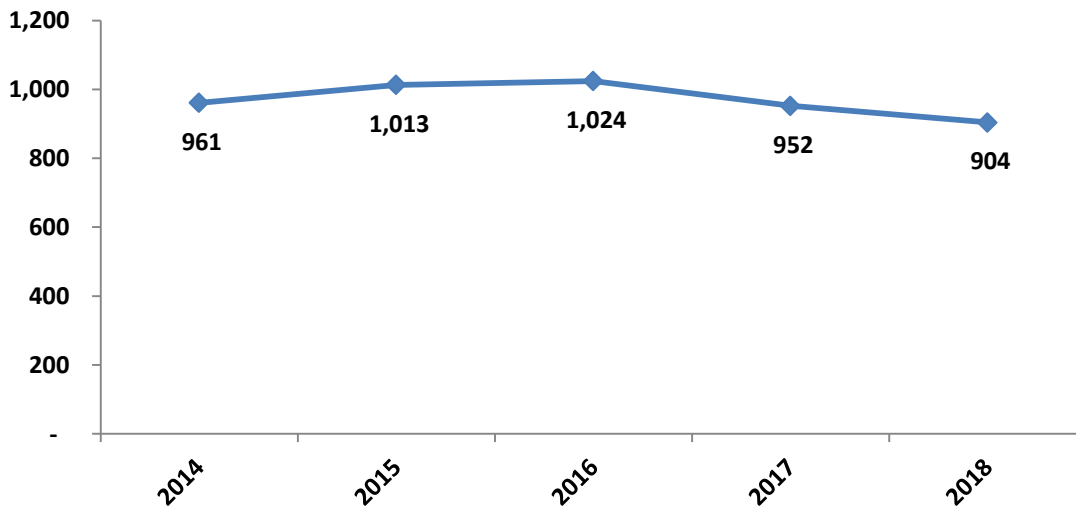
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[6] Title 22, §4011-A; notification of prenatal exposure to drugs or having fetal alcohol spectrum disorders.

- The number of reports to Child Protective Services regarding infants born affected by substance use or babies affected by prenatal exposure to substances decreased by 48 from 2017 to 2018. This represents a 5 percent decrease for the time period.

Figure 29. Proportion of live births with drug affected (substance exposed) reports: 2014–2018
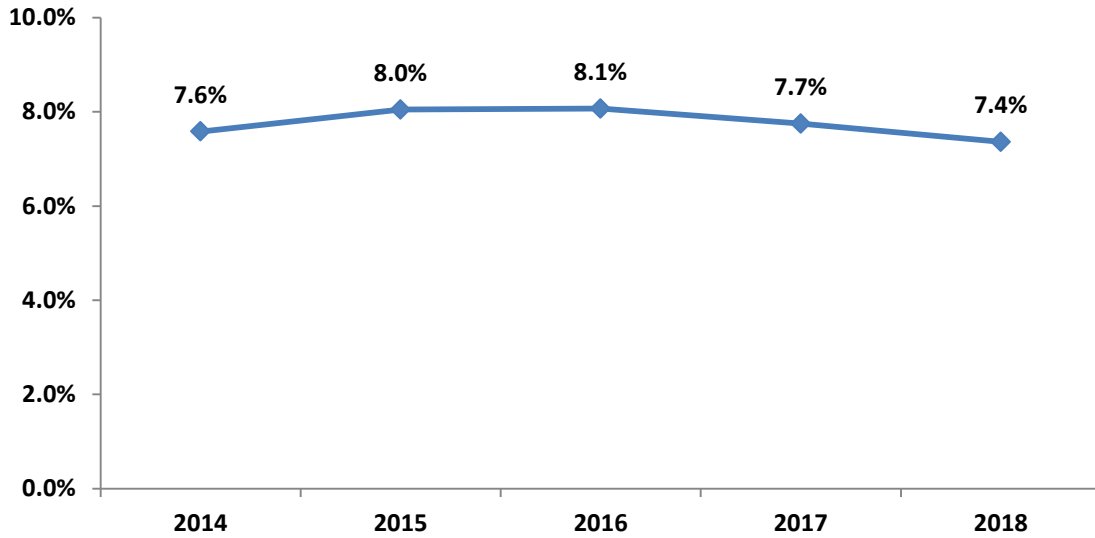
- The proportion of live births with substance exposure decreased slightly in 2018, but the rate has remained relatively consistent over the last five years.

Criminal Justice Involvement: *Arrests Related to Alcohol*

Indicator Description: This indicator reflects arrests related to alcohol and includes Operating Under the Influence (OUI) and liquor law violations. The data include those who were released without having been formally charged.

Why Indicator is Important: OUI and liquor law arrest rates can be an indication of the rate of criminal behavior, but it is important to note that they are also an indication of the level of law enforcement deployed. Arrests rates are expected to increase with increased enforcement regardless of whether criminal behavior changes.

Data Source(s): DPS-UCR, 2013–2017

Summary: The total OUI arrests have remained stable over the past several years, whereas arrests pertaining to violating liquor laws (excluding OUIs) have decreased substantially. Liquor law violations among those under 21 have decreased by nearly half from 2013 to 2017 while adult OUI arrests among the same population have doubled from 2016 to 2017. Adults aged 21 to 29 continue to have the highest number of OUIs reported each year (1,865).

Figure 30. Adult arrests (18+ years old) related to alcohol, by arrest type: 2013–2017
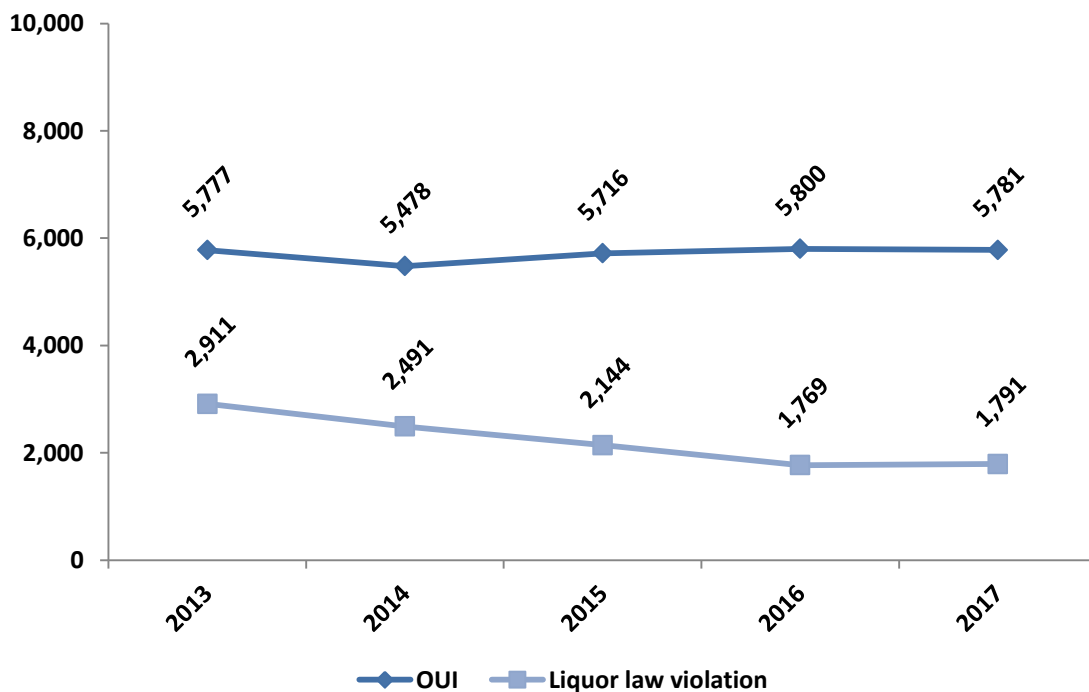
Source: DPS-UCR, 2013–2017

- In 2017, there were 5,781 adult arrests for OUIs compared to 1,791 arrests for breaking liquor laws. The number of adult OUI arrests has remained relatively stable since 2013, while the number of adult liquor violations decreased by 38 percent.

Figure 31. Juvenile arrests (<18 years old) related to alcohol, by arrest type: 2013–2017
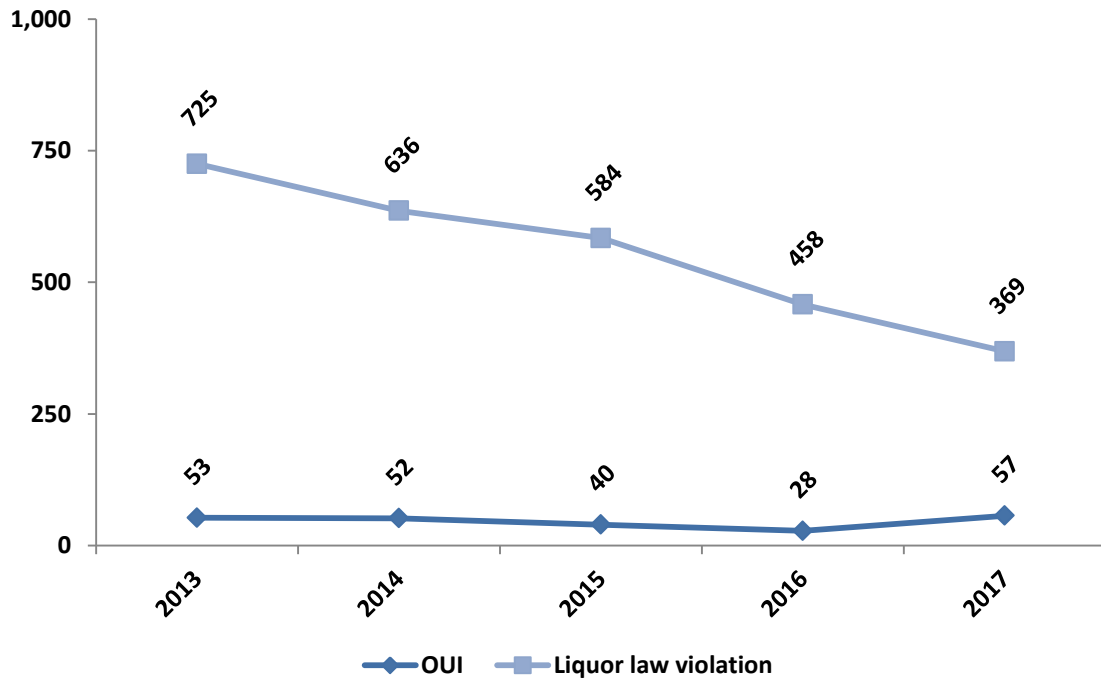
Source: DPS-UCR, 2013–2017

- Alcohol-related arrests among juveniles differ from those of adults in that there are more arrests for liquor law violations than OUIs. In 2017, there were 369 juvenile arrests for breaking liquor laws and 57 for OUI arrests. Juvenile liquor law violations have decreased by 49 percent since 2013, whereas juvenile OUI arrests increased by 8 percent in the same time period.

Figure 32. Arrests related to alcohol, by age group: 2017

	Under 18	18 to 20	21 to 29	30 to 39	40 to 49	50 to 59	60+
Liquor law violation	369	1,225	170	110	133	123	30
OUI	57	300	1,865	1,460	944	831	381
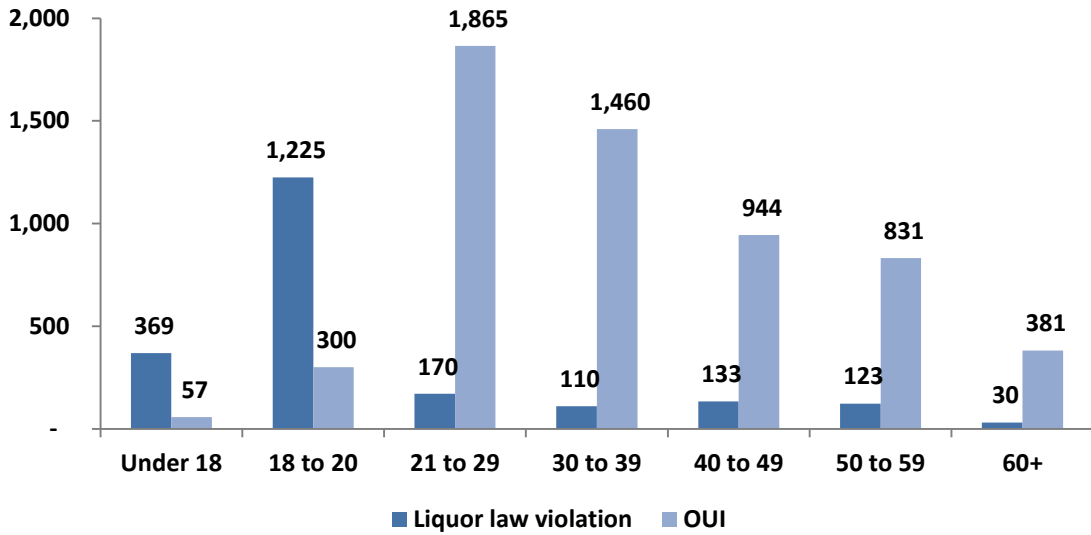
Source: DPS-UCR, 2017

Figure 33. Arrests related to liquor law violations, by age group: 2013 to 2017

	2013	2014	2015	2016	2017
Under 18	725	636	584	458	369
18 to 20	2,172	1,800	1,518	1,250	1,225
21 to 29	320	225	243	152	170
30 to 39	95	108	99	95	110
40 to 49	190	187	126	126	133
50 to 59	108	118	142	121	123
60+	26	23	16	25	30
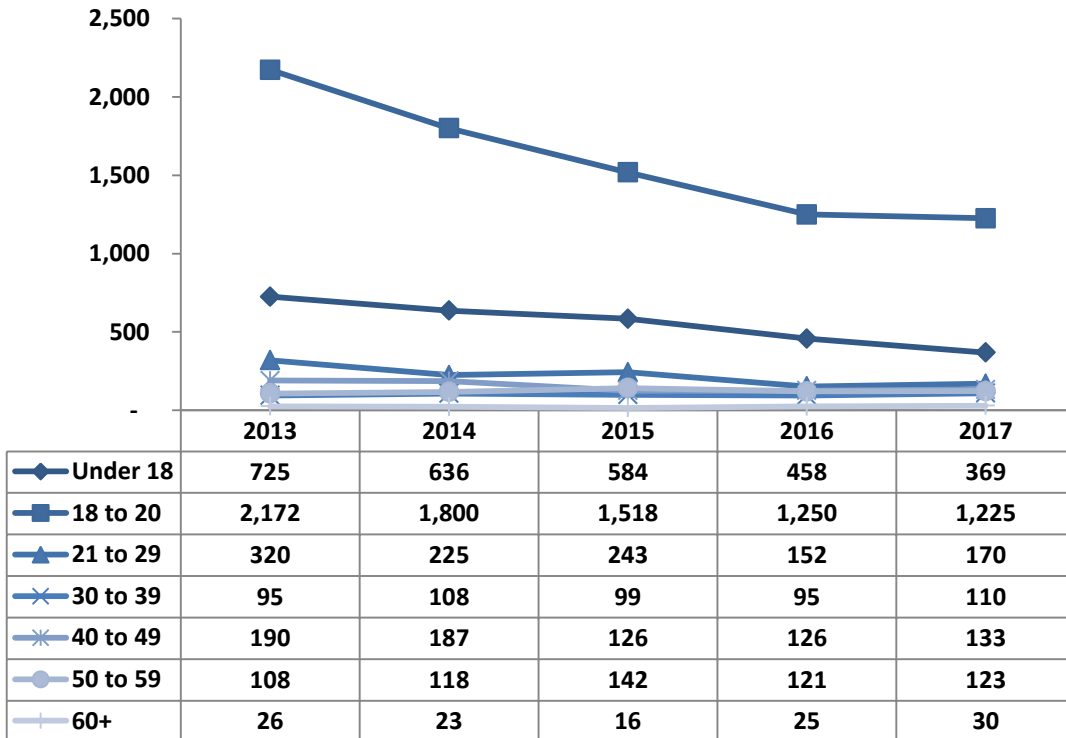
Source: DPS-UCR, 2013–2017

Figure 34. Arrests related to operating under the influence, by age group: 2013 to 2017

	2013	2014	2015	2016	2017
Under 18	53	52	40	28	57
18 to 20	315	301	298	297	300
21 to 29	2,064	1,814	1,909	1,919	1,865
30 to 39	1,277	1,215	1,350	1,470	1,460
40 to 49	1,091	1,013	987	968	944
50 to 59	748	792	801	793	831
60+	282	343	371	353	381
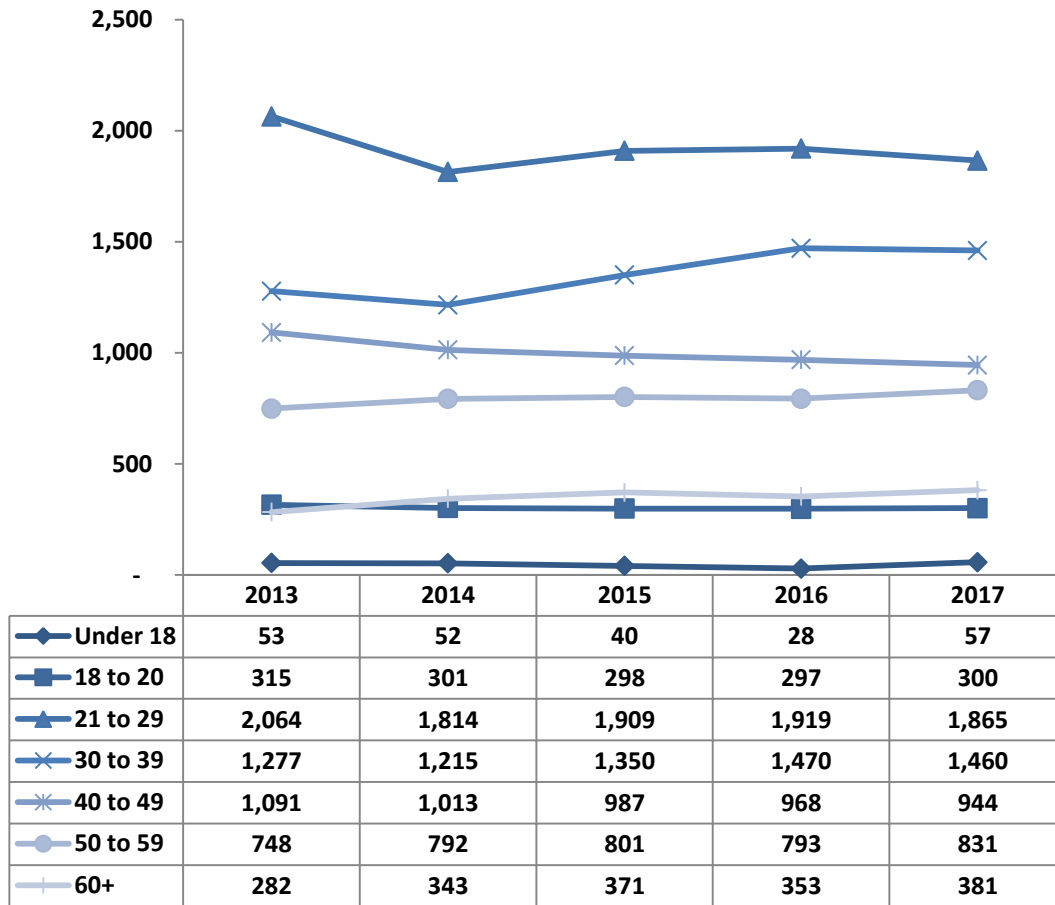
Source: DPS-UCR, 2013–2017

- As previously noted, the number of arrests related to OUI and liquor law violations differs among adults and juveniles. This pattern remains when comparing the number of arrests among those of legal drinking age to those who are under 21. In 2017, there were 369 liquor law violations for people under 18 and 1,225 for people between the ages of 18 to 20. In comparison, there were 170 liquor law violations for those between the ages of 21 and 29, and even fewer among older age groups.

- The opposite can be seen in OUI violations. In 2017, there were 57 arrests for those under the age of 18 and 300 for 18- to 20-year-olds, compared to 1,865 OUIs for those between the ages of 21 and 29 (more than any other age group). While the number of OUI violations for most age groups appear to be stable, Mainers under 18 observed a 51 percent increase in OUI arrests from 2016 to 2017. The number of OUIs generally decreases with age, beginning with those aged 30 to 39.

Criminal Justice Involvement: *Arrests Related to Drugs*

Indicator Description: This indicator reflects the number of arrests made by Maine law enforcement agencies that were related to drugs and includes manufacturing, sales, and possession.

Why Indicator is Important: Arrest rates for drug sales, manufacturing and drug possession can be an indication of the rate of criminal behavior, but it is important to note that they are also an indication of the active level of law enforcement. Arrest rates are expected to increase with increased enforcement regardless of whether criminal behavior changes.

Data Source(s): DPS-UCR, 2013–2017

Summary: In 2017, 70 percent of drug-related offenses were for possession rather than sale and manufacturing. From 2016 to 2017, all arrests related to drugs declined by 37 percent. In 2017, one in three drug offense arrests for possession were for marijuana. The number of arrests due to marijuana possession has decreased by 68 percent from 2016 to 2017. While rates of arrest for possession related to marijuana, synthetic narcotics, and opium-related crimes have decreased greatly, the percent of arrests for other dangerous non-narcotics increased slightly from 2016 to 2017.

Figure 35. Adult and juvenile drug offenses, by offense type: 2017
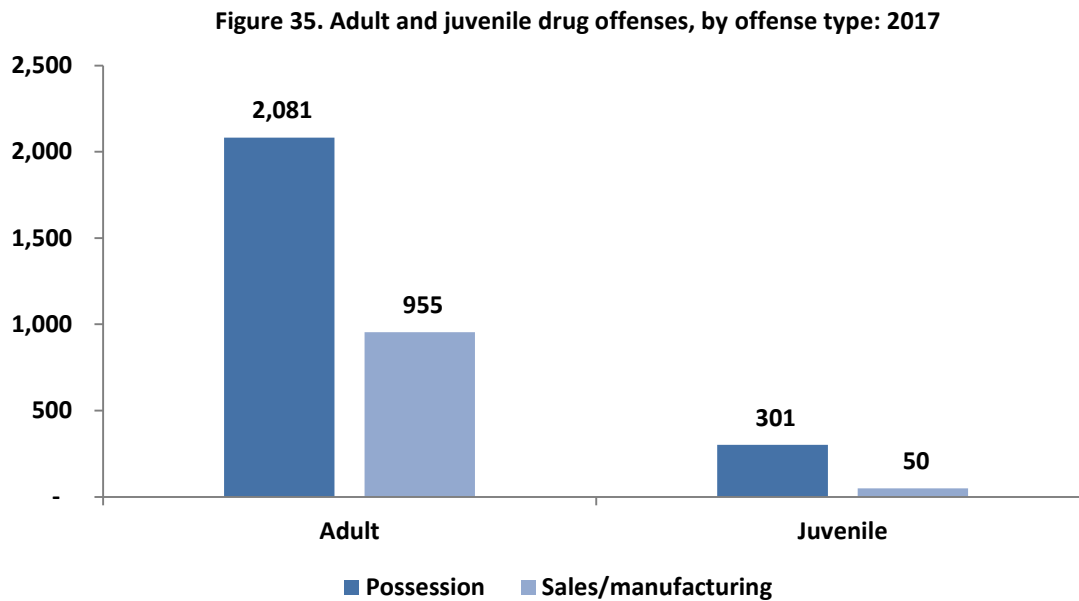
Source: DPS-UCR, 2017

- Possession continues to be the leading drug offense for juveniles and adults (2,081 for adults, 301 for juveniles) rather than sales/manufacturing (955 for adults and 50 for juveniles) in 2017.

- Although not shown, of the 3,387 total drug arrests, 2,410 involved a male and 977 were female. This means that approximately seven out of 10 (71%) arrests related to drugs were among males.

Figure 36. Total drug offense arrests, by age group: 2013–2017
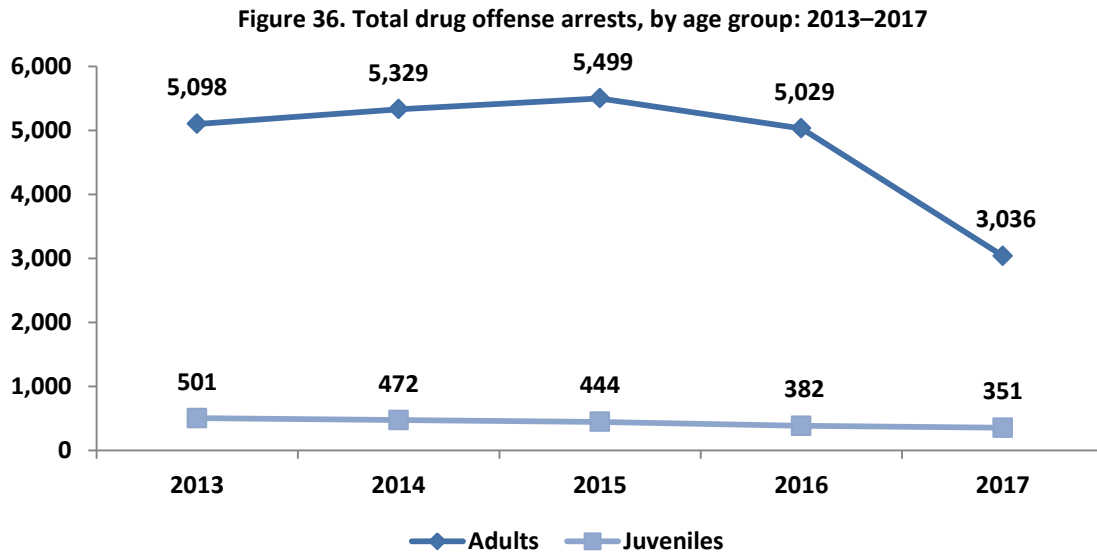
Source: DPS-UCR, 2013–2017

- The total number of drug arrests for adults and juveniles declined in 2017. Adult arrests decreased by 40 percent and juvenile arrests decreased by 8 percent from 2016.

Figure 37. Local law enforcement drug offense arrests (all ages) for possession, by drug type: 2017

Source: DPS-UCR, 2017

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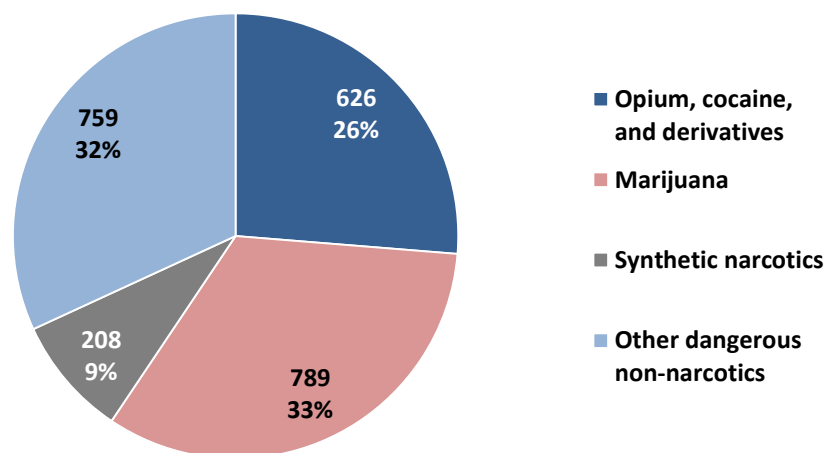
- Marijuana comprised the largest portion of drug arrests for possession in 2017 at 33 percent, followed closely by other dangerous non-narcotics at 32 percent, opium/ cocaine derivative at 26 percent and synthetic narcotics at 9 percent.

Figure 38. Local law enforcement drug offense arrests (all ages) for possession, by drug type: 2013–2017

	2013	2014	2015	2016	2017
Opium, cocaine, and derivatives	563	737	865	788	626
Marijuana	2,769	2,820	2,458	2,457	789
Synthetic narcotics	371	346	300	305	208
Other dangerous non-narcotics	656	683	711	752	759
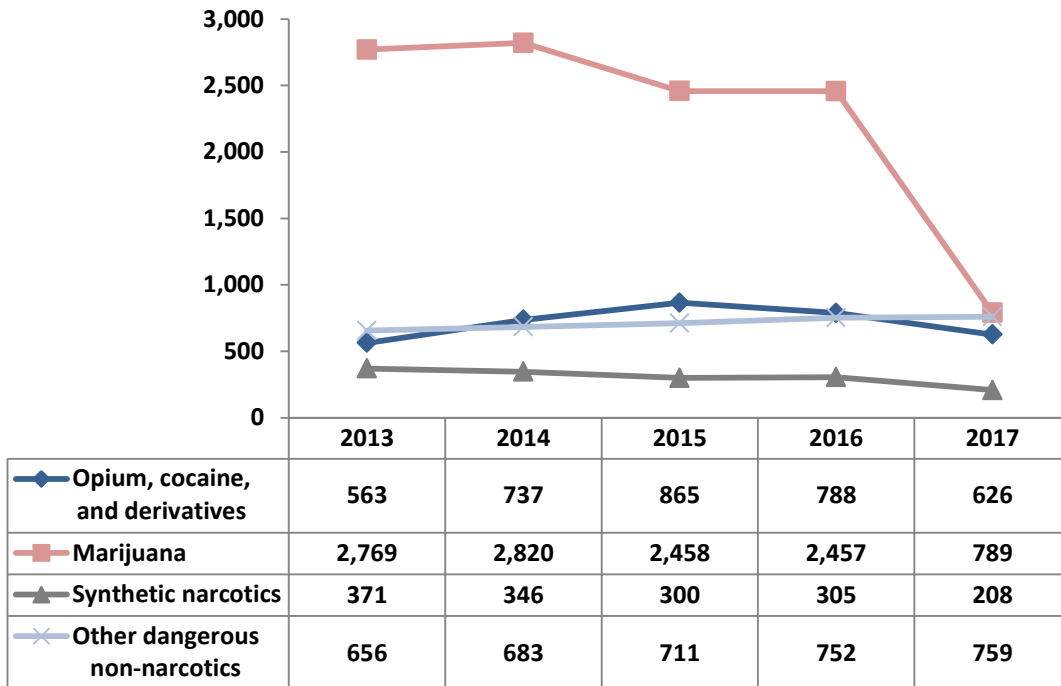
Source: DPS-UCR, 2013-2017

- From 2016 to 2017, arrests for possession of opium/cocaine derivatives (*e.g.,* morphine, heroin, cocaine, and codeine) declined by 21 percent; however, arrests for other dangerous non-narcotics (*e.g.,* barbiturates and Benzedrine) increased slightly. Arrests for possession of marijuana and synthetic narcotics (*e.g.,* Demerol and methadone) decreased greatly.

Criminal Justice Involvement: *Drug Enforcement Agency Drug Trafficking and Manufacturing Investigations*

Indicator Description: This indicator reflects trafficking investigations made by the Maine's Drug Enforcement Agency, by drug type. The MDEA through its regional multi-jurisdictional task forces is the lead state agency in confronting drug trafficking crime.

Why Indicator is Important: Drug investigation counts can be an indication of the rate of criminal behavior, but it is important to note that they are also an indication of the active level of law enforcement. Drug manufacturing investigations are expected to increase with increased enforcement regardless of whether criminal behavior changes.

Data Source(s): MDEA-UCR, 2014–2018

Summary: In 2018, the majority of MDEA trafficking investigations involved cocaine, followed by heroin, and other opiates. From 2017 to 2018, MDEA trafficking investigations related to heroin decreased by 21 percent, while investigations related to other opiates increased by 19 percent, and investigations involving cocaine increased by 27 percent. Manufacturer investigations related to methamphetamine decreased by 13 percent from 2017 to 2018.

Figure 39. MDEA drug trafficking investigations, by drug type: 2014–2018

	2014	2015	2016	2017	2018
Heroin	243	399	480	314	248
Other Opiates	185	146	120	86	102
Cocaine	151	208	126	234	297
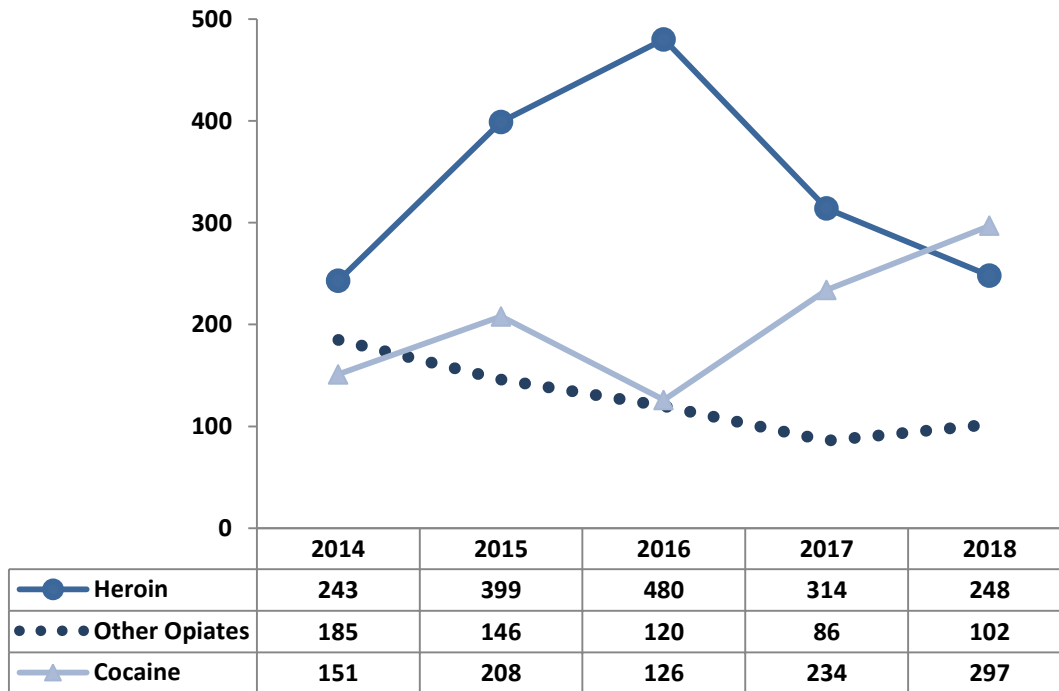
Source: MDEA, 2014–2018

Figure 40. MDEA methamphetamine manufacturing investigations: 2014–2018
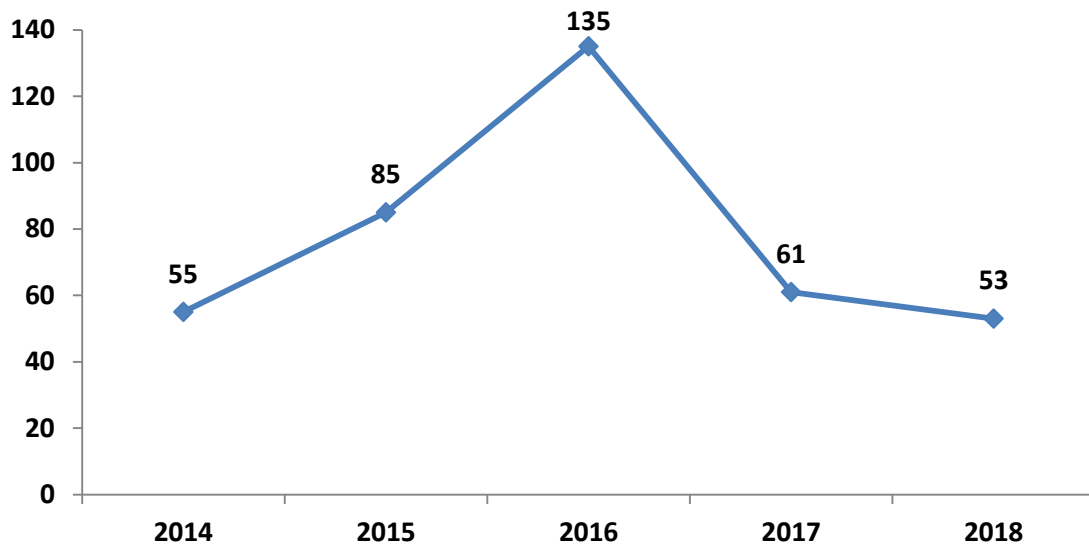
- Investigations of methamphetamine manufacturing decreased by 13 percent from 2017 to 2018.
- Although not shown, there were 51 methamphetamine lab/dumpsite-related responses by the MDEA in 2017, which is a slight decrease from 58 such responses in 2017.

Indicator Description: This indicator reflects the number of pharmacy robberies in the state of Maine as tracked by the Maine Drug Enforcement Agency.

Why Indicator is Important: The number of pharmacy robberies can indicate the demand for pharmaceutical drugs. Pharmacy robberies contribute to a higher demand for law enforcement resources, lost earnings for retailers, and trauma to those involved. In addition, robberies increase the availability of prescription drugs in the community, which contribute to misuse by individuals without a prescription.

Data Source(s): MDEA-UCR, 2014–2018

Summary: Pharmacy robberies have steadily decreased from 2014 (20 robberies) to 2018 (two robberies).

Figure 41. Number of pharmacy robberies in Maine: 2014–2018
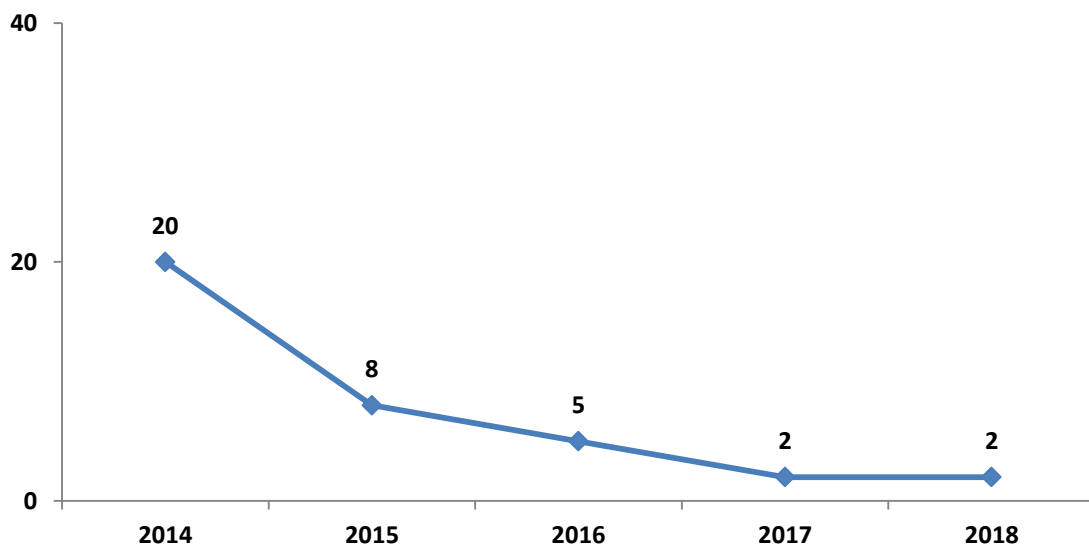
Source: MDEA, 2014–2018

- In 2018, two pharmacies were robbed. This is consistent with 2017 and represents a 90 percent decrease since 2014.

MOTOR VEHICLE CRASHES INVOLVING ALCOHOL/DRUGS

Motor Vehicle Crashes Involving Alcohol/Drugs: *Impaired Driving*

Indicator Description: This indicator shows the number of motor vehicle crashes in which alcohol was a factor, meaning at least one driver had consumed medication, drugs, or alcohol.

Why Indicator is Important: Motor vehicle crashes are the second leading cause of traumatic brain injury, with 27 percent of traumatic brain injuries occurring from motor vehicle crashes.[7]

Data Source(s): MDOT, BHS, 2014–2018

Summary: While the overall number of motor vehicle crashes has increased by 10 percent from 2014 to 2018, the proportion of alcohol and or drug related motor vehicle crashes has remained stable at 4 percent.

Figure 42. Number of motor vehicle crashes, by whether they involved impaired drivers: 2014–2018
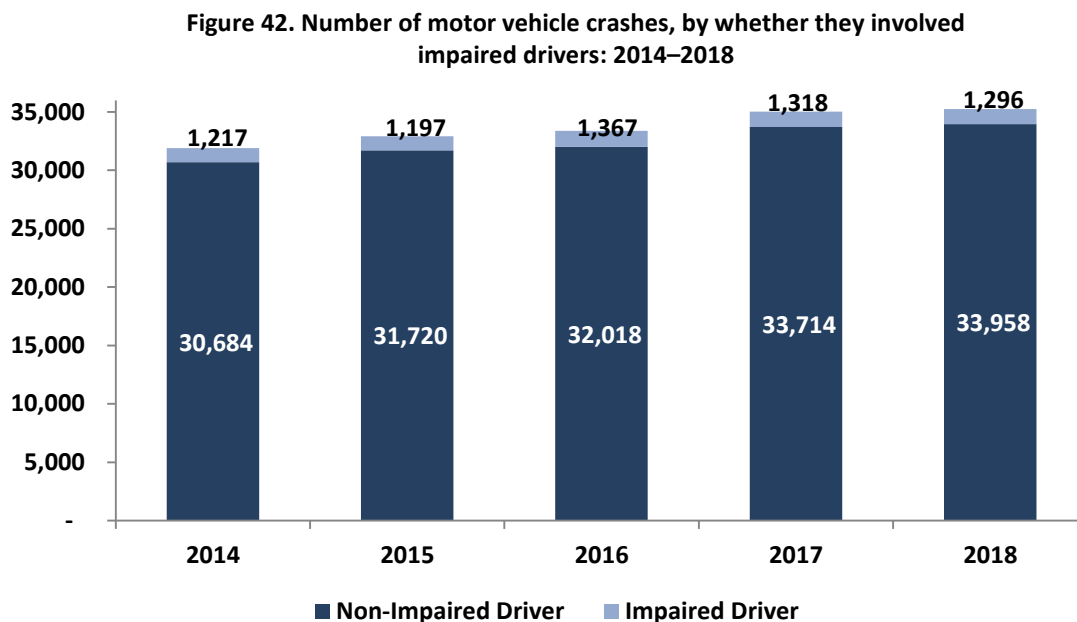
Source: MDOT, BHS, 2014–2018

- The total number of motor vehicle crashes has increased by 10 percent from 2014 (31,909) to 2018 (35,254) while crashes involving impaired drivers increased by 6 percent from 2014 (1,225) to 2018 (1,296). The proportion of crashes related to alcohol and/or drugs has remained relatively stable at around 4 percent.

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[7] 2007 Maine Injury Report, Maine Center for Disease Control, Injury Prevention Program. Retrieved on 7/1/2019 from http://www.maine.gov/dhhs/mecdc/population-health/inj/documents/2007maineinjuryreport.pdf

Motor Vehicle Crashes Involving Alcohol/Drugs: *Alcohol/Drug-Related Motor Vehicle Crash Rate*

Indicator Description: This indicator presents the number of motor vehicle crashes involving impaired drivers under the influence of alcohol and/or drugs/medication, relative to the licensed population. The rate per 100,000 allows us to see the frequency with which an occurrence emerges within a population over time. In this case, the population is the number of licensees (among a particular age group) in Maine.

Why Indicator is Important: One in four of all motor vehicle crashes resulting in fatalities involved alcohol and/or drugs, regardless of age.

Data Source(s): MDOT, BHS, 2014–2018

Summary: In 2018, drivers between the ages of 21 and 24 had the highest rate of alcohol/drug-related crash rates, followed by drivers between the ages of 25 to 34. Although not explicitly shown, the count of such crashes involving 16- to 20-year-olds observed a decrease of 37 percent, while 25- to 34-year-olds experienced an increase of 24 percent from 2017 to 2018.

Figure 43. Alcohol/drug-related motor vehicle crash rate per 100,000 licensees, by age group: 2014–2018

	2014	2015	2016	2017	2018
16-20	232.0	246.2	266.7	265.7	169.5
21-24	400.5	371.6	383.9	376.2	373.0
25-34	226.6	203.2	273.2	273.3	263.4
35-44	141.2	152.5	165.9	168.4	186.7
45-54	90.2	95.9	113.3	116.8	102.6
55+	31.9	31.6	35.7	36.2	44.0
16+	119.4	117.5	133.8	136.5	133.1
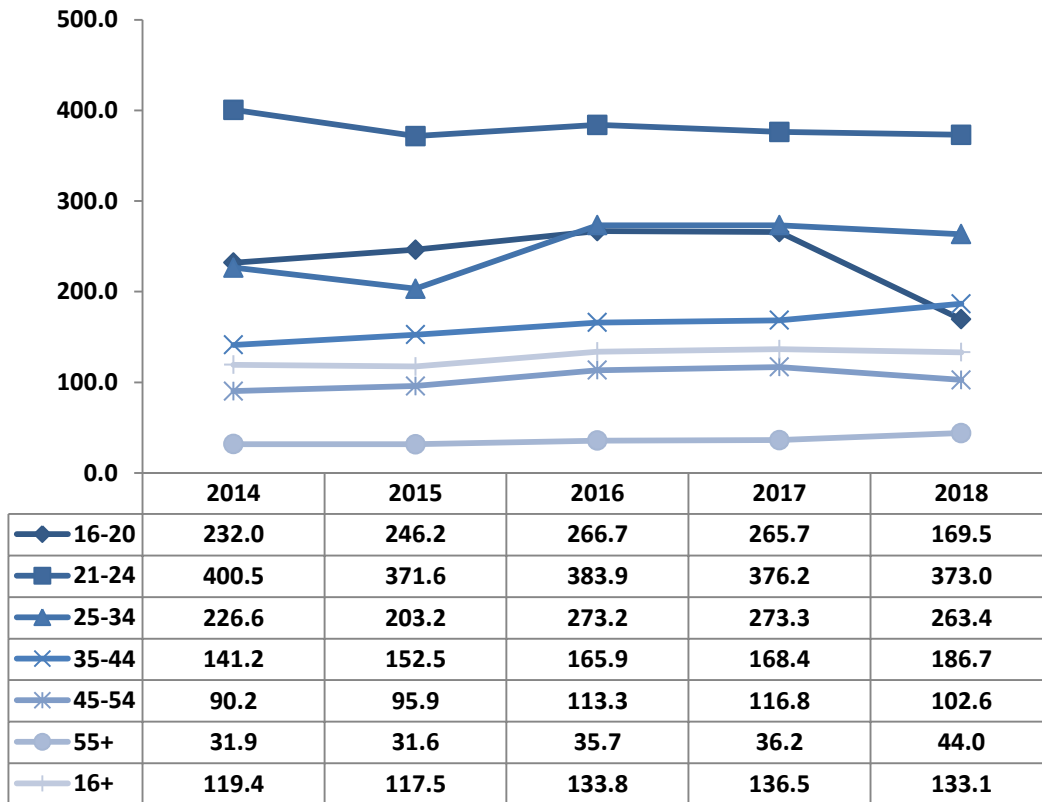
Source: MDOT, BHS, 2014–2018

- Maine drivers ages 21 to 24 had the highest alcohol-related crash rate in 2018 (373.0 per 100,000 licensees); rates among this age group have remained relatively stable for the past several years. In 2018, the second-highest rates of alcohol/drug-related motor vehicle crashes were observed among drivers between the ages of 25 to 34 (263.4 per 100,000 licensees), followed by drivers ages 35 to 44 (186.7 per 100,000 licensees). Mainers aged 16 to 20 observed a notable decrease in impaired crash rates from 2017 to 2018.

Motor Vehicle Crashes Involving Alcohol/Drugs: *Number of Fatal Motor Vehicle Crashes Involving Alcohol/Drugs*

Indicator Description: This indicator presents the number of fatal motor vehicle crashes where alcohol was a factor in the crash. This means that at least one driver had a blood alcohol content (BAC) of at least .08 or greater and/or was under the influence of drugs/medication. This indicator includes total fatalities of anyone (*e.g.,* pedestrian, passenger) involved in the crash. It is important to note that small fluctuations from year to year do not indicate an overall trend.

Why Indicator is Important: Alcohol/drug-related crash fatalities are a major consequence of alcohol/drug consumption. Although alcohol/drugs were involved in only 4 percent of all crashes, one in four fatal motor vehicle crashes in 2018 involved alcohol/drugs.

Data Source(s): MDOT, BHS, 2014–2018

Summary: In 2018, one quarter of fatal motor vehicle crashes involved alcohol and/or drugs. While the number of overall fatal crashes decreased from 2017, 2018 had a slightly higher percentage of crashes related to drug/alcohol impairment.

Figure 44. Number of fatal motor vehicle crashes, by whether they involved impaired drivers: 2014–2018
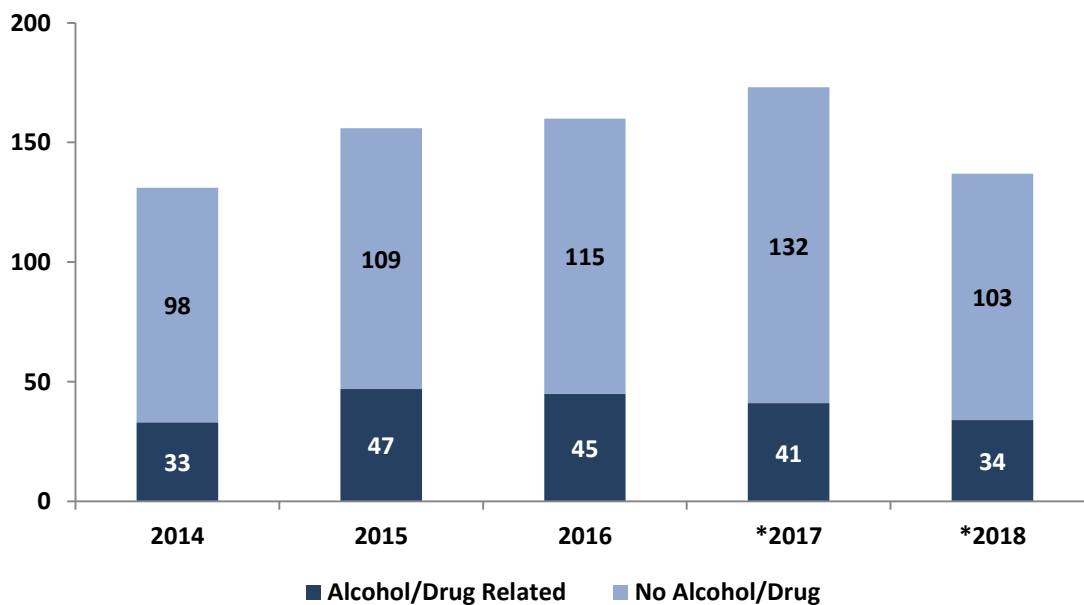
Source: MDOT, BHS, 2014–2018

*2017 and 2018 results are preliminary

- One in four (34 of 137) fatal motor vehicle crashes in 2018 involved an alcohol or drug-impaired driver. Although not explicitly shown, this is a slight increase from 24 percent in 2017, but a decrease from 2016 (28%).

Motor Vehicle Crashes Involving Alcohol/Drugs: *Alcohol/Drug-Related Motor Vehicle Crash Fatality Rate*

Indicator Description: This indicator presents the number of fatalities resulting from motor vehicle crash fatalities that involved alcohol (drivers with a blood alcohol content of .08 or greater) and/or drugs, relative to the licensed population. The rate per 100,000 allows us to see the frequency of this occurrence within a population over time. In this case, the population is the number of licensees in Maine. Where applicable, the number of licensees used to calculate the rate reflects the relevant age group.

Why Indicator is Important: Nearly one in four of all motor vehicle crashes resulting in fatalities involve alcohol and/or drugs.

Data Source(s): MDOT/BHS, 2011–13 to 2015–17

Summary: In 2015–17, the rates of alcohol/drug-related motor vehicle crash fatalities were highest among 21- to 24-year-olds, followed by 25- to 34-year-olds. Following a decline in past years, recent rates of alcohol/drug related fatalities have increased across all age ranges.

Figure 45. Alcohol/drug-related motor vehicle crash fatality rate per 100,000 licensees, by age: 2011–13 to 2015–17

	2011-13	2012-14	2013-15	2014-16	2015-17
16-20	6.3	5.3	4.0	4.8	6.3
21-24	12.0	10.0	9.6	8.7	10.0
25-34	5.1	3.7	5.7	6.0	7.5
35-44	2.1	1.3	2.6	3.8	5.6
45-54	3.3	2.6	1.9	3.0	4.3
55+	1.2	1.0	0.6	0.6	0.9
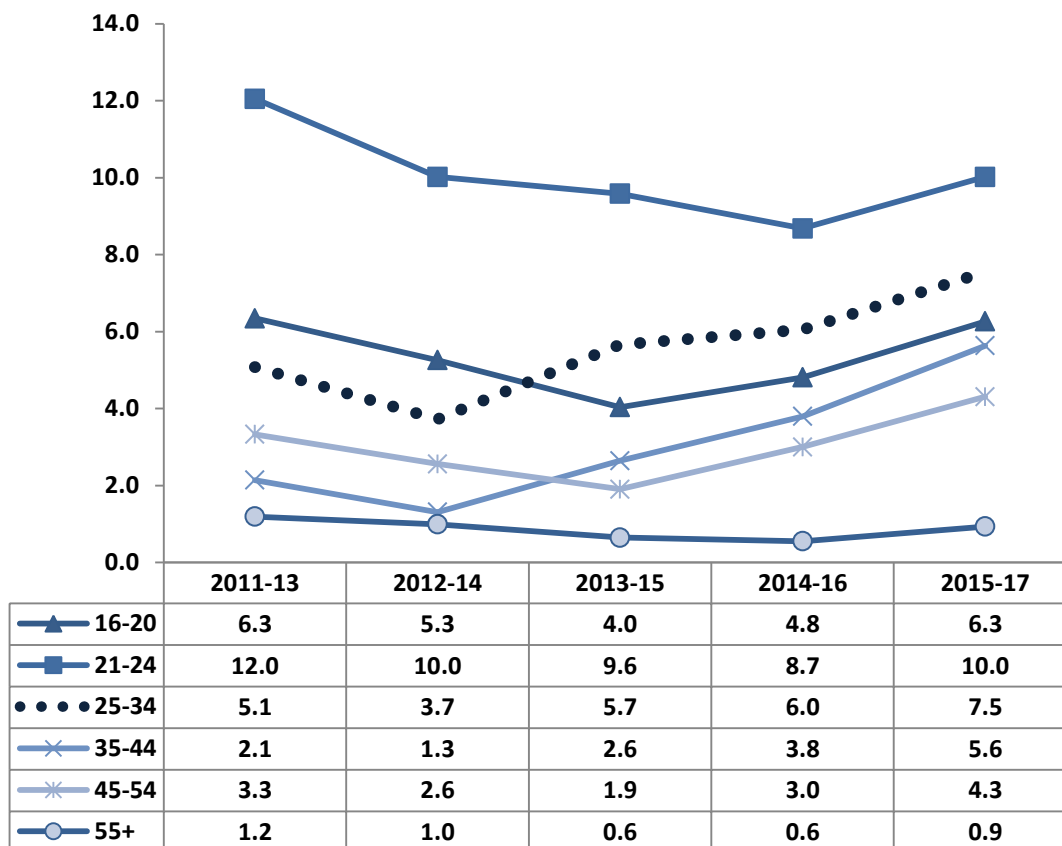
Source: MDOT, 2011–13 to 2015–17

- In 2015–17, the highest rate of fatalities from alcohol/drug-related motor vehicle crashes was among drivers ages 21 to 24 (10.0 per 100,000 licensees). Rates among this age group have notably increased since 2014–16 (8.7 per 100,000 licensees).
- The second highest rate in 2015–17 was among 25- to 34-year-olds, with 7.5 alcohol/drug-related motor vehicle fatalities per 100,000 licensees.

OVERDOSES AND RELATED DEATHS

Overdoses and Related Deaths: *EMS Overdoses*

Indicator Description: This indicator shows the number of persons receiving help from Emergency Medical Services related to an overdose from 2014 to 2018. These data are based on the primary impression given by the emergency responder at the scene.

Why Indicator is Important: Overdosing on a substance can cause serious physical harm resulting in hospitalization and even death. Responding to overdoses also uses valuable EMS resources.

Data Source(s): Emergency Medical Services, 2014–2018

Summary: In 2018, drug/medication overdoses decreased for the first time since 2014, while those related to alcohol overdose increased slightly. Rates of drug/medication overdose responses were highest among Mainers aged 36 to 54 and the same trend is seen in alcohol overdose rates.

Figure 46. Number of overdose EMS responses, by type: 2014–2018
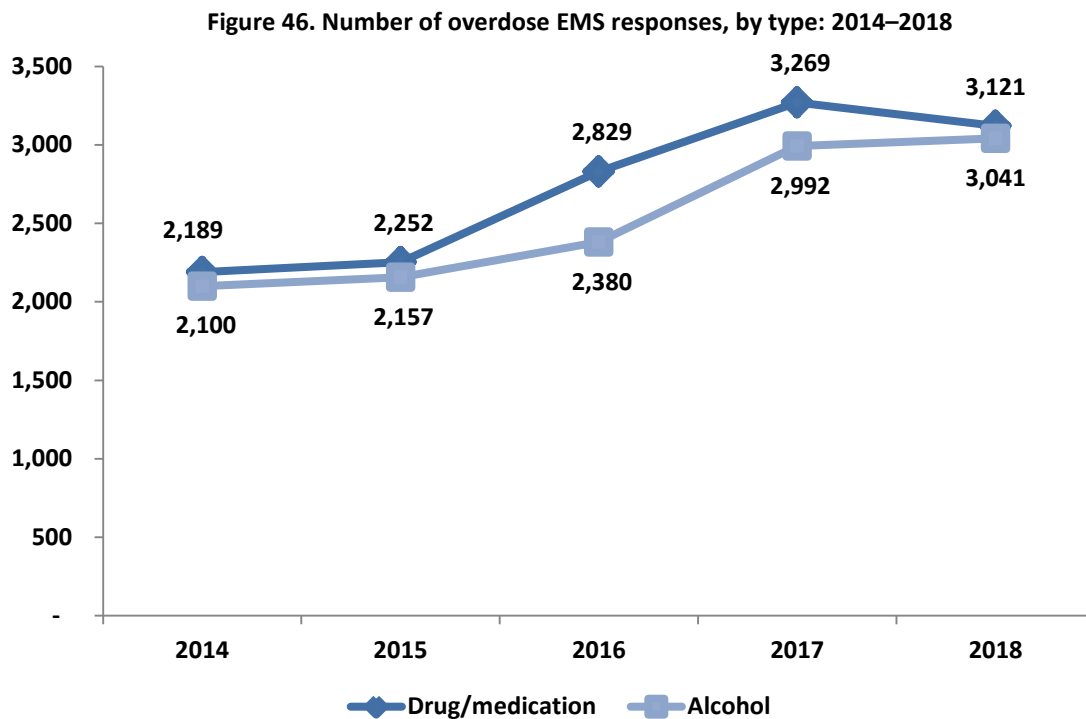
Source: EMS, 2014–2018

- In 2018, EMS responded to 3,121 individuals experiencing a drug/medication overdose; this represents a 5 percent decrease since 2017. A 31 percent increase was evidenced in EMS overdose responses related to alcohol between 2014 (2,100) and 2018 (3,041).

Figure 47. Number of overdose EMS responses related to drugs or medication, by age group: 2014–2018

	2014	2015	2016	2017	2018
under 18	166	202	191	217	181
18 to 25	373	417	520	554	450
26 to 35	525	551	807	963	957
36 to 54	702	687	874	1029	984
55+	412	385	431	501	516
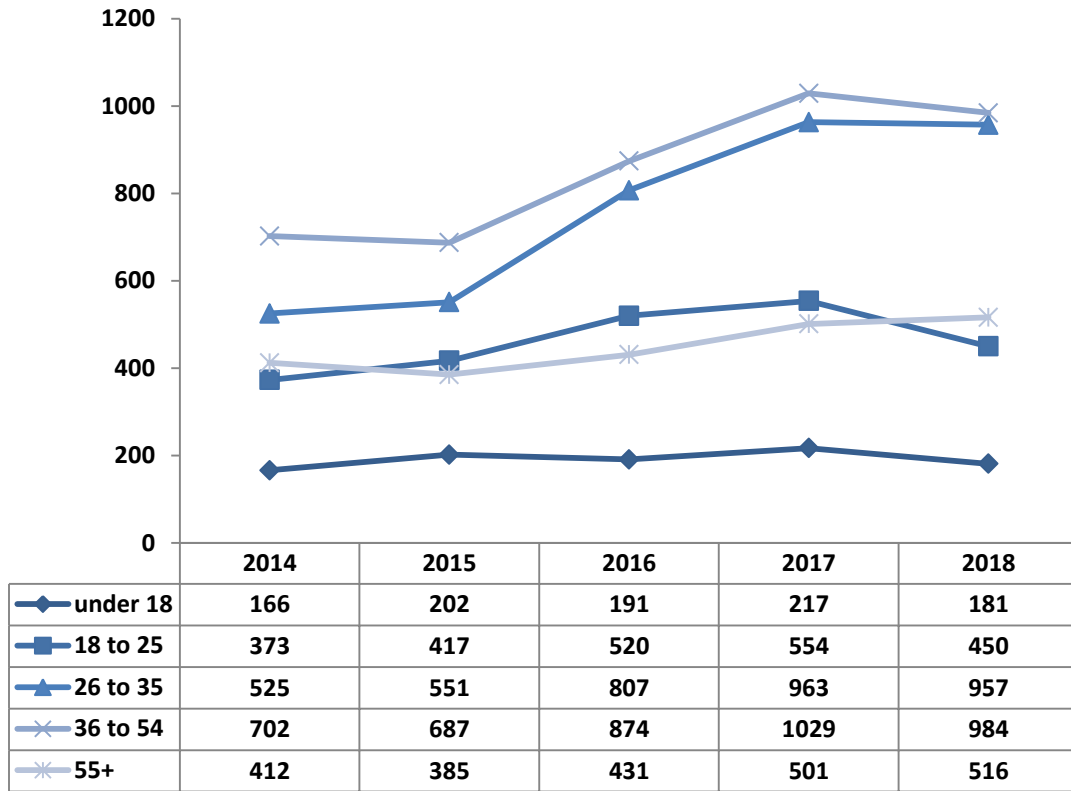
- In 2018, there were 984 drug/medication EMS overdose responses among Mainers between 36 and 54 years old, followed by 957 among 26- to 35-year-olds, 516 among those aged 55 and older, and 450 among 18- to 25-year-olds

- All age groups, except for those 55 and older, observed decreases in the number of EMS overdose responses related to drugs/medication from 2017 to 2018. Mainers aged 18 to 25 observed the steepest decrease of 19 percent from 2017 to 2018.

Figure 48. Number of overdose EMS responses related to alcohol, by age group: 2014–2018

	2014	2015	2016	2017	2018
Under 18	88	76	64	84	81
18 to 25	457	458	487	487	410
26 to 35	249	290	310	406	423
36 to 54	856	768	795	1101	1085
55+	431	551	701	906	1021
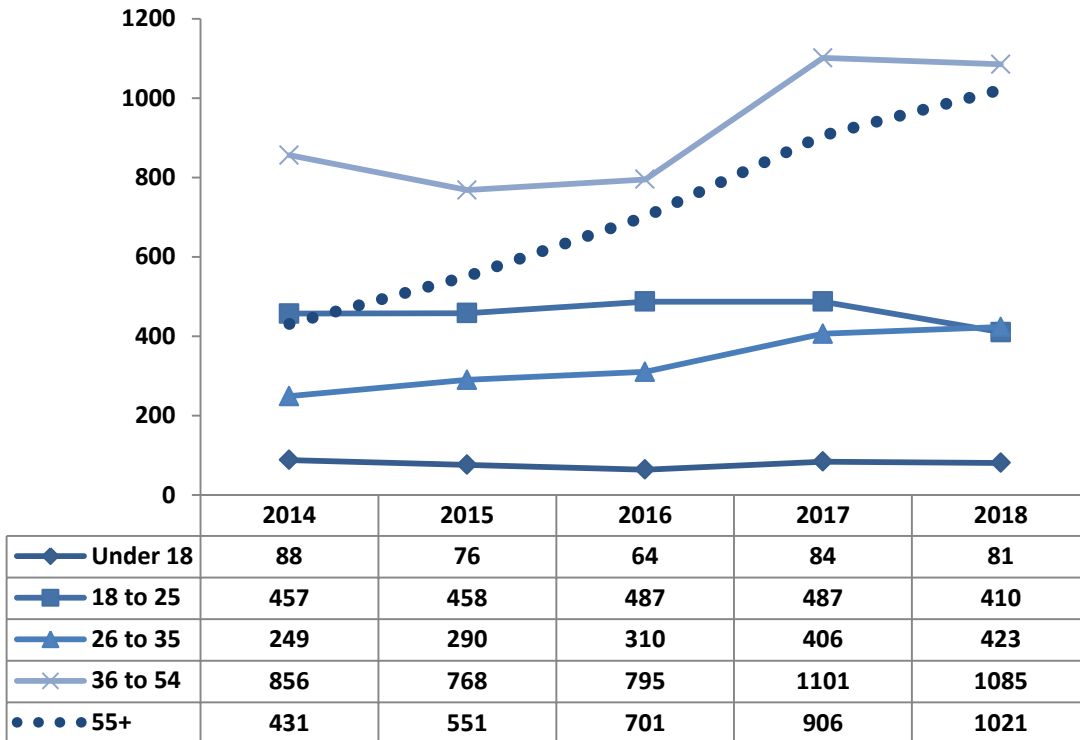
Source: EMS, 2014–2018

- In 2018, most EMS responses related to an overdose involving alcohol were among Mainers between 36 and 54 years old (1,085), followed by those 55 and older (1021).
- Alcohol-related overdose responses among residents 55 and older increased by 11 percent from 2017 to 2018, while such responses among Mainers 18 to 25 decreased by 16 percent over the same period.

Figure 49. EMS overdose response rate (per 100,000 residents), by age and overdose type: 2018

	Under 18	18 to 25	26 to 35	36 to 54	55+	All Ages
■ Alcohol	32.1	327.0	296.5	321.4	213.8	226.1
■ Drug/Medication	71.6	358.9	670.7	291.5	108.0	231.2
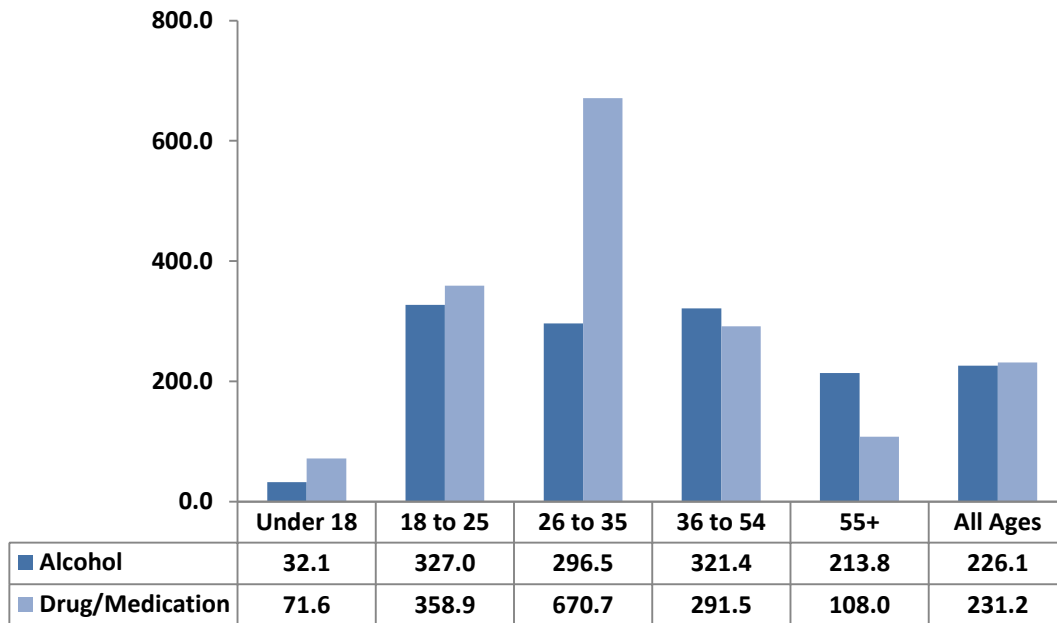
Source: EMS, 2018

- In 2018, the highest rate of EMS responses due to medication and/or drug overdoses occurred among Mainers 26 to 35 years old (670.7 per 100,000), followed by 18- to 25-year-olds (358.9 per 100,000).

- As for EMS overdose responses related to alcohol, although 36- to 54-year-olds made up the greatest proportion of responses, rates based on population were highest among 18- to 25-year-olds (327.0 per 100,000), followed by 36- to 54-year-olds (321.4 per 100,000).

Indicator Description: This indicator shows the number of naloxone administrations and the number of individuals receiving doses from Emergency Medical Services related to an opioid overdose. Naloxone is a medication administered to patients who have experienced an overdose related to an opioid (*e.g.*, prescription painkillers, heroin, or morphine). Some individuals may have received multiple administrations/doses of naloxone.

Why Indicator is Important: Overdosing on a substance can cause serious physical harm resulting in hospitalization and even death. Responding to overdoses also uses valuable EMS resources. This indicator also provides a sense of the prevalence of all opioid overdoses including those that did not result in death.

Data Source(s): Emergency Medical Services, 2014–2018

Summary: After more than doubling from 2014 to 2016, the number of EMS naloxone administrations have begun to decrease. In 2018, nearly seven out of 10 individuals receiving naloxone by the EMS were male. Rates are disproportionately highest among males 26 to 34 years old.

Figure 50. Number of EMS naloxone* administrations and individuals dosed**: 2014–2018***
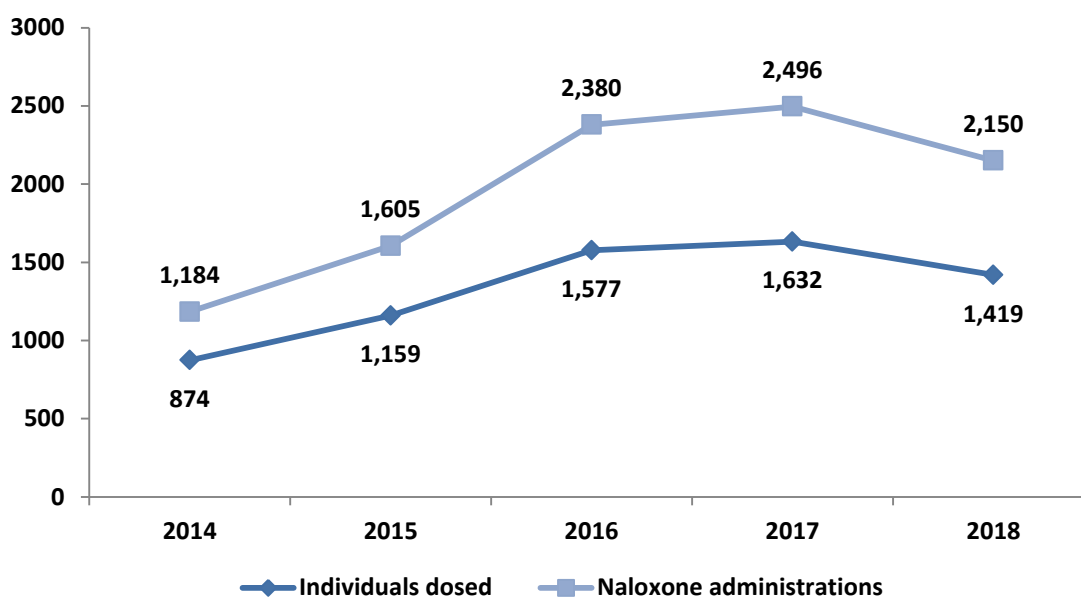
Source: EMS, 2014–2018

*Naloxone, also known as Narcan, is a medication administered to counter the effects of an overdose due to opioids.
**Some individuals may have received multiple administrations/doses of naloxone.
***2018 data are preliminary

- In 2018, there were a total of 2,150 naloxone administrations given by emergency medical responders to 1,419 individuals. Both the number of naloxone doses

administered by EMS responders as well as the number of individuals receiving administrations increased steadily from 2014 to 2017. From 2017 to 2018, the number of administrations and the individuals receiving naloxone from EMS responders decreased.

Figure 51. Individuals receiving EMS naloxone* administrations, by gender and age: 2018**
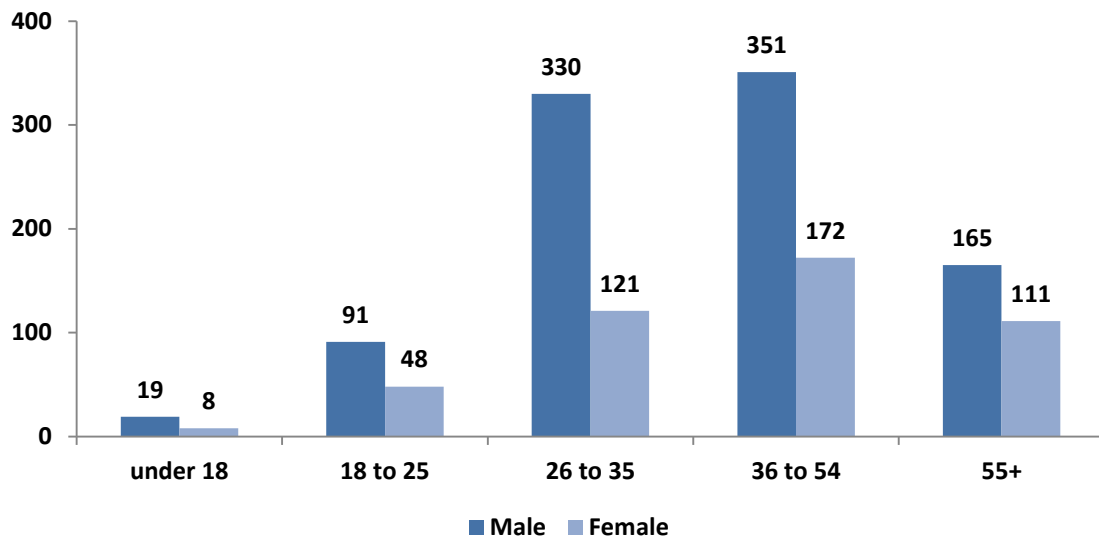
Source: EMS, 2018

*Naloxone is a medication administered to counter the effects of an overdose due to opioids.
**2018 data are preliminary

- In 2018, out of 1,418 individuals (with known ages) receiving naloxone administrations from EMS responders, 956 (67%) were male and 460 (33%) were female. In 2018, most EMS responder naloxone administrations were given to males 36 to 54 (351) and males 26 to 35 years of age (330). Among females, doses were most commonly administered to those between the ages of 36 and 54 (172) and those 26 to 35 (121). These patterns are consistent with years past.

Figure 52. EMS naloxone* administrations rate (per 100,000 residents), by gender and age: 2018**

	under 18	18 to 25	26 to 35	36 to 54	55+	All ages
■ Both Genders	11.1	110.9	316.8	154.9	57.8	106.1
■ Male	14.6	141.6	461.2	212.0	73.9	146.1
■ Female	6.5	78.5	170.1	100.0	43.6	67.5
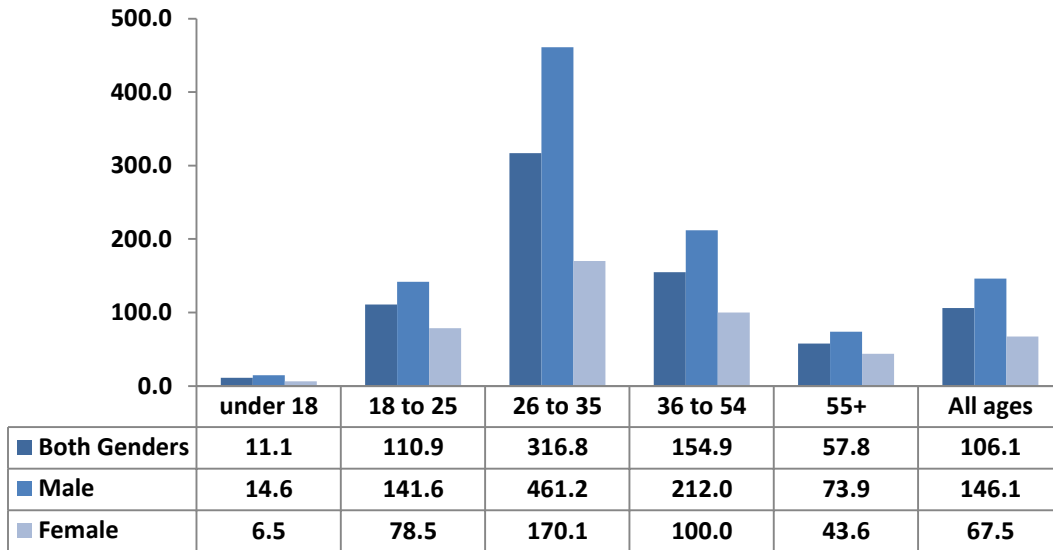
Source: EMS, 2018

*Naloxone, also known as Narcan, is a medication administered to counter the effects of an overdose due to opioids.
**2018 data are preliminary

- In 2018, the highest rate of individuals receiving naloxone administrations given by EMS responders were observed among the 26 to 35-year-old population. In total, the 26 to 35-year-old population had a rate of 316.8 naloxone administrations per 100,000, of which males observed disproportionately high rates compared to females (461.2 per 100,000 compared to 170.1 per 100,000).

Overdoses and Related Deaths: *Deaths Due to Overdose*

Indicator Description: This measure reflects the number of deaths where the cause of death was directly related to the consumption of one or more substances. This excludes deaths where a substance may have been ingested prior to engaging in a behavior that resulted in death (*e.g.*, drunk driving) or where lifetime substance use may have impacted health (*e.g.*, alcoholic cirrhosis). Pharmaceutical opioids are drugs used in medical treatment; illicit drugs are those illegally produced and sold outside of medical channels. This analysis includes Maine decedents as well as non-residents that died from an overdose while in Maine.

Why Indicator is Important: The most extreme consequences of alcohol and drug use is overdose death, where the substance(s) plays a direct role in an individual's death. These are potentially preventable deaths.

Data Source(s): Office of Chief Medical Examiner/Marcella Sorg,[8] 2014–2018

Summary: In 2018, there were a total of 354 overdose deaths due to substance use in Maine. After more than doubling from 2014 to 2017, the rate has started to decrease. From 2017 to 2018, overall overdose deaths decreased by 15 percent. In 2018, seven out of 10 overdose deaths were related to illicit drugs, while six out of 10 involved a pharmaceutical drug. It is important to note that deaths involving pharmaceuticals and illicit drugs are not mutually exclusive.

Figure 53. Number of deaths* caused by pharmaceuticals and/or illicit drugs, alone or in combination: 2014–2018
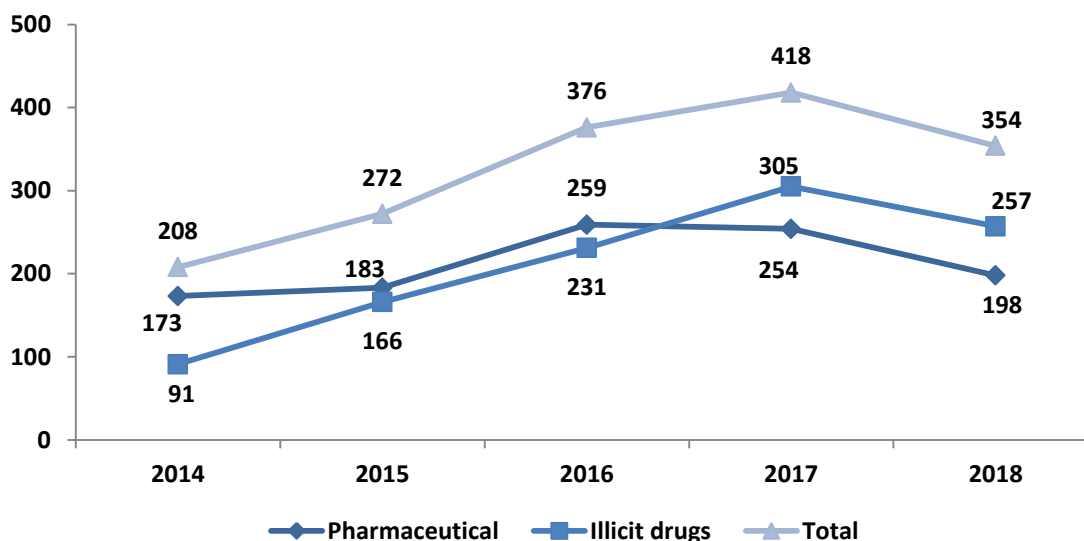
Source: Marcella Sorg/Office of the Chief Medical Examiner, 2014–2018

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[8] Sorg, Marcella H. Margaret Chase Smith Policy Center, University of Maine.

Deaths involving pharmaceuticals and illicit drugs are not mutually exclusive.

- Overdose deaths decreased for the first time since 2011. Illicit drug overdose deaths continue to outnumber overdoses related to pharmaceuticals (198 pharmaceutical-related compared to 257 illicit drug-related).

Overdoses and Related Deaths: *Overdose Deaths Associated with Specific Substances*

Indicator Description: When a death is investigated, the Medical Examiner determines what substances contributed to the individual's death. This measure examines the percent of drug overdose deaths associated with certain types of substances. Note that more than one substance can be determined to have contributed to the death.

Why Indicator is Important: One of the most extreme consequences of alcohol and drug use is overdose death, where the substance(s) play a direct role in an individual's death. These are potentially preventable deaths. In addition, some substances are more lethal than others.

Data Source(s): Office of Chief Medical Examiner/Dr. Marcella Sorg,[9] 2014–2018

Summary: Non-pharmaceutical fentanyl continues to play a major role in drug-related deaths, comprising about six out of 10 total deaths. Apart from Methamphetamine, the number of deaths for all substances showed a decline in 2018.

Figure 54. Number of drug deaths involving specific drug types†: 2014–2018
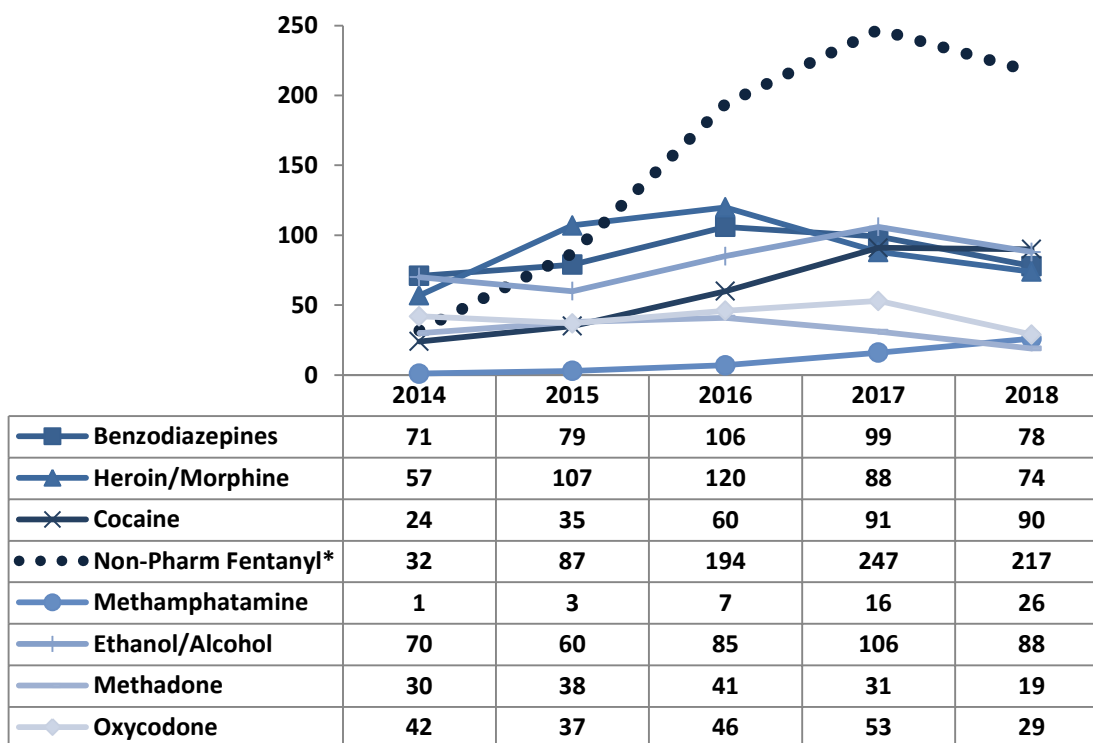
	2014	2015	2016	2017	2018
■ Benzodiazepines	71	79	106	99	78
▲ Heroin/Morphine	57	107	120	88	74
✕ Cocaine	24	35	60	91	90
● ● ● Non-Pharm Fentanyl*	32	87	194	247	217
● Methamphatamine	1	3	7	16	26
+ Ethanol/Alcohol	70	60	85	106	88
Methadone	30	38	41	31	19
◆ Oxycodone	42	37	46	53	29

Source: Dr. Marcella Sorg/OCME, 2014–2018

†*Some deaths may be caused by more than one key drug.*
**Deaths caused by known pharmaceutical morphine removed from total.*
Non-pharmaceutical fentanyl includes illicitly manufactured fentanyl and fentanyl analogs but excludes pharmaceutical fentanyl (e.g., fentanyl patches).

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[9] Sorg, Marcella H. Margaret Chase Smith Policy Center, University of Maine.

- Although not explicitly shown, opiates/opioids were involved in 80 percent of the drug-related deaths in 2018. Most substance-related overdose deaths demonstrated decreases from 2017 to 2018.
- The number of non-pharmaceutical fentanyl-related deaths nearly tripled from 2015 to 2017, but decreased from 2017 to 2018.
- In 2018, ethanol/alcohol-related overdose deaths decreased for the first time since 2014. The rate of deaths related to cocaine have slowed down and slightly decreased from 2017 to 2018.

Figure 55. Percent of drug deaths involving specific drug types†: 2014–2018
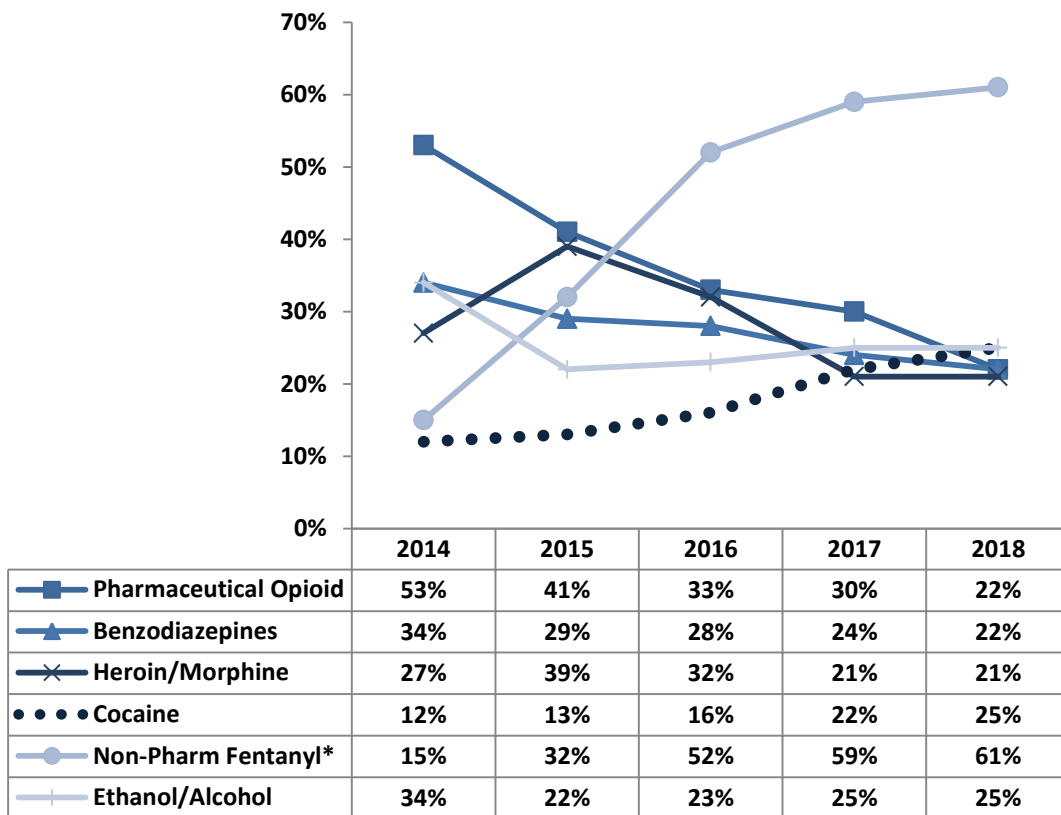
	2014	2015	2016	2017	2018
Pharmaceutical Opioid	53%	41%	33%	30%	22%
Benzodiazepines	34%	29%	28%	24%	22%
Heroin/Morphine	27%	39%	32%	21%	21%
Cocaine	12%	13%	16%	22%	25%
Non-Pharm Fentanyl*	15%	32%	52%	59%	61%
Ethanol/Alcohol	34%	22%	23%	25%	25%

Source: Dr. Marcella Sorg/OCME, 2014–2018

†*Some deaths may be caused by more than one key drug.*
**Deaths caused by known pharmaceutical morphine removed from total.*
* include acetyl fentanyl but excludes pharmaceutical fentanyl (e.g., fentanyl patches).*

- In 2018, most (61%) drug-related overdose deaths involved non-pharmaceutical fentanyl; this was followed by cocaine (25%), ethanol/alcohol (25%), benzodiazepines (22%), pharmaceutical opioids (22%), and heroin/morphine (21%). In recent years, the proportions of prescription drug-related overdose deaths (*e.g.,* oxycodone, benzodiazepines) have decreased.

Overdoses and Related Deaths: *Rate of Deaths Due to Substance Use*

Indicator Description: This measure estimates the rate of deaths due to substance use or overdose per 100,000 people. It reflects deaths physically occurring within the state of Maine, which includes non-Maine residents dying in Maine, but excludes Maine residents who died outside of Maine. The rate per 100,000 allows us to see the frequency of an occurrence within a population over time.

Why Indicator is Important: Drug-induced deaths can be mitigated by programs to prevent substance use, accidental poisoning, suicide and fatal interaction among medications.

Data Source(s): DRVS, 2014–2018*

Summary: All age groups saw a decrease in drug-related deaths per 100,000 people in 2018. Adults 26 to 35 years of age had the greatest rate of decline from 2017 to 2018. Rates of substance use and overdose-related deaths per 100,000 for 36- to 49-year-olds were the highest observed of all age groups.

Figure 56. Substance use and overdose deaths, per 100,000, by age group: 2014–2018*

	2014	2015	2016	2017	2018
under 18	0.4	0.0	0.0	0.4	0.0
18 to 25	10.4	18.3	30.3	23.9	17.5
26 to 35	40.4	47.4	64.4	81.5	59.4
36 to 49	32.2	38.0	59.0	61.3	59.9
50 to 64	19.1	26.2	27.1	32.3	28.4
65+	4.5	5.3	5.6	7.5	4.9
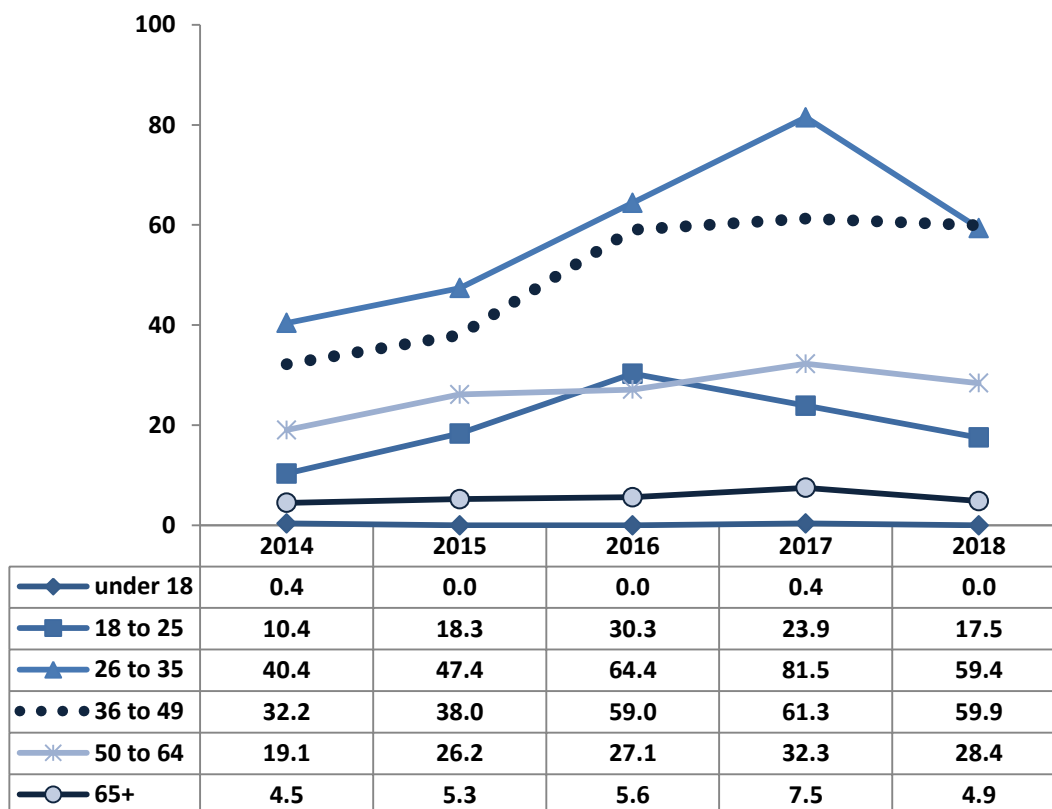
*Source: DRVS, 2014–2018**

*2018 results are preliminary

- The second-highest rate was among Mainers between the ages of 26 to 35 years old, at 59.4 per 100,000. This was followed by 50- to 64-year-olds (28.4), 18- to 25-year-olds (17.5), those over 65 (4.9), and people under 18 (0.0). Rates for all age groups decreased from 2017 to 2018.

Morbidity and Mortality: *Rate of Deaths from Chronic Conditions Associated with Substance Use*

Indicator Description: Every death in Maine has a recorded cause. This indicator examines the rate of chronic diseases commonly associated with substance use, including primary and contributing factors that lead to ischemic cerebrovascular diseases (commonly known as stroke), cardiovascular diseases, and alcohol-related liver diseases. The rates show all cases where the disease/condition was identified as a factor in the death (either in primary cause or contributing cause). In this case, a rate per 100,000 of the state population is used to compare the prevalence across certain populations.

Why Indicator is Important: Prolonged and lifelong use of substances, including tobacco and alcohol, can often result in chronic health problems later in life. As a consequence of substance use, these health-related deaths are considered potentially preventable.

Data Source(s): DRVS, 2014–2018*

Summary: In 2018, cardiovascular diseases and ischemic cerebrovascular (stroke) diseases were more prevalent among Mainers than alcoholic cirrhosis diseases. Deaths related to alcoholic cirrhosis were substantially higher among men than women.

Figure 57. Deaths from chronic diseases related to substance use, per 100,000 of the population: 2014–2018*
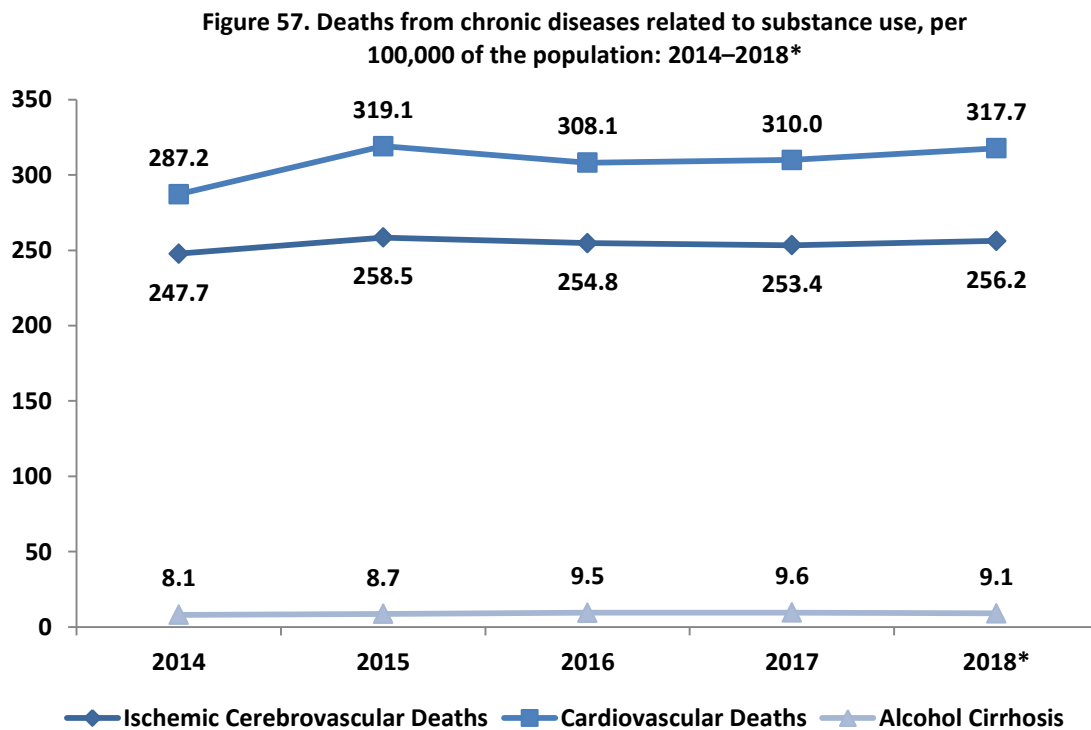
Source: DRVS, 2014–2018

*2018 results are preliminary

- At 317.7 deaths per 100,000, cardiovascular diseases were more prevalent among Mainers in 2018 than ischemic cerebrovascular diseases (256.2 per 100,000) and alcoholic cirrhosis (9.1 per 100,000). Rates of death from ischemic cerebrovascular disease, cardiovascular disease, and alcoholic cirrhosis have remained relatively stable for the past several years.

Figure 58. Deaths from alcoholic cirrhosis and liver disease per 100,000 of the population, by gender: 2014–2018*
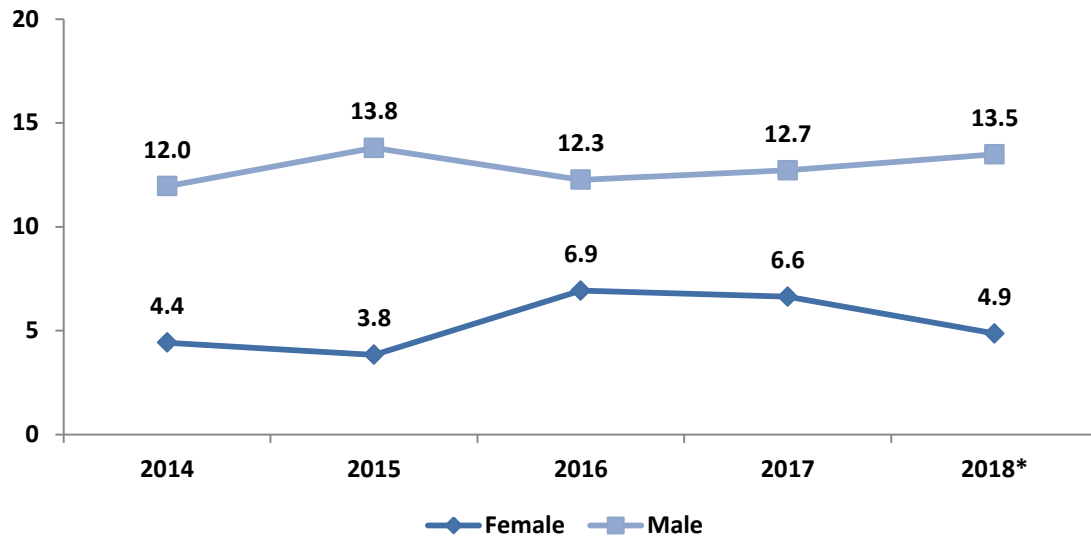
*Source: DRVS, 2014–2018**

*2018 results are preliminary

- In 2018, deaths related to alcoholic cirrhosis and liver disease were more than twice as likely among men (13.5 deaths per 100,000) than women (4.9 deaths per 100,000). Since 2016, the rate of male deaths related to alcohol cirrhosis and liver disease has increased, while the contrary has been seen in females.

Morbidity and Mortality: *Rate of Violent Deaths*

Indicator Description: Every death in Maine has a recorded cause. This indicator examines deaths that were the result of violence, *i.e.*, those classified as a suicide or homicide. In this case, a rate per 100,000 of the state population is used to compare the prevalence across certain populations.

Why Indicator is Important: Although not the leading cause of death, substance use and misuse are often factors in homicides and suicides. For example, the federal Substance Abuse and Mental Health Services Administration has estimated that about 47 percent of homicides and 23 percent of suicides are influenced by alcohol nationally.

Data Source(s): DRVS, 2014–2018*

Summary: In Maine, suicide rates are more than 15 times higher than homicide rates. Suicides are more than three times as likely in men compared to women, and most prevalent among adults 50 to 64. In addition, deaths due to homicide are more likely among men; rates for homicide are highest among adults between 36 and 49 years old.

Figure 59. Deaths from suicide or homicide per 100,000 of the population: 2014–2018*
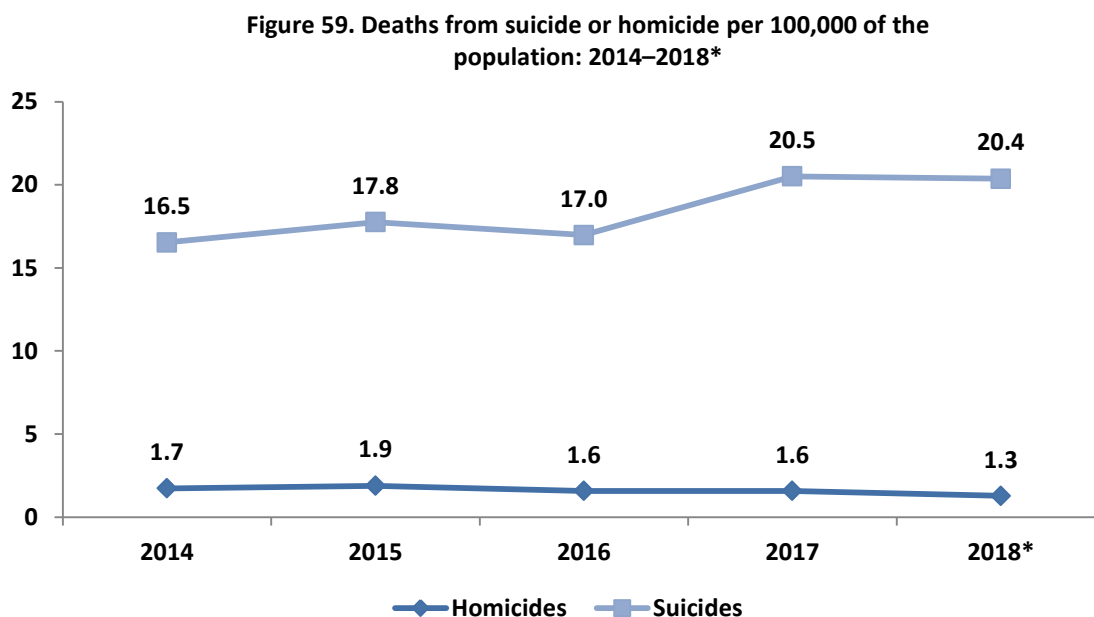
*Source: DRVS, 2014–2018**

2018 results are preliminary

- In 2018, there were 20.4 suicides per 100,000 Mainers compared to 1.3 homicides per 100,000 residents. Rates for homicides have remained relatively stable for the past several years. Similarly, rates for suicides have remained stable from 2017 to 2018.

Figure 60. Deaths from suicide or homicide per 100,000 of the population, by age groups: 2016–18
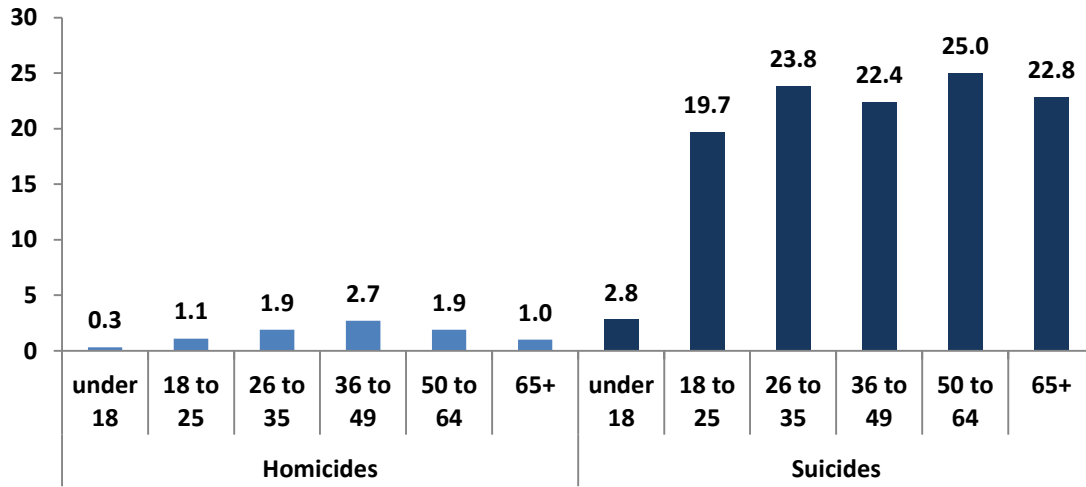
Source: DRVS, 2016–18

- In 2016–18, deaths from suicide were most prevalent among the 50- to 64-year-old population at a rate of 25.0 per 100,000, followed by Mainers aged 26 to 35 (23.8 per 100,000).

- As for homicides, 36- to 49-year-olds held the highest rate at 2.7 per 100,000, followed by 26- to 35-year-olds and 50- to 63-year-olds (1.9 per 100,000).

Figure 61. Deaths from suicide or homicide per 100,000 of the population, by gender: 2016–18
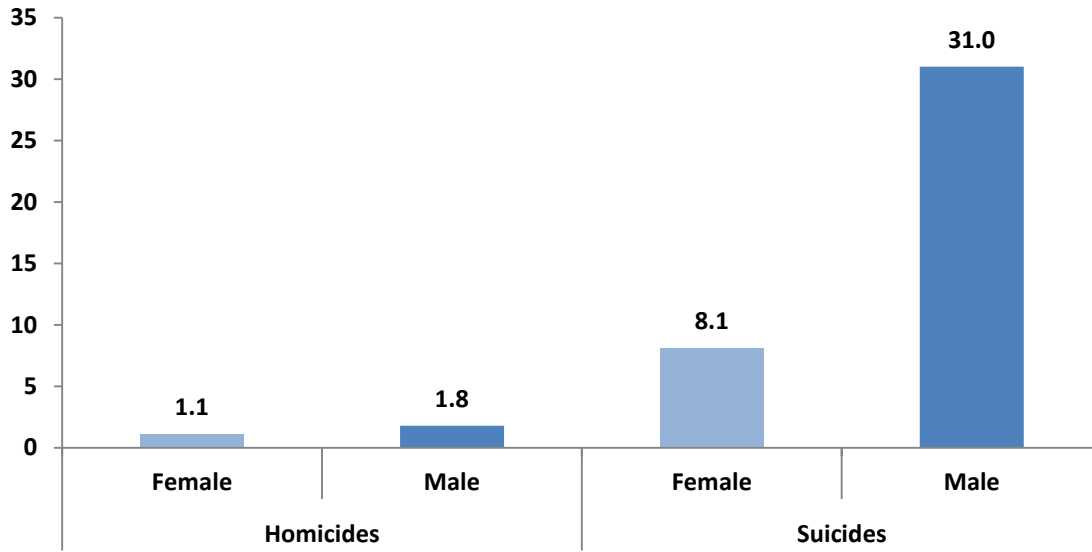
- Deaths by suicide were considerably more prevalent among men in 2016–18 (31.0 per 100,000), compared to women (8.1 per 100,000).

- The homicide rate is much lower than suicide. The rate for men was slightly higher than the rate for women in 2016-18 at 1.8 per 100,000 and 1.1 per 100,000 respectively.

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Factors Contributing to Substance Use and Misuse

Substance use prevention research has identified certain groups of factors that "cause" or have an impact on substance use and the consequences related to use. That is, they appear to influence the occurrence and magnitude of substance use and its' related consequences. Generically, these causal factors (also known as contributing factors) are categorized into groups which include:

- Social Access (*e.g.*, getting drugs and alcohol from friends or family);
- Retail Availability (*e.g.,* retailer not carding properly, over-prescribing/dispensing, outlet density);
- Pricing and Promotion (*e.g.,* two-for-one specials, industry sponsorships or signage);
- Social/Community Norms (*e.g.*, parental/community attitudes and beliefs);
- Enforcement (*e.g.,* lack of compliance checks, lack of enforcing policies, laws);
- Perceptions of Harm (*e.g.*, individuals' belief that using a substance is harmful); and
- Perceived Risk of Being Caught (*e.g.,* individuals' belief that s/he will be caught by parents or police).[10,11]

In this report, data are presented on many of these factors particularly as they relate to youth and young adults, parents, and cultural norms. These measures can help prevention professionals make decisions about what types of behaviors, attitudes, and norms should be targeted to prevent substance use and misuse.

Overall the rates of youth and parents' perceptions of the accessibility of substances have shown a downward trend. For example, 61 percent of youth reported it would be easy to get alcohol in 2017, compared to 69 percent in 2009. A similar trend was observed regarding obtaining marijuana. In addition, there was an increase in parents who reported there was no alcohol in their home (from 5% in 2015 to 15% in 2017) and a decrease in parents who said that alcohol was accessible to their teens. Half of parents reported that their teen could access alcohol in their home in 2015, compared to 37 percent in 2017. In contrast to alcohol, it is less common for parents to report that teens have access to prescription drugs at home (18% in 2017).

There was a steady decline in the total number of opiate agonist prescriptions dispensed from 2016 to 2018. In 2018, opiate agonists remain the most common type of prescription with over 770,000 prescriptions dispensed in Maine. Looking at trends among all opiate doses dispensed, the most common primary active ingredient is Oxycodone, which made up 32 percent of the doses dispensed. This is consistent with 2017 data. Furthermore, prescriptions for sedatives

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[10]*A General Causal Model to Guide Alcohol, Tobacco and Illicit Drug Prevention: Assessing the Research Evidence.* Multi-State Technical Assistance Workshop. Washington, DC. March 16, 2006.
[11] Bonnie, R. J. (Ed.). (2004). *Reducing underage drinking: A collective responsibility*. National Academies Press.

have observed a decrease in recent years, while prescriptions dispensed for stimulants have observed a slight increase.

Over the last several years, high school students' perceptions of risk associated with alcohol consumption has steadily increased while the perceived risk of marijuana use has decreased. Eight out of 10 (82%) high school students reported that people risk harming themselves if they consume five or more alcoholic drinks in a row once or twice a week, compared to 35 percent of students who thought that there was moderate-to-great risk to smoking marijuana once or twice a week.

Perception of harm from marijuana has steadily decreased among parents as well. In 2013, 81 percent of parents felt that marijuana use by their child or teenager was "never ok." In 2017, this figure dropped to 62 percent. This change appears to be driven by increases in the number of parents who believe it is okay to use marijuana if a doctor provides a written certificate or when their "child is grown." Among young adults and adults, 18- to 25-year-olds are the least likely to perceive risks of harm from using alcohol, marijuana, or heroin.

While most high school students (91%) still believe that their family has clear rules about alcohol and drug use, about three-quarters reported that they didn't think they would be caught by police for smoking marijuana or drinking. However, parents report that they believe their children have less access to alcohol and prescription drugs in the home, largely because they indicated these items are not kept in their homes.

AVAILABILITY AND ACCESSIBILITY

Availability and Accessibility: *Ease of Obtaining Alcohol by Underage Youth*

Indicator Description: This indicator reflects the percentage of high school students (grades 9 to 12) who reported that it would be easy or very easy for them to get alcohol if they wanted some.

Why Indicator is Important: In 2017, students who reported that they thought alcohol was easy to obtain were nearly four times as likely to report consuming alcohol within the past month compared to students who did not think it was easy to obtain.

Data Source(s): MIYHS, 2009–2017

Summary: Nearly two out of three high school students think it would be easy to obtain alcohol; this rate has steadily declined from 2009 (69%) to 2017 (61%).

Figure 62. High school students who reported it would be easy to get alcohol: 2009–2017
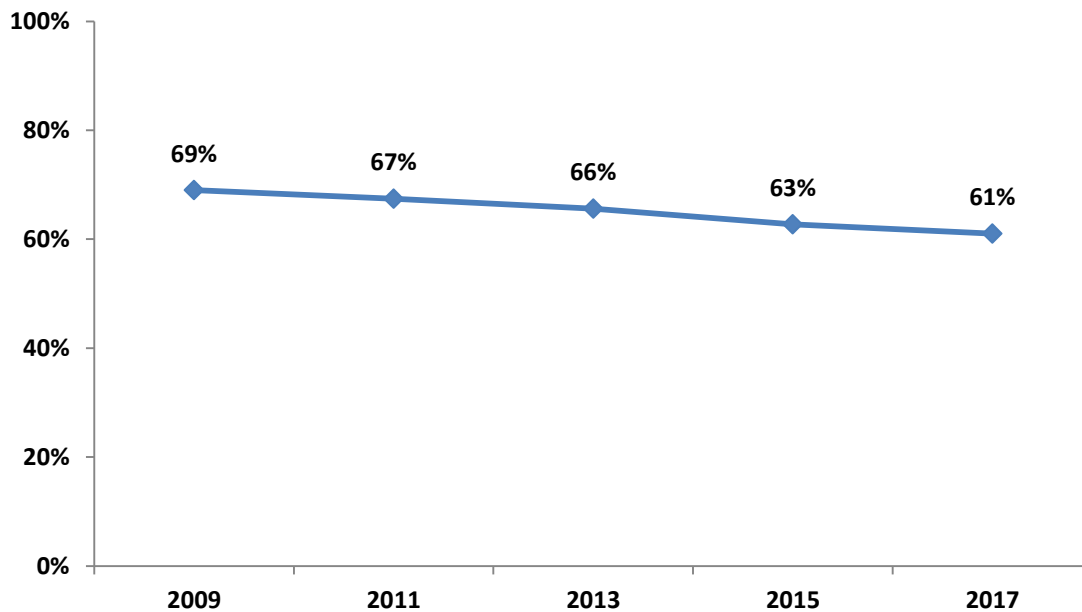
Source: MIYHS, 2009–2017

- In 2017, 61 percent of students felt it would be easy for them to obtain alcohol. This rate has decreased by 8 percentage points since 2009 (69%).

Availability and Accessibility: *Underage Youth Receiving Alcohol from Others*

Indicator Description: This measure reflects the percentage of high school students who drank within the past 30 days, reporting that they usually obtain the alcohol they drink from someone giving it to them.

Why Indicator is Important: Easy social access to alcohol is a major contributing factor to underage drinking. Students who report that alcohol is easy to get are nearly four times as likely to drink as their peers who report it is not easy.

Data Source(s): MIYHS 2009–2017

Summary: Social access continues to be a primary way that underage youth obtain alcohol. Of those students who obtained alcohol, nearly two out of five reported that someone had given it to them and the proportion of those who were given alcohol has been growing steadily.

Figure 63. High school students who obtained alcohol by someone giving it to them, among those who drank in past month: 2009–2017
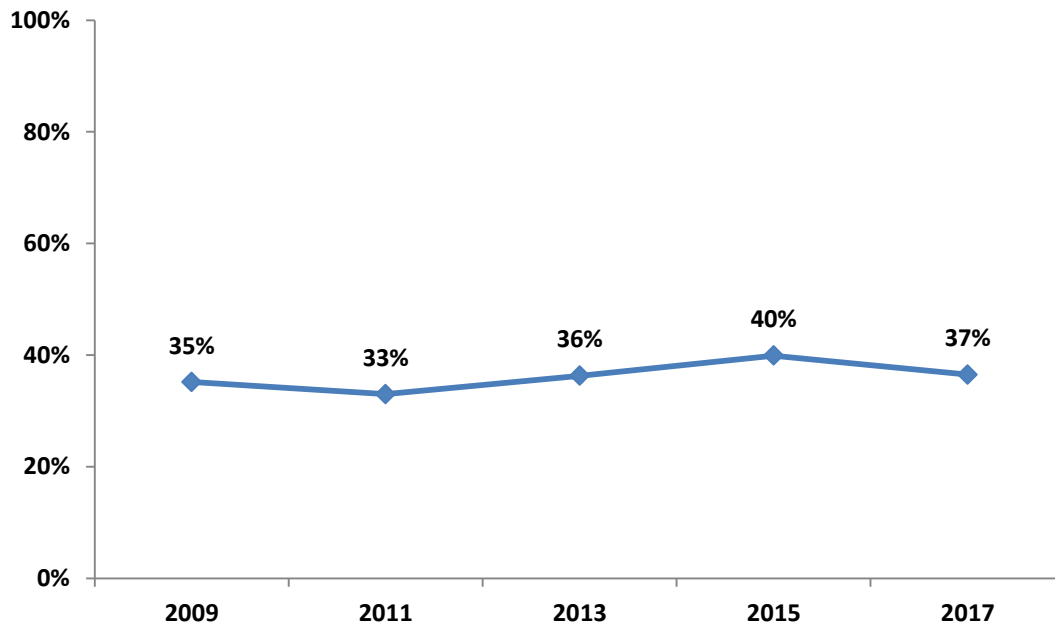
Source: MIYHS 2009–2017

- In 2017, 37 percent of high school students who obtained alcohol in the past month reported that someone gave them the alcohol they consumed; this represents a decrease of 3 percentage points since 2015 (40%).

Availability and Accessibility: *Parent Perception of Accessibility of Alcohol at Home*

Indicator Description: This indicator measures the percentage of parents reporting that their teen would be able to access alcohol they had purchased without their knowledge. These data come from the Maine Parent Survey, administered by Pan Atlantic Research for the Maine Center for Disease Control and Prevention.

Why Indicator is Important: Easy access to alcohol at home is a major contributing factor to underage drinking.

Data Source(s): Parent Survey 2009–2017

Summary: Among parents of middle and high school students, more than a third (37%) felt it was possible for their teen to access alcohol they had purchased without their knowledge. This is a decrease of 13 percentage points from 2015. This decrease also coincides with a 10-percentage point increase in parents who report not keeping alcohol in the house.

Figure 64. Parent perceptions of accessibility of parent-purchased alcohol without parental knowledge: 2009–2017
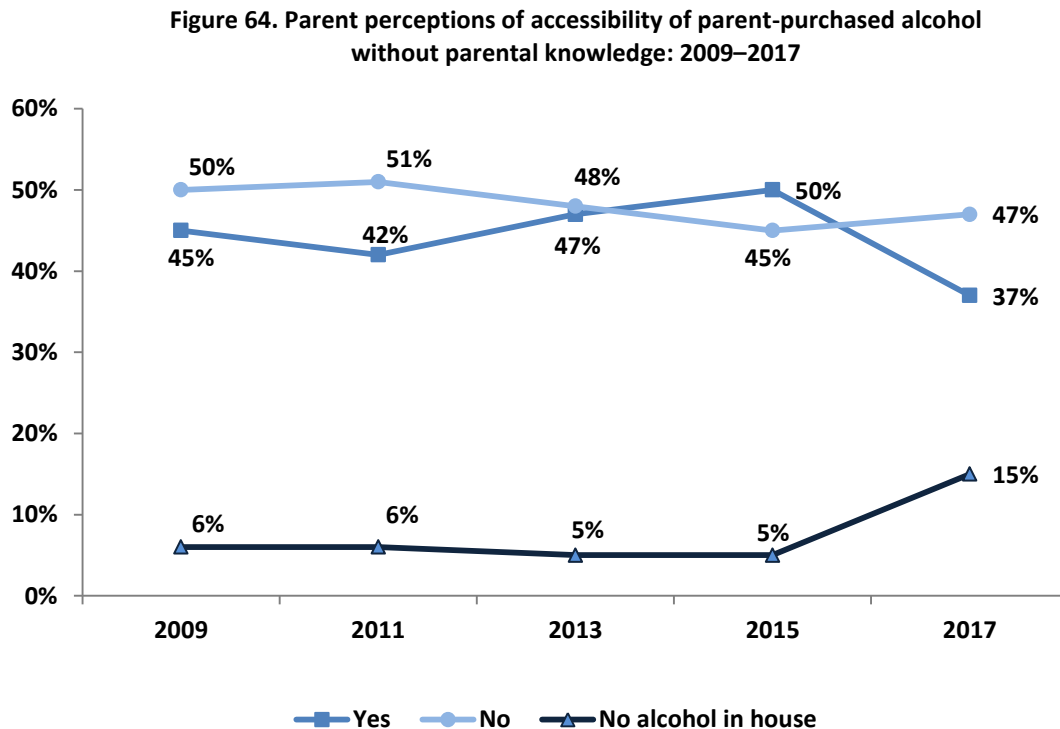
Source: Parent Survey 2009–2017

- The percentage of parents reporting that their child would be able to access alcohol without their parents' knowledge decreased from 2015 (50%) to 2017 (37%). In 2017, about one in seven (15%) parents reported they did not have alcohol in their home.

Availability and Accessibility: *Parent Perception of Accessibility of Prescription Drugs at Home*

Indicator Description: This indicator measures the percentage of parents reporting that their teen would be able to access prescription medication (not prescribed to their child) without their knowledge. These data come from the Maine Parent Survey, administered by Pan Atlantic Research for the Maine Center for Disease Control and Prevention.

Why Indicator is Important: Easy access to prescription drugs at home is a major contributing factor to prescription drug misuse. According to the Maine Integrated Youth Health Survey in 2017, students who perceived prescription medication as easy to obtain were about five times as likely to have misused prescription medication in the past month compared to those who thought that prescription drugs were not easy to obtain.

Data Source(s): Parent Survey 2015–2017

Summary: In 2017, about one in five parents felt that, at home, their child would be able to access prescription medications that were not prescribed to their teen, without permission. This is a decrease from 2015 when more than one-third of parents felt their child could access prescriptions. This decline in the perception of accessibility coincides with a 12-percentage point increase of parents reporting that they do not keep prescriptions in the home.

Figure 65. Parent perception of teen accessibility of prescription drugs at home without parental knowledge: 2015–2017
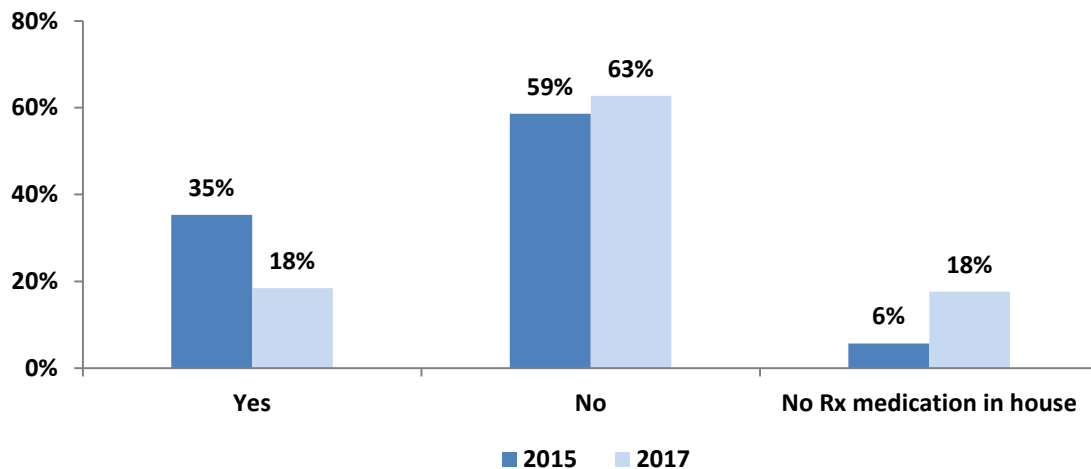
Source: Parent Survey 2015-2017

- The percent of parents who reported that, at home, their teen would be able to access prescription medications without their knowledge decreased by 17 percentage points from 2015 (35%) to 2017 (18%).
- Although not shown, parents with a four-year degree were more likely to report that their teen could access medication (23%), followed by single parents (20%) and parents aged 45 and older (19%).

Availability and Accessibility: *Ease of Obtaining Marijuana by Youth*

Indicator Description: This indicator shows the percentage of high school students reporting it would be easy or very easy to obtain marijuana if they wanted it.

Why Indicator is Important: In 2017, students who reported that they thought marijuana was easy to obtain were more than nine times as likely to use marijuana in the past 30 days compared to their peers who thought it was difficult to obtain.

Data Source(s): MIYHS, 2009–2017

Summary: More than half of high school students believed that marijuana is easy to obtain. This rate has steadily declined from 2009 to 2017.

Figure 66. High school students who reported it would be easy to get marijuana: 2009–2017
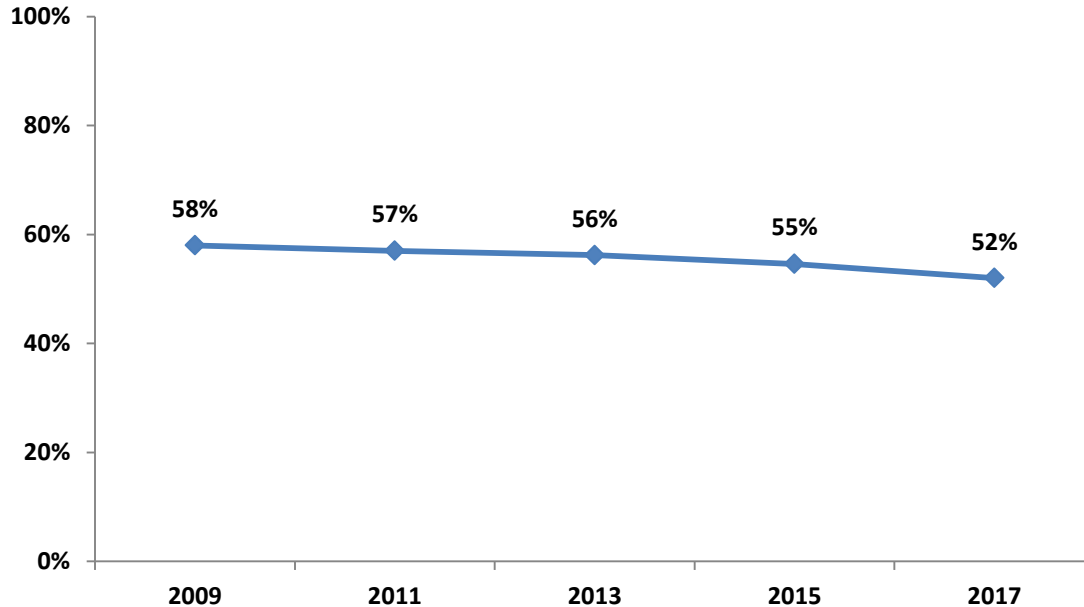
Source: MIYHS, 2009–2017

- In 2017, 52 percent of high school students felt it would be easy to get marijuana; this is a decrease of 6 percentage points since 2009 (58%).

Availability and Accessibility: *Illegal Drugs on School Property*

Indicator Description: This measure represents the percentage of high school students reporting they were sold, offered or given an illegal drug on school property during the past year.

Why Indicator is Important: In 2017, students who reported they were offered drugs at school were twice as likely to use marijuana as their peers who were not offered drugs at school.

Data Source(s): MIYHS, 2009–2017

Summary: The proportion of high school students who were sold, offered or given an illegal drug on school property has remained the same from 2015 to 2017 (20%).

Figure 67. High school students who were sold, offered, or given an illegal drug on school property in past year: 2009–2017
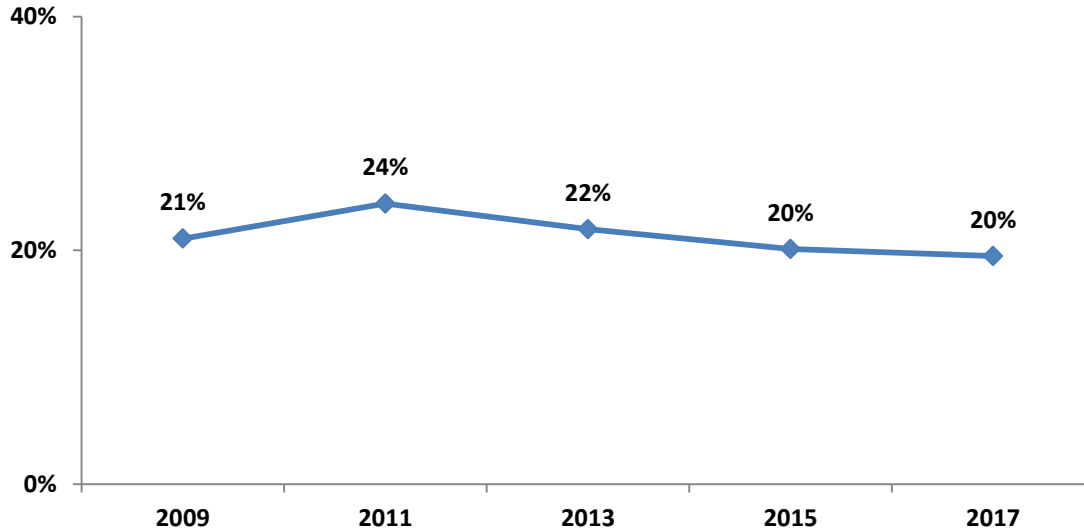
Source: MIYHS, 2009–2013

- One in five (20%) high school students were sold, offered or given an illegal drug on school property in 2017. This was a 4-percentage point decrease from 2011 (24%).

Availability and Accessibility: *Prescriptions Dispensed*

Indicator Description: These indicators reflect the number of opiate, sedative, and stimulant prescriptions and doses dispensed in Maine. This is collected through the Maine's Prescription Monitoring Program.

Why Indicator is Important: The number of prescriptions prescribed indicate the volume of prescription drugs potentially available in the community for diversion (*e.g.,* gift, sale, or theft). A higher level of availability contributes to misuse by individuals without a prescription.

Data Source(s): PMP, 2016–2018

Summary: From 2016 to 2018, the number of prescriptions prescribed for opiate agonists (excluding partial agonists such as buprenorphine) decreased by 22 percent and the number of prescriptions for sedatives decreased by 9 percent, while prescriptions dispensed for stimulants increased by 6 percent. In 2018, just over half of the all narcotic doses (agonists as well as partial agonists) dispensed contained the primary active ingredients of either oxycodone or hydrocodone.

Figure 68. Number of prescriptions dispensed in Maine, by type: 2016-2018*
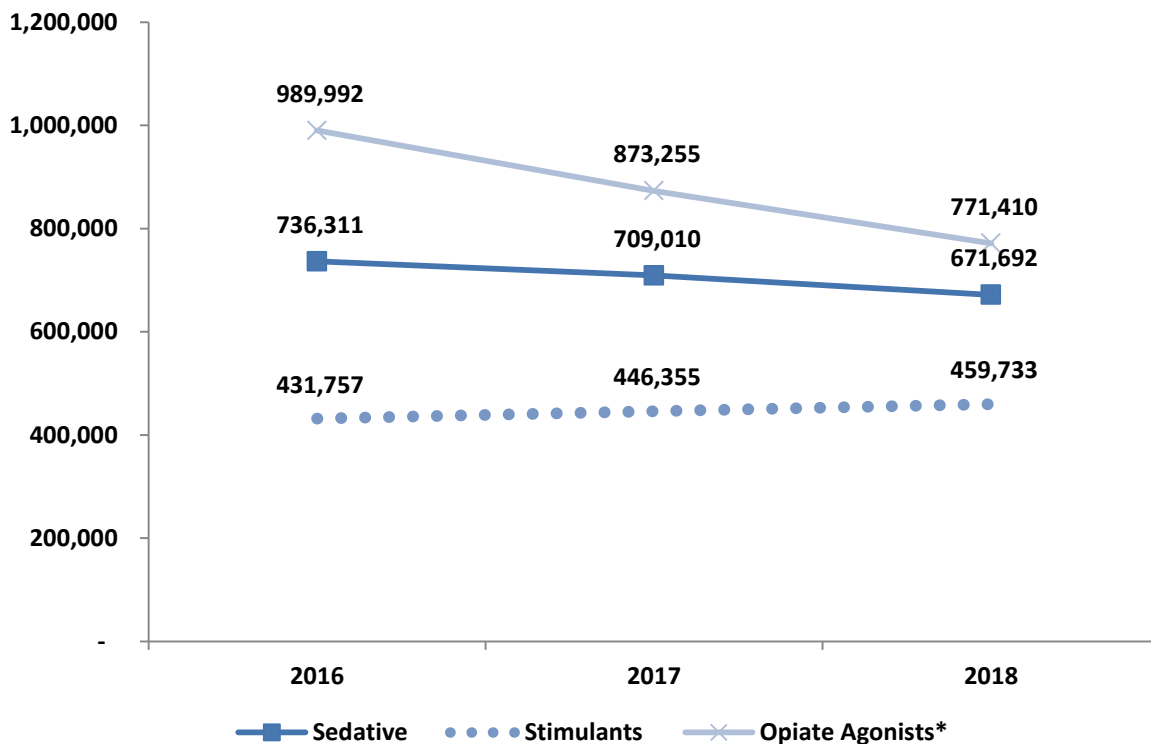
Source: PMP, 2016–2018

*Opiate analgesics include pain relievers and exclude medicated assisted prescriptions such as buprenorphine. In addition, opiate analgesic in the form of powder were excluded from this analysis.

Figure 69. Percentage of narcotic doses dispensed, by primary active ingredient: 2016–2018*
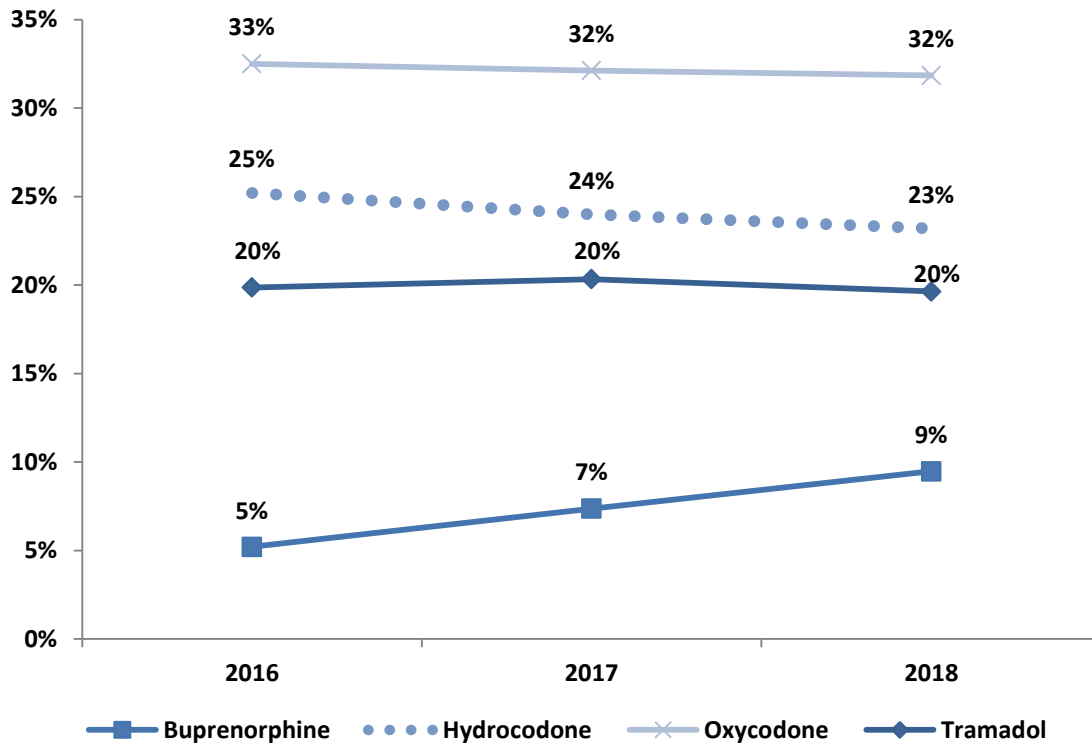
Source: PMP, 2016–2018

- The most common active ingredient in narcotic doses dispensed since 2016 has been Oxycodone, making up 32 percent of doses dispensed in 2018. The proportion of buprenorphine doses has increased from 5 percent in 2016 to 9 percent in 2018.

Indicator Description: This indicator shows the number of requests by non-law enforcement for medication verification through the Northern New England Poison Center (NNEPC). A person may call the NNEPC for many reasons, one being to help identify a medication or substance which they or another person has consumed or that has been found. The calls reflected in this indicator have been characterized by NNEPC as likely related to substance use, although NNEPC staff do not make a formal or clinical assessment.

Why Indicator is Important: The volume of medication verification calls suggests the degree of availability of those drugs in the community.

Data Source(s): NNEPC, 2016–18

Summary: Most calls to Northern New England Poison Center requesting medication verification in 2016–18 involved opioids, followed by benzodiazepines, and stimulants.

**Figure 70. Substances most frequently requested for medication
verification by non-law enforcement, by type: 2016–18**
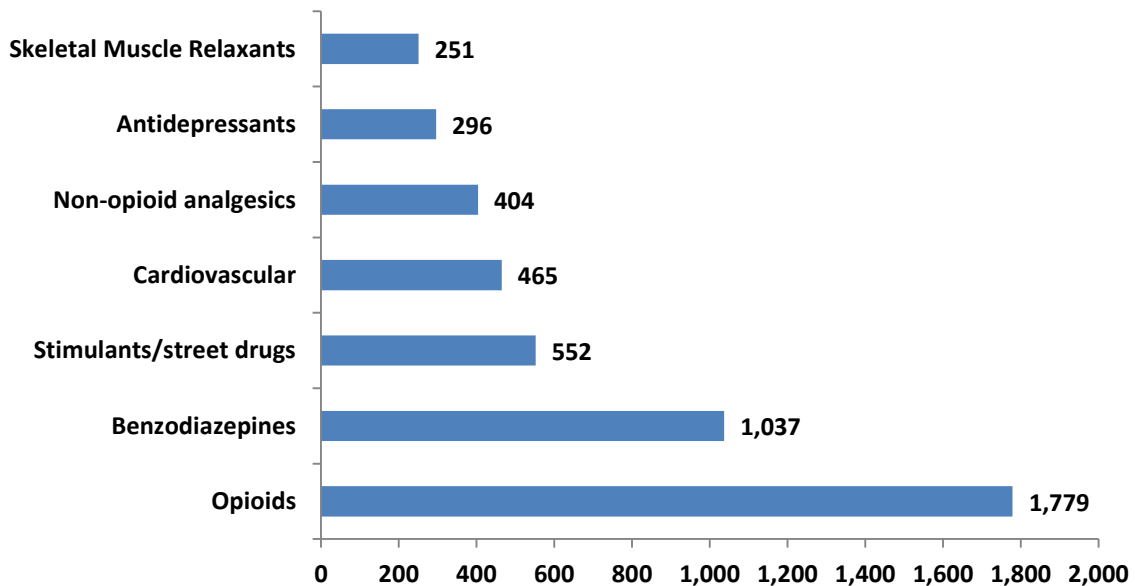
Source: NNEPC, 2016–18

- During the three-year period of 2016–18, the Poison Center received an average of 1,779 calls per year requesting verification for substances that were identified as opioids, followed by benzodiazepines (1,037), and stimulant/street drugs (552). Although not shown, the volume of calls for these substances has decreased steadily since 2010; according to the NNEPC, this can partly be attributed to callers transitioning to online research which has not been tracked.

Perceived Harm: *Perceived Risk from Regular Alcohol Use*

Indicator Description: This indicator reflects the percentage of high school students who report that there is moderate to great risk of harm from drinking one or two alcoholic beverages every day.

Why Indicator is Important: In 2017, high school students who do not perceive regular alcohol use (one to two drinks per day) as risky were almost twice as likely to drink in the past month than students who did perceive harm.

Data Source(s): MIYHS, 2009–2017

Summary: Six out of 10 high school students think there is moderate-to-great risk of harm from drinking alcohol regularly (one to two drinks every day); this has remained relatively stable from 2009 to 2017.

Figure 71. High school students perceiving moderate to great risk from drinking 1–2 drinks every day: 2009–2017
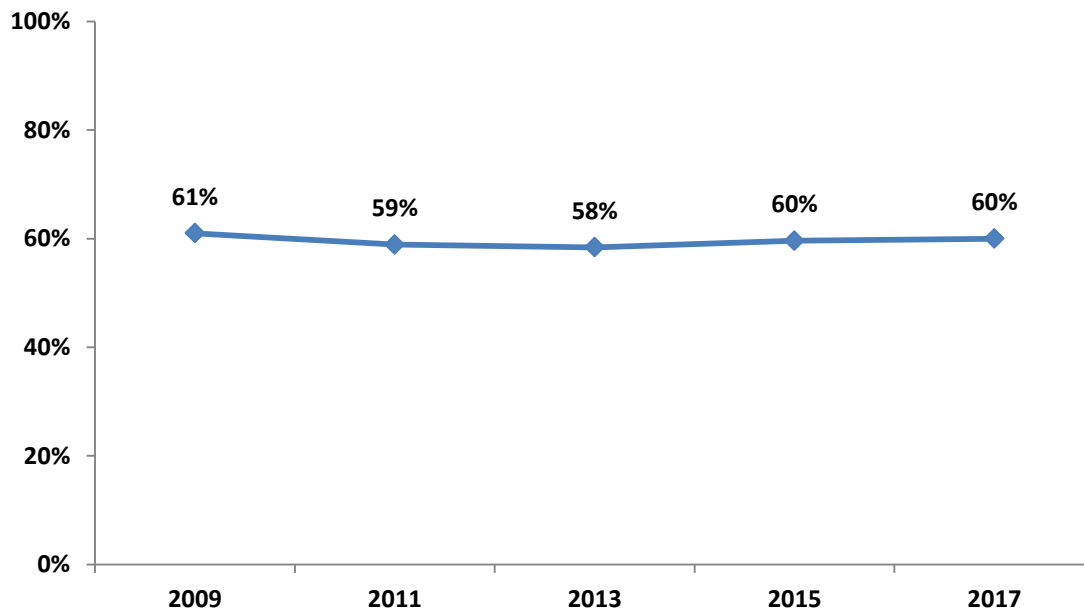
Source: MIYHS, 2009–2017

Indicator Description: This indicator reflects the percentage of individuals (high school students and adults) who perceive that there is moderate-to-great risk from drinking five or more drinks in a row once or twice per week.

The National Survey on Drug Use and Health (NSDUH) made changes to the survey design in 2015-16. Part of those changes involved changing the order in which the question about perceived risk of binge drinking appeared in the survey. It is still unknown if this has caused some question order bias in results.

Why Indicator is Important: In 2017, high school students who did not perceive a moderate to great risk of harm from binge drinking once or twice a week were twice as likely to drink in the past month as high school students who did perceive risk of harm. Perceptions around the risks of binge drinking are related to high-risk alcohol use among adults as well.

Data Source(s): MIYHS, 2009–2017; NSDUH 2015–16

Summary: Four out of five high school students (82%) think binge drinking once or twice a week is harmful. Perception of harm from binge drinking remains much lower among young adults. More than seven out of 10 young adults (18 to 25) thought that binge drinking a few times a week was NOT risky.

Figure 72. High school students perceiving moderate to great risk from drinking five or more drinks once or twice per week: 2009–2017
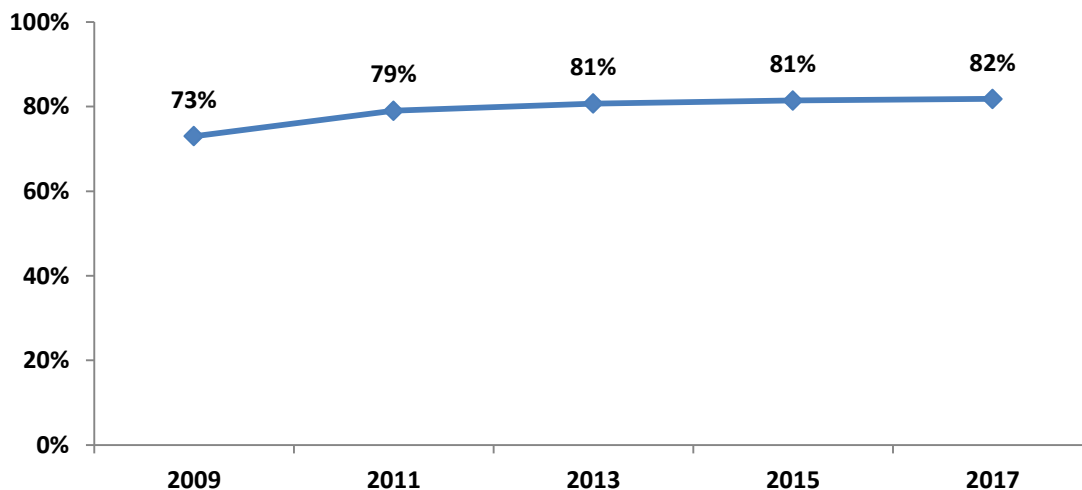
Source: MIYHS, 2009–2017

- Perception of risk associated with binge drinking has increased by 9 percentage points from 2009 to 2017.

Figure 73. Adults (18 and over) perceiving great risk from drinking five or more drinks once or twice per week, by age group: 2015–16 and 2016–17
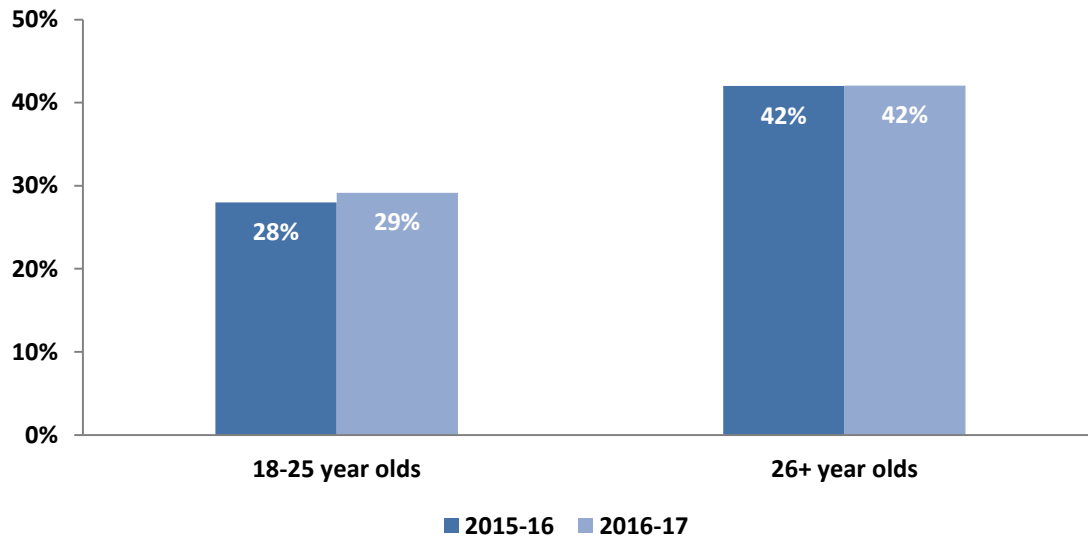
Source: NSDUH 2016–17

- Remaining consistent with 2015–16, 42 percent of Mainers ages 26 and older reported that drinking five or more drinks once or twice per week posed some risk of harm in 2016–17. Perception of harm from binge drinking was consistently lower among 18- to 25-year-olds in 2016-17 at 29 percent, but did increase slightly from 2015–16.

Perceived Harm: *Perceived Risk of Regular Marijuana Use*

Indicator Description: This measure demonstrates the percentage of individuals (high school students and adults) who perceive a moderate to great risk of harm from smoking marijuana regularly.

The National Survey on Drug Use and Health (NSDUH) made changes to the survey design in 2014–15, and the question related to perception of risk for smoking marijuana once per month was not asked. However, the question returned to the survey in 2015–16. Thus, there is a gap in trend analysis.

Why Indicator is Important: In 2017, high school students who do not believe there is moderate to great risk in smoking marijuana regularly are almost seven times as likely to smoke marijuana as their peers who do perceive risk of harm.

Data Source(s): MIYHS, 2013–2017; NSDUH, 2010–11 to 2015–16

Summary: In 2017, about one-third of high school students felt smoking marijuana once or twice a week was risky. In 2016–17, less than one in 10 18- to 25-year-olds perceived smoking marijuana at least once per month as risky. Perceptions of harm regarding marijuana use have decreased among both youth and adults over the past several years.

Figure 74. High school students perceiving moderate to great risk from smoking marijuana once or twice a week: 2013 and 2017
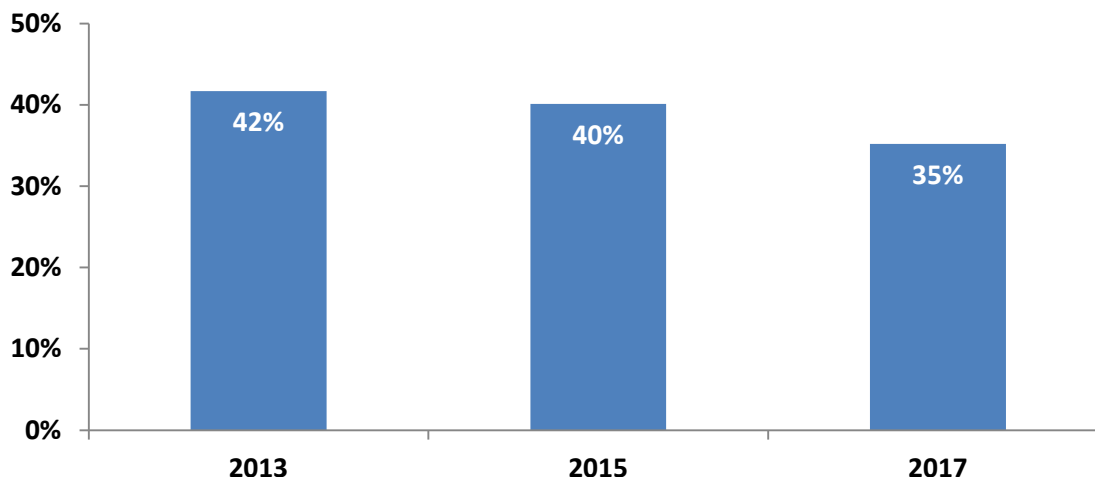
Source: MIYHS, 2013–2017

- The proportion of high school students who perceived a moderate to great risk of harm from smoking marijuana once or twice a week has declined by 7 percentage points from 2013 (42%) to 2017 (35%). In 2017, 35 percent of high school students thought that smoking marijuana once or twice per week was risky. Inversely, 65 percent of students thought that it was not risky to do so.

Figure 75. Adults (age 18 and older) perceiving great risk from smoking marijuana once per month, by age group: 2011–12 to 2016–17
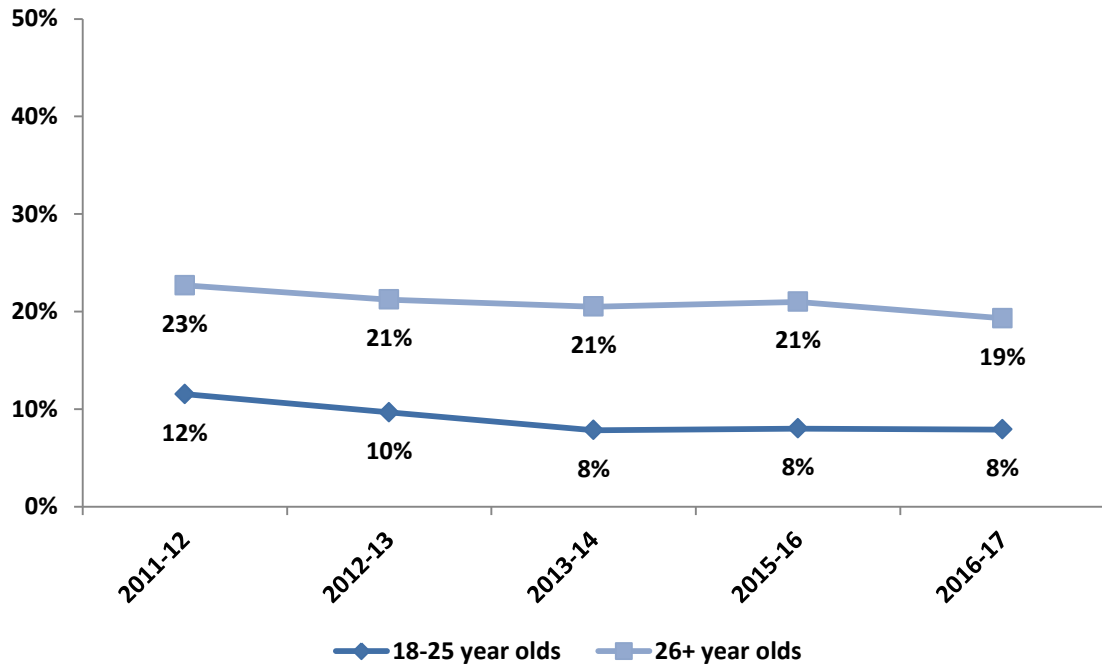
Source: NSDUH, 2011–12 to 2016–17

- In 2016-17, young adults 18 to 25 were unlikely to perceive a great risk from smoking marijuana at least once per month (8%), whereas Mainers who were 26 years old or older, had a higher perception of risk (19%). The 26 and older population's perception of risk has slightly decreased from 2015–16.

Perceived Harm: *Perceived Risk of Prescription Drug Misuse*

Indicator Description: This measure demonstrates the percentage of high school students who perceive a moderate to great risk of harm from taking a prescription drug that was not prescribed to them.

Why Indicator is Important: Factors such as perception of harm from using a substance can have a significant impact in determining whether an individual will initiate use. It is important that youth are taught at a young age of the harms and risks (*e.g.,* addiction) associated with misuse of prescription drugs.

Data Source(s): MIYHS, 2015–2017

Summary: In 2017, the vast majority of high school students (87%) reported that it would be harmful if they took a prescription drug that was not prescribed to them. Female students were more likely to perceive a risk than males. Rates have been stable for the past several years.

Figure 76. High school students who felt using a prescription drug not prescribed to them was harmful, by age group: 2015–2017
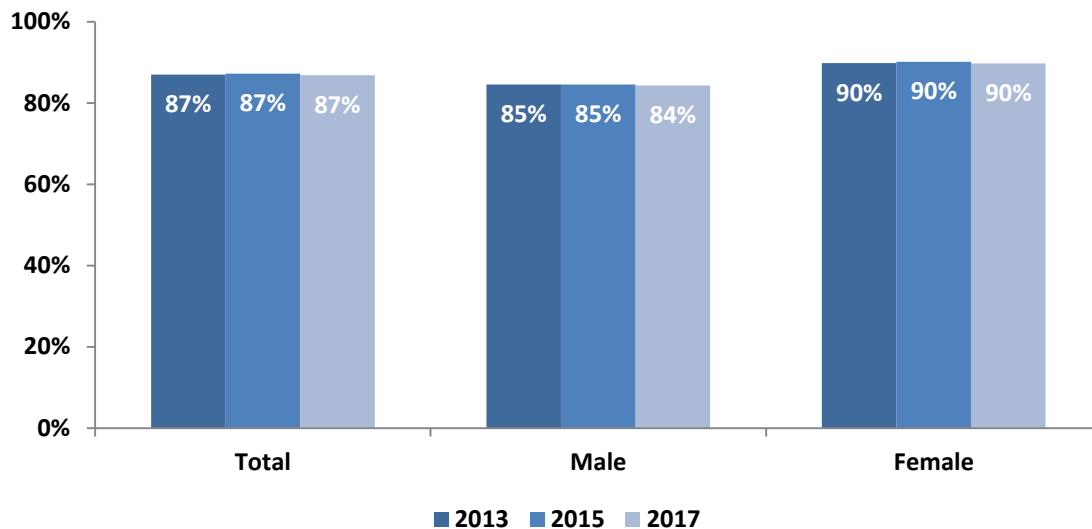
Source: MIYHS, 2015–2017

- When broken out by gender, females were more likely to perceive a risk than males; 90 percent compared to 84 percent respectively.

Indicator Description: This measure demonstrates the percentage of individuals (youth and adults) who perceive a moderate to great risk of harm from trying heroin once or twice.

Why Indicator is Important: Factors such as perception of harm from using a substance can have a significant impact in determining whether an individual will initiate use. It is important that youth are taught at a young age of the harms and risks (*e.g.,* addiction) associated with opioid use.

Data Source(s): NSDUH, 2016–17

Summary: In 2016–17, more than eight out of 10 adults reported that trying heroin once or twice was of moderate to great risk. Youth aged 12 to 17 were much less likely to perceive a risk. Two-thirds of 12- to 17-year-olds thought there was great risk from trying heroin once or twice.

Figure 77. Mainers perceiving great risk from trying heroin once or twice, by age group: 2016–17
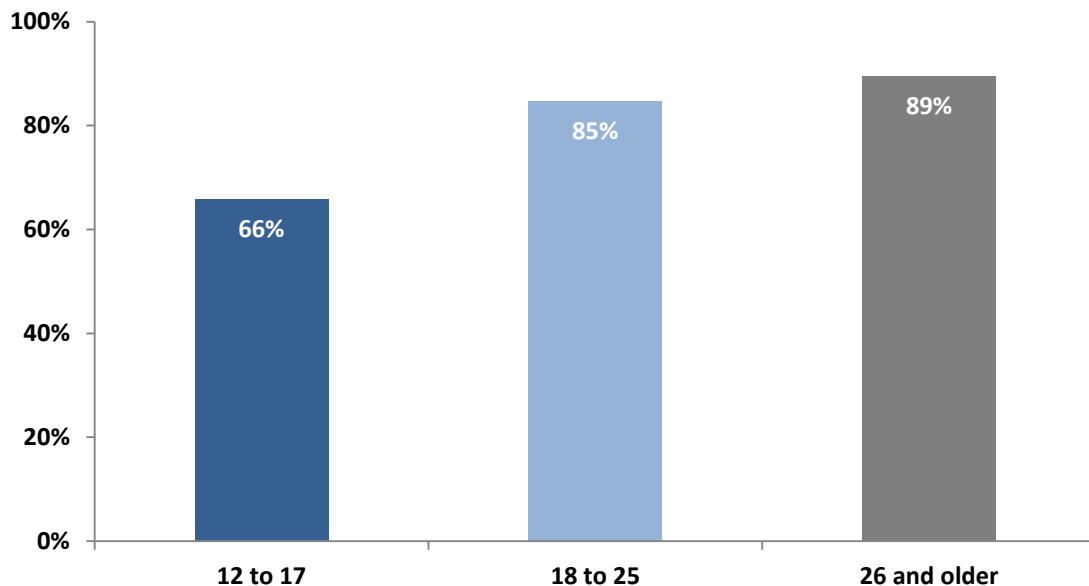
Source: NSDUH, 2016–17

- In 2016-17, 66 percent of 12- to 17-year-olds, 85 percent of 18- to 25-year-olds, and 89 percent of Mainers aged 26 and older reported that trying heroin once or twice was of moderate to great risk. These rates show a slight increase in perception of risk from 2015–16.

Perceived Enforcement: *Youth Perceived Risk of Being Caught Drinking Alcohol*

Indicator Description: **YOUTH PERCEIVED RISK OF BEING CAUGHT FOR DRINKING ALCOHOL.** This indicator shows the percentage of high school students perceiving they would be caught by their parents or by police if they drank alcohol.

Why Indicator is Important: In 2017, high school students who believed they would not be caught by their parents were more than five times as likely to drink in the past month, compared to students who did think they would be caught. In addition, students who believe that they would not be caught by the police were three times as likely to drink alcohol in the past month as those who did think they would be caught.

Data Source(s): MIYHS, 2009–2017

Summary: In 2017, half of high school students thought they would be caught by their parents for drinking alcohol while only about one in five felt they would be caught by the police. Perceptions of getting caught by parents or policy have increased over the past several years.

Figure 78. High school students reporting they would be caught by parents or the police if they drank: 2009–2017
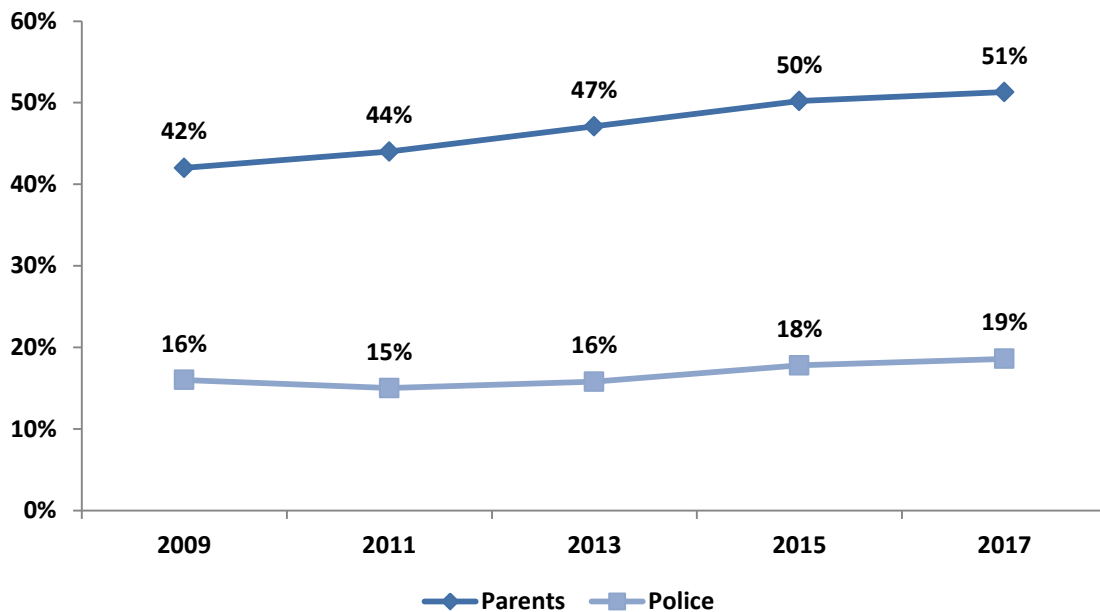
Source: MIYHS, 2009–2017

Perceived Enforcement: *Youth Perceived Risk of Being Caught Smoking Marijuana*

Indicator Description: This indicator represents the percentage of high school students perceiving they would be caught by police if they smoked marijuana.

Why Indicator is Important: In 2017, high school students who believed they would not be caught by the police (for smoking marijuana in their neighborhood) were almost five times as likely to smoke marijuana as their peers.

Data Source(s): MIYHS, 2009–2017

Summary: In 2017, about one-quarter of high school students thought they would be caught by police for smoking marijuana. Therefore, the majority of high school students were not worried about being caught by the police for smoking marijuana. Rates have remained relatively stable over the past several years.

Figure 79. High school students reporting they would get caught by the police if they smoked marijuana in their neighborhood: 2009–2017
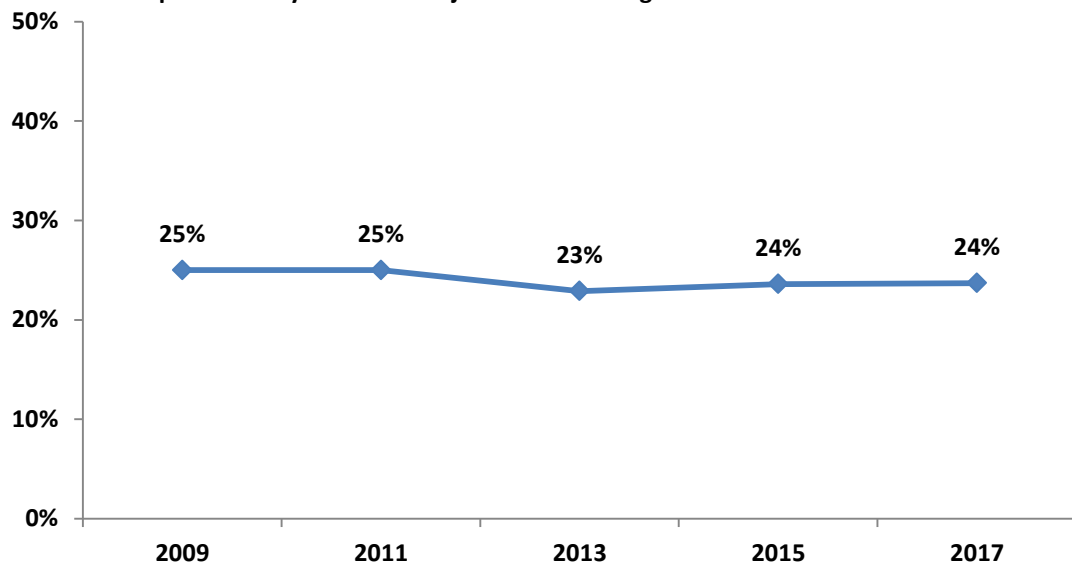
Source: MIYHS, 2009–2017

Community and Cultural Norms: *Youth Perception of Parental Attitudes Toward Alcohol Use*

Indicator Description: This indicator depicts the percentage of high school students who thought that their parents feel it would be wrong for them to drink regularly. It also examines the proportion who reported that adults in their community think it would be wrong for kids their age to consume alcohol.

Why Indicator is Important: In 2017, high school students who did not believe their parents felt it would be wrong for them to drink were more than twice as likely to drink alcohol in the past month as their peers who did think their parents would perceive it as wrong.

Data Source(s): MIYHS, 2009–2017

Summary: High school students largely believe that their parents and adults in their community think it would be wrong for them to drink alcohol. In 2017, more than nine out of 10 students perceived that their parents would think it was wrong for them to use alcohol regularly. This was compared to three out of four students who felt that adults in their community would think it was wrong. The perception of disapproval remained stable in both parents and adults in the community from 2013 to 2017.

Figure 80. High school students who reported perceiving that their parents and adults in their community think student alcohol use is wrong: 2009–2017*
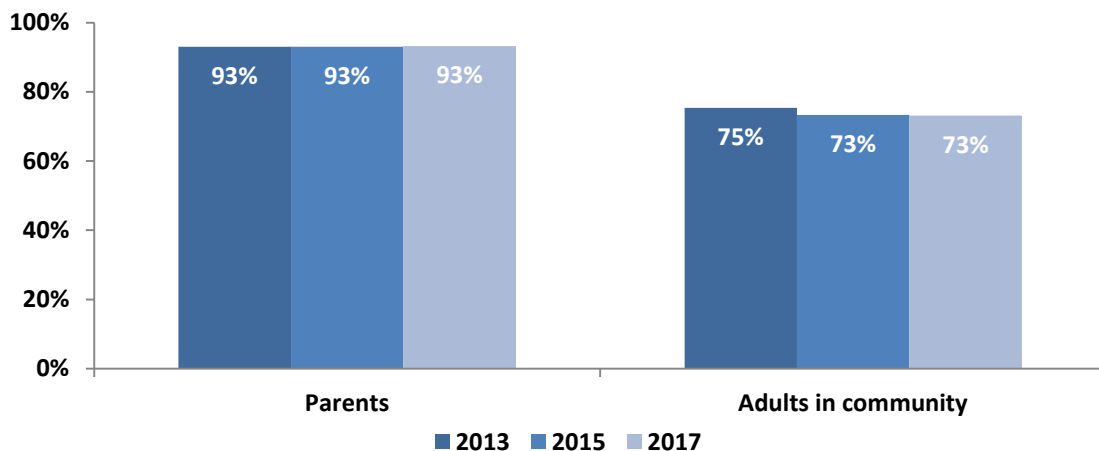
Source: MIYHS, 2013–2017

- The proportion of high school students who thought their parents felt it would be wrong for them to drink one to two drinks per day remained unchanged from 2013 to 2017 at 93 percent.

- In 2017, 73 percent of students reported that adults in their community think it is wrong for youth to use alcohol. This was a slight decrease from 2013 (75%).

Community and Cultural Norms: *Youth Perception of Parental Attitudes Toward Marijuana Use*

Indicator Description: This indicator shows the percentage of high school students who reported that their parents feel it would be wrong for them to smoke marijuana.

Why Indicator is Important: In 2017, high school students who don't believe their parents feel it is wrong for them to smoke marijuana are four times as likely to use marijuana as students who believe their parents think it is wrong.

Data Source(s): MIYHS, 2009–2017

Summary: Although high school students generally believe that their parents think it would be wrong for them to smoke marijuana; perceptions of disapproval have slowly decreased from 2009 (87%) to 2017 (81%). About one in five high school students felt their parents would not disapprove of them using marijuana.

Figure 81. High school students who reported that parents would think it was wrong to use marijuana: 2009–2017

Source: MIYHS, 2009–2017

Indicator Description: This indicator reflects how parents felt about their teen using marijuana. Maine parents of teenagers (7th to 12th graders) were asked to select the response that best described their attitude about marijuana use by their child. Response options were mutually exclusive. These data come from the Maine Parent Survey, administered by Pan Atlantic Research for the Maine Center for Disease Control and Prevention.

Why Indicator is Important: Parental perceptions and permissive attitudes towards substance use can have a major effect in their child's decision to use. As Maine observes changes in regulations and policies regarding marijuana use; changes to cultural norms and beliefs around use are occurring as well.

Data Source(s): Parent Survey, 2013–2017

Summary: The percentage of parents who felt it was never okay for their teen to use marijuana has substantially decreased from 2013 (81%) to 2017 (62%). In 2017, about one in six parents felt it would be okay if their teen used marijuana if they had a written certificate from a doctor or when their "child is grown".

**Figure 82. Parental attitudes regarding their teen using marijuana:
2013–2017**
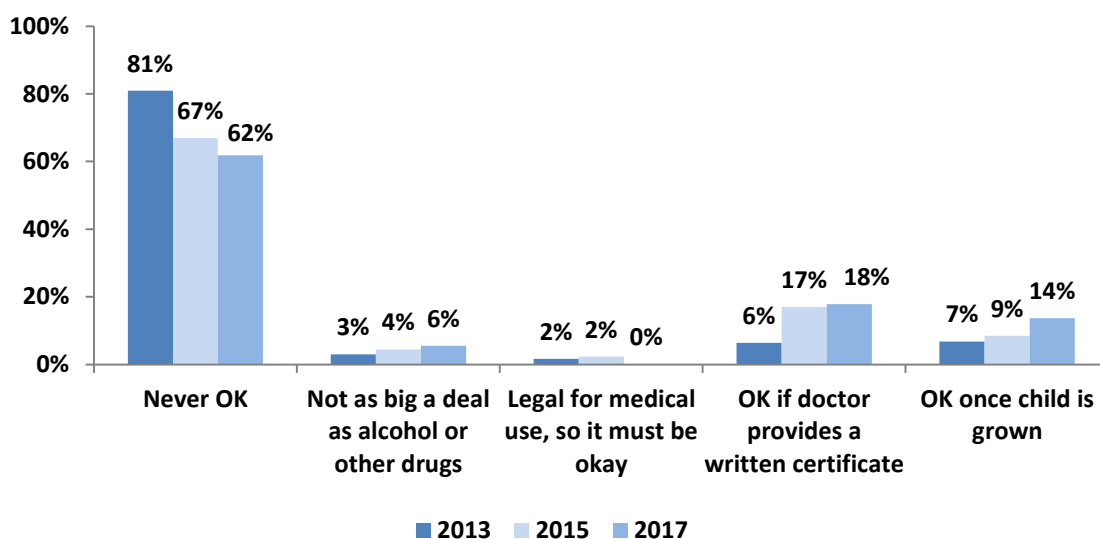
Source: Parent Survey, 2013–2017

- The percentage of parents who felt marijuana use was okay if a doctor provided a written certificate increased from 2013 (6%) to 2017 (18%). In addition, parents who responded that it would be okay for their child to use marijuana when they are "grown" doubled from 2013 (7%) to 2017 (14%).

Community and Cultural Norms: *Youth Perception of Family Rules Toward Substance Use*

Indicator Description: This indicator reflects the percentage of high school students who reported that their family has clear rules about the use of alcohol, tobacco and other drugs (substance use).

Why Indicator is Important: In 2017, high school students who believe their parents have clear rules about substance use are half as likely as their peers to drink alcohol.

Data Source(s): MIYHS, 2009–2017

Summary: In 2017, nine in 10 high school students reported that their family has clear rules around substance use. However, one in 10 students still did not think their family had clear rules and were therefore at higher risk for underage alcohol use than their peers. Rates of perception of clear rules around substance use have steadily increased since 2011.

Figure 83. High school students who reported their family has clear rules about alcohol and drug use: 2009–2017
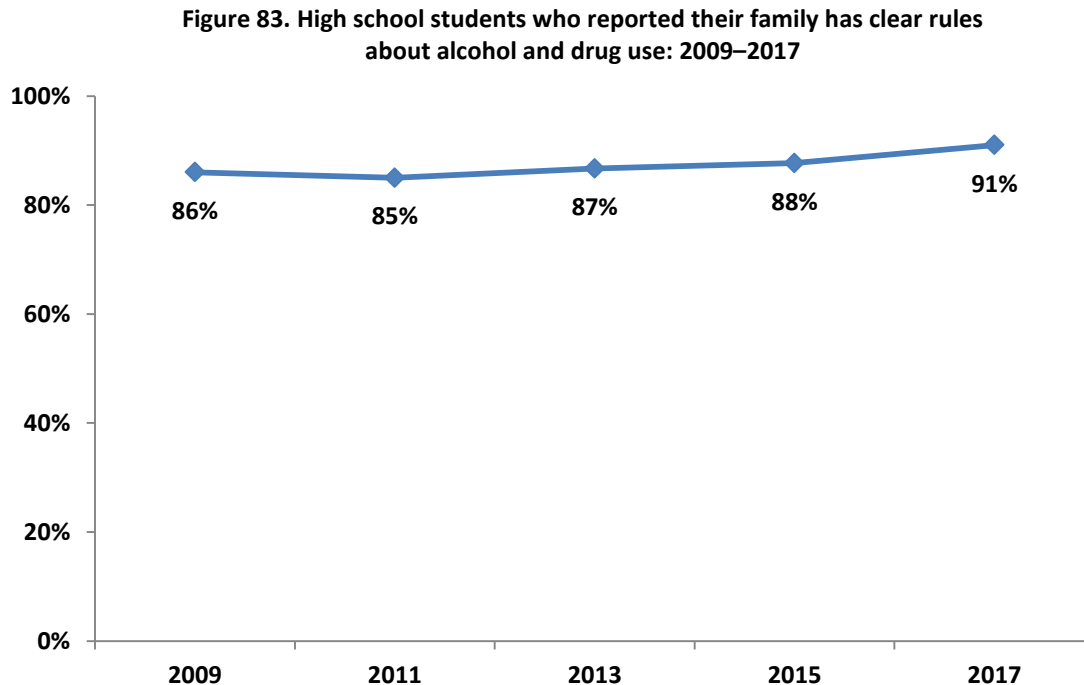
Source: MIYHS, 2009–2017

- High school students who agreed their family has clear rules about the use of alcohol, tobacco and other drugs increased by 5 percentage points from 2009 (86%) to 2017 (91%).

Indicator Description: This indicator reflects the percentage of parents who perceived that their child (7th through 12th graders) would be able to access alcohol in their house without their knowledge.

Why Indicator is Important: Parental perceptions of child behaviors compared to the actual behaviors reported by youth often differ from one another. This disconnect can be challenging to reconcile, especially when confronting youth substance use and parental monitoring.

Data Source(s): Parent Survey, 2009–2017

Summary: More than a third (37%) of parents believe that their child would be able to access alcohol in the home without their knowledge. This is a substantial decline from 2017 (50%). In addition, one in seven parents of 7th to 9th graders reported that they do not keep alcohol in the house.

Figure 84. Parent's (of high school students) perception of youth access to alcohol: 2009–2017
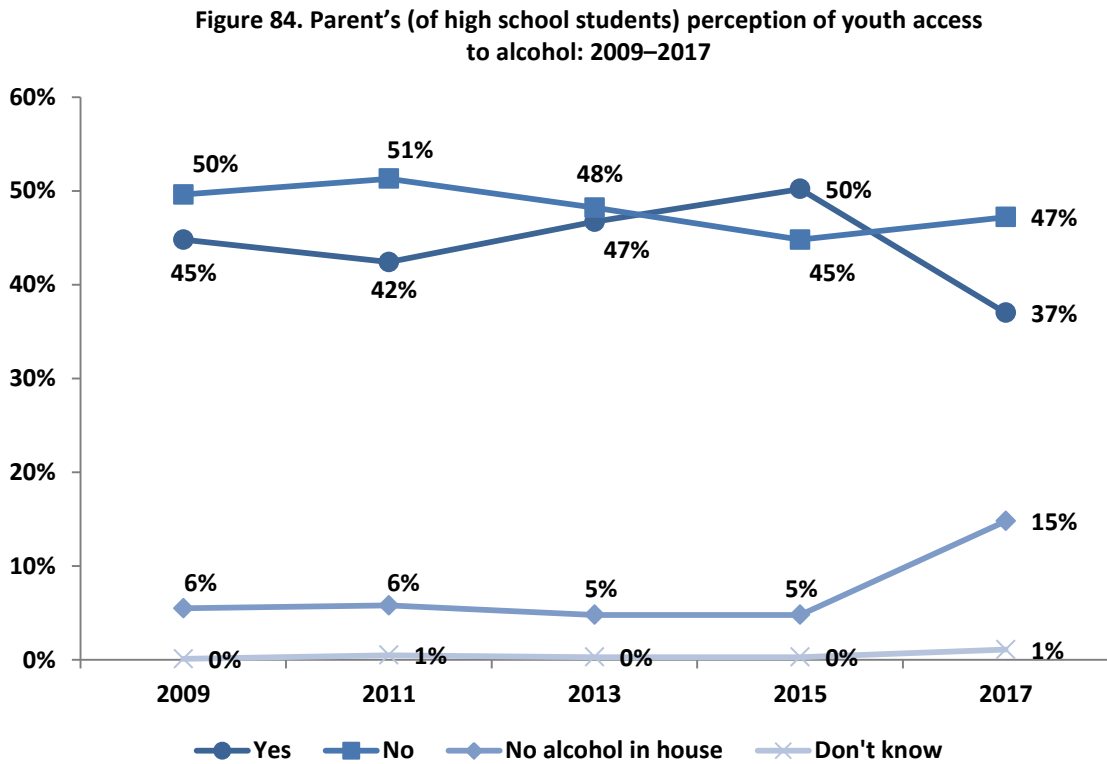
Source: Parent Survey, 2009–2017

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

Impact of Protective Factors on Substance Use and Mental Health: *Protective Factors Among Youth*

Indicator Description: This indicator explores the extent to which protective factors or behaviors influence substance use and mental health among youth.

Why Indicator is Important: There are some protective factors, like sleep, social support, and familial support, that taken together may mitigate the risk of substance use behaviors and mental health issues among youth.

Data Source(s): MIYHS, 2017

Summary: The prevalence of substance use, suicide ideation and feelings of sadness and helplessness are higher among high school students who report certain risk factors. Children are much more likely to report feelings of sadness and helplessness, as well as substance use and suicide ideation if they have not had eight hours or more of sleep, report three or more adverse childhood experiences or feel that they matter.

Figure 85. Alcohol use, feelings of sadness and suicide ideation among youth who sleep eight hours or more and those who do not: 2017
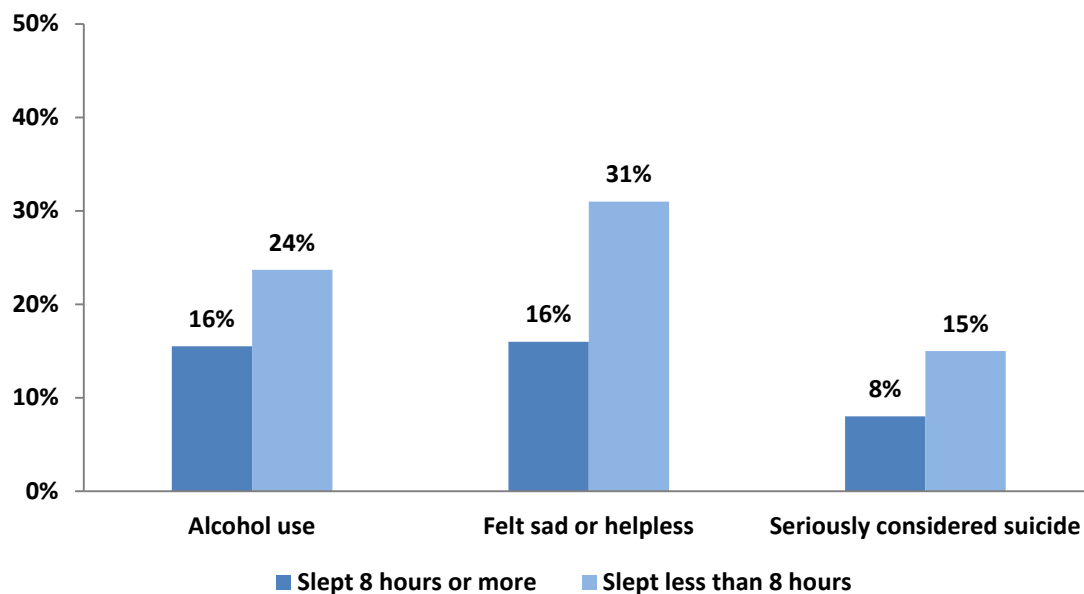
Source: MIYHS, 2017

- High school students reporting sleeping more than eight hours on average during school nights were less likely to drink alcohol (16% versus 24% of those who did not get a full night's rest), feel sad or helpless (16% versus 31%), or seriously consider suicide (8% compared to 15%) compared to those who sleep less than eight hours.

Figure 86. Alcohol use, feelings of sadness and suicide ideation among youth who feel like they matter to people in the community and those who do not: 2017

Bar chart with y-axis from 0% to 50%.

Category	Matter	Don't matter
Alcohol use	20%	25%
Feeling sad or helpless	16%	41%
Seriously considered suicide	8%	24%

■ Matter ■ Don't matter
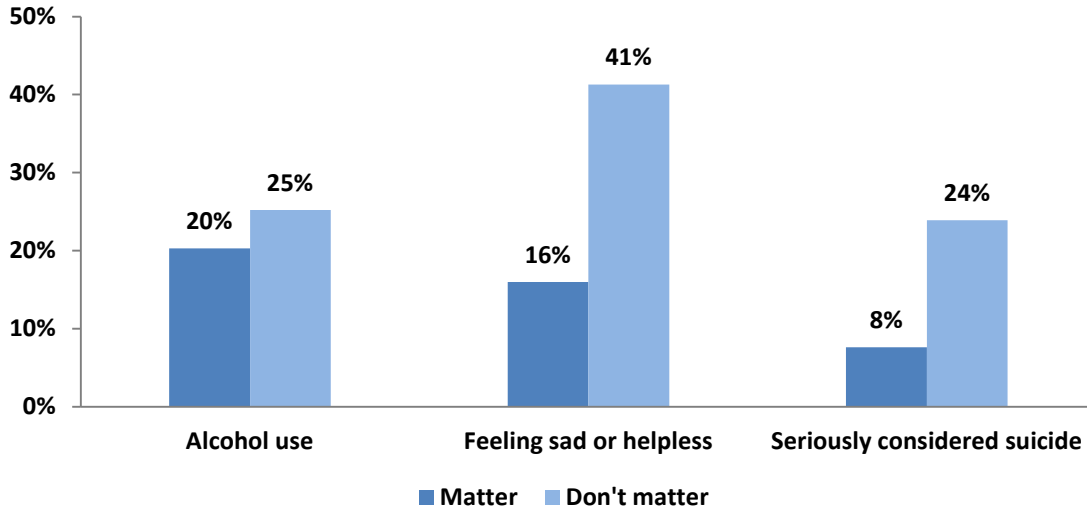
Source: MIYHS, 2017

- High school students who felt like they mattered to their community reported less alcohol use, feelings of depression, and suicidal consideration. While the difference in alcohol use was small, youth who said they felt like they do not matter were two to three times more likely to have thoughts and feelings associated with depression as well.

Figure 87. Past month high school substance use by whether or not their parents know where they are: 2017

Bar chart with y-axis from 0% to 50%.

Category	Parents know	Parents don't know
Alcohol	18.4%	39.7%
Marijuana	15.1%	37.4%
Prescription drugs	2.9%	16.7%
Cigarettes	5.5%	21.5%

■ Parents know ■ Parents don't know
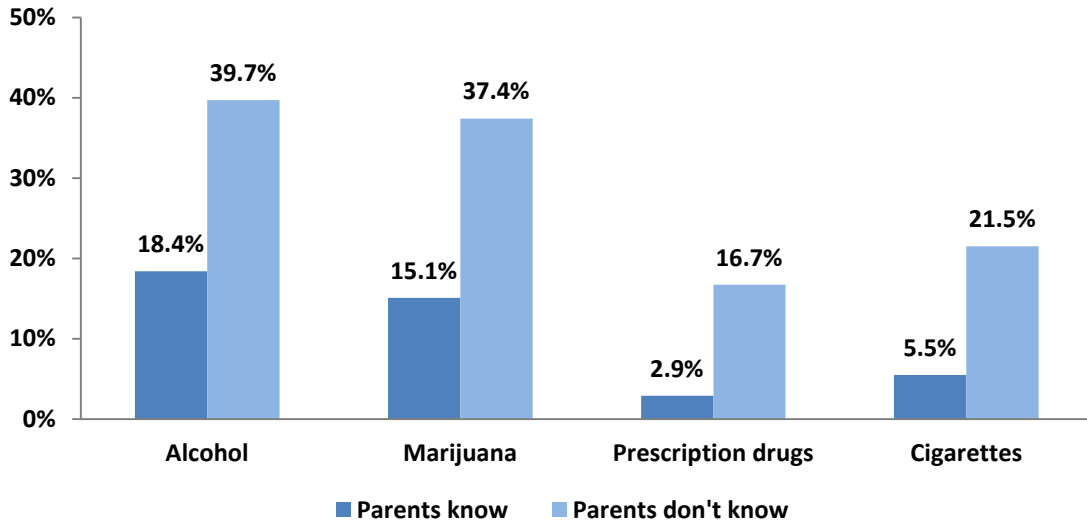
Source: MIYHS, 2017

- High school students who felt their parents or guardians did not know where they are most or all the time when they are not at home were more likely to use substances in the past month. Youth who think their parents do not know where they are were more than five times as likely to have misused prescription drugs.

- Although not pictured, high school students who felt that they had a parent or guardian that tries to help them succeed were also two to three times less likely to have used alcohol, marijuana, prescription drugs, and cigarettes within the past month. Additionally, this is also true of students who believe their family loves and supports them.

Figure 88. Alcohol use, feelings of sadness and suicide ideation among youth based on the number of adverse childhood experiences reported: 2017
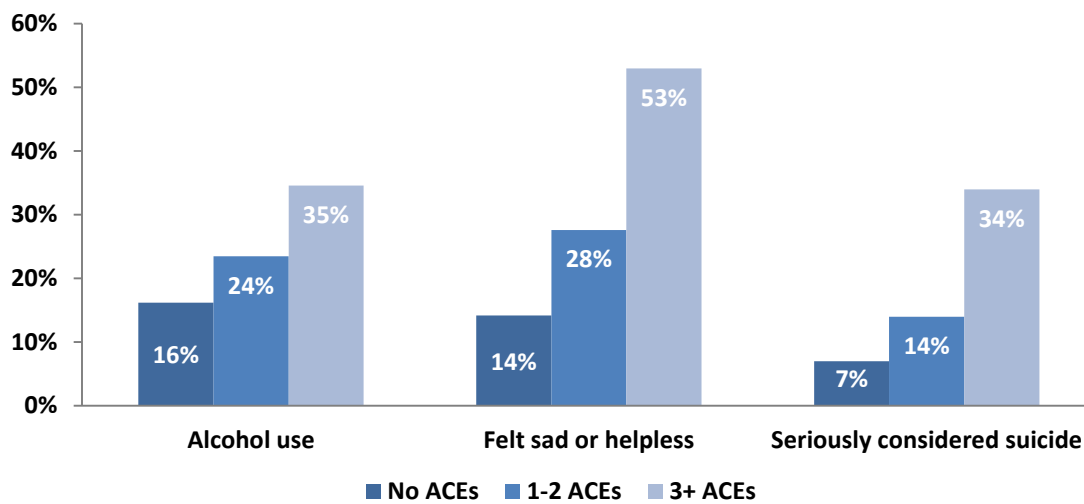
Source: MIYHS, 2017

- High school students who reported three or more adverse childhood experiences (ACEs) reported greater alcohol use, feeling sad or helpless, and serious suicidal consideration when compared to those who reported fewer ACEs.

Mental Health, Suicide and Co-occurring Disorders

The relationship between substance use and mental health has been well documented. There are efforts underway throughout Maine to better integrate mental health promotion and substance use prevention. At the individual level, it is important to know if one exists because the symptoms of each can affect the other; that is, a person who is depressed may use alcohol to feel better. At the community level, it is important to understand how the prevalence of one interacts with the other so that prevention and intervention efforts can better address the needs of both. The data indicators included below represent multiple mental health indicators that can be routinely monitored in relation to substance use in hopes that this will lead to better prevention and intervention initiatives.

According to most recent estimates, about one in five adults in Maine reported having ever been diagnosed with anxiety, while one in four reported having ever been diagnosed with depression. Rates of depression are consistent among adults ages 18 to 25, 26 to 35, and 36 to 49. Rates of anxiety are highest among adults between 26 and 35 years old. Young adults (aged 18 to 25) are more likely to report experiencing at least one major depressive disorder within the past year (about one in seven) compared to those over age 25. Rates of depression among young Mainers in high school have been increasing in recent years, with more than a quarter of high school students reporting feeling so sad or helpless for at least two weeks in the past year that they stopped doing their usual activities. About one in seven high school students in Maine had planned for suicide, and one in 10 reported they had attempted suicide in the past year. As discussed in the contributing factors section, certain protective factors are more common among teens who do not report suicidal thoughts. *2-1-1 Maine* referral calls related to substance use increased by 26 percent from 2017 to 2018, while calls related to mental health services and gambling have remained relatively stable.

Comorbidity of substance use and mental illness is common in Maine. In 2017, as in previous years, students who reported drinking in the past month were more prone to have thoughts of suicide when compared to their peers who did not consume alcohol. Nearly one in four high school students who had consumed alcohol in the past month also had serious thoughts of suicide within the past year. In addition, mental illness is also prevalent among Mainers who needed treatment for substance use; half of all substance use treatment admissions also involved a mental health disorder.

MENTAL ILLNESS, DEPRESSION, AND ANXIETY

Mental Illness, Depression and Anxiety: *Mental Illness and Depressive Episodes Among Adults*

Indicator Description: This indicator reflects the percentage of Maine residents age 18 and older reporting experiencing any mental illness, serious mental illness or having experienced at least one major depressive episode.[12]

Why Indicator is Important: Experiencing a mental illness or psychological distress in the past year has been associated with higher rates of substance use.

Data Source(s): NSDUH, 2014–15 to 2016–17

Summary: About one in five adults in Maine reported experiencing any mental illness in the past year. Adults between 18 and 25 years old reported the highest rates of past-year major depressive episodes at 15 percent; an increase of 3 percentage points since 2015–16.

Figure 89. Adults (age 18 and older) experiencing any mental illness in past year, by age group: 2014–15 to 2016–17
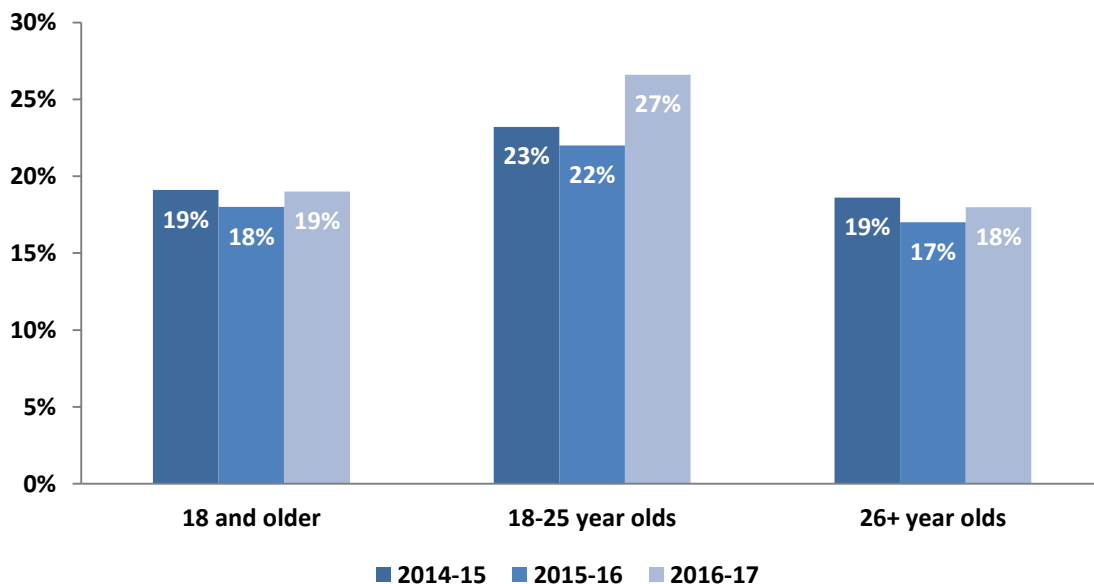
Source: NSDUH, 2014–15 to 2016-17

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[12] Any mental illness is a diagnosable mental, behavioral, or emotional disorder, other than a substance use disorder, that met the criteria found in the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V). Serious mental illness is a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, that met the DSM-IV criteria and resulted in serious functional impairment. Major depressive episode is defined as 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.

- In 2016–17, 19 percent of adults ages 18 and over, 27 percent of adults between 18 and 25 years old, and 18 percent of adults 26 and older report that they have experienced any mental illness in the past year. These rates have all increased since 2015–16.

Figure 90. Adults experiencing at least one major depressive episode in the past year, by age group: 2012–13 to 2016–17
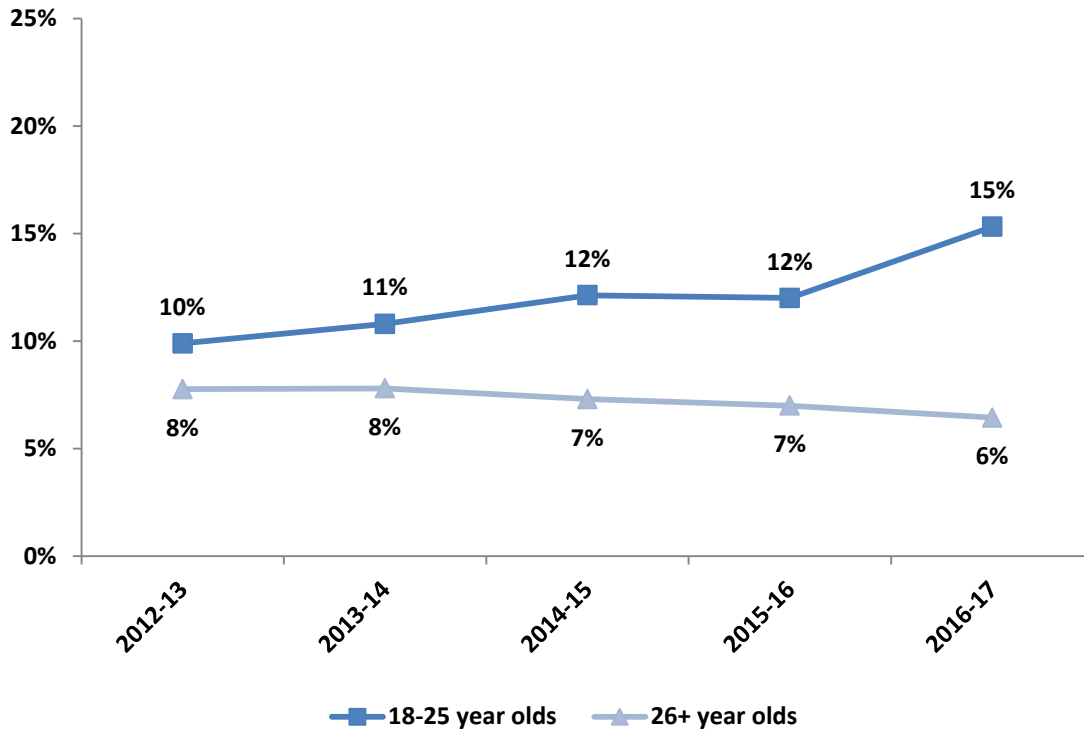
Source: NSDUH, 2012–13 to 2016–17

- In 2016–17, major depressive episodes[13] continue to be more prevalent among young adults ages 18 to 25 (15%) compared to adults 26 and older (6%). Major depressive episode rates among 18- to 25-year-olds have increased since 2015–16, while rates among those 26 and older have slightly decreased.

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[13] Major depressive episode (MDE) is defined as in the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V), 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.

Mental Illness, Depression and Anxiety: *Diagnosis of Anxiety and Depression Among Adults*

Indicator Description: This indicator examines the percentage of Maine residents age 18 and older who have been told they have a depression or anxiety disorder.

Why Indicator is Important: The link between mental health and substance use is well documented. Experiencing anxiety or depression in the past year is associated with higher rates of substance use.

Data Source(s): BRFSS, 2013–15 to 2015–17

Summary: In 2015–17, nearly one in four adults in Maine reported having ever been diagnosed with depression compared to one in five reporting to have ever been diagnosed with anxiety. Rates of depression have been relatively stable since 2013–15. However, rates of anxiety among adults has increased slightly among most age groups.

Figure 91. Adults who have been told they have a depressive disorder by age group: 2013–15 to 2015–17*
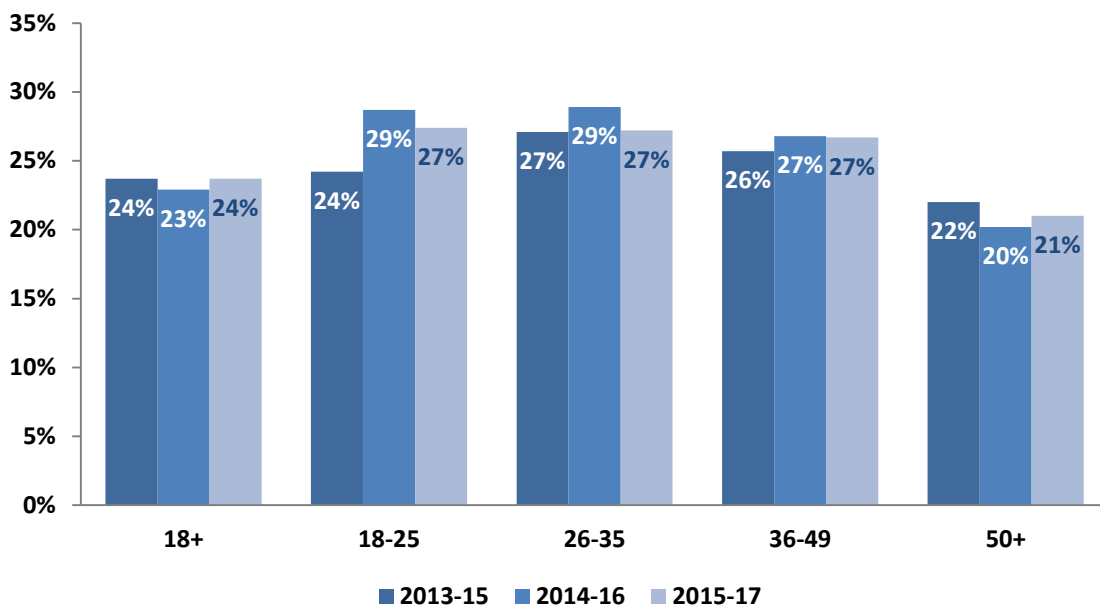
Source: BRFSS 2013–15 to 2015–17
*2017 BRFSS estimates are preliminary.

- In 2015–17, about one-quarter (24%) of adults in Maine reported having ever been diagnosed with a depressive disorder.

Figure 92. Adults who have been told they have an anxiety disorder by age group: 2013–15 to 2015–17*
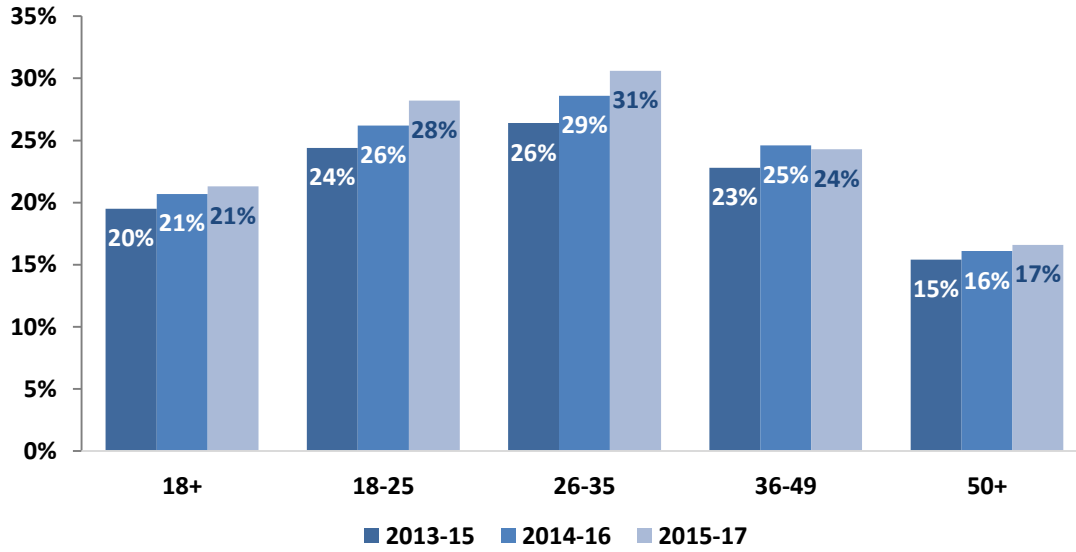
Source: BRFSS 2013–15 to 2015–17
*2017 BRFSS estimates are preliminary.

- In 2015–17, approximately one in five (21%) adults in Maine reported having ever been diagnosed with an anxiety disorder. Rate were highest among 26- to 35-year-olds, at 31 percent.

Indicator Description: This indicator measures the percentage of high school students reporting they felt sad or hopeless almost every day for two weeks in a row during the past year.

Why Indicator is Important: Experiencing depression in the past year is associated with higher rates of substance use and suicide. In 2017, students who reported feeling hopeless or sad for at least two weeks within the past twelve months were almost twice as likely to have used marijuana or to have engaged in alcohol use in the past 30 days, and three times as likely to have misused prescription drugs during the past 30 days. Among youth, depression is also associated with problems with relationships and academic achievement.

Data Source(s): MIYHS 2009–2017

Summary: The percentage of Maine high school students who reported feeling sad or helpless for at least two weeks in the past year steadily increased from 22 percent in 2009 to 27 percent in 2017.

Figure 93. High school students who reported feeling sad or hopeless in past year: 2009–2017
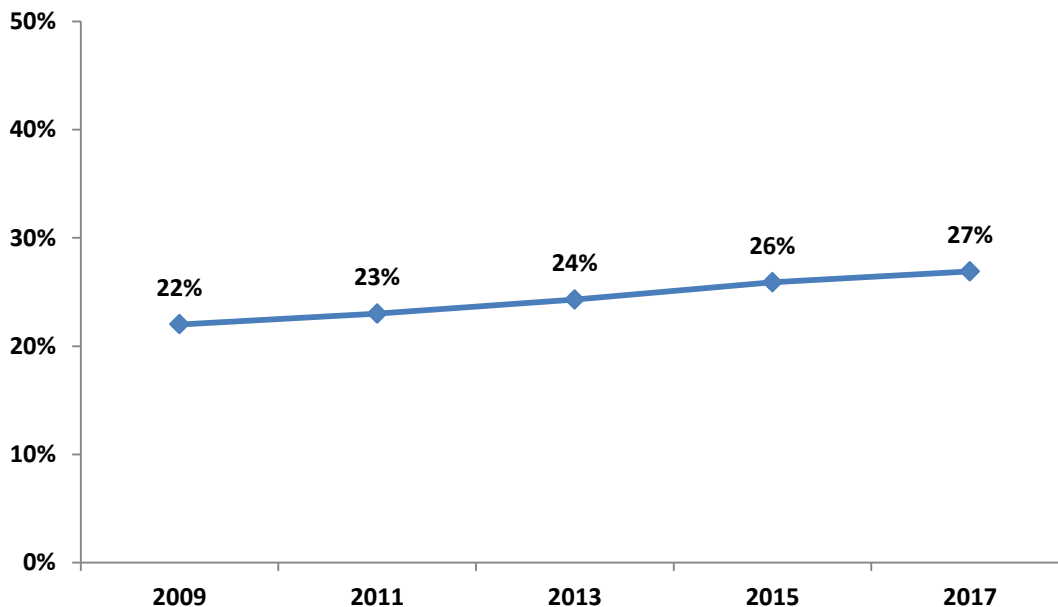
Source: MIYHS 2009–2017

- In 2017, about one in four students felt so sad or helpless for at least two weeks in the past year that they stopped doing their usual activities.

Suicidal Ideation: Suicidal Ideation Among Youth

Indicator Description: This measure examines the percentage of high school students who reported that they seriously considered attempting suicide, planned about how they would attempt suicide, or attempted to commit suicide during the past year.

Why Indicator is Important: Suicide is the most extreme consequence of major depressive disorders. Use of alcohol or other drugs may increase emotional problems leading to suicidal ideation and suicidal behavior.

Data Source(s): MIYHS 2009–2017

Summary: In 2017, an average of one in seven (15%) Maine high school students considered suicide and a little more than one in 10 (12%) had planned for suicide; rates have remained relatively stable. The percentage of students who reported that they had attempted suicide decreased from 2015 (10%) to 2017 (7%).

Figure 94. High school students who considered, planned, or attempted suicide in past year: 2009–2017
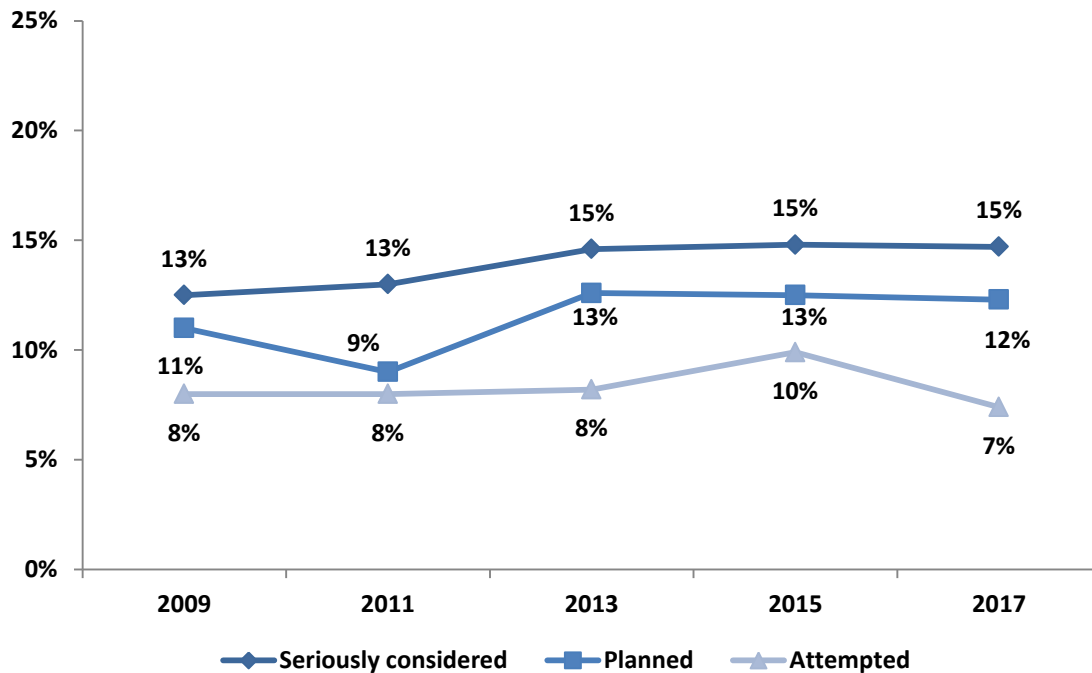
Source: MIYHS 2009–2017

Mental Health and Substance Use Co-Occurrence: *Co-occurring Substance Use and Suicidal Behavior Among Youth*

Indicator Description: This indicator explores the relationship between alcohol use within the past 30 days and suicidal behavior. It reflects the likelihood of high school students to report that they planned or attempted suicide during the past year by whether they reported consuming alcohol in the past month.

Why Indicator is Important: The link between mental health and substance use is well documented. Alcohol is a depressant and its use by depressed individuals may increase suicidal behavior.

Data Source(s): MIYHS, 2009–2017

Summary: In 2017, the percentage of high school students who had consumed alcohol in the past month and had serious thoughts of suicide within the past year continues to be nearly one in four (24%); this is more than double the rate compared to students who did not drink.

Figure 95. High school students reporting seriously considering suicide in the past year, by alcohol use in the past month: 2009–2017
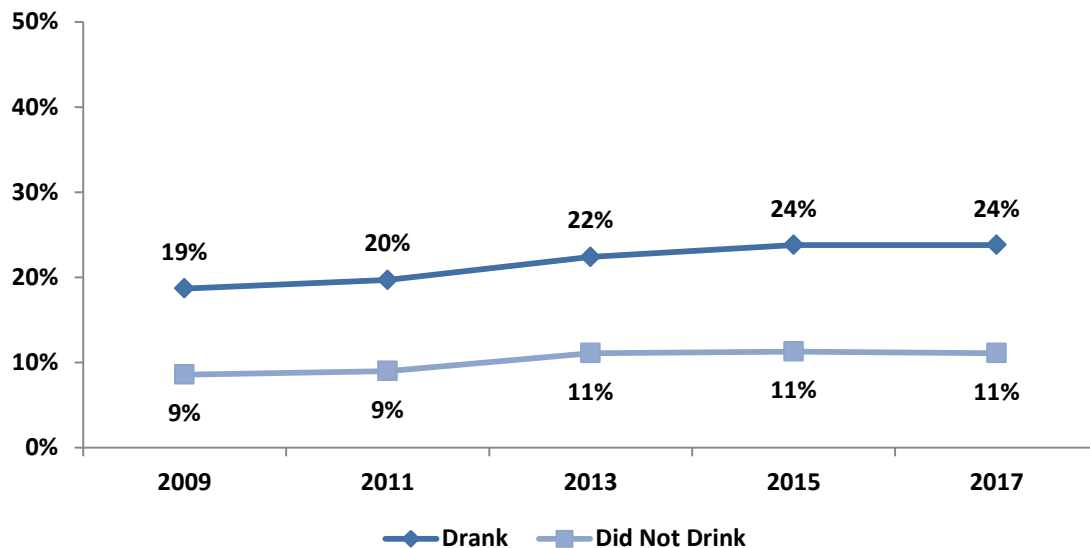
Source: MIYHS 2009–2017

Mental Health and Substance Use Co-Occurrence: *Co-occurring Mental Health and Substance Use Treatment*

Indicator Description: This indicator reflects the proportion of treatment admissions for substance use where the individual has a mental health diagnosis or has previously received mental health services. The following analysis excludes admissions for shelter/detoxification services as well as those who were identified as co-affected or codependents (*e.g.,* spouse, child, sibling) of the client who was receiving treatment. In addition, the following data analysis includes duplicate admissions, meaning that a unique individual/client could have been counted multiple times if they were admitted during the year on more than one occasion.

Why Indicator is Important: The link between mental health and substance use is well documented. In terms of treatment, it is important to know if one exists since the symptoms of each can affect the other.

Data Source(s): WITS, 2012–2016

Summary: In 2016, over half (51%) of all substance use treatment admissions also involved a mental health disorder.

Figure 96. Percent of total treatment admissions with reported mental health disorders: 2012–2016
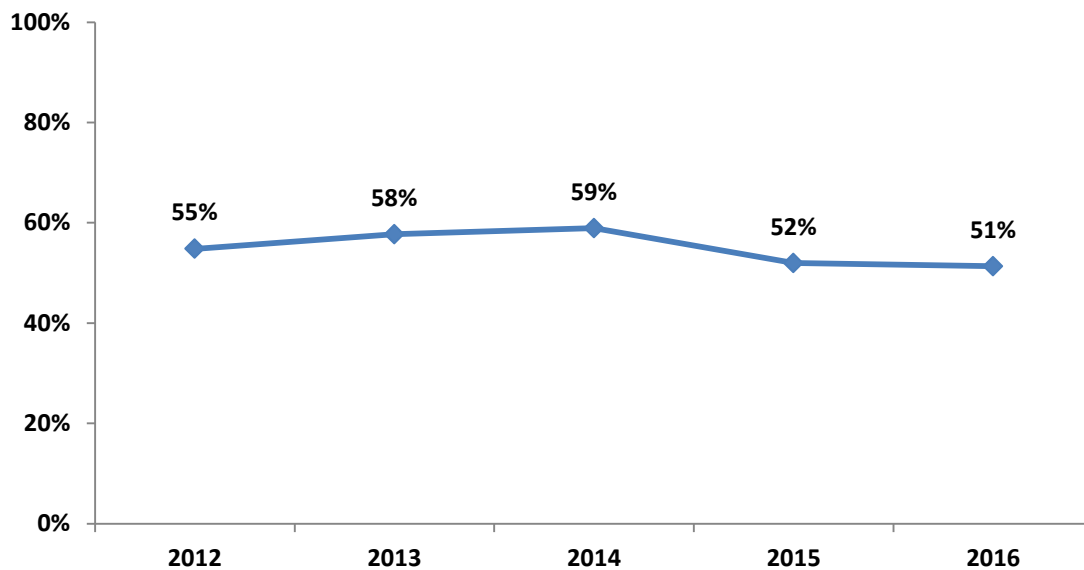
Source: WITS, 2012–2016

*WITS system is not static; therefore 2016 rates may be different than true values. Data were retrieved 6/8/2017

- In 2016, 51 percent of all substance use treatment admissions also had a diagnosed mental health disorder, representing a decrease of 8 percentage points from 2014.

Mental Health and Substance Use Co-Occurrence: *Information Calls for Mental Health and Human Services*

Indicator Description: *2-1-1 Maine* is a telephone and internet service that provides information and referrals to health and human services. This indicator reflects the number of calls received by *2-1-1 Maine* by the type of service requested.

Why Indicator is Important: The data collected from each call provide valuable information, serving as a barometer of health and human service needs in the state.

Data Source(s): *2-1-1 Maine*, 2014–2018

Summary: *2-1-1 Maine* referral calls related to housing/shelter outnumbered calls related to mental health services as well as substance use in 2018. Referral calls for housing/shelter, substance use, and mental health have observed increases from 2017 to 2018, while calls related to gambling have slightly decreased.

Figure 97. Number of *2-1-1 Maine* referral calls, by service type: 2014–2018

	2014	2015	2016	2017	2018
Gambling	138	86	125	95	80
Housing/Shelter	3,827	3,313	2,762	2,573	3,554
Mental Health	4,154	3,630	3,204	2,902	2,927
Substance Abuse	2,416	2,232	2,125	1,644	2,075
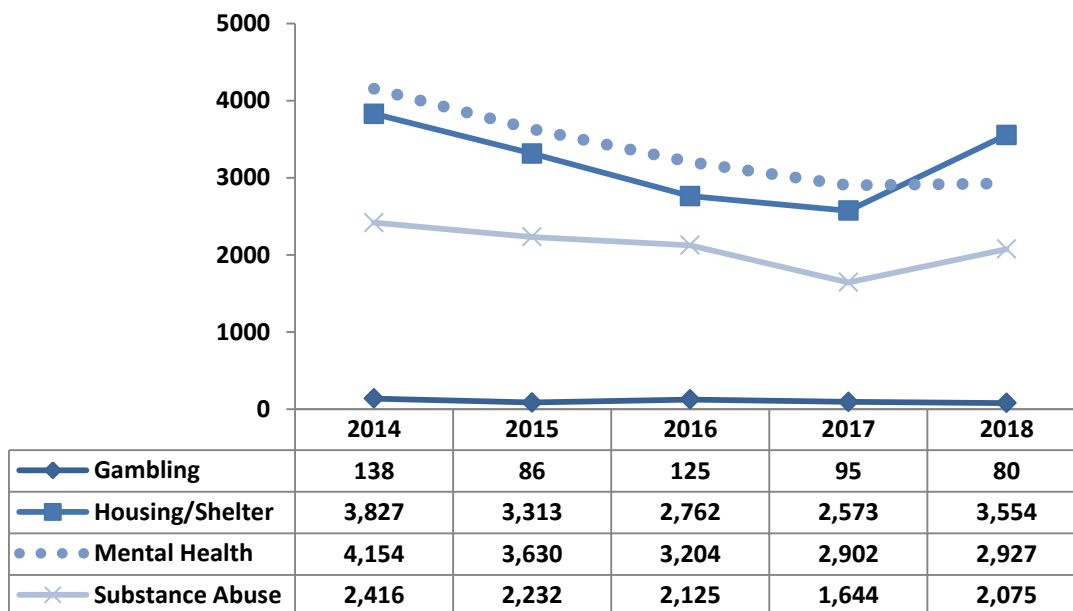
Source: 2-1-1 Maine, 2014–2018

- In 2018, there were 3,554 calls to *2-1-1 Maine* relating to calls for housing/shelter, followed by 2,927 calls for mental health services, substance abuse (2,075), and problem gambling (80). From 2014 to 2018, *2-1-1 Maine* referral calls for mental health services decreased by 30 percent from 2014 to 2018. Over the same period, housing/shelter calls decreased by 7 percent, calls for substance abuse services decreased by 14 percent, and calls related to problem gambling decreased by 42 percent.

Treatment for Substance Use

PRIMARY TREATMENT ADMISSIONS

Primary Treatment Admissions: *Primary Treatment Admissions by Substance*

Indicator Description: This indicator reflects substance use treatment admissions in which a substance was listed as the primary reason for admission. The following analysis excludes admissions for shelter/detoxification services as well as those who were identified as co-affected or codependents (*e.g.,* spouse, child, sibling) of the client receiving treatment. The following data include duplicate admissions, meaning that a unique individual/client could be counted multiple times if they were admitted more than once during the year.

Why Indicator is Important: The number of substance use treatment admissions is bound by both the need and the capacity for treatment. Therefore, treatment admissions data do not provide a complete indication of substance use, misuse or dependence. They do, however, provide an indication of service usage and impact of substance use on the behavioral healthcare system.

Data Source(s): WITS, 2014–2018

Summary: Nearly four in ten substance use treatment admissions listed alcohol as the primary reason for treatment in 2018, followed by heroin/morphine, and other opiates/synthetics. In 2018, nearly half (47%) of primary admissions were related to either opioids or opiates which is consistent with previous years. The proportion of primary admissions related to synthetic opiates continues to decrease as primary admissions involving heroin/morphine continue to increase.

Figure 98. Number and percentage of primary treatment admissions, by substance type: 2018*
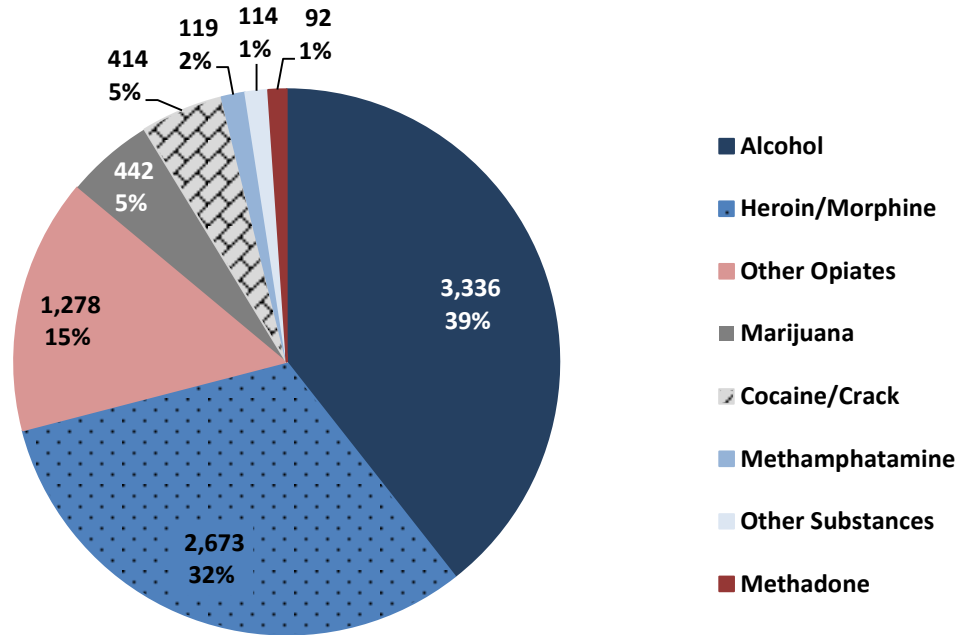
Source: WITS, 2018

*WITS system is not static; therefore, 2018 numbers may be lower than true counts. Data were retrieved 7/25/2019

- In 2018, there were a total of 8,543 primary admissions. Of those admissions, 3,336 (39%) were related to alcohol, followed by heroin/morphine (2,673, 31%), other opiates and synthetics (1,278, 15%), marijuana/hashish/THC (442, 5%), cocaine/crack (414, 5%), and methamphetamine (119, 4%).

Figure 99. Percent of primary treatment admissions, by substance type: 2014–2018

	2014	2015	2016	2017	2018
Alcohol	34%	35%	36%	37%	39%
Cocaine/Crack	3%	3%	3%	4%	5%
Heroin/Morphine	23%	27%	28%	29%	31%
Marijuana	7%	7%	6%	6%	5%
Other Opiates	28%	24%	22%	18%	15%
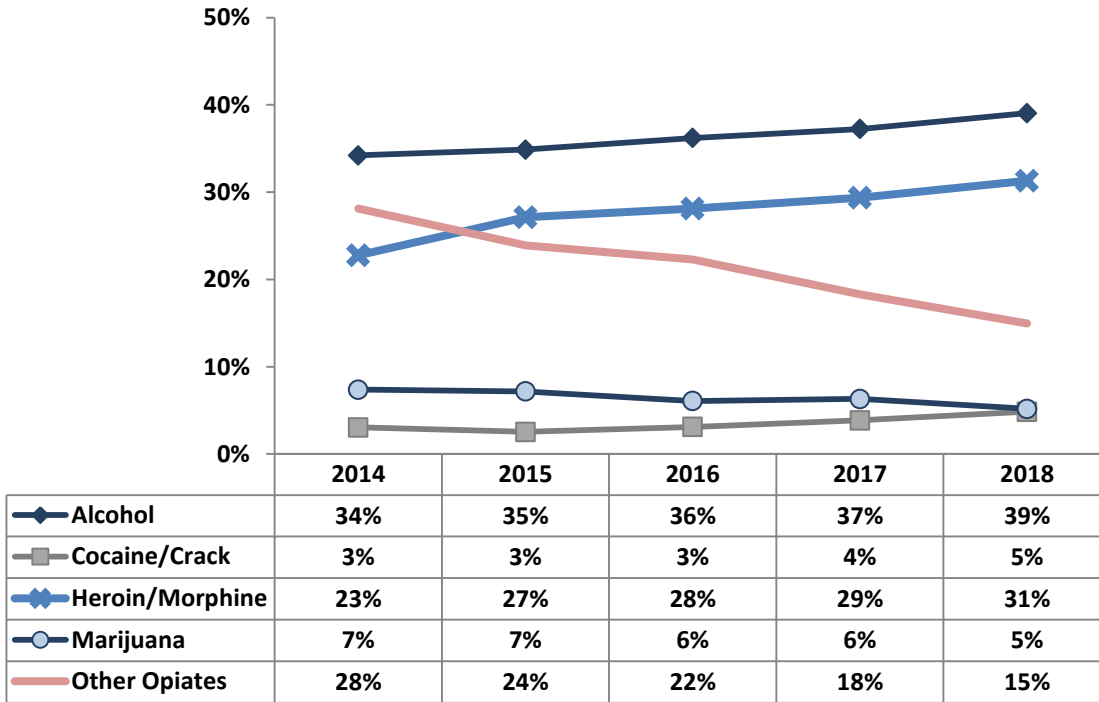
Source: WITS, 2014–2018

- The proportion of primary admissions related to heroin/morphine has increased by 8 percentage points from 2014 (23%) to 2018 (31%). During the same time frame, primary admissions related to synthetic opiates decreased by 13 percentage points, from 28 percent in 2014 to 15 percent in 2018.
- Primary admission rates involving alcohol have consistently held the greatest proportion over the past several years. The percentage of primary admissions attributed to cocaine/crack as well as marijuana have been relatively consistent.

Secondary Treatment Admissions: *Secondary Treatment Admissions by Substance*

Indicator Description: This indicator reflects substance use treatment admissions in which a substance was listed as the secondary reason for admission. Not every admission includes a secondary reason or substance. The following analysis excludes admissions for shelter/detoxification services as well as those who were identified as co-affected or codependents (*e.g.,* spouse, child, sibling) of the client who was receiving treatment. The following data include duplicate admissions, meaning that a unique individual/client could be counted multiple times if they were admitted more than once during the year.

Why Indicator is Important: The number of substance use treatment admissions is bound by both the need and the capacity for treatment. Therefore, treatment admissions data do not provide a complete indication of substance use, misuse or dependence. They do, however, provide an indication of service usage and impact of substance use on the behavioral healthcare system.

Data Source(s): WITS, 2013–2017

Summary: Out of the admissions that listed a secondary substance, nearly one in three was related to marijuana and about one in five was related to synthetic opiates. Rates related to synthetic opiates have steadily decreased while rates involving cocaine/crack have gradually increased.

Figure 100. Number and percentage of secondary treatment admissions, by substance type: 2017*
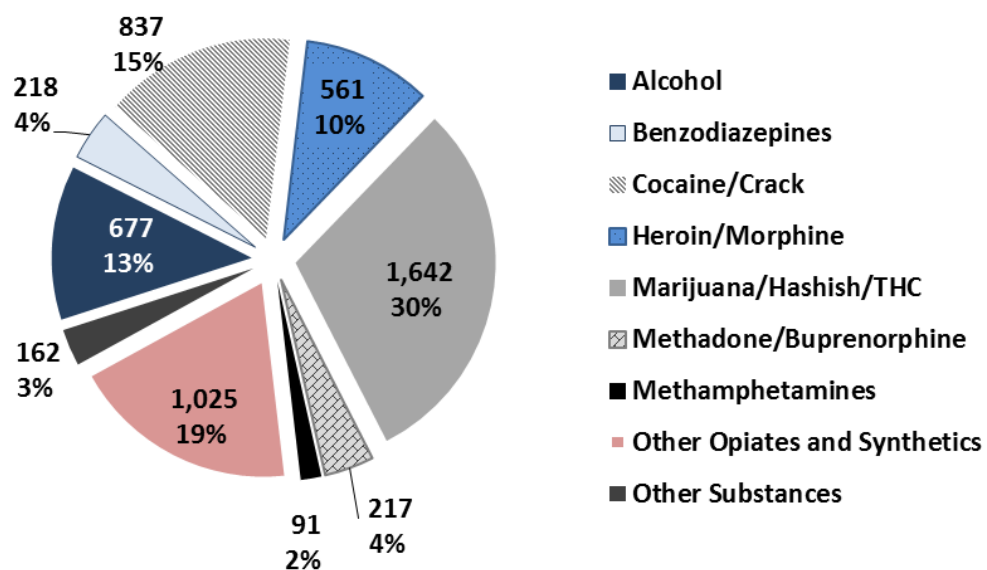
Source: WITS, 2017

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

- In 2017, there were a total of 5,430 admissions that listed a secondary substance or reason for treatment. Of those admissions, 1,642 (30%) were related to marijuana, followed by other opiates and synthetics (1,025, 19%), and cocaine/crack (837, 15%).

Figure 101. Percent of secondary treatment admissions, by substance: 2013–2017

	2013	2014	2015	2016	2017
Alcohol	14%	12%	12%	13%	12%
Benzodiazepines	4%	4%	4%	4%	4%
Cocaine/Crack	10%	11%	11%	14%	15%
Heroin/Morphine	9%	11%	10%	11%	10%
Marijuana/Hashish/THC	30%	29%	32%	30%	30%
Methadone/Buprenorphine	5%	5%	4%	4%	4%
Methamphetamines	1%	1%	1%	1%	2%
Other Opiates and Synthetics	23%	24%	22%	20%	19%
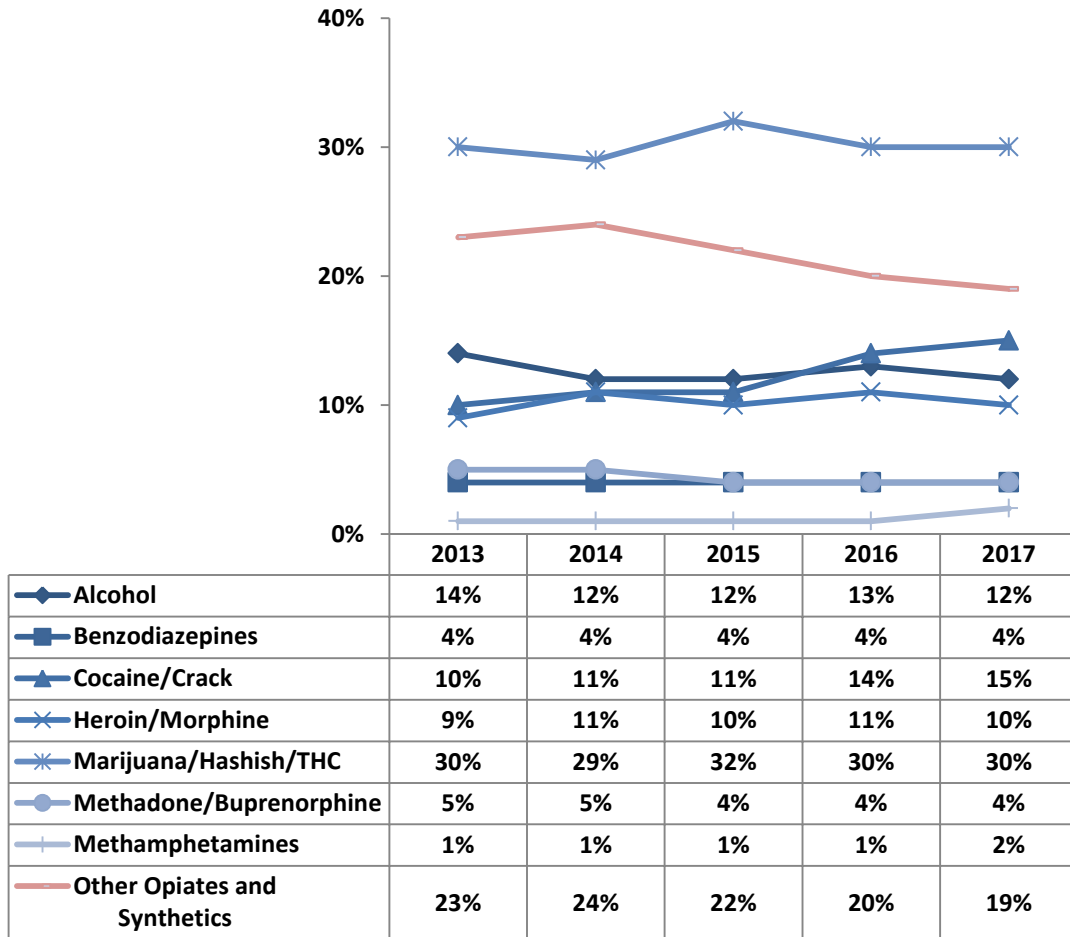
Source: WITS, 2013–2017

- Marijuana/hashish/THC still has the highest proportion of admissions where a secondary substance was listed. The proportion of admissions related synthetic opiates continue to decline while the proportion of admissions related to cocaine/crack has gradually increased.

TREATMENT ADMISSIONS AMONG PREGNANT WOMEN

Treatment Admissions Among Pregnant Women: *Substance Use Treatment Admissions While Pregnant*

Indicator Description: This indicator explores the primary substances for which pregnant women sought treatment. The following analysis excludes admissions for shelter/detoxification services as well as those who were identified as co-affected or codependents (*e.g.,* spouse, child, sibling) of the client receiving treatment. In addition, the following data analysis includes duplicate admissions, meaning that a unique individual/client could have been counted multiple times if they were admitted during the year on more than one occasion.

Why Indicator is Important: Exposure to alcohol and drugs damage a fetus during all stages of pregnancy. Babies born to mothers who used drugs during pregnancy are at greater risk of experiencing long-term behavioral difficulties and developmental delays. The American Academy of Pediatrics recommends complete abstinence from alcohol drugs for pregnant women. However, medical professionals advise pregnant women suffering from addiction to seek treatment rather than attempt to quit without medical supervision.

Data Source(s): WITS, 2013–2017

Summary: In 2017, nearly 80 percent of pregnant substance use treatment admissions were related to opioids/opiates. In recent years, the percentage of pregnant treatment admissions primarily due to other synthetic opioids has steadily declined while the proportion related to heroin has increased.

Figure 102. Pregnant treatment admissions, by primary substance: 2013–2017

	2013	2014	2015	2016	2017
◆ Alcohol	8%	7%	7%	7%	9%
■ Cocaine/Crack	7%	3%	5%	4%	7%
▲ Heroin/Morphine	23%	26%	41%	42%	43%
✕ Marijuana/Hashish/THC	4%	3%	2%	2%	3%
✶ Methadone/Buprenorphine	11%	16%	12%	10%	11%
•••• Other Opiates and Synthetics	45%	42%	30%	34%	24%
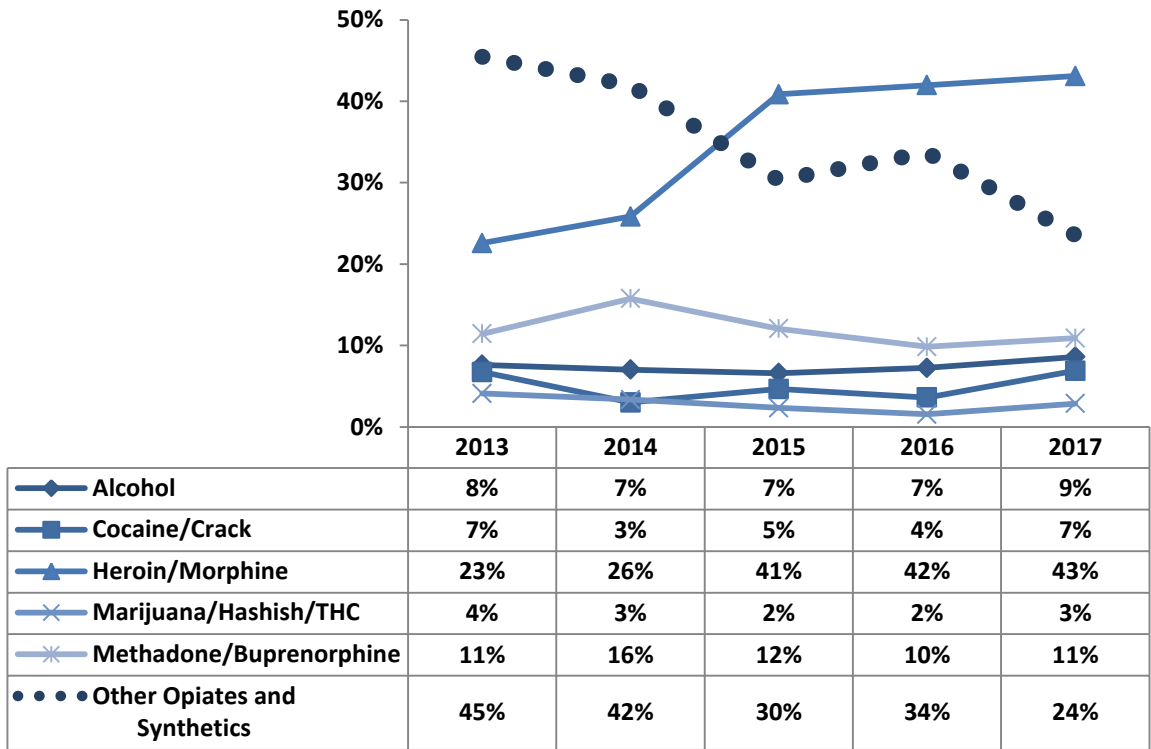
Source: WITS, 2013–2017

WITS system is not static and is continually updated; therefore, 2017 rates may be different than actual values. Data were retrieved 7/8/2018

- In 2017, 43 percent of pregnant women were seeking treatment for heroin/morphine, followed by other opiates and synthetics (24%), methadone/buprenorphine (11%), alcohol (9%), cocaine/crack (7%), and marijuana (3%) as the primary reason.
- The proportion of pregnant women who were admitted for treatment primarily due to other synthetic opiates has been declining since 2013, from 57 percent to 39 percent. Over the same period, the proportion of pregnant women admitted for heroin increased from 22 percent in 2013 to 43 percent in 2017.

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Conclusion

For the past several years, we have witnessed the toll that substance use, particularly opioids, has had on Mainers, their families, and communities. Fortunately, beginning in 2018, a multitude of public health surveillance sources indicate that the consequences arising from opioid use are showing signs of either slowing in pace or declining. After observing a steady climb in fatal and nonfatal overdoses over several years, Maine has begun to see a downward shift in rates of morbidity and mortality related to opioid use.

Although policies and prescribing practices have limited the supply of opiate agonists, there were still more than 770,000 opiate agonist prescriptions dispensed in Maine in 2018. According to Northern New England Poison Center, the majority of calls involving medication verification are related to opioids, followed by benzodiazepines, and stimulants; this aligns with statistics produced by Maine's Prescription Drug Monitoring Program. While reducing the supply of opiate prescriptions is integral to prevention work in Maine, this approach is best coupled with education efforts aimed at increasing the awareness of the dangers of misuse, and safe storage and disposal of unused medications.

As Maine continues to confront the opioid epidemic, it is crucial that we not lose sight of more traditional substances like alcohol, as well as emerging patterns such as stimulant use, marijuana use, and vaping. As evidenced by the data provided in this report, there are trends that support the need for prioritization in these areas.

Priority prevention outcome measures such as past-month binge drinking and past-month tobacco use among youth in Maine continue to demonstrate progress in reducing rates of use. According to the most recent survey data, youth and their parents appear to have gained an increased awareness and understanding of the dangers associated with risky alcohol use and habitual tobacco use among youth. In addition, self-reported data affirm that youth rates of illicit drugs such as heroin, cocaine, inhalants, and methamphetamine have also steadily declined over the past several years. While consumption rates are down among youth, most teens and many parents still feel it is easy to access alcohol. Moreover, there continues to be a large discrepancy between parental perceptions of their child's behaviors compared to the actual behaviors reported by youth. This disconnect is an ongoing challenge, especially concerning youth substance use and parental monitoring. Prevention efforts targeting access to any substance should continue to be a priority.

Marijuana, prescription drugs, and vaping product use among Maine's youth continue to be of concern. These substances and behaviors have either plateaued or have shown increasing rates of use. The changing landscape and proliferation of medical and recreational marijuana in our state also brings an increased social acceptance and potential for diversion. Rates of prescription drug misuse, as well as rates of dispensation—particularly of medications such as pain relievers, stimulants, and sedatives—must be monitored closely. Additionally, vaping products also deserve special attention as they gain in popularity. Prevention professionals must continue to study and track trends of emerging substances, behaviors, and routes of

administration. Strategies and interventions should be based on the contributing factors that affect an individual's decision to initiate or to continue to use a substance.

According to recent public health surveillance data, methamphetamine, cocaine, and other potentially addictive and dangerous prescription drugs are emerging as a concern in Maine. MDEA investigations related to the trafficking of cocaine increased by 27 percent from 2017 to 2018, while drug-related overdose deaths involving cocaine remained relatively consistent during the same time frame. According to the MDEA, local lab investigations related to methamphetamine have recently decreased partly due to imported, mass-produced crystal methamphetamine. In addition, sedatives (*e.g.,* benzodiazepines, anxiety medications) are the second-most commonly prescribed Schedule II–IV medication in Maine, the second-most commonly verified medication in calls to the poison center, and were present in nearly one-quarter of drug-related overdose deaths. Furthermore, prescriptions dispensed for stimulants have increased by 10 percent since 2014. It is vital that we track the availability and accessibility of these substances.

Data gathered in this report conclude younger adults 18 to 35 are more prone to risky substance use. Mainers in this age bracket tend to have disproportionately higher incidence rates of drug/medication overdose ambulance responses, as well as higher rates of impaired driving crashes/fatalities. In addition, this demographic does not appear to perceive alcohol or drug use as harmful when compared to attitudes of youth and older adults. Furthermore, self-reported data also indicates 18- to 35-year-olds have the highest rates of depression and anxiety. Prevention professionals should focus their efforts in tailoring and adapting messaging to reach at-risk populations such as young adults.

Beyond understanding the current trends of a specific age group or substance, understanding the intersections of substance use and mental health is critical. Data continue to support the strong association between mental health and substance use. Over the past several years, we have seen rates of depression among youth and young adults in Maine steadily increase. There is evidence that depression and higher rates of substance use are strongly associated. According to the 2017 Maine Integrated Youth Health Survey, students who reported feeling hopeless or sad for at least two weeks within the past twelve months had a higher prevalence of risky substance use. In addition, data suggest that the prevalence of substance use, suicidal ideation, and feelings of sadness and helplessness are lower among high school students who report certain protective factors (*e.g.,* sleep, social support, and stable families). Research indicates that prevention strategies that foster such protective factors may mitigate the risks of mental illness and substance use among youth.

Finally, as public health professionals and stakeholders, we must remind ourselves that in order to ensure effective planning and implementation, we cannot rely on data from a single source. It takes a triangulation approach, assessing information from a multitude of sources. The Maine State Epidemiological Outcomes Workgroup encourages consulting a variety of trusted sources to help yield a fuller understanding of behavioral health in Maine. This method of triangulation can help us to affirm, refute, and explain findings. Similarly, it is essential to examine trends and

data over time, rather than depend on information from a single point. The prevention field understands that for strategies and interventions to achieve success they must be conducted through a multipronged approach and be given sufficient time to demonstrate outcomes; therefore, it is of equal importance that our methodology for identifying and prioritizing issues reflects this process.

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Public Health District Indicators

The following section highlights key indicators on a Public Health District (PHD) level. Maine has a total of nine public health districts. Eight districts are identified regionally. The ninth district, the Tribal Public Health District, does not have a regional boundary. This report does not contain Tribal district-specific data; instead it is comprised of the eight public health districts that cover the entire geography of Maine. The following indicators reflect where a resident lives or where an incident happened and do not distinguish a person's ethnicity or cultural affiliation.

The establishment of the public health districts was designed to enhance effective and efficient delivery of public health services by:

- Creating the geographic and local framework for greater consistency and equity in statewide delivery of all 10 Essential Public Health Services.
- Providing a consistent basis for regional planning and coordination across the governmental, private (including business), public, and nonprofit sectors.
- Building sustainable infrastructure through regional co-location of Maine CDC and DHHS staff, and through an interactive, fully participatory District Coordinating Council.[14]

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[14] Maine Center for Disease Control and Prevention: https://www.maine.gov/dhhs/mecdc/public-health-systems/lphd/index.shtml

Key Indicators at the Public Health District Level: *Current High-Risk Alcohol Use Among Adults*

Indicator Description: This indicator reflects the percentage of adults who reported consuming several alcoholic beverages in a row for at least one day within the past month.[15]

Why Indicator is Important: Binge drinking is considered a type of high-risk drinking, meaning it increases the risk for many health and social related consequences. High-risk alcohol use has been linked to injury (such as falls, fights, and suicides), violence, crime rates, motor vehicle crashes stroke, chronic liver disease, addiction, and some types of cancer.

Data Source(s): BRFSS, 2014–2017

Summary: The highest binge drinking rates continue to be observed among 18- to 35-year-olds, with between one-quarter and one-third reporting binge drinking within the past month. Rates of binge drinking among adults between 18 and 25 years old ranged from the highest rate (38%) observed in Penquis, to the lowest rate (23%) reported in Aroostook.

Figure 103. Percent of adults by Public Health District who reported binge drinking in past 30 days by age group: 2014–17

	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
■ 18-25	23%	25%	36%	34%	32%	38%	27%	35%	32%
■ 26-35	22%	24%	36%	28%	34%	33%	27%	33%	31%
■ 36-49	19%	23%	26%	25%	24%	20%	20%	24%	23%
■ 50+	7%	10%	9%	10%	8%	9%	10%	10%	9%
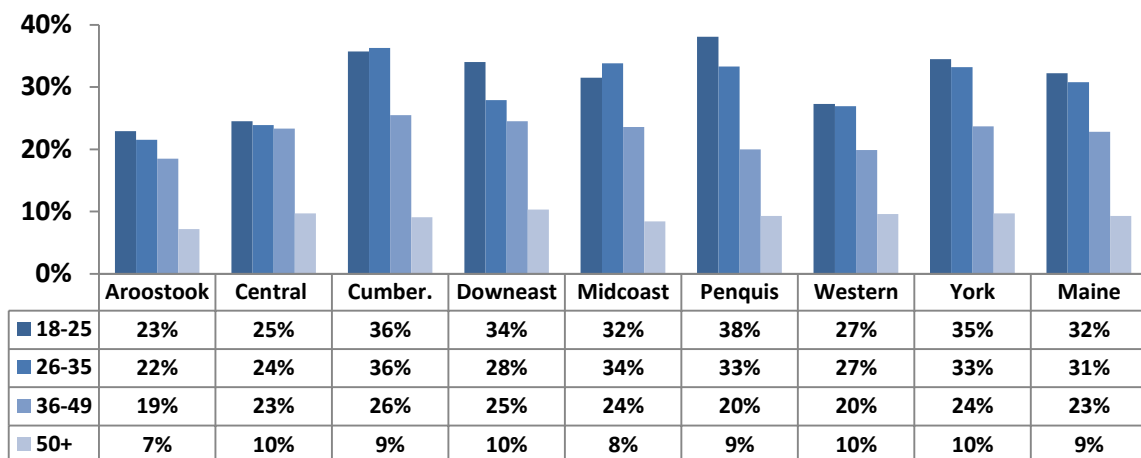
Source: BRFSS 2014–2017

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[15] 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.

Key Indicators at the Public Health District Level: *Smoking Among Youth*

Indicator Description: This indicator illustrates the percentage of Maine high school students who reported smoking a cigarette on at least one occasion within 30 days prior to the survey.

Why Indicator is Important: Use of tobacco is associated with a greater risk of negative health outcomes, including cancer, cardiovascular, chronic respiratory diseases, and can lead to death.

Data Source(s): MIYHS, 2013–2017

Summary: The use of tobacco products among high school students continues to steadily decline. In 2017, less than one in 10 students in Maine reported having smoked a cigarette within the past month. Rates ranged from the highest observed in Aroostook (13%) to the lowest reported in Cumberland (7%). Almost all public health districts observed decreases from 2015 to 2017.

Figure 104. Percent of high school students by Public Health District who reported smoking one or more cigarettes during past 30 days: 2013–2017*
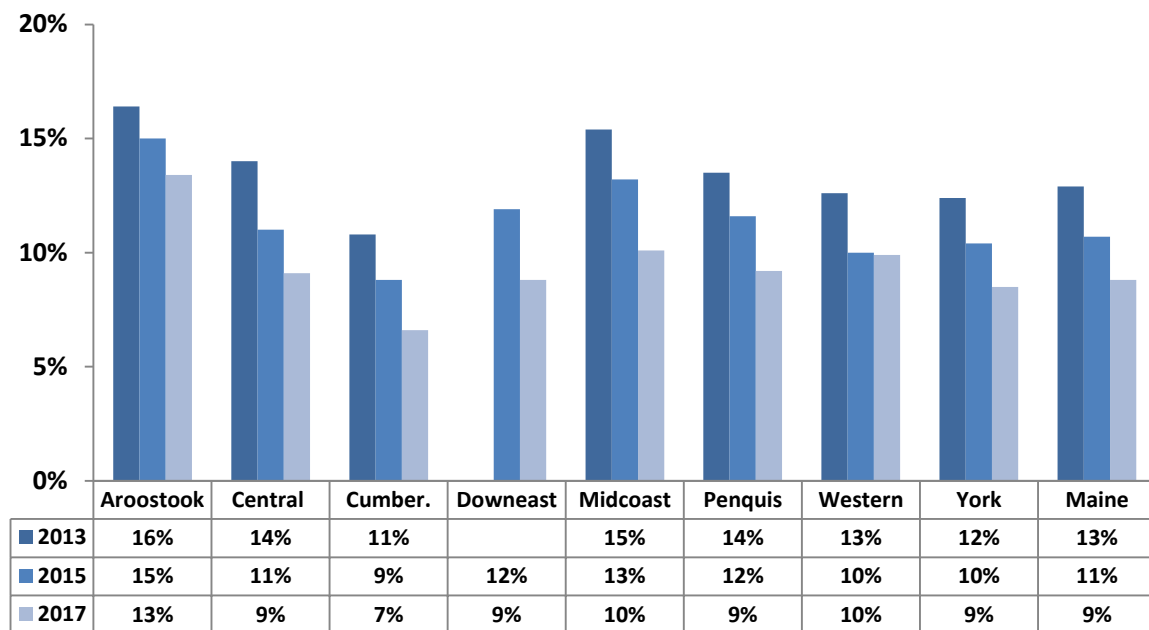
	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
2013	16%	14%	11%		15%	14%	13%	12%	13%
2015	15%	11%	9%	12%	13%	12%	10%	10%	11%
2017	13%	9%	7%	9%	10%	9%	10%	9%	9%

Source: MIYHS, 2013–2017

*Due to low sample size, Downeast estimates were not available for 2013

Indicator Description: This indicator represents the percentage of youth who reported using prescription medications (any type) that were not prescribed to them by a doctor.

Why Indicator is Important: Misuse of prescription drugs may lead to consequences such as unintentional poisonings or overdose, which could lead to death, automobile crashes, addiction, and increased crime.

Data Source(s): MIYHS, 2009–2017.

Summary: On a state level, the percentage of high school students in Maine reporting that they had misused a prescription medication in the past month increased from 2015 (5%) to 2017 (6%). In 2017, Rates did not vary drastically across public health districts; ranging from 4 percent in Downeast to 7 percent in the Cumberland and Western districts. Both the Cumberland and Western districts observed a 2-percentage point increase from 2015 to 2017.

Figure 105. Percent of high school students by Public Health District who have taken prescription drugs not prescribed to them by a doctor (past 30 days): 2013–2017*

	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
2013	5%	4%	6%		6%	6%	6%	7%	6%
2015	4%	4%	5%	4%	5%	4%	5%	6%	5%
2017	5%	5%	7%	4%	6%	5%	7%	6%	6%

Source: MIYHS, 2013–2017

*Due to low sample size, Downeast estimates were not available for 2013

Indicator Description: This measure reflects the percentage of adults in Maine who reported using prescription drugs (any type) not prescribed to them by a doctor or using them in a way other than the way in which they were prescribed, at least once in their lifetime.

Why Indicator is Important: Misuse of prescription drugs may lead to consequences such as unintentional poisonings, overdose, which may lead to death, dependence and increased crime.

Data Source(s): BRFSS, 2013–2017

Summary: During 2015–17, 4.2 percent of Maine adults reported they had ever misused prescription drugs. Lifetime adult prescription drug misuse rates did not vary much across districts; the lowest rate was observed in Central (2.9%) and the highest rate was seen in Cumberland (5.2%).

Figure 106. Misuse of prescription drugs among Maine residents (18 and older) in their lifetime, by Public Health District: 2013–15 to 2015–17

	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
2013-15	1.3%	3.2%	3.8%	4.7%	2.8%	5.2%	4.5%	2.7%	3.7%
2014-16	2.6%	2.5%	4.4%	4.6%	3.7%	4.5%	4.6%	3.1%	3.9%
2015-17	3.4%	2.9%	5.2%	4.9%	4.0%	4.9%	3.9%	3.2%	4.2%
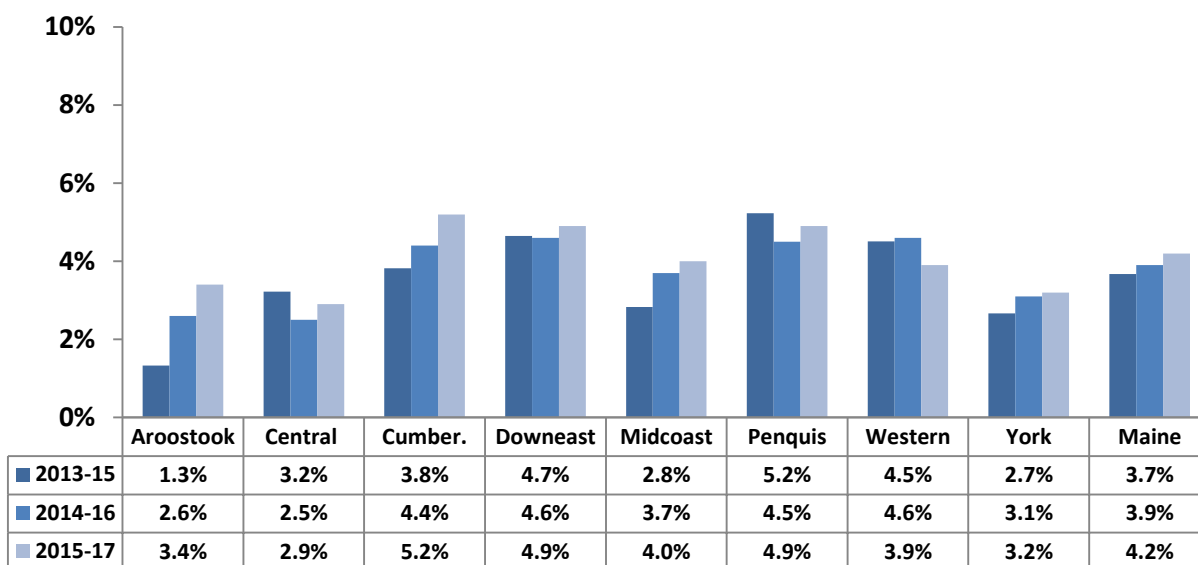
Source: BRFSS 2013–15 to 2015–17

Summary: The highest rates of lifetime prescription drug misuse were observed among adults between the ages of 18 and 34. Statewide, nearly one in 10 (9.5%) 18- to 34-year-olds reported misusing prescription drugs within their lifetime. Rates among 18- to 34-year-olds ranged from the lowest in Central (4.2%) to the highest in Cumberland (12.8%).

Figure 107. Lifetime misuse of prescription drugs among Maine adults, by age and Public Health District: 2014–17

	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
■ 18-34	9.4%	4.2%	12.8%	11.0%	11.1%	11.4%	8.6%	6.7%	9.5%
■ 35-54	2.4%	2.7%	3.2%	6.0%	3.4%	4.5%	4.5%	4.4%	3.9%
■ 55+	0.4%	2.0%	1.8%	2.0%	1.8%	1.2%	2.4%	1.1%	1.7%
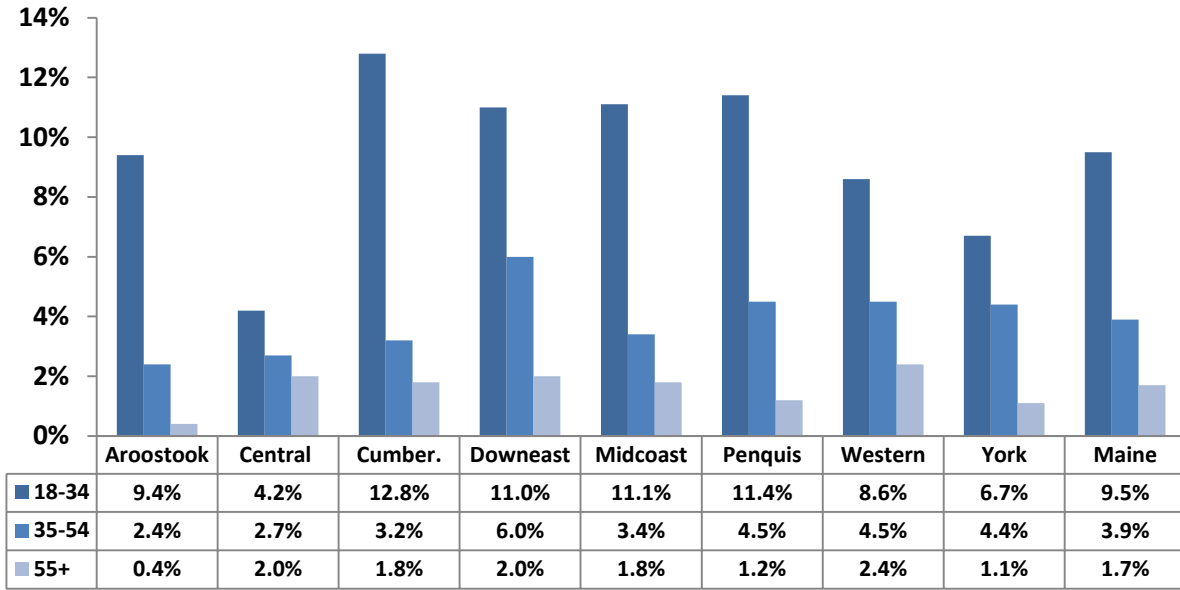
Source: BRFSS 2014–17

Key Indicators at the Public Health District Level: *Babies Born Exposed to/Affected by Substances*

Indicator Description: This indicator reflects the number of infants born in Maine where a healthcare provider reported to the Office of Child and Family Services (OCFS) that there was reasonable cause to suspect the baby may either be affected by illegal substance use, demonstrating withdrawal symptoms resulting from prenatal drug exposure (illicit or prescribed), or have fetal alcohol spectrum disorders. This measure potentially excludes instances where the infant was exposed to substances and did not show withdrawal symptoms after birth, instances where the birth of an infant affected by substances was not reported to OCFS, and any other instances in which there were discrepancies between reporters when interpreting the law.[16]

Why Indicator is Important: Prenatal exposure to alcohol, tobacco, and illicit drugs has the potential to cause a wide spectrum of physical, emotional, and developmental problems for these infants. The harm caused to the child can be significant and long-lasting, especially if the exposure is not detected and the effects are not treated as soon as possible.

Data Source(s): OCFS/MACWIS, 2014–2018

Summary: In 2018, there were 904 reports submitted to OCFS regarding infants born exposed to substances (drug-affected babies); this is a rate of 6.8 reports per 10,000 residents. Among public health districts, the highest rates were observed in Western (11.3) and Aroostook (11.2) while the lowest rates were observed among Cumberland (2.9) and York (3.5). While the Penquis district has previously observed some the highest rates of drug-affected babies, the region has observed a steady decline since 2015. The Western district has observed an increase in drug-affected babies since 2014.

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[16] Title 22, §4011-A; notification of prenatal exposure to drugs or having fetal alcohol spectrum disorders.

Figure 108. Number of drug-affected baby (substance-exposed infant) reports per 10,000 residents, by Public Health District: 2014–2018

	2014	2015	2016	2017	2018
Aroostook	8.4	8.7	11.2	10.8	11.2
Central	9.2	8.3	9.7	8.1	7.7
Cumberland	3.8	3.6	2.8	3.9	2.9
Downeast	9.0	9.0	9.2	8.9	8.5
Midcoast	6.0	6.6	7.9	6.4	8.0
Penquis	14.2	15.5	13.9	10.8	7.3
Western	7.4	8.8	9.0	10.0	11.3
York	4.1	4.8	4.5	3.5	3.5
Maine	7.2	7.6	7.7	7.1	6.8
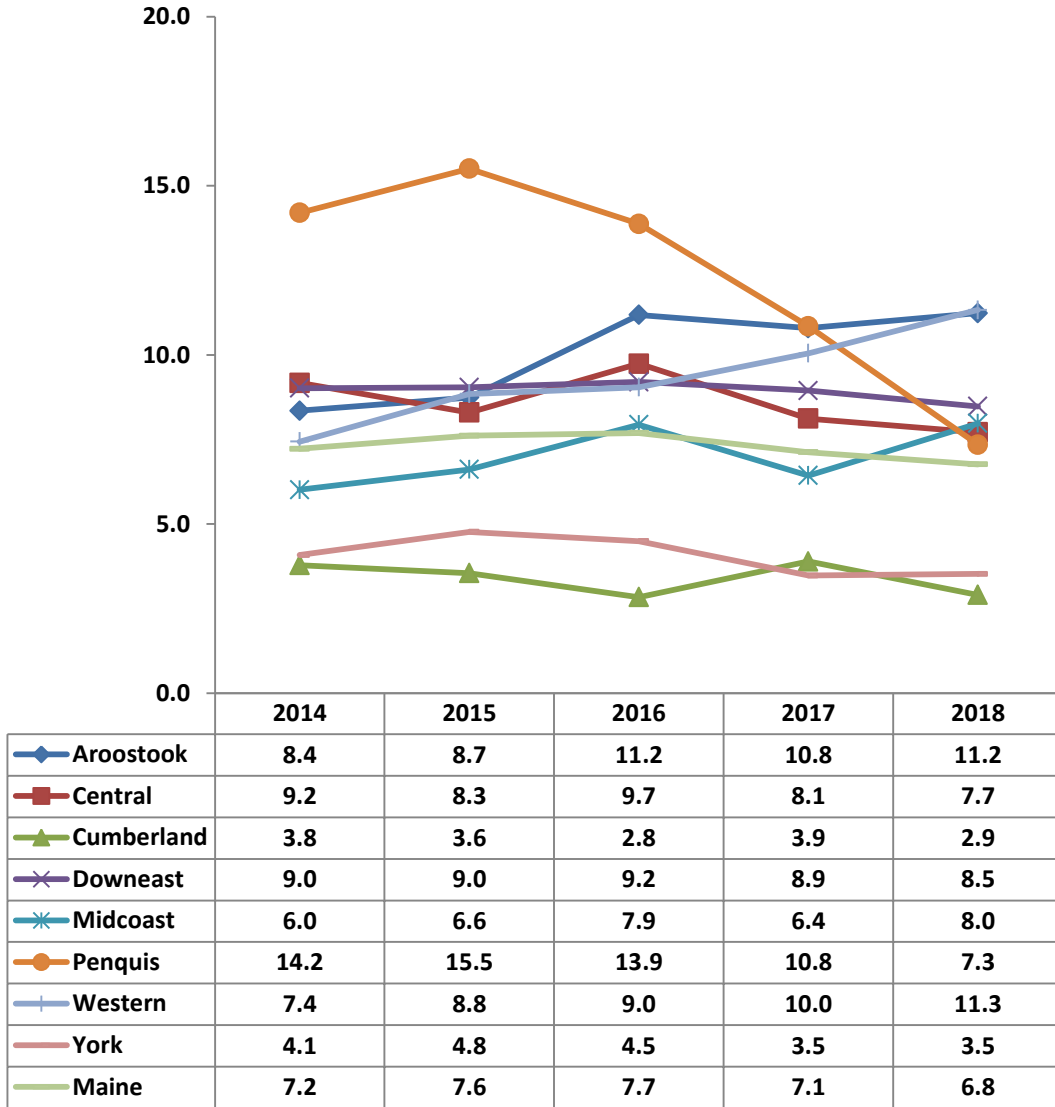
Source: OCFS/MACWIS 2014–2018

Indicator Description: This indicator reflects the number of arrests (made by all local and state law enforcement) that were related to drugs per 10,000 people. Drug-related arrests include manufacturing, sales, and possession. The rate per 10,000 allows us to see frequency with which an occurrence shows up within a population over time as well as make relative comparisons between small and large population areas.

Operationalized as: $\left(\frac{\# \ of \ drug \ arrests}{population} \right) \times 10,000$

Why Indicator is Important: Arrest rates for drug sales, manufacturing and drug possession can be an indication of the rate of criminal behavior, but it is important to note that they are also an indication of the level of active law enforcement. Arrests rates are expected to increase with increased enforcement regardless of whether a decline in criminal behavior is observed.

Data Source(s): DPS-UCR, 2016–17

Summary: In 2016–17, there was an annual average of 29.8 drug-related arrests per 10,000 residents in Maine. During this time, rates among public health districts ranged from 23.7 in Downeast to 39.6 in Penquis. When broken down by substance type, the highest rates for arrests related to Marijuana were observed among the York and Penquis districts. The highest rates for arrests related to opium, cocaine, and derivatives (*e.g.,* cocaine/crack, heroin) were observed in Central, York, and Cumberland. The highest rate regarding arrests for other dangerous narcotics (*e.g.,* methamphetamine, benzodiazepines) was observed in the Penquis district. Lastly, the highest rate for drug arrests related to synthetic narcotics was observed in Aroostook.

Figure 109. Drug-related arrest rate per 10,000 residents (all ages), by drug type and Public Health District: 2016–17

	All drugs	Marijuana	Opium, cocaine, and derivatives*	Other dangerous non-narcotics**	Synthetic narcotics
Aroostook	34.0	15.3	8.1	6.3	4.3
Central	30.2	15.6	9.6	2.9	2.2
Cumberland	26.0	8.9	9.3	5.4	2.5
Downeast	23.7	9.3	5.2	8.0	1.2
Midcoast	26.8	11.7	5.3	7.5	2.2
Penquis	39.6	16.5	3.2	18.6	1.4
Western	26.0	10.4	8.0	5.8	1.8
York	35.7	19.1	9.1	4.8	2.7
Maine	29.8	13.0	7.3	7.3	2.3
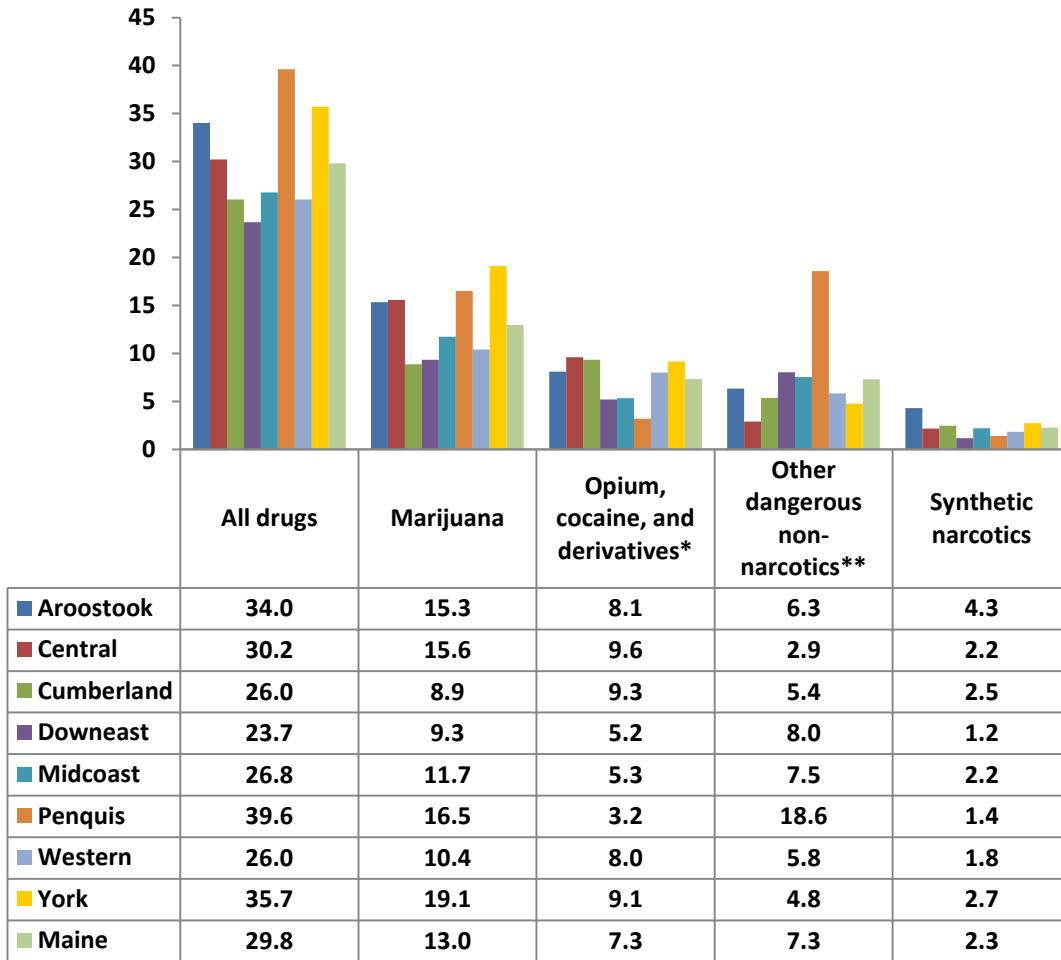
Source: DPS; UCR 2016–17

*Derivatives include cocaine/crack, codeine, heroin, and morphine.
**Other dangerous non-narcotics include but are not limited to benzodiazepines, steroids, stimulants, synthetic cannabis, bath salts, methamphetamine, hallucinogens, and barbiturates.

Indicator Description: This indicator shows the rate of persons receiving help from Emergency Medical Services related to an overdose. Overdose is based on the primary impression given by the emergency responder.

Why Indicator is Important: Overdosing on a substance can cause serious physical harm resulting in hospitalization and even death. Responding to overdoses also uses valuable EMS resources. The rate per 10,000 allows us to see the frequency with which an occurrence happens within a population over time, as well as make relative comparisons between small and large population areas. In this case, the base of 10,000 people was used due to small numbers.

Operationalized as: $\left(\frac{\# \ of \ overdose \ responses}{population} \right) \times 10{,}000$

Data Source(s): EMS, 2014–2018

Summary: In 2018, Maine observed 23.3 Emergency Medical Service responses per 10,000 residents due to an overdose related to drugs and/or medication; highest rates were observed among the Central and Penquis public health districts. This is consistent with previous years. From 2017 to 2018 there was a decrease in rates across the state except for the Aroostook, Cumberland, and Western districts.

Figure 110. Number of overdose EMS responses due to drug and/or medication per 10,000 residents, by Public Health District: 2014–2018
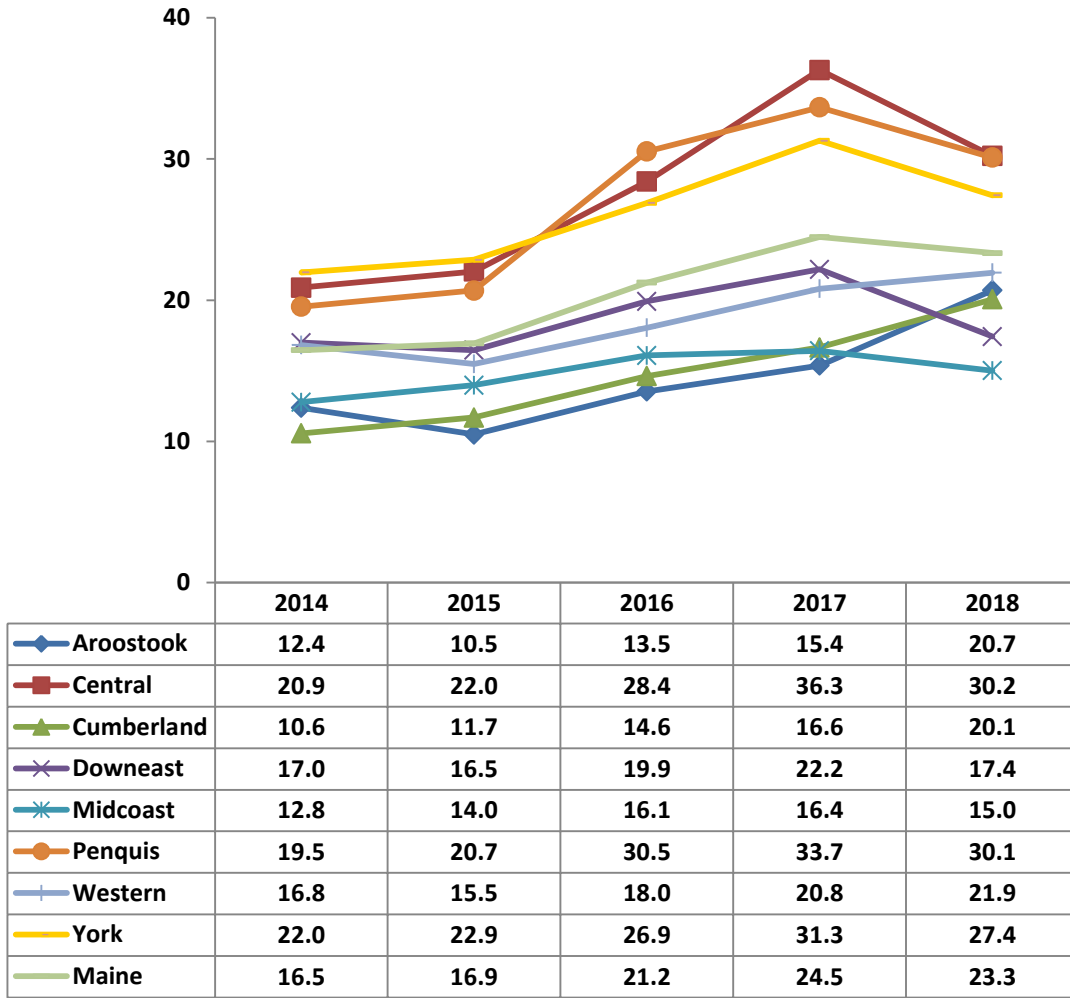
	2014	2015	2016	2017	2018
Aroostook	12.4	10.5	13.5	15.4	20.7
Central	20.9	22.0	28.4	36.3	30.2
Cumberland	10.6	11.7	14.6	16.6	20.1
Downeast	17.0	16.5	19.9	22.2	17.4
Midcoast	12.8	14.0	16.1	16.4	15.0
Penquis	19.5	20.7	30.5	33.7	30.1
Western	16.8	15.5	18.0	20.8	21.9
York	22.0	22.9	26.9	31.3	27.4
Maine	16.5	16.9	21.2	24.5	23.3

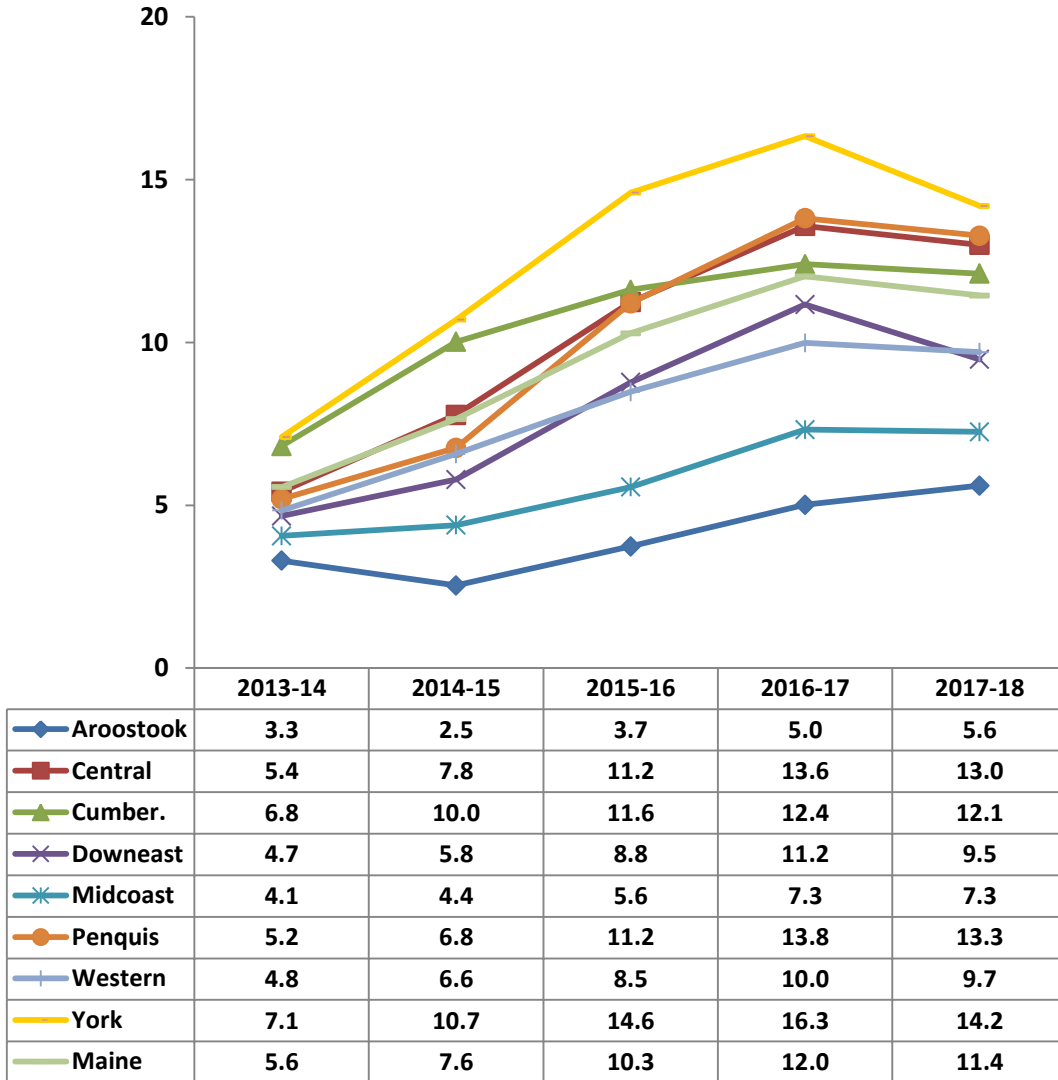*Source: Emergency Medical Services, 2014–2018*

Indicator Description: This indicator shows the number of unique persons receiving naloxone administrations from Emergency Medical Services related to an opioid overdose. Naloxone, also known as Narcan, is a medication administered to patients who have experienced an overdose related to an opioid (*e.g.*, prescription painkillers, heroin, or morphine). This indicator includes instances where the opioid overdose is accidental (that is, not a result of intentional or recreational misuse). Naloxone is also distributed by many agencies and organizations outside of EMS and not documented here.

Why Indicator is Important: Overdosing on a substance can cause serious physical harm resulting in hospitalization and even death. Responding to overdoses also uses valuable EMS resources. It is worth stating that this indicator gives us a better sense of the overall prevalence of opioid overdoses, since it includes those that did not result in death.

Data Source(s): Emergency Medical Services, 2013–14 to 2017–18

Summary: In 2017–18, Maine observed a rate of 11.4 individuals administered naloxone per 10,000 residents via emergency medical responders; rates ranged from the highest observed in York (14.2) to the lowest reported in Aroostook (5.6). From 2016–17 to 2017–18, all public health districts except for Aroostook and Midcoast experienced a decrease in the rate of EMS administered naloxone. York has consistently observed the highest rates since 2013–14.

Figure 111. Individuals receiving EMS administered naloxone* administrations per 10,000 residents, by Public Health District: 2013–14 to 2017–18**

	2013-14	2014-15	2015-16	2016-17	2017-18
Aroostook	3.3	2.5	3.7	5.0	5.6
Central	5.4	7.8	11.2	13.6	13.0
Cumber.	6.8	10.0	11.6	12.4	12.1
Downeast	4.7	5.8	8.8	11.2	9.5
Midcoast	4.1	4.4	5.6	7.3	7.3
Penquis	5.2	6.8	11.2	13.8	13.3
Western	4.8	6.6	8.5	10.0	9.7
York	7.1	10.7	14.6	16.3	14.2
Maine	5.6	7.6	10.3	12.0	11.4

Source: Emergency Medical Services, 2013–14 to 2017–18

*Naloxone, also known as Narcan, is a medication administered to counter the effects of an overdose due to opioids.
**2018 data are preliminary

Indicator Description: DEATHS DUE TO OVERDOSE. This measure reflects the number of deaths where the cause of death was directly related to the consumption of one or more substances. The measure excludes deaths where a substance may have been ingested prior to engaging in a behavior that resulted in death (*e.g.,* drunk driving) or where lifetime substance use may have impacted health (*e.g.,* alcohol-related cirrhosis). To preserve anonymity and strengthen validity, rates were calculated based on the sum of deaths per three-year interval. The rate per 10,000 allows us to see the frequency with which an occurrence happens within a population over time, as well as make relative comparisons between small- and large-population areas. In this case, the base of 10,000 people was used due to small numbers.
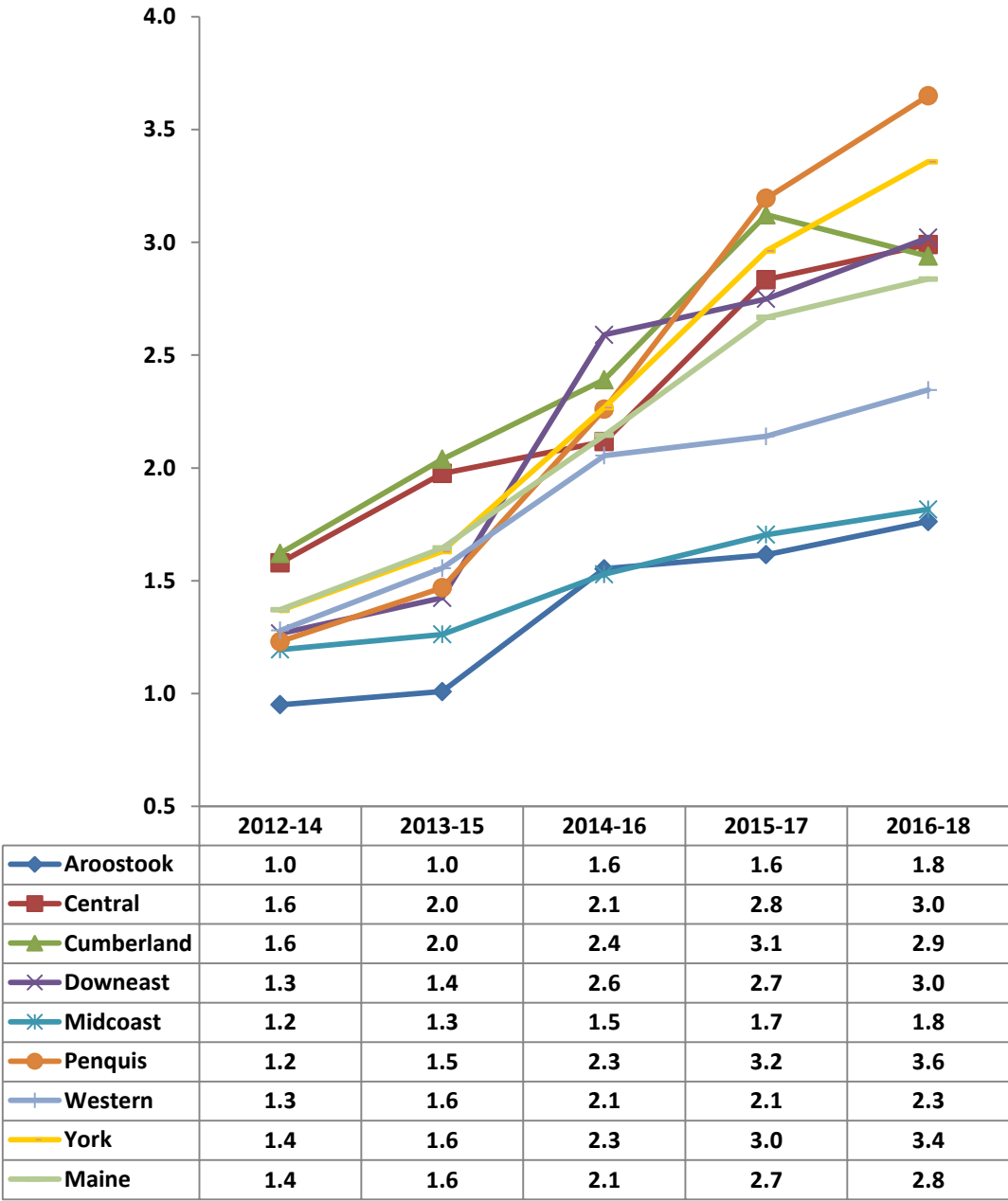
Operationalized as: $\left(\frac{\# \ of \ overdose \ deaths}{population}\right) \times 10{,}000$

Why Indicator is Important: One of the most extreme consequences of alcohol and drug use is overdose death; that is, the substance(s) consumed played a direct role in an individual's death. These are potentially preventable deaths.

Data Source(s): Dr. Marcella Sorg, Margaret Chase Smith Policy Center at University of Maine, Office of the Chief Medical Examiner, 2012–14 to 2016–18

Summary: During 2016–18 (combined years), Maine observed an average of 2.8 drug related overdose deaths per 10,000 residents per year; rates were highest among the Penquis (3.6) and York (3.4) public health districts and lowest among the Aroostook (1.8) and Midcoast (1.8) districts. All public health districts have observed steady increases in drug related overdose deaths since 2012–14.

Figure 112. Drug-related death rate per 10,000 residents, by Public Health District: 2012–14 to 2016–18

	2012-14	2013-15	2014-16	2015-17	2016-18
Aroostook	1.0	1.0	1.6	1.6	1.8
Central	1.6	2.0	2.1	2.8	3.0
Cumberland	1.6	2.0	2.4	3.1	2.9
Downeast	1.3	1.4	2.6	2.7	3.0
Midcoast	1.2	1.3	1.5	1.7	1.8
Penquis	1.2	1.5	2.3	3.2	3.6
Western	1.3	1.6	2.1	2.1	2.3
York	1.4	1.6	2.3	3.0	3.4
Maine	1.4	1.6	2.1	2.7	2.8

Source: Dr. Marcella Sorg, Margaret Chase Smith Policy Center at University of Maine, Office of the Chief Medical Examiner 2012–14 to 2016–18

Key Indicators at the Public Health District Level: *Perceived Risk of Regular Marijuana Use Among Youth*
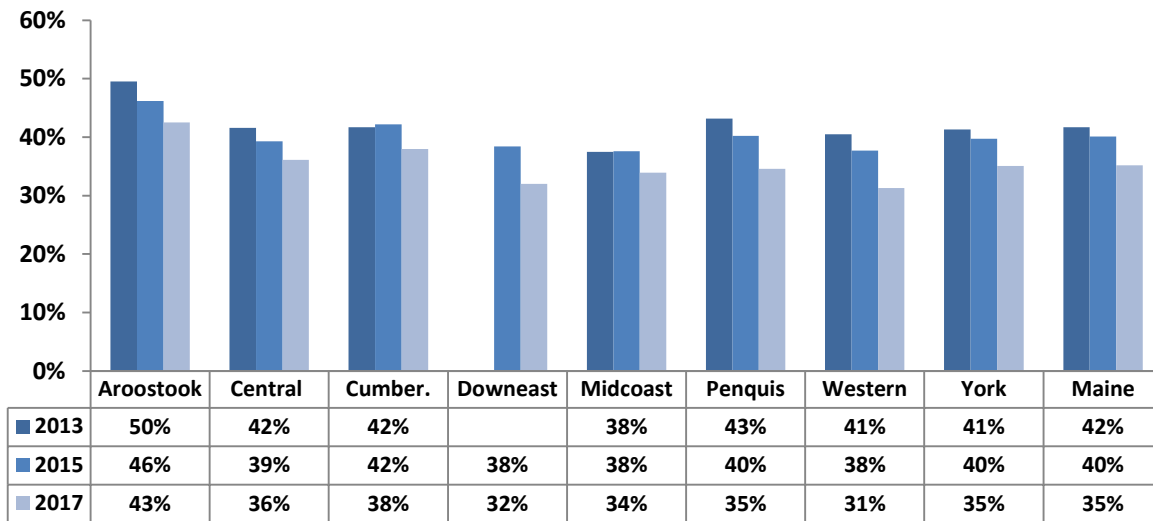
Indicator Description: This measure demonstrates the percentage of individuals who perceive a moderate-to-great risk of harm from smoking marijuana regularly.

Why Indicator is Important: High school students who do not believe there is moderate to great risk in smoking marijuana regularly are almost seven times as likely to smoke marijuana as their peers who do perceive risk of harm. A similar relationship exists between adult perceptions and consumption.

Data Source(s): MIYHS, 2013–2017

Summary: In 2017, 35 percent of Maine high school students reported that they felt smoking marijuana once or twice a week would pose a risk of harm; rates were highest in Aroostook (43%) and lowest in Downeast (32%). All public health districts have observed decreases in the perception of harm. The Western public health district experienced a 10-percentage-point decline in perception of harm from smoking marijuana from 2013 to 2015.

Figure 113. Percent of high school students by Public Health District who reported a risk of harm from smoking marijuana once or twice per week: 2013–2017*

	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
2013	50%	42%	42%		38%	43%	41%	41%	42%
2015	46%	39%	42%	38%	38%	40%	38%	40%	40%
2017	43%	36%	38%	32%	34%	35%	31%	35%	35%

Source: MIYHS 2013–2017

*Due to low sample size, Downeast estimates were not available for 2013

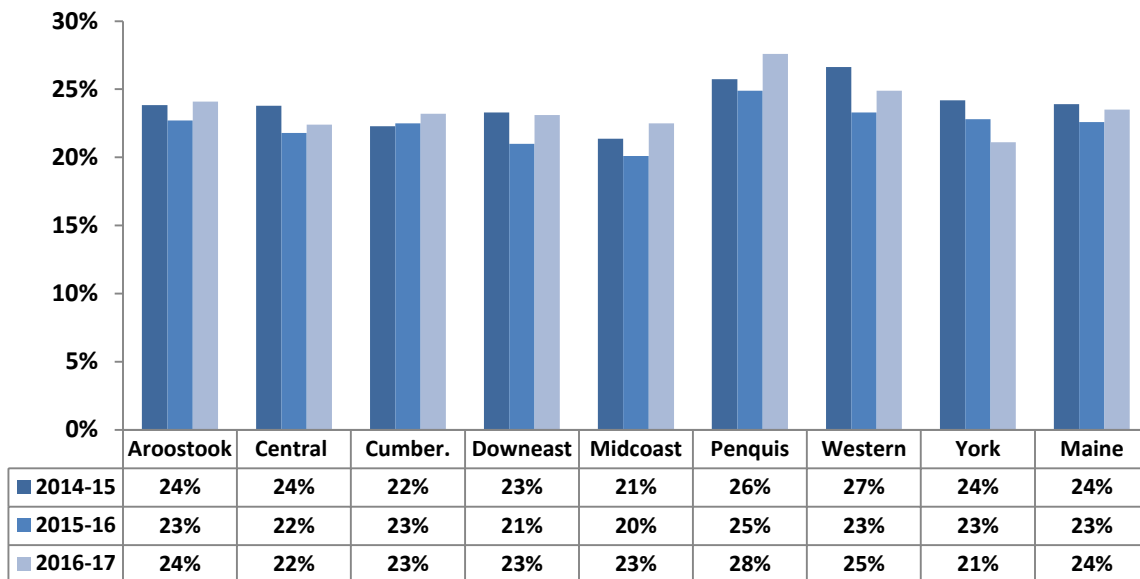**Key Indicators at the Public Health District Level:** *Diagnosis of Anxiety and Depression Among Adults*

Indicator Description: This indicator examines the percentage of Maine residents age 18 and older who have ever been told by a doctor that they have a depressive disorder.

Why Indicator is Important: The link between mental health and substance use and misuse is well documented. Experiencing mental health disorders (*e.g.*, anxiety or depression) is associated with higher rates of substance use.[17]

Data Source(s): BRFSS, 2014–17

Summary: In 2016–17, 24 percent of adults in Maine reported they had ever been diagnosed with depression. Rates of depression did not vary much across districts; they ranged from 21 percent in York to 28 percent in Penquis. Overall, rates of depression among adults in Maine have been relatively stable since 2013–14.

Figure 114. Percent of adults who have ever been told they have a depression disorder, by Public Health District: 2014–15 to 2016–17

	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
■2014-15	24%	24%	22%	23%	21%	26%	27%	24%	24%
■2015-16	23%	22%	23%	21%	20%	25%	23%	23%	23%
■2016-17	24%	22%	23%	23%	23%	28%	25%	21%	24%

Source: BRFSS 2014–15 to 2016–17

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[17] Kessler, R. C. (2004). The epidemiology of dual diagnosis. *Biological psychiatry*. *56*(10), 730–737.

Key Indicators at the Public Health District Level: *Information Calls for Mental Health and Human Services*
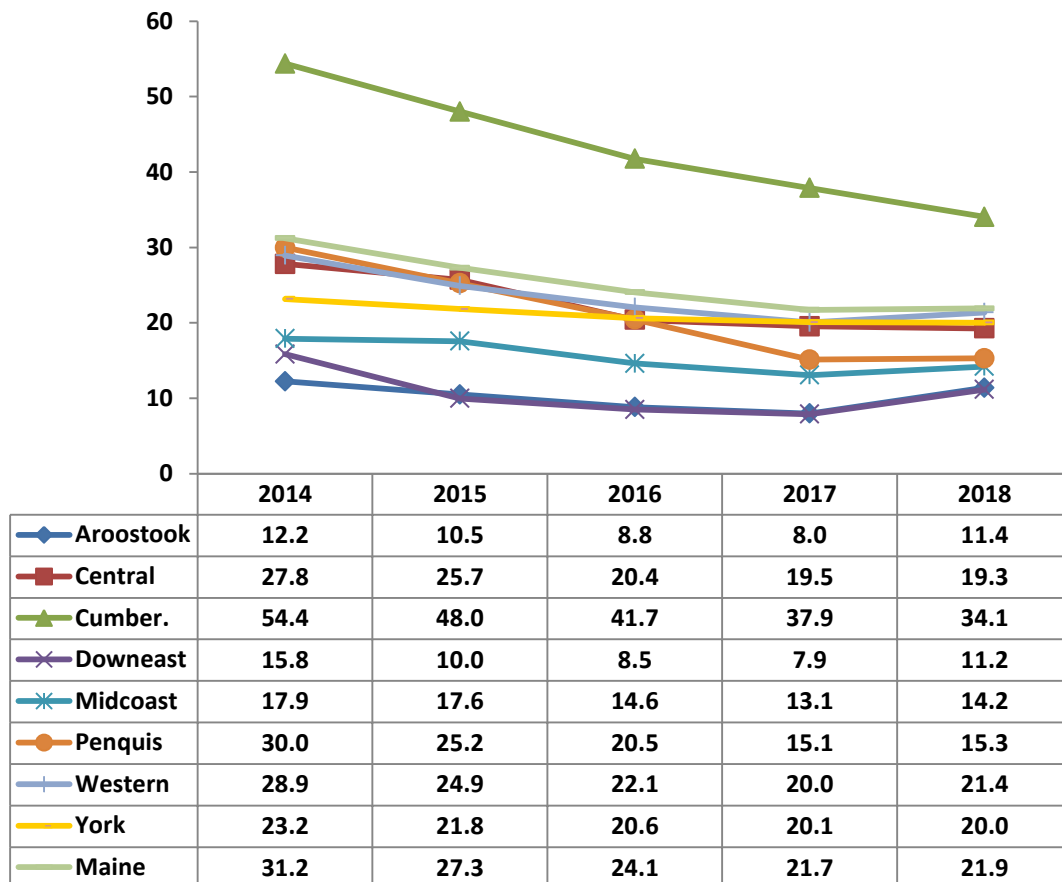
Indicator Description: *2-1-1 Maine* is a telephone and internet service that provides information and referrals to health and human services. This indicator reflects the number of calls received by *2-1-1 Maine* by the type of service requested.

Why Indicator is Important: The data collected from each call provide valuable information, serving as a barometer of health and human service needs in the state.

Data Source(s): *2-1-1 Maine*, 2014–2018

Summary: In 2017, there was an average of 21.9 calls per 10,000 residents made to *2-1-1 Maine* seeking resources related to mental health services; rates ranged from the highest observed in Cumberland (34.1) to the lowest in Downeast (11.2) and Aroostook (11.4). All public health districts observed declines in calls related to mental health services since 2014. Cumberland has consistently observed the highest rate over the past several years.

Figure 115. Number of *2-1-1 Maine* referral calls related to mental health services per 10,000 residents, by public health districts: 2014–2018

	2014	2015	2016	2017	2018
Aroostook	12.2	10.5	8.8	8.0	11.4
Central	27.8	25.7	20.4	19.5	19.3
Cumber.	54.4	48.0	41.7	37.9	34.1
Downeast	15.8	10.0	8.5	7.9	11.2
Midcoast	17.9	17.6	14.6	13.1	14.2
Penquis	30.0	25.2	20.5	15.1	15.3
Western	28.9	24.9	22.1	20.0	21.4
York	23.2	21.8	20.6	20.1	20.0
Maine	31.2	27.3	24.1	21.7	21.9

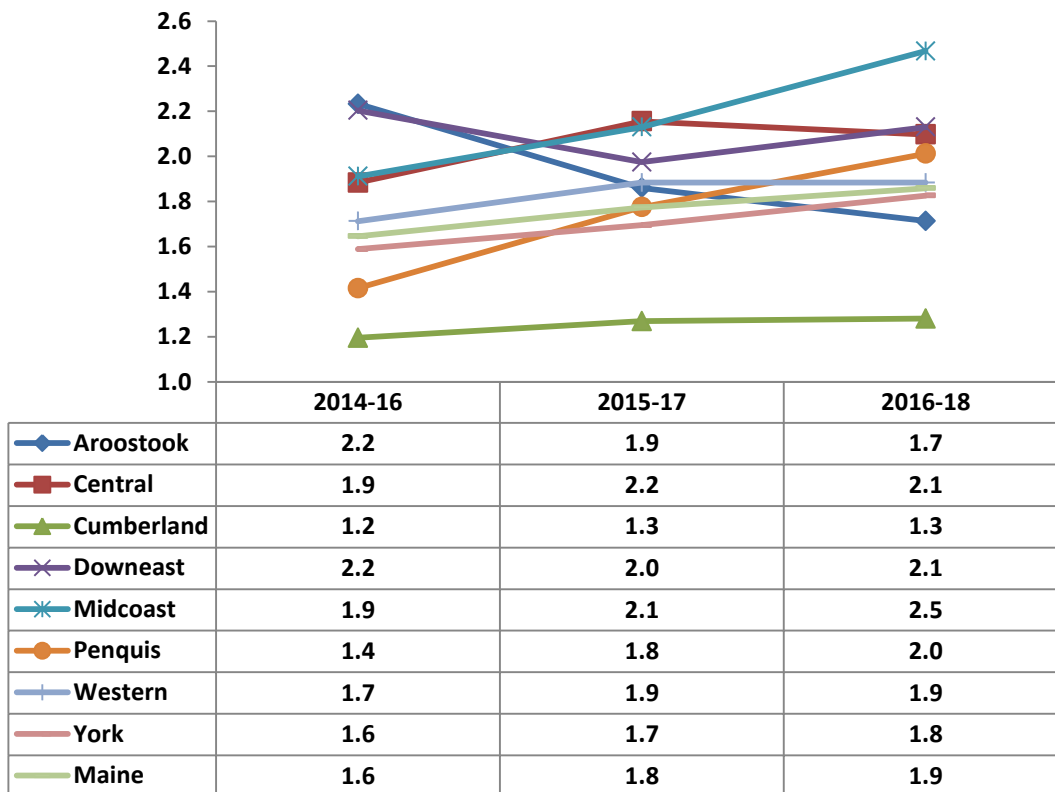*Source: 2-1-1 Maine, 2014–2018*

Indicator Description: Every death in Maine has a recorded cause. This indicator examines deaths that were classified as a suicide. In this case, a rate per 10,000 residents is used to compare the prevalence across the public health districts.

Why Indicator is Important: Although not the leading cause of death, substance use is often a factor in suicides. For example, the CDC's National Violent Death Reporting System has estimated that nationally, 14 percent of suicides are attributable to alcohol.[18]

Data Source(s): ODRVS, 2014–16 to 2016–18

Summary: During the 2016–18 period, Maine experienced an average of 1.9 suicides per 10,000 residents per year; rates were highest among the Midcoast (2.5), Central (2.1), and Downeast (2.1) public health districts and lowest in Cumberland (1.3). Most public health districts, with the exception of Aroostook and Downeast, observed increases from 2014–16 to 2016–18.

Figure 116. Number of suicide deaths per 10,000 residents, by Public Health District: 2014–16 to 2016–18

	2014-16	2015-17	2016-18
Aroostook	2.2	1.9	1.7
Central	1.9	2.2	2.1
Cumberland	1.2	1.3	1.3
Downeast	2.2	2.0	2.1
Midcoast	1.9	2.1	2.5
Penquis	1.4	1.8	2.0
Western	1.7	1.9	1.9
York	1.6	1.7	1.8
Maine	1.6	1.8	1.9

Source: ODRVS, 2014–16 to 2016–18

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[18] Centers for Disease Control and Prevention. (2011). Suicides due to alcohol and/or drug overdose: a data brief from the National Violent Death Reporting System. *Atlanta (GA): The Centers*.