Substance Use Trends in Maine

State Epidemiological Profile 2021

Produced for

Maine Department of Health and Human Services
Statewide Epidemiology Outcomes Workgroup
www.MaineSEOW.com

by Public Consulting Group LLC

November 2021

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State Epidemiological Profile 2021

THIS REPORT IS PRODUCED FOR
THE MAINE DEPARTMENT OF HEALTH AND HUMAN SERVICES
STATE EPIDEMIOLOGICAL OUTCOMES WORKGROUP (SEOW)
WWW.MAINESEOW.COM

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This report addresses the objectives of the Maine Department of Health and Human Services (DHHS), Maine Center for Disease Control and Prevention (ME 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. This report includes data available through the 2020 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 2019, 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. Males appear more likely than females to participate in this behavior, as are older students relative to younger students. Results were the same in 2017.
- The highest binge drinking rates can be observed among 18 to 24-year-olds and 25 to 34-year-olds, with about one in three reporting high-risk drinking within the past month. While rates among most age groups have remained relatively stable or decreased, rates for 18 to 24-year-olds have steadily increased from 2017 to 2019.
- In 2019, nearly one in 10 pregnant women reported consuming any alcohol in their last trimester.

Tobacco and Vaping Product Use

- Cigarette smoking has remained consistent for adult Mainers over the last three years; however, there have been slight decreases in younger adults (18 to 24-year-olds) and a slight increase in use by 55 to 64-year-olds.
- In 2019, 11 percent of women who recently had given birth reported smoking at least one cigarette during their last trimester. E-cigarette use among pregnant women during the last trimester increased from one to three percent from 2018 to 2019.
- In 2019, nearly half of all high school students reported having ever used a vaping product and almost one third reported using in the past month. Among students who had ever used a vaping product, more than half reported that the last time they vaped it had nicotine, one quarter reported it was just flavorinig, one in eight reported it was marijuana-based oil, and seven percent were unsure what was in the vapor. Past month use of vapor products increased, nearly doubling from 2017 to 2019.

Marijuana

- Marijuana initiates between the ages of 12 and 17 increased in 2018–19, while rates for 18 to 25-year-olds remained consistent with 2017–18 estimates. However, the number of adult initiates 26 and older decreased by 2,000 during the same time period.

- In 2019, more than one in five high school students reported using marijuana within the past month; this rate has remained relatively steady in recent years.
- In 2018-19, the highest rate of marijuana use among adults continues to be observed among 18 to 25-year-olds (35%). Marijuana use rates among adult Mainers have been steadily increasing over the past several years.
- In 2019, about one in 10 women reported using marijuana while pregnant.

Prescription Drugs

- The percentage of high school students reporting they have misused a prescription medication in the past month decreased from 2017 (6%) to 2019 (5%). In 2019, about one in 10 high school students reported having misused a prescription pain medication during their lifetime.
- In 2018-19, rates of non-medical use of prescription pain relievers continued to be higher among young adults between the ages of 18 and 25 compared to adults aged 26 and older. However, use, in general, appears to be on the decline.

Other Illegal Drugs

- In 2019, seven percent of high school students reported ever using inhalants, four percent reported ever using cocaine, and three percent reported ever using heroin. Lifetime rates for cocaine use decreased by one percentage point, but the lifetime use rates of inhalant, heroin and methamphetamine have remained unchanged since 2017.
- In 2018–19, seven percent of 18 to 25-year-olds, two percent of youth aged 12 to 17, and three percent of those 26 and older reported having used illicit drugs other than marijuana in the past year.
- In 2018–19, almost 7.3 percent of 18 to 25-year-olds and 1.4 percent of Mainers 26 and older reported they had used cocaine at least once in the past year, and 0.56 percent of Mainers 12 and older (approximately 7,000 residents) self-reported that they had used heroin within the past year; a slight decrease from the previous year.

Consequences Resulting from Substance Use and Misuse

Criminal Justice Involvement

- The number of OUI arrests and liquor law violations (excluding OUIs) have decreased steadily over the last five years. Liquor law violations among those under 21 have decreased considerably from 2015 to 2019, as have OUI violations among drivers 21 to 29 as well as those 18 and under. While adults aged 21 to 29 continue to receive the highest number of OUI arrests, the increase observed among Mainers ages 30 to 39 for OUI arrests in 2018 decreased to previous rates in 2019.

- After observing a dramatic drop from 2016 to 2017, arrests related to adult possession of drugs have steadily increased from 2017 to 2019. In 2019, more than one in three drug offense arrests for possession were for other dangerous non-narcotics (includes benzodiazepines and stimulants such as methamphetamine). The number of arrests due to marijuana possession has continued to decrease.
- In 2020, the most common substance involved in drug trafficking investigations was heroin, which was involved in 151 investigations. However, heroin investigations have been decreasing since 2016. This is the first time since 2016 that cocaine investigations dropped below 200 per year. There was also a decrease of 60 percent in methamphetamine manufacturing investigations from 2019 (38) to 2020 (15); however, there was a 20 percent increase in investigations related to the sale of methamphetamine during this time frame.

Motor Vehicle Crashes Involving Alcohol/Drugs

- While the number of motor vehicle crashes decreased substantially in 2020, the proportion of alcohol and/or drug-related motor vehicle crashes has remained stable at four percent.
- In 2020, Maine drivers ages 21 to 24 had the highest alcohol-related crash rate (388.8 per 100,000 licensees), a 29-point increase from 2019 rates.
- About one in four (27%) fatal motor vehicle crashes involved alcohol and/or drugs (2019). There was a slight increase in both fatal crashes and non-fatal crashes that involved alcohol and/or drugs.
- The rate of alcohol/drug-related motor vehicle crash fatalities was highest among 25 to 34-year-olds, followed by 21 to 24-year-olds in 2017-2019. This is the first reporting period that 21 to 24-year-olds did not have the highest rate of alcohol/drug-related motor vehicle crash fatalities.

Overdoses and Related Deaths

- In 2020, just less than half of EMS substance use related responses were for alcohol, about a third were related to other drugs, excluding opioids, and nearly one in five were for opioids. Rates of alcohol overdose responses were slightly higher among Mainers aged 18 to 24 but did not vary much among other adult age groups, while non-opioid and opioid responses were substantially higher among Mainers aged 25 to 34.
- In 2020, there were nearly 20,000 alcohol-related ED visits, followed by marijuana related visits (5,632), and opioid (pharmaceutical and illicit) overdose visits (1,473). Overall, males are more likely to be admitted to the ED as a result of an overdose regardless of substance.
- Drug deaths have been on the rise since 2018. In 2020, there were a total of 504 overdose deaths due to substance use in Maine. Illicit drug overdose deaths continue to outnumber overdoses related to pharmaceuticals (322 pharmaceutical-related deaths compared to 358 illicit drug-related deaths).

- Non-pharmaceutical fentanyl continues to play a major role in drug-related deaths. The number of non-pharmaceutical fentanyl-related deaths has risen by 73 percent since 2016. The number of deaths related to methamphetamines also doubled between 2019 and 2020.
- Deaths related to alcoholic cirrhosis and liver disease have steadily increased since 2018. Men are still twice as likely to experience death related to alcoholic cirrhosis and liver disease compared to women.
- Suicide rates in Maine are more than 10 times higher than homicide rates. Suicide deaths are more than four times as likely in men compared to women, and most prevalent among adults aged 26 to 35 years.

Substance Exposed Infants

- In 2020, there were 903 notifications to Child Protective Services regarding infants born exposed to substances (drug-affected babies); this accounted for nearly eight percent of the live births in Maine.

Factors Contributing to Substance Use and Misuse

Availability and Accessibility

- Social access continues to be the primary way that underage youth obtain alcohol. Of those students who obtained alcohol, one in three reported that someone had given it to them.
- Just over half of parents thought their teen would not be able to access any substances susceptible to misuse at home without their knowledge. One-third of parents felt their child could access alcohol at home without permission.
- More than half of high school students believe that marijuana is easy to obtain. This rate had steadily declined from 2009 (58%) to 2017 (52%) but increased by a percentage point in 2019 (53%).
- The number of liquor licenses declined slightly from 28.6 licenses per 10,000 Mainers in 2019 to 25.9 in 2020.
- From 2018 to 2020, the number of prescriptions prescribed for opiate agonists (excluding partial agonists such as buprenorphine) decreased by 23 percent, the number of prescriptions for sedatives decreased by 17 percent, and the number of prescriptions for stimulants decreased by four percent.
- Most calls to Northern New England Poison Center requesting medication verification in 2018–20 involved opioids, followed by benzodiazepines, and stimulants. This continued the trend from the previous reporting period.

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) did not think binge drinking a few times a week was risky.
- In 2019, about one-third of high school students felt smoking marijuana once or twice a week was risky. In 2017–18, less than one in 10 adults between 18 and 25 years old perceived smoking marijuana at least once per month as risky. Perception of harm regarding marijuana use has decreased among both youth and adults over the past several years.
- In 2018–19, nearly nine 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. About two-thirds of 12 to 17-year-olds thought there was great risk from trying heroin once or twice.

Perceived Enforcement

- In 2019, 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 remained stable over the past several years.
- In 2019, less than 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, decreasing by two percentage points from 2017 (24%) to 2019 (22%).

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 2019, more than nine out of 10 students perceived that their parents would think it was wrong for them to use alcohol. Rates have remained stable over the past several years.
- 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 2019; most recently, one in five high school students felt their parents would not disapprove.
- In 2019, the most commonly cited reason from parents as to why their teen should not use marijuana was that it was unhealthy (55%); this was followed by potential for addiction (27%), negative impact on child's future (23%), potential legal problems (18%), teen was too young to use (12%), marijuana use could lead to other substance use (12%), and it was against family values (8%). Two percent of parents surveyed felt it was okay for their teen to use marijuana.
- In 2019, nine in 10 high school students reported that their family has clear rules around alcohol and drug use.

- In 2019, nearly one in 10 (8.2%) parents of 7th thru 12th graders thought their teen had used a vapor product within the past 30 days. One in 20 parents thought their child had used marijuana and four percent believed their teen had drunk any alcohol.
- In 2019, high school students who reported three or more adverse childhood experiences (ACEs) reported greater alcohol use, feeling sad or hopeless, and serious suicidal consideration when compared to those who reported fewer ACEs.

Mental Health, Suicide and Co-occurring Disorders

Mental Illness, Depression, and Anxiety

- In 2018–19, nearly one in four adults in Maine reported experiencing any mental illness in the past year, with adults between 18 and 25 years old experiencing the highest rate (32%). Increases can be observed across all age groups.
- In 2018–19, major depressive episodes continue to be more prevalent among young adults ages 18 to 25 (16%) compared to adults 26 and older (7%). Major depressive episode rates have increased for young adults but stayed consistent for Mainers 26 and older since 2014–15.
- The percentage of Maine high school students who reported feeling sad or hopeless for at least two weeks in the past year has steadily increased, from 23 percent in 2011 to 32 percent in 2019, representing an 18.5 percent increase.

Suicidal Ideation

- In 2019, an average of one in seven (16%) Maine high school students seriously considered suicide, a little more than one in 10 (13%) had planned a suicide, and about one in 10 (9%) actually attempted suicide.
- In 2019, 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 about one in four (26%); this is double the rate compared to students who did not drink.

Mental Health and Substance Use Co-occurrence

- The number of *2-1-1 Maine* referral calls related to housing/shelter outnumbered calls related to mental health services as well as substance use in 2020. Referral calls for housing/shelter, mental health, and substance use observed increases from 2019 to 2020, while calls related to gambling decreased.
- The prevalence of substance use, suicidal ideation, and feelings of sadness and hopelessness are higher among high school students who report certain risk factors. Children are much more likely to report feelings of sadness and hopelessness if they have not had eight hours or more of sleep, report three or more adverse childhood experiences, or feel that they do not matter.

Treatment Admissions for Substance Use

Primary Treatment Admissions

- Nearly four in 10 admissions for substance use treatment listed alcohol as the primary reason for treatment in 2018, followed by heroin/morphine, and other opiates/ synthetics. In 2018, almost half (47%) of primary admissions were related to either natural or synthetic opiates, which is consistent with previous years. The proportion of primary admissions related to synthetic/semi-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/semi synthetic opiates. Rates related to synthetic opiates have steadily decreased, while rates involving cocaine/crack have gradually increased.

Treatment Admissions and Pregnant Women

- In 2018, three quarters of primary pregnant substance use treatment admissions were related to opioids. 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 seeking treatment primarily for alcohol has increased steadily in recent years.

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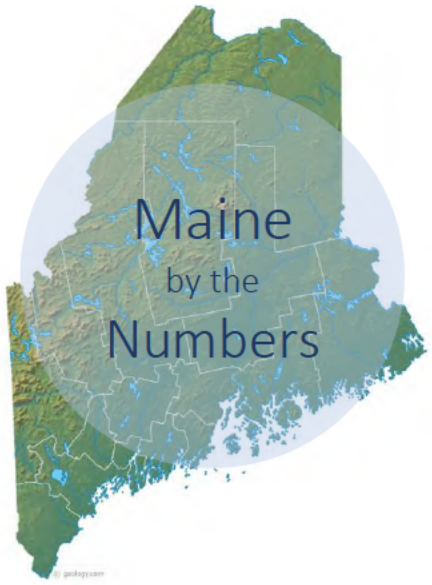
Introduction

Demographics of Maine

The state of Maine had an estimated population of 1,362,359 people in 2020. This 2.6 percent increase over 2019 is a far slower growth rate than the 7.4 percent population growth seen nationally. As the 2020 detailed Census has not been released at the time this report was published, figures are based on 2019 estimates (1,344,212 people). In 2019, 21 percent of the population was 65 years old and older, a higher proportion than the overall US population (16%). Thus, Maine is considered an "aging" state. It is further estimated that nineteen percent of the state's population is under the age of 18, a lower proportion than the average for the United States (22%). According to the 2019 U.S. Census estimate, 94.4 percent of Maine's population is White, non-Hispanic, followed by 1.8 percent who are Hispanic, 1.7 percent who are Black, 1.3 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 2019, this varies greatly by county. The most densely populated counties are Cumberland (with 348 people per square mile) and Androscoggin (with 230.2 persons per square mile), while the least densely populated counties are 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 $57,918 for the period of 2015-19, lower than the United States median income of $62,843. 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 $73,072, Cumberland has the highest median household income, and is one of only three Maine counties where the median income is higher than the national median income (the other two are Sagadahoc at $63,694 and York at $67,830). At the other end of this range, Piscataquis County has the lowest median income of $40,890.



This past year was also exceptional due to the COVID-19 global pandemic. Government-mandated quarantines, social distancing, and business shut-downs led to increased isolation and limited supportive resources which have in turn influenced substance use across the country, Maine included. According to national CDC estimates, Maine is ranked 49th of 52 U.S. states and territories (includes Washington DC and Puerto Rico) for total number of COVID-19 cases as of June 2020. While overall case counts have been contained, the 69,000 cases account for nearly one-fifth of the state's population.

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 from the *Maine Center for Disease Control and Prevention (Maine CDC) Prevention Plan* such as underage drinking, high-risk drinking among 18 to 25-year-olds, use of opioids, marijuana use in 12 to 25-year-olds, and slowing the spread of stimulant use; it also monitors the progress being made to address these priorities.

This report includes data through the 2020 calendar year. 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. For more information contact the SEOW Chair, Timothy Diomede at timothy.diomede@maine.gov.

The preferred citation for this report is:

Maine Department of Health and Human Services/Maine State Epidemiological Outcomes Workgroup. (2021). Substance Use Trends in Maine.

Organization of the Report

Data in this report are often used for assessments, benchmarking and evaluating the progress of outcome measures. This report is also utilized for strategic planning at the local or state level. Additionally, this data is often used to support applications for funding. Some stakeholders need a snapshot of the status of a substance, while others are looking for longer-term trends. 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, including statistics and 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 parsed 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 overdoses.
    - *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.

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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 2020 calendar year.

Several criteria are used annually to determine what information should be included in this report. Maine's SEOW workgroup, comprised of data stakeholders, applies these standards to each indicator and selects the best possible data source (or sources) to be included. Indicators determined to be redundant, no longer useful, or too confusing are updated annually 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 is necessary 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 2018–19, 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. Where this is not possible, new indicators are updated and the baseline year is established.

- **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 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. We caution data users not to rely too heavily on a single indicator in their assessment and evaluation; instead, we structure and present resources within a larger context to help users look at the broader picture. 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. Substance use prevention strategies are successful when conducted over a long period and data monitoring should reflect this process. When discussing rates of prevalence, however, the user should rely upon the most recent data source available. We promote the use of data indicators that have the reputation of being accurate, reliable, and timely.

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. Most recent 2019 data was only available for some indicators. Thus, there are several instances where 2017–18 estimates are still displayed. 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 Bureau of Alcoholic Beverages & Lottery Operations (BABLO). BABLO regulates the alcohol industry to include pricing, listing, and delisting of spirits and issuing all liquor licenses throughout Maine. Additionally, they are charged with the enforcement of Maine Liquor laws codified in Title 28-A of Maine law. They also manage the Maine State Lottery. **Contact:** Laurence Sanborn, Manager of Licensing and Enforcement; Laurence.D.Sanborn@maine.gov (207) 624-7227.

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 2019. 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 they 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. Beginning in March of 2017, Maine EMS began a transition from the NEMSIS version two data set to the NEMSIS version three data set. Among other things, this transition afforded Maine EMS clinicians the ability to document a broader range of diagnoses, as seen with the alcohol-related data. **Contact:** Darren Davis, Maine Emergency Medical Services; Darren.W.Davis@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 2019. **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; they are 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 2018–19.

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/sites/default/files/NSDUHsaeMethodology2016/NSDUHsaeMethodology2016.htm.

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/sites/default/files/reports/rpt29395/2019NSDUHMethodsSummDefs/2019NSDUHMethodsSummDefs082120.pdf.

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 2020. 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:** Data, Research and Vital Statistics; (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, 2017 and most recently in 2019. 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 2019 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:** Virginia Buchanan, PRAMS Coordinator, Maine CDC; Virginia.Buchanon@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 2019 and 2020. **Contact:** Office of Behavioral Health; PMP@maine.gov; (207) 287-2595.

Syndromic Surveillance System. Maine's hospital syndromic surveillance system collects information from hospital emergency departments and, in some cases, their affiliated urgent care centers. Maine CDC has 33 hospital emergency departments participating in syndromic surveillance reporting approximately 2,000 ED visits per day (depending on the time of year and other factors that affect patient traffic). Maine CDC is constantly working to improve the system, so data are subject to change as additional facilities/data fields/facility types are added. ED visits are based on patient residence. The Maine Syndromic Dashboard can be found here: https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/syndromic/index.shtml. **Contact:** Maine CDC; syndromic@maine.gov.

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. Drug categories included in this report are alcohol, marijuana, cocaine, heroin, synthetic opiates, methadone/buprenorphine, and benzodiazepines. The most recent WITS data is from 2018. **Contact:** Office of Behavioral Health; (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; call 2-1-1 or 1-866-811-5695; text your ZIP code to 898-211.

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Consumption of Substances

Consumption and misuse 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 disease, and mortality. In addition, substance use can have a harmful impact on society, including motor vehicle accidents, crime, straining health/medical resources, and lowering work productivity. It is the manner and frequency with which people use drugs and/or alcohol that are often linked to substance-related consequences.

To understand the magnitude that substance use can have on individuals, it is important to measure the prevalence of substance use 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, young adults, pregnant women). The consumption of substances is also heavily influenced by environment and context, which is further examined within factors that contribute to substance use. This report reviews consumption related to alcohol, tobacco and vaping, marijuana, prescription drugs, and other illicit drugs as well as substance use during pregnancy.

As will be expected throughout this report, COVID-19 had an impact on substance use consumption. For example, alcohol misuse was already a priority public health concern and data have already begun to indicate the affects COVID-19 has had on alcohol consumption. Initial studies and data show increased daily and risky alcohol use, increased rates in alcohol related injuries, and increased sales. According to the American Journal of Drug and Alcohol Abuse, 32 percent of the participants in a web-based, self-report survey of US adults reported binge drinking during stay-at-home orders, with 60 percent of those indicating they had increased alcohol consumption during the pandemic.[1] Total alcohol sales outside of bars and restaurants also increased by 24 percent during the pandemic nationwide, and agent spirit sales in Maine increased by 10 percent from 2019 to 2020.[2] Similar to previous years, alcohol continues to be the most often used substance by Mainers across the lifespan, particularly for youth and young adults

Tobacco use among adults has remained stable for the last few years. About one in four Mainers between 25 and 44 years old reported currently smoking cigarettes, compared to fewer than one in seven adults aged 18 to 25. While the rate of cigarette use among pregnant women has also been decreasing in recent years, we have observed a corresponding uptick in alcohol and e-cigarette use. In 2019, about one in 10 of women reported using cigarettes (11%), alcohol (10%), or e-cigarettes (3%) while pregnant. Although rates of all types of traditional tobacco use (cigarettes, cigars, and smokeless) have progressively declined, use of other

[1] American Journal of Drug and Alcohol Abuse. (2021). Longer Time Spent at Home During COVID-19 Pandemic is Associated with Binge Drinking Among US Adults. Retrieved 5/19/21 from https://www.tandfonline.com/doi/full/10.1080/00952990.2020.1832508.

[2] USDA Economic Research Service. (2020). Nielsen COVID-19 Beverage Alcohol Insights. Retrieved on 5/19/21 from https://wineindustryadvisor.com/2020/11/16/nielsen-covid-beverage-alcohol-insights

products such as e-cigarettes and vaping increased from 2015-2017, but the increase was not statistically significant.

Maine legalized medical marijuana use in 1999 for specific health conditions and adult-use marijuana beginning in 2016. Due to delays in legislation, adult-use sale of marijuana did not commence until October 2020. However, increased access for nonmedical use is already having impacts on consumption for adults. While marijuana use among high school students remained stable from 2011 to 2019, at around 20 percent, there already have been increases in marijuana use among young adult Mainers, as well as use by those 26 and older. Concerningly, Mainers appear to be initiating use of marijuana at a younger age, and the 18 to 25-year-old population reported using marijuana more than any other age group. More than 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. However, marijuana use among women in their third trimester of pregnancy has remained stable since 2016; one in 10 reported using marijuana during their third trimester in 2019.

Though rates of prescription pain reliever misuse among youth and adults continues to decline, stimulants, such as cocaine, methamphetamine, and potentially addictive, stimulant-based prescription drugs (e.g. Adderall®, Ritalin®) are emerging concerns in Maine. For example, past-year rates for young adults 18 to 25 decreased from 7.4 percent in 2015-16 to 5.5 percent in 2018-19. However, in 2018-19, Mainers ages 18-25 had higher rates of past year cocaine use (7.3%) than the national average (5.5%), which is a 2.3 percent increase since 2013-14 rates.

As reported lifetime heroin use remains low, less than one percent for Mainers aged 12 and older in 2018-19, young adults between 18 and 25 years old were still the most likely to use. This is consistent with previous years. As data are still pending for much of 2020, it is unclear how the pandemic has fully impacted substance use.

ALCOHOL

Alcohol: *Current Use Among Youth*

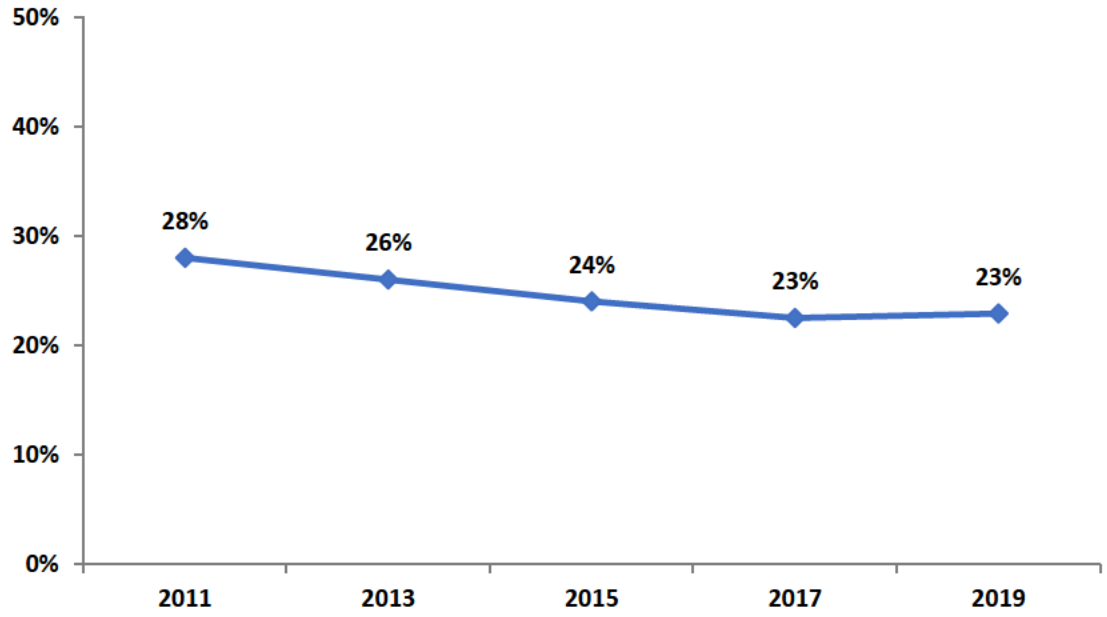
Indicator Description: This measure shows the percentage of high school students who reported having had one or more alcoholic drinks on one or more days in the past month.

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, 2011–2019

Summary: Less than one quarter of high school students reported consuming alcohol in the past month in 2019. The rate of alcohol consumption decreased steadily from 2011 to 2017 but has stayed consistent from 2017 to 2019.

Figure 1. High school students reporting alcohol use in the past month: 2011–2019



Source: MIYHS, 2011 to 2019

- The rate of high school students consuming alcohol in the past month decreased by five percentage points over eight years, from 28 percent in 2011 to 23 percent in 2019.
- Although not shown, more than one third of high school students who have ever consumed alcohol reported that someone gave them the alcohol, as opposed to purchasing or stealing it.

Alcohol: *Current High-Risk Use Among Youth*

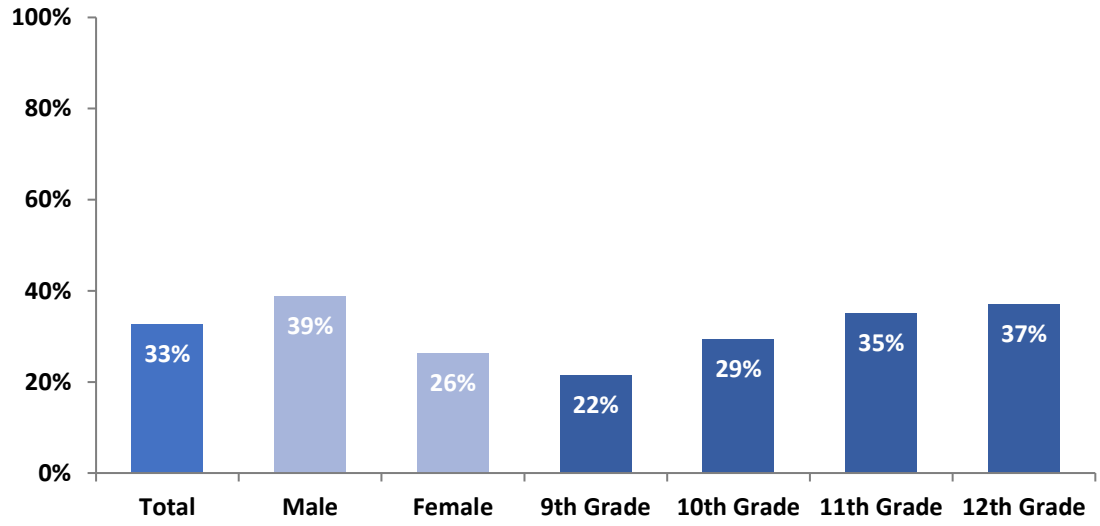
Indicator Description: This indicator displays the percentage of youth who reported having had five or more alcoholic drinks within a couple of hours in the past month. In 2019, the MIYHS redesigned the question to ask students about the frequency of high-risk alcohol use. Therefore, 2019 data cannot be compared to previous years for trending purposes.

Why Indicator is Important: Youth are more likely to engage in high-risk use 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, alcohol use disorder, cancer, 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, 2019

Summary: In 2019, among high school students who reported drinking in the past month, one third reported they had five or more drinks over the period of a couple hours at least once in the past month. Although not shown, this accounts for roughly eight percent of all high school students. Females are less likely than their male counterparts to participate in this behavior, as are younger students relative to older 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: 2019



Source: MIYHS, 2019

- Twelfth grade students were most likely to report that they had engaged in high-risk alcohol use within the past month when compared to the other high school grades.

Alcohol: *Current Use Among Underage Adults*

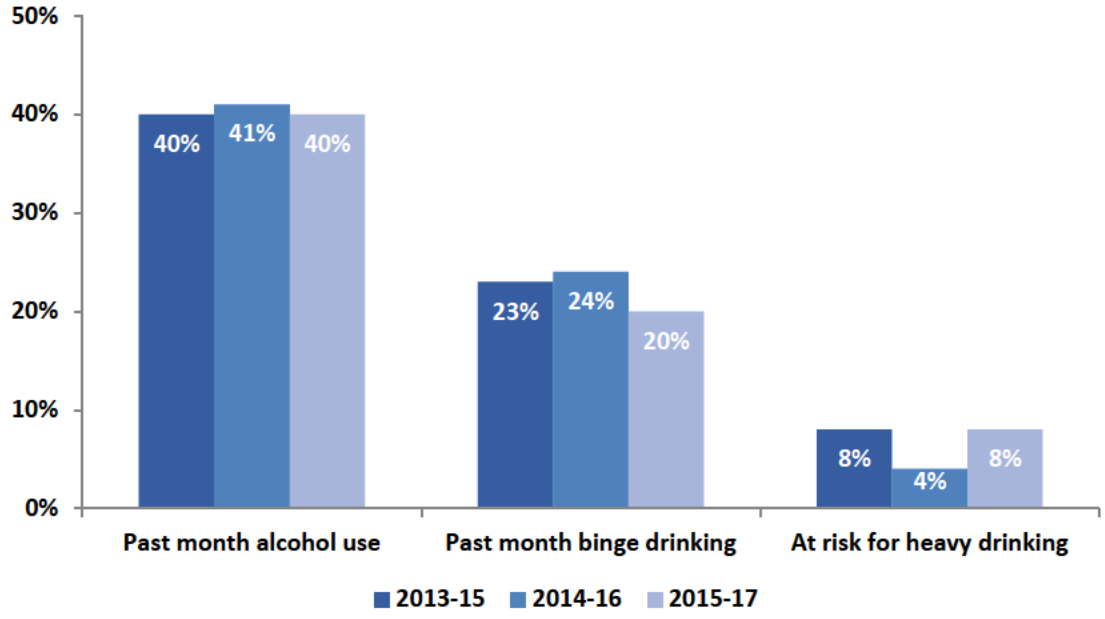
Indicator Description: This indicator portrays the alcohol use patterns among adults between the ages of 18 and 20; specifically, those who reported consuming any alcohol in the past month.

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. Drinking alcohol can also have negative health effects and can 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 2015–17. High-risk alcohol use 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, 40 percent reported consuming any alcohol in the past 30 days, 20 percent reported binge drinking, and eight percent were at risk from heavy alcohol use.

Alcohol: *At Risk of Heavy Use*

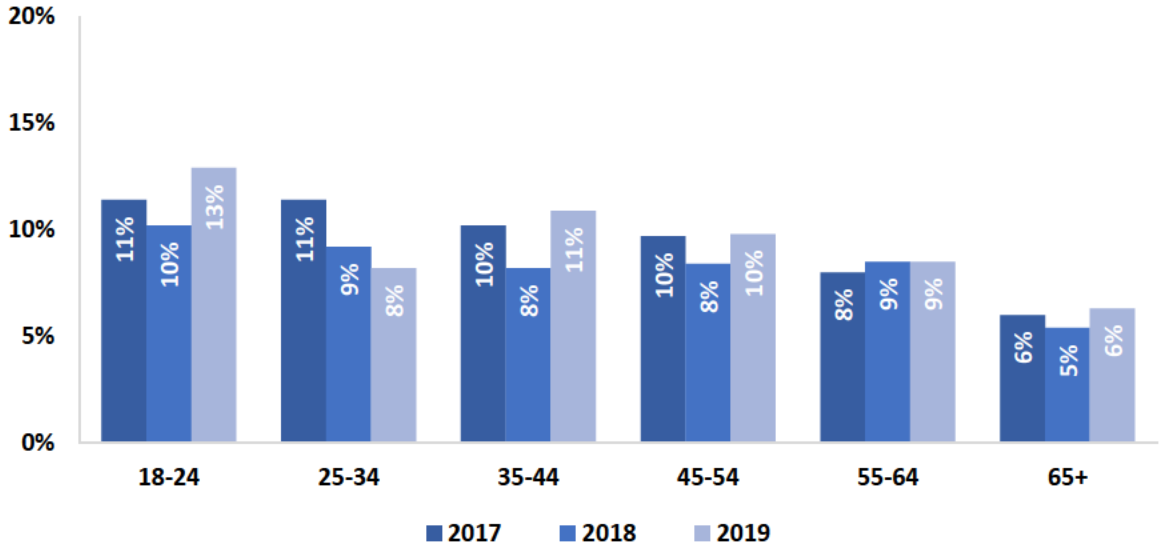
Indicator Description: This indicator examines the percentage of Maine residents who are at risk of suffering consequences from heavy drinking in the past month. "At risk of heavy drinking" is defined as more than two drinks per day (14 per week) for a man or more than one drink per day for a woman (seven 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.[3]

Data Source(s): BRFSS, 2017–2019

Summary: From 2018 to 2019, risk of heavy alcohol use among Mainers 18 years and older increased for nearly all age groups.

Figure 4. Adults at risk of heavy alcohol use in past 30 days, by age group: 2017–2019



Source: BRFSS, 2017 to 2019

- During 2019, nine percent of adults 18 and over reported having consumed alcohol daily, putting them at risk from heavy alcohol use. Adults 18 to 24 years are at highest risk of heavy alcohol use (13%).

[3] Centers for Disease Control and Prevention. (2021). "Alcohol Use and Your Health." Retrieved 6/28/2021 from https://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm

Alcohol: *Current High-Risk Use Among Adults*

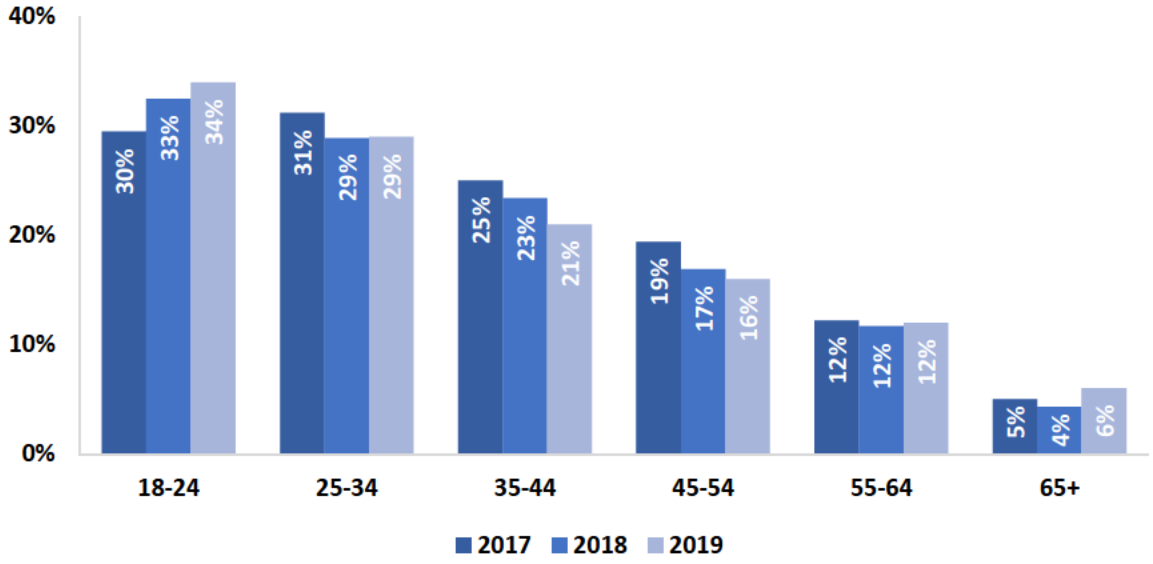
Indicator Description: This indicator reflects the percentage of adults who reported consuming several alcoholic beverages in a row for at least one day within the past month.[4]

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, 2017–2019

Summary: The highest binge drinking rates can be observed among 18 to 24-year-olds and 25 to 34-year-olds, with about one in three reporting high-risk drinking within the past month. While rates among most age groups have remained relatively stable or decreased, rates for 18 to 24-year-olds have steadily increased from 2017 to 2019.

Figure 5. Adults reporting high-risk drinking in past 30 days, by age group: 2017–2019



Source: BRFSS, 2017 to 2019

[4] BRFSS defines binge drinking (high-risk drinking) as five or more drinks in one sitting for a male and four or more drinks in one sitting for a female.

TOBACCO AND VAPING PRODUCT USE

Tobacco and Vaping Product Use: *Cigarette, Cigars, and Smokeless Tobacco Use Among Youth*

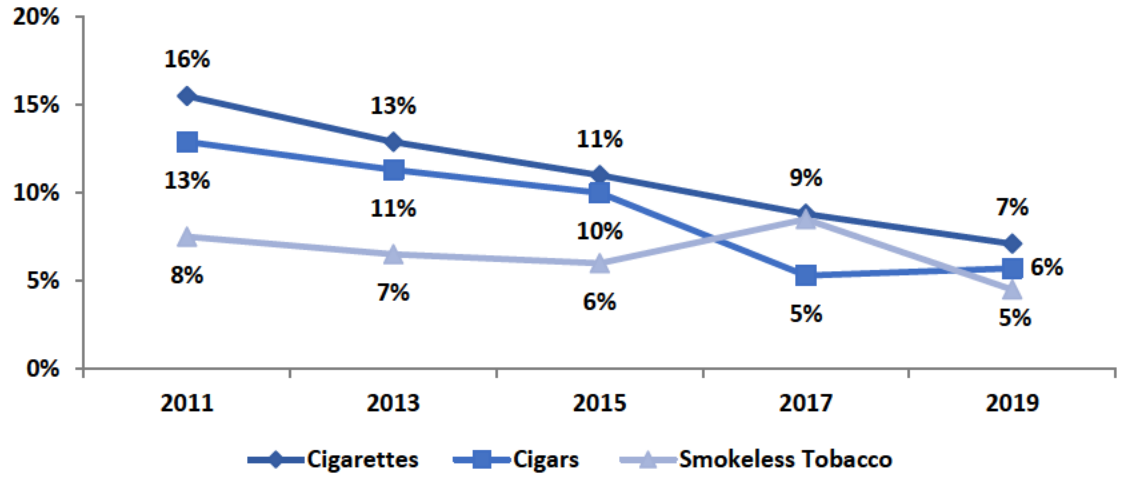
Indicator Description: This indicator illustrates the percentage of youth who reported using cigarettes, cigars, and smokeless tobacco within the past month.

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.

Data Source(s): MIYHS, 2011–2019

Summary: In 2019, fewer than one in 10 students reported having smoked a cigarette within the past month. The use of tobacco products among high school students continues to steadily decline.

Figure 6. High school students who used tobacco during past month, by tobacco type: 2011–2019



Source: MIYHS, 2011 to 2019

- The percentage of high school students who reported having smoked any cigarettes on at least one day during the past 30 days decreased by nine percentage points from 2011 (16%) to 2019 (7%).
- Although not shown, among students who reported current cigarette use in 2019, nine percent reported smoking more than 10 cigarettes per day. This is a decrease of three percentage points from 2017. Among students who have ever smoked an entire cigarette, 55 percent reported having done so before age 13.
- The only tobacco type that saw an increase in use from 2017 to 2019 was cigars. The rates of smokeless tobacco and cigarette use have both decreased from 2017.

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

Indicator Description: This indicator illustrates the percentage of youth who reported using vapor products (*e.g.,* electronic cigarettes, vaporizers). Questions about vapor products were added to the survey in 2015.

Why Indicator is Important: Vapor products have become a popular alternative to smoking cigarettes as they have been marketed as safer than traditional cigarettes. These products are often marketed to youth through appealing flavors and bright colors. 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. Current evidence documents the presence of several harmful or potentially harmful chemicals in the aerosols produced by e-cigarettes.[5]

The FDA has become aware that some people who use e-cigarettes have experienced seizures, with most reports involving youth or young adult users.[6] Many e-cigarettes come in fruit, candy, and other kid-friendly flavors, such as mango, fruit, and crème. Youth report using e-cigarettes for a variety of reasons, the most common of which are curiosity, use by friends or family members, and availability of flavors. Many also believe these products to be less harmful than conventional cigarettes and other tobacco products.[7] The CDC and FDA recommend that vaping products not be acquired from informal sources such as friends, family, or online dealers, but more importantly vaping products should never be used by youths, young adults or women who are pregnant.[8]

Data Source(s): MIYHS, 2011–2019

Summary: Nearly half of all high school students reported having ever used a vaping product and almost one-third reported using in the past month. Among students who had ever used a vaping product, more than half reported that the last time they vaped it contained nicotine, a quarter reported it was just flavoring, one in eight reported it was marijuana-based oil, and seven percent were unsure what was in the vapor. Past month use of vapor products increased notably, nearly doubling from 2017 to 2019.

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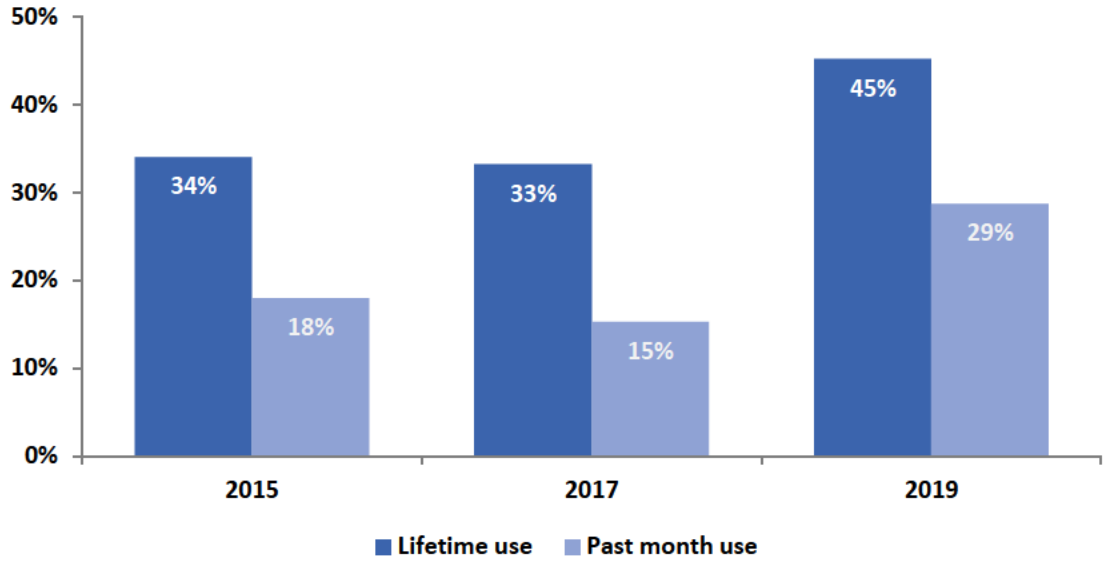
[5] Tobacco and Substance Use Prevention and Control Program Maine Center for Disease Control and Prevention (2021). E-CIGARETTE PREVENTION TOOLKIT: A Guide of Educational Resources. https://preventionforme.org/wp-content/uploads/FINAL_ECig_toolkit_10.7.21.pdf.

[6] U.S. Food and Drug Administration. (2020). Some E-cigarette Users Are Having Seizures, Most Reports Involving Youth and Young Adults. Retrieved 6/25/21 from https://www.fda.gov/tobacco-products/ctp-newsroom/some-e-cigarette-users-are-having-seizures-most-reports-involving-youth-and-young-adults.

[7] U.S. Centers for Disease Control and Prevention. (2019). Tobacco Product Use and Associated Factors Among Middle and High School Students — United States, 2019. Retrieved 6/25/21 from https://www.cdc.gov/mmwr/volumes/68/ss/ss6812a1.htm?s_cid=ss6812a1_w.

[8] U.S. Centers for Disease Control and Prevention. (2020). Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products. Retrieved 6/25/21 from https://www.cdc.gov/tobacco/basic_information/e cigarettes/severe-lung disease.html#:~:text=CDC%20and%20FDA%20recommend%20that,in%2Dperson%20or%20online%20dealers.

Figure 7. High school students who used an electronic vapor product* in the past 30 days or lifetime: 2015–2019

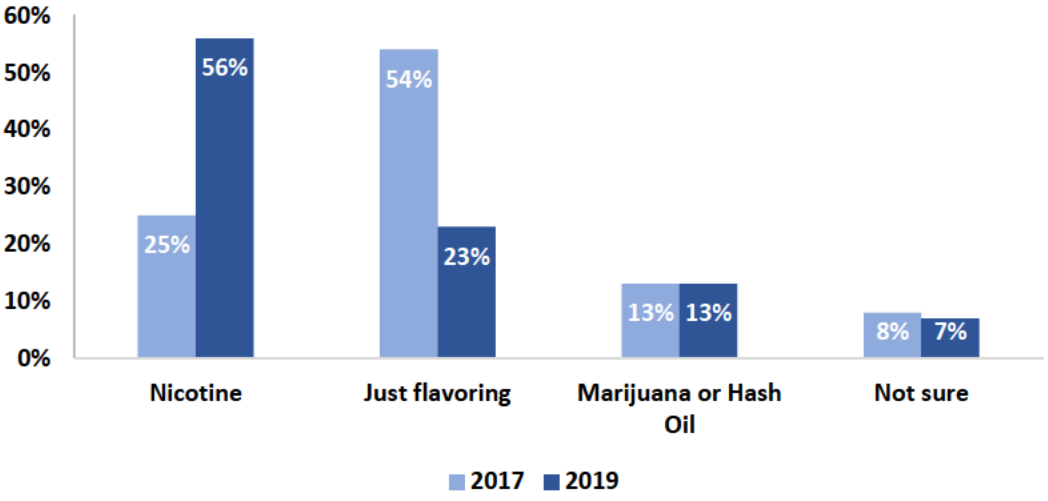


Source: MIYHS, 2015 to 2019

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

- Nearly half of high school students reported having ever used an electronic vaping product in 2019.This is a substantial increase from 2017. The rate of past-month use nearly doubled from 2017 to 2019, with nearly one-third of high schoolers reporting using an electronic vapor product in 2019.

Figure 8. Type of vapor product used by high school students (among those who reported ever using): 2017–2019



Source: MIYHS, 2017 to 2019

- In 2019, high school students who reported ever using a vapor product most commonly reported the liquid/product they last used included nicotine. This is much different from 2017 when 54 percent reported using a product that contained just flavoring, which is unlikely and demonstrates a knowledge gap given that 91% of e-cigarettes actually contain nicotine[9]. In 2019, about one in four think they were vaping just flavoring, and about one in eight were vaping marijuana (13%). Seven percent were not sure what kind of liquid was in the vapor product they used.
- Although not pictured, most high school students who used a vapor product reported that they obtained it by borrowing it from someone else (42%). Only about five percent of those who used a vapor product bought it from a convenience store themselves.

[9] Raymond BH, Collette Merrill K, et al. (2018). The Nicotine Content of a Sample of E-cigarette Liquid Manufactured in the United States. Journal of Addiction Medicine. Mar/Apr;12(2):127-131. doi: 10.1097/ADM.0000000000000376.

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

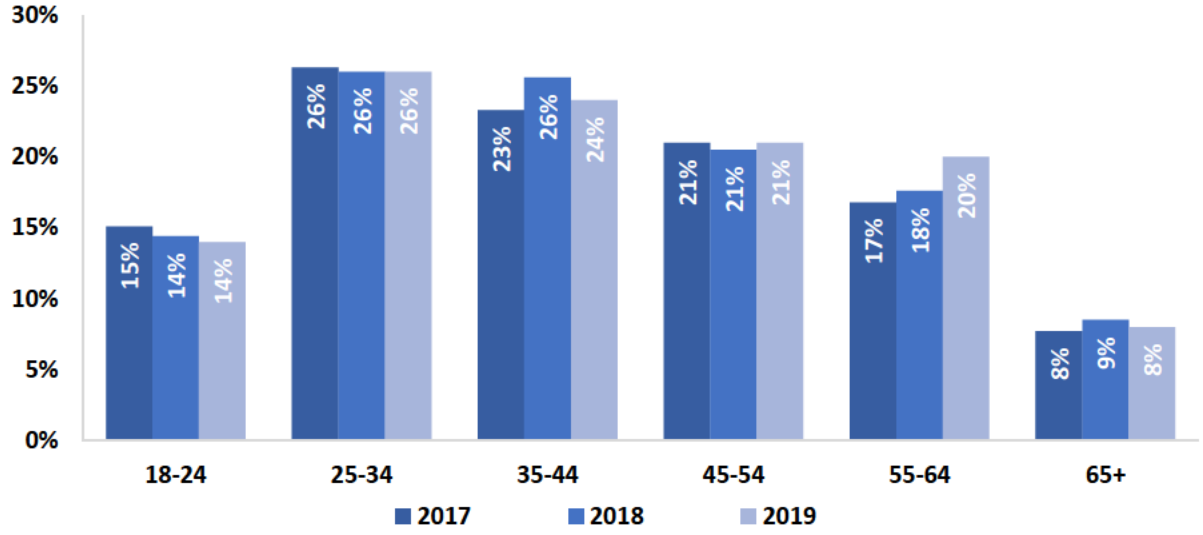
Indicator Description: This indicator depicts cigarette use among adults who reported smoking at least 100 cigarettes in their lifetime and currently smoke cigarettes either every day or every couple of days.

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, 2017–2019

Summary: Cigarette smoking has remained relatively consistent for adult Mainers over the last three years. There have been slight decreases in use by 18 to 24-year-olds, 35 to 44-year-olds and those 65 and older, and a slight increase in use by 55 to 64-year-olds.

Figure 9. Current cigarette use among adults, by age group: 2017–2019



Source: BRFSS, 2017 to 2019

- Mainers aged 25 to 34 continue to be the population with the greatest prevalence for cigarette smoking (26%), followed closely by 35 to 44-year-olds (24%). Adults aged 45 to 54 (21%) reported the next-highest rate of current smokers. However, rates have increased slightly for Mainers ages 55 to 64 from 2017 (17%) to 2019 (20%).

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

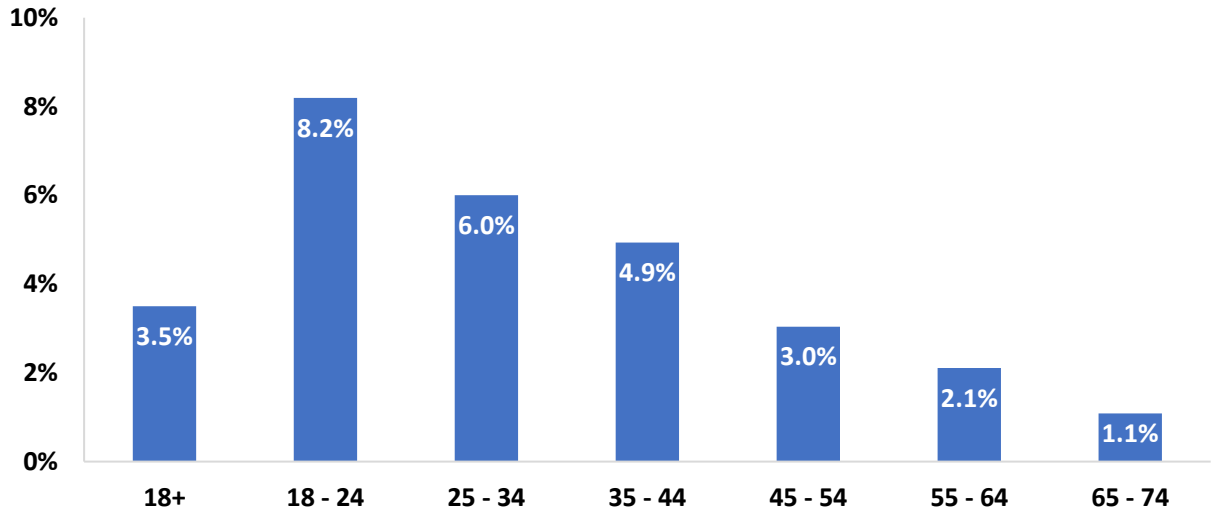
Indicator Description: This indicator depicts current electronic or e-cigarette use among adults.

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. E-cigarettes are not safe for adults who do not currently use tobacco products.[10] Vitamin E acetate is strongly linked to an e-cigarette or vaping use associated lung injury (EVALI) outbreak although most cases were associated with use of THC-containing e-cigarette products, particularly those from informal sources like friends, family, and in person or online dealers. Vitamin E acetate has been found in product samples tested by FDA and state laboratories and in-patient lung fluid samples tested by CDC from geographically diverse states. Vitamin E acetate has not been found in the lung fluid of people that do not have EVALI. More research is underway on this issue.[11]

Data Source(s): BRFSS, 2015–2017

Summary: In 2017, 4.1 percent of Mainers 18 and older reported current use of e-cigarettes. While use of e-cigarettes increased from 2015-2017, that increase was not statistically significant. Cigarette use declined during the same period.

Figure 10. Current e-cigarette use among adults, by age group: 2015–2017



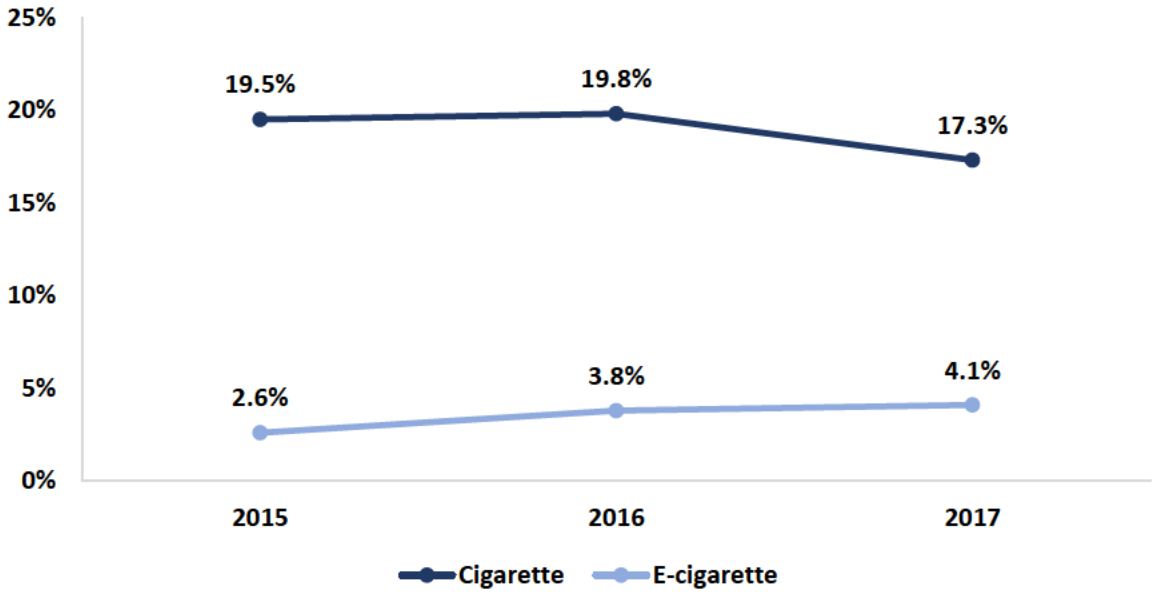
Source: BRFSS, 2015-2017

[10] U.S. Centers for Disease Control and Prevention. (2021). About Electronic Cigarettes. Retrieved 5/8/21 from https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html.

[11] U.S. Centers for Disease Control and Prevention. (2021). Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products. Retrieved 5/18/21 from https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html.

- During the 2015-2017 period, Mainers between 18 and 25 reported the highest rate of e-cigarette use, at 8.2 percent.

Figure 11. Current adult e-cigarette and cigarette usage, by type: 2015–2017



Source: BRFSS, 2015 to 2017

- In 2017, 4.1% of adults in Maine reported currently using e-cigarettes, compared to 17.3% reporting current regular cigarette use.

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).

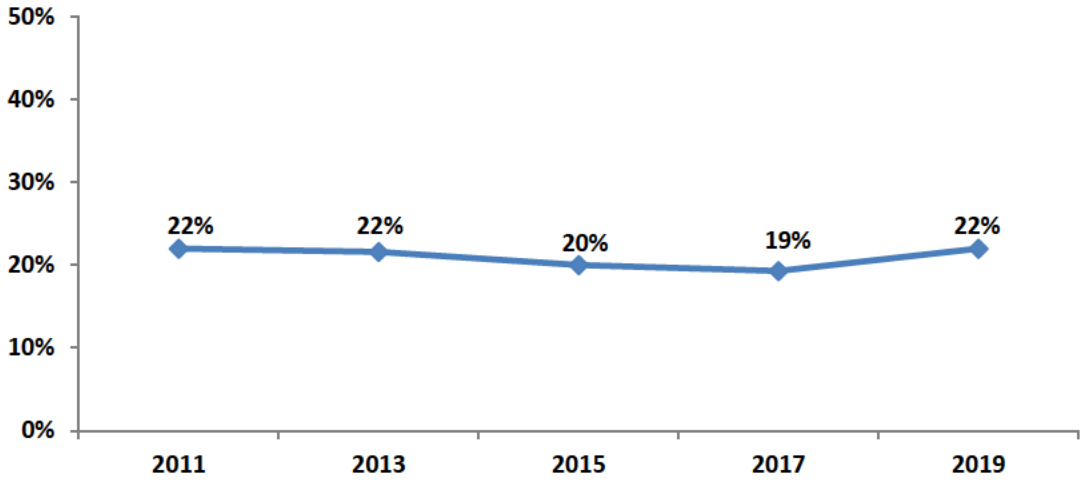
Why Indicator is Important: Marijuana can be addictive and is associated with increased risk for respiratory illnesses and memory impairment. Additionally youth who begin smoking marijuana at an early age are more likely to develop a substance use disorder and dependence later in life.[12] State-level marijuana liberalization policies have been evolving for the past five decades, and yet the overall scientific evidence of the impact of these policies is widely believed to be inconclusive. Many US states moved away from strict prohibition of marijuana well before considering outright legalization. There are a variety of ways to consume marijuana, with the most common methods including smoking, vaporization, and ingestion of edible products. There are also new techniques for controlling potency. Legalization will broaden access to these new products to a broader market of individuals It is difficult to predict the extent to which legalization will increase product innovation, as growth in the industry will promote the development of new methods for extracting and synthesizing the byproducts of the cannabis plant.[13]

Data Source(s): MIYHS, 2011–2019; NSDUH, 2014–15 to 2018–19; BRFSS, 2017

Summary: From 2017 to 2019, a three-percentage point increase in past-month marijuana use was observed among high school students. More than one in five high school students reported using marijuana within the past month. Two out of three students who reported using marijuana, reported usually smoking it while a little more than one in 10 (12%) said they vaporized it. The highest rates of marijuana use among adults continues to be observed among 18 to 25-year-olds (35%). Marijuana use rates among adult Mainers have been steadily increasing over the past several years.

[12] National Institute on Drug Abuse. (2020). Marijuana Research Report. Retrieved 6/25/21 from https://www.drugabuse.gov/publications/research-reports/marijuana/marijuana-addictive.
[13] Pacula, R. L., & Smart, R. (2017). Medical marijuana and marijuana legalization. *Annual review of clinical psychology*, *13*, 397–419. Retrieved 6/25/21 from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6358421/.

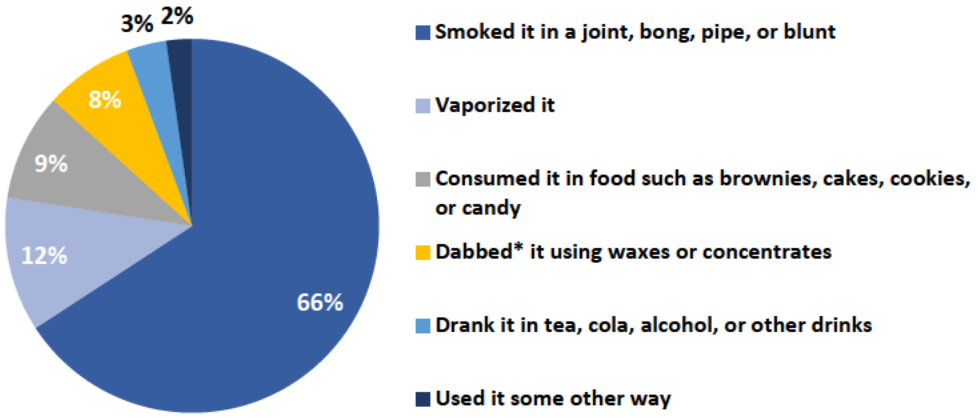
Figure 12. High school students who have used marijuana at least once in the past month: 2011–2019



Source: MIYHS, 2011 to 2019

- The percentage of high school students who reported using marijuana one or more times during the past month stayed relatively consistent from 2011 (22%) to 2019 (22%). Although not explicitly shown, according to the 2019 Parent Survey, only five percent of parents of middle school and high school students believed their child had used marijuana in the past 30 days.

Figure 13. Usual method of marijuana intake, among high school students who reported using marijuana in the past month: 2019



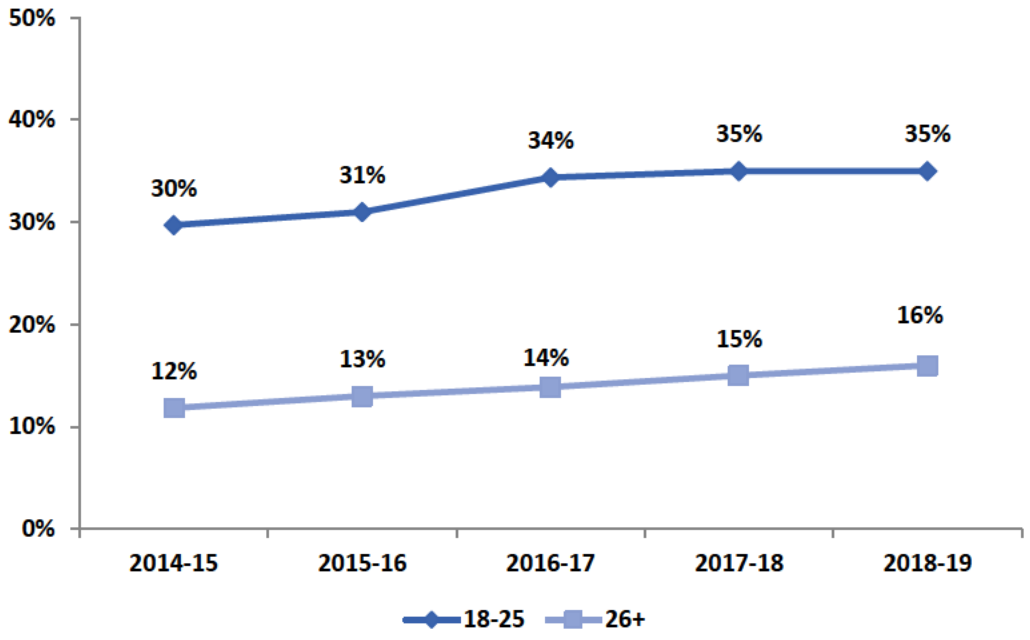
Source: MIYHS, 2019

** Dabs are cannabis concentrates gaining notoriety for their significant amounts of tetrahydrocannabinol (THC) that are ultimately vaporized and inhaled for their effect.*[14]

[14] Alzghari, S. K., Fung, V., Rickner, S. S., Chacko, L., & Fleming, S. W. (2017). To dab or not to dab: rising concerns regarding the toxicity of cannabis concentrates. *Cureus*, *9*(9). Retrieved 6/25/21 from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5679763/.

- In 2019, among high school students who reported using marijuana within the past month, two-thirds (66%) reported that they had most often smoked marijuana in either a joint, bong, or blunt; this was followed by administration through an electronic vapor product (12%), dabbing it using waxes or concentrates (9%), consumption through edibles (8%), drinking it (3%), or some other way (2%).

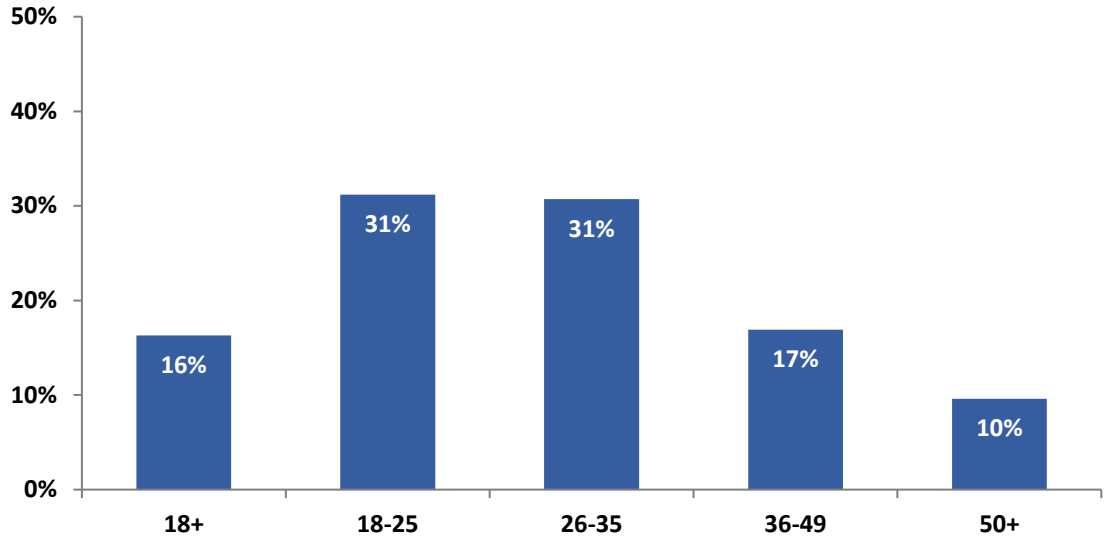
Figure 14. Adults reporting marijuana use in past month, by age group: 2014–15 to 2018–19



Source: NSDUH, 2014–15 to 2018–19

- Of Maine residents between 18 and 25 years of age, 35 percent reported using marijuana in the past month in 2018–19; this is an increase of five percentage points since 2014–15. Marijuana use rates among those aged 26 and older increased by four percentage points, from 12 to 16 percent, in the same time period.

Figure 15. Adults reporting marijuana use in past month, by age group: 2017[15]



Source: BRFSS, 2017

- 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 each.

[15]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.

Marijuana: *Initiation of Marijuana Use*

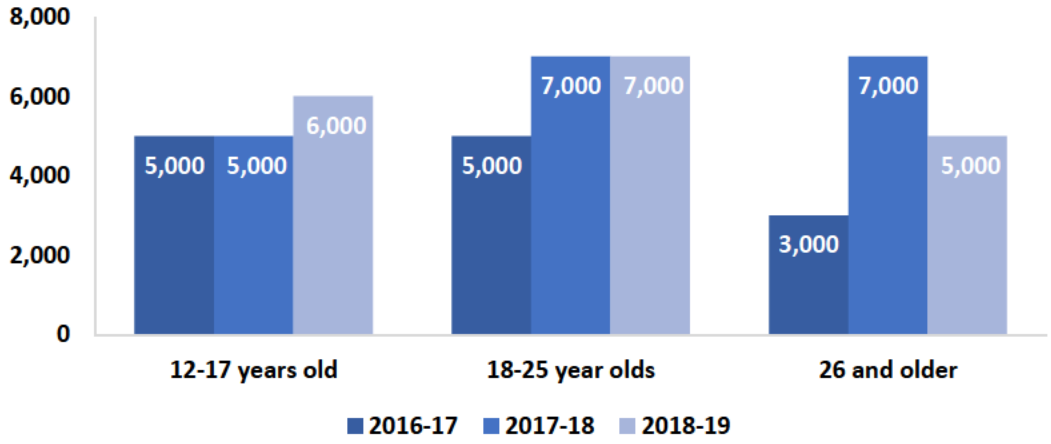
Indicator Description: This measure shows the average number of Mainers that used marijuana for the first time in their life in a specific period of time. Average annual number of marijuana initiates = $X_1 \div 2$, where X_1 is the number of marijuana initiates in the past 24 months.

Why Indicator is Important: Marijuana is the most widely used drug among adolescents. It can be addictive and is associated with increased risk for respiratory illnesses and memory impairment. Youth who begin smoking marijuana at an early age are more likely to use substances and develop dependence later in life[16] In addition to the risk of developing a marijuana use disorder (MUD) and using other illegal substances, research has indicated significant associations between adolescent marijuana use and poor social and educational development and functioning, as well as having other mental health problems. In addition, adverse consequences of marijuana use can extend into adulthood, including substance use and misuse, cognitive impairment, criminal justice involvement, and ongoing mental and physical health problems.

Data Source(s): NSDUH, 2015–16 to 2018–19

Summary: About 17,000 Mainers 12 years and older reported using marijuana for the first time in their life in 2018–19. Six thousand initiates were between 12 and 17; seven thousand were between 18 and 25, and five thousand initiates were 26 and older. The number of initiates 26 and older decreased from 2017–18 estimates but remains higher than 2016–17 rates.

Figure 16. Average annual number of marijuana initiates, by age group: 2015–16 to 2018–19



Source: NSDUH, 2015–16 to 2018–19

- Marijuana initiates between the ages of 12 and 17 increased in 2018-19, while rates for 18- to 25-year-olds remained consistent with 2017-18 estimates and rates for adults 26 and older decreased from by 2,000 during the same time period.

[16] National Institute on Drug Abuse. (2020). Marijuana Research Report. Retrieved on 6/25/21 from https://www.drugabuse.gov/publications/research-reports/marijuana/marijuana-addictive.

PRESCRIPTION DRUGS

Prescription Drugs: *Misuse of Prescription Drugs Among Youth*

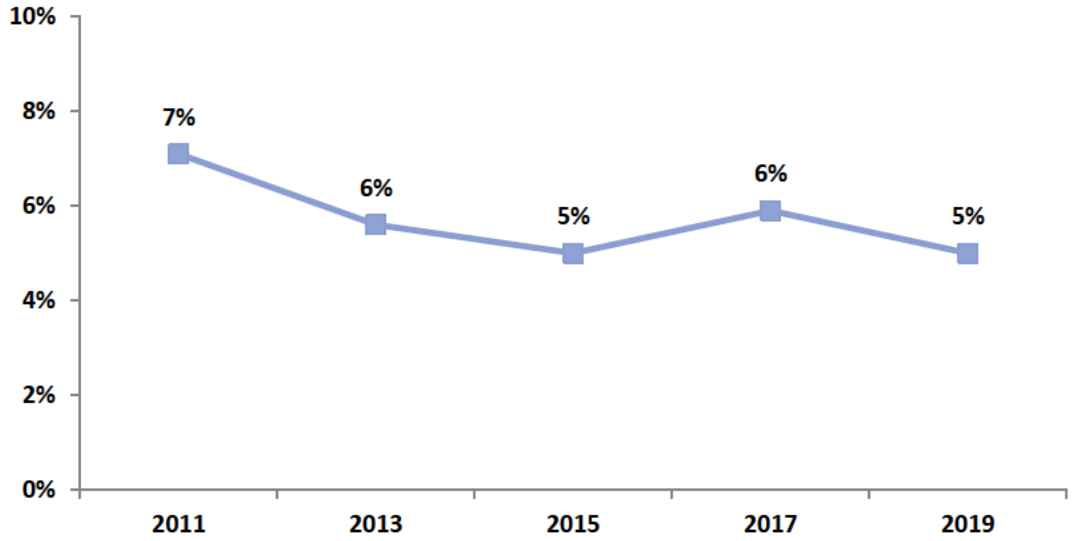
Indicator Description: This indicator presents the percentage of youth who reported using prescription medications (any type) that were not prescribed to them by a doctor.

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, 2011–2019

Summary: There was a slight decrease in the percentage of high school students reporting that they had misused a prescription drug in the past month from 2017 (6%) to 2019 (5%).

Figure 17. High school students reporting misuse of prescription drugs (any type) in the past month: 2011–2019



Source: MIYHS, 2011 to 2019

- Since 2011, the proportion of students who reported misusing prescription drugs (of any type) has slightly decreased from seven percent to five percent.
- Although not shown, in 2019, high school students who perceived no risk or slight risk of harm from taking prescription drugs that were not prescribed to them were more than four times as likely to take them in the past month as high school students who did perceive a risk of harm.

Prescription Drugs: *Misuse of Prescription Drugs Among Adults*

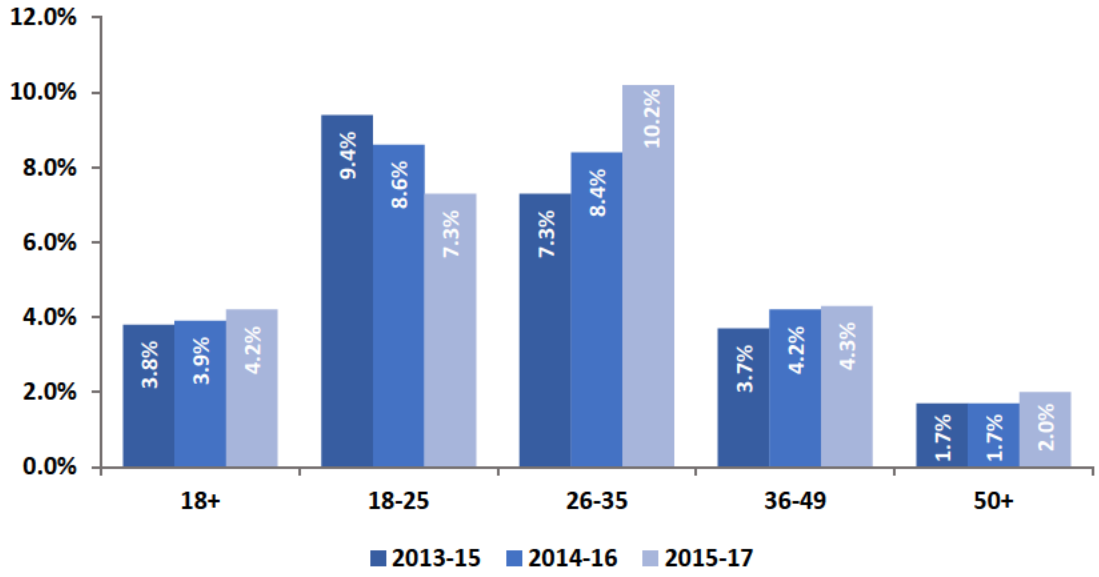
Indicator Description: This measure reflects the percentage of adults in Maine who reported using prescription drugs (any type) not prescribed to them by a doctor or using them in a way other than the way in which they were prescribed, at least once in their lifetime.

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 and 35; about one in 10 (10%) reported misusing prescription drugs within their lifetime. Lifetime prescription drug misuse among 18 to 25-year-olds has decreased over the past several years.

Figure 18. 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

- During the 2015–17 period, about four percent of adults 18 and older in Maine reported having misused prescription drugs during their lifetime. Rates of lifetime prescription drug misuse among Mainers aged 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. The rates for other age groups remained relatively stable in their reported misuse.

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

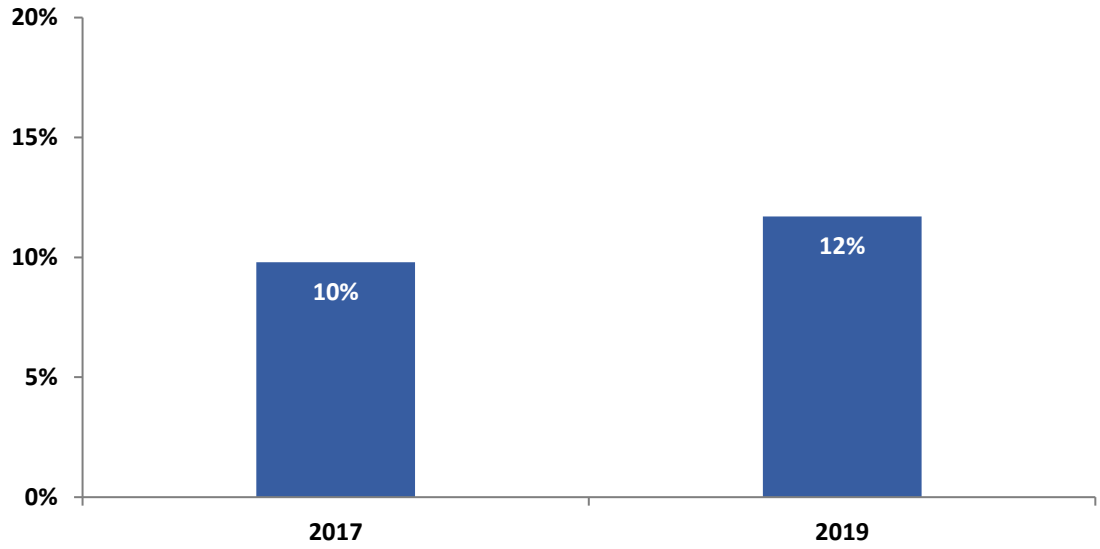
Indicator Description: This indicator presents the percentage of youth who reported using prescription pain medicines that were not prescribed to them by a doctor. This indicator was introduced in MIYHS in 2017.

Why Indicator is Important: Misuse of prescription pain medicines 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, 2017–2019

Summary: About 12 percent of high school students in 2019 reported they misused a prescription pain medication during their lifetime. This is an increase of two percentage points from 2017.

Figure 19. High school students reporting misuse of prescription pain medicine in their lifetime: 2017–2019



Source: MIYHS 2017 to 2019

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

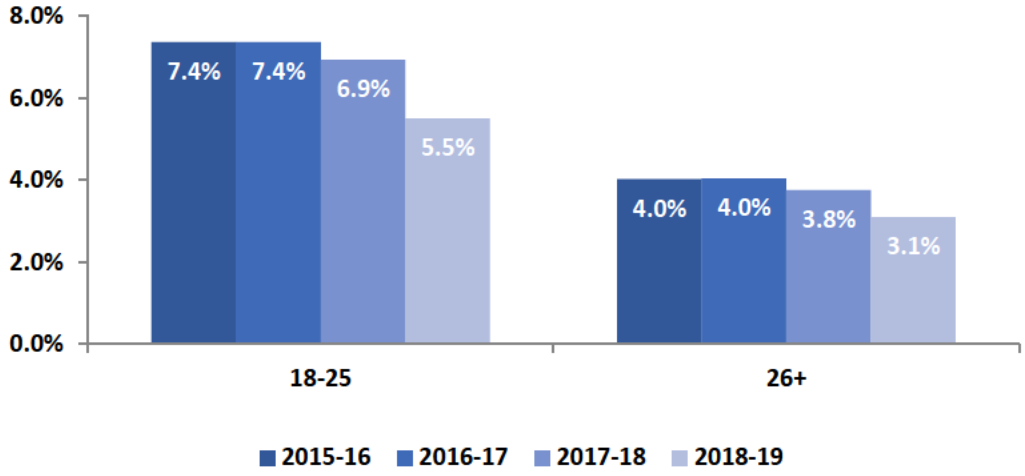
Indicator Description: This indicator reflects the percentage of adults who reported using prescription pain relievers, specifically for reasons other than their intended purpose in the past year. In 2015–16, the pain reliever misuse indicator was redesigned to incorporate use in any way not directed 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 or overdose, which could lead to death, dependence, and increased crime.

Data Source(s): NSDUH, 2015–16 to 2018–19

Summary: Rates of non-medical use of prescription pain relievers continue to be higher among young adults between the ages of 18 and 25 compared to adults age 26 and older. However, use, in general, appears to be on the decline. In 2018–19, five percent of 18 to 25-year-olds and three percent of Mainers 26 and older reported having misused pain relievers in the past year.

Figure 20. Non-medical use of pain relievers among adults in the past year, by age group: 2015–16 and 2018–19



Source: NSDUH, 2015–16 to 2018–19

- From 2015–16 to 2018–19, there was a decrease in non-medical pain reliever use for both young adults (18–25 years) and adults 26 and older.

OTHER ILLEGAL DRUGS

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

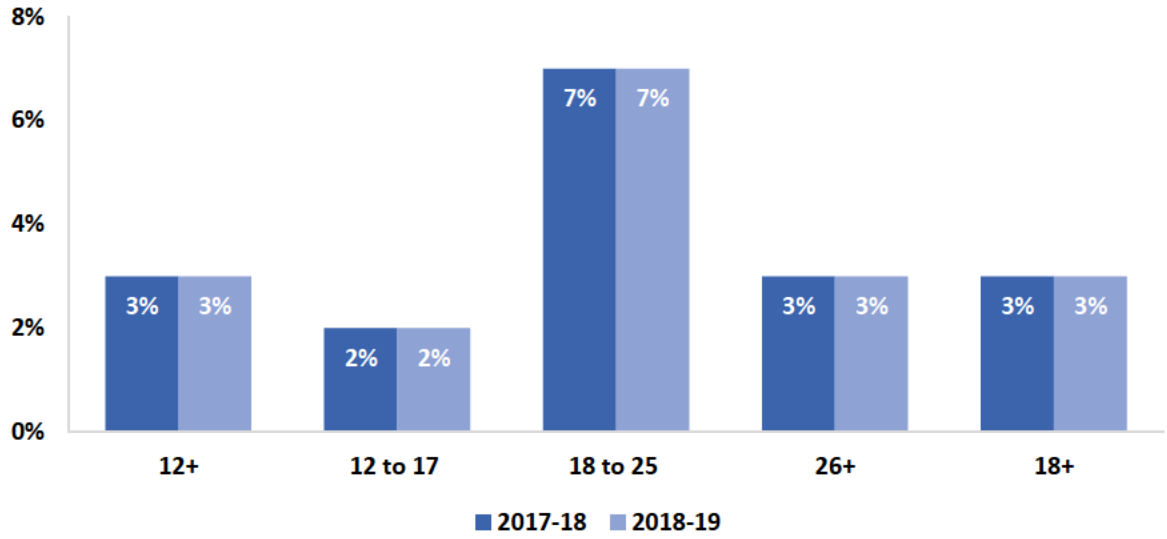
Indicator Description: This indicator reflects the percentage of individuals who used illicit drugs (other than marijuana) within the past month. Illicit drugs other than marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, methamphetamine, or prescription-type psychotherapeutics 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, 2017–18 to 2018–19

Summary: In 2018–19, the age group with the highest reported rate of illicit drug use was 18 to 25-year-olds (7%), followed by those 26 and older (3%), and youth 12 to 17 years old (2%). This is consistent with 2017-18 data.

Figure 21. Illicit drug use (other than marijuana)* in past month, by age group: 2017–18 to 2018–19



Source: NSDUH, 2017–18 to 2018-19

**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 stayed consistent since 2013–14. Rates among youth and adults 26 and older have increased slightly from 2016–17.

Other Illegal Drugs: *Cocaine Use Among Adults*

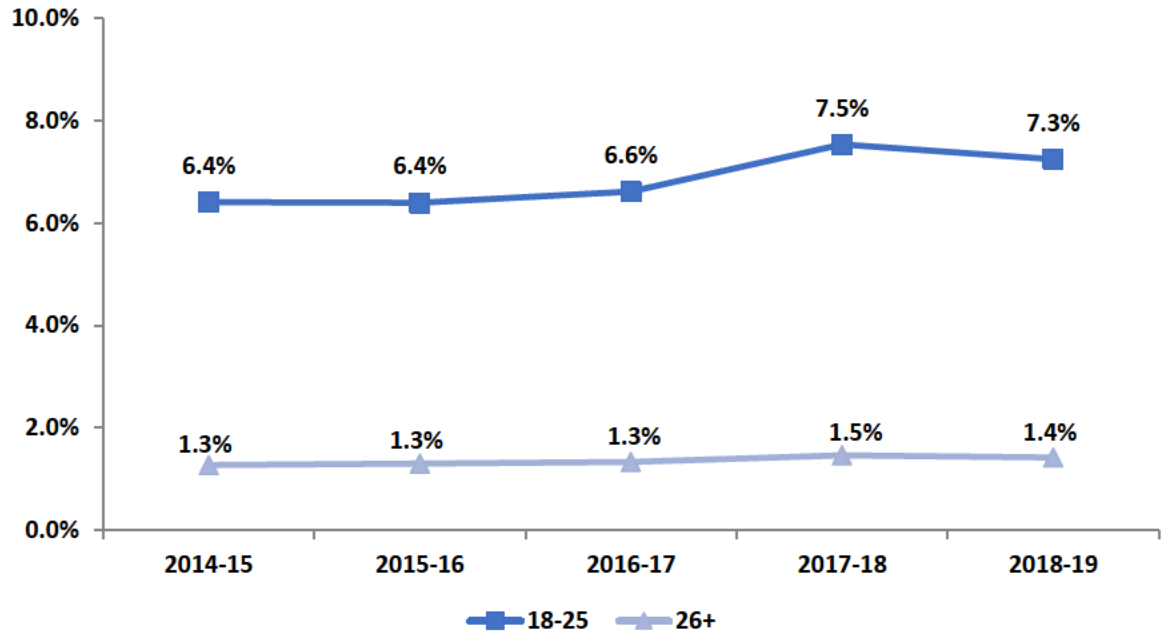
Indicator Description: This indicator illustrates the percentage of Maine residents who have used cocaine. The measure reflects rates of use within the past year.

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. Deaths involving cocaine have been rising in the state of Maine since 2014 as it is commonly mixed with other drugs such as fentanyl and heroin.[17]

Data Source(s): NSDUH, 2014–15 to 2018–19

Summary: In 2018–19, about seven percent of 18 to 25-year-olds and less than two percent of Mainers 26 and older reported they had used cocaine at least once in the past year. Adults 18 to 25 saw an increase in reported use from 2016–17 to 2017–18, but the trend declined subsequently in 2018–19.

Figure 22. Adults reporting cocaine use in past year, by age group: 2014–15 to 2018–19



Source: NSDUH, 2014–15 to 2018–19

- Rates among Mainers aged 18–25 have increased by about one percentage point from 2014–15 (6.4%) to 2018–19 (7.3%), while rates among those 26 years and older have remained consistent over the same period.

[17] Sorg, M.H. (2020). *Maine Drug Death Report for 2019*. Margaret Chase Smith Policy Center, University of Maine.

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

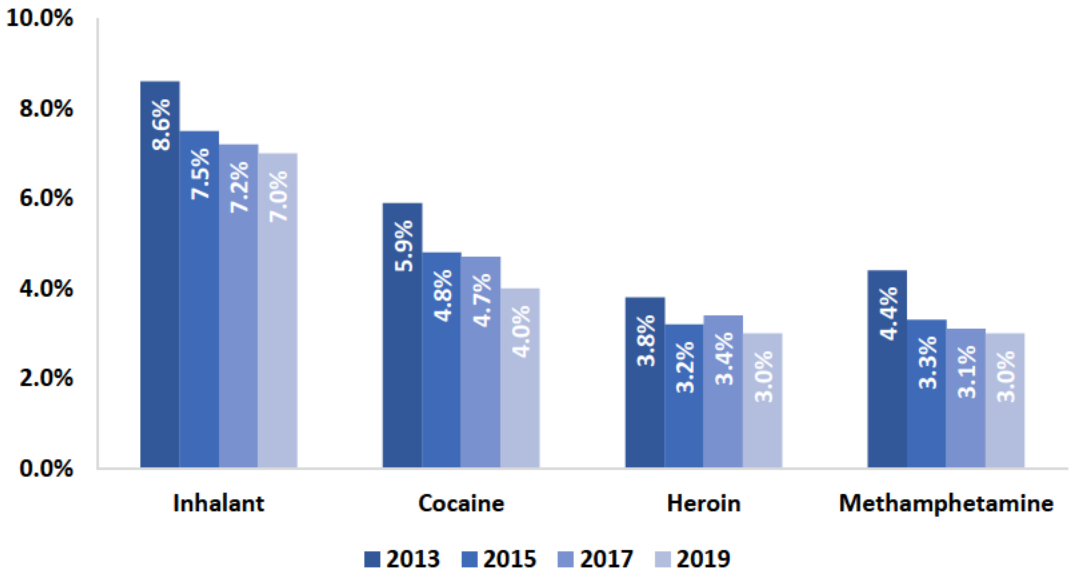
Indicator Description: This indicator depicts the percentage of high school students who reported having used inhalants, cocaine/crack, heroin, or methamphetamine in their lifetime. Inhalants include substances such as glue, aerosol spray cans, paints, or sprays.

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, 2013–2019

Summary: In 2019, seven percent of high school students reported ever using inhalants, four percent reported ever using cocaine, three percent reported ever using heroin, and three percent reported ever using methamphetamine. Although lifetime use for all four drugs has decreased from 2013 to 2019, rates have remained relatively stable in recent years.

Figure 23. High school students reporting inhalant, cocaine/crack, heroin, or methamphetamine use in their lifetime: 2013–2019



Source: MIYHS, 2013 to 2019

- From 2013 to 2019, the reported lifetime rate of inhalant use declined by two percentage points, lifetime cocaine/crack use decreased by two percentage points, lifetime heroin use decreased by one percentage point, and lifetime methamphetamine use decreased by one percentage point over the same period. There have been no increases in the use of these substances from 2013 through 2019.

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

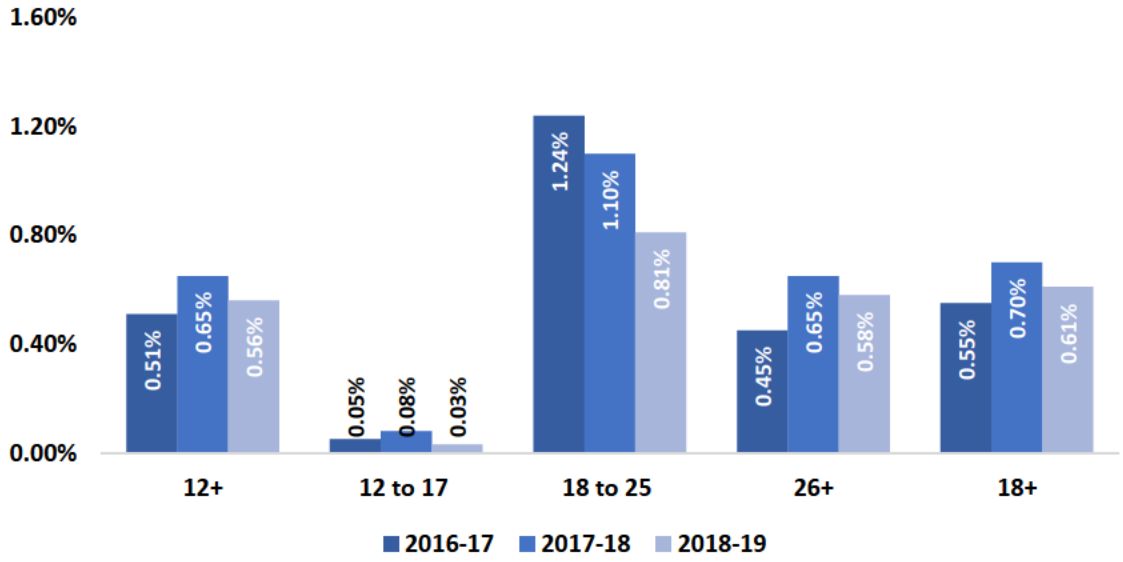
Indicator Description: This indicator depicts the percentage and approximate number of Mainers who reported heroin use in the past 12 months.

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, 2016–17 to 2018–19

Summary: Self-reported heroin use decreased for all age groups from 2017–18 to 2018–19. While reported rates of use in young adults 18 to 25 slightly decreased over the same period, this is still the group with the highest reported rate of heroin use.

Figure 24. Heroin use in the past year, by age group (percentage and approximate number in thousands): 2016–17 to 2018–19



Source: NSDUH, 2016–17 to 2018–19

- In 2018–19, 0.56 percent of Mainers aged 12 and older (approximately 7,000 residents) self-reported that they had used heroin within the past year. This represents a slight decline from 0.65 percent (about 8,000 residents in 2016–17). The highest prevalence continues to be observed among 18 to 25-year-olds, reporting a rate of .81 percent in the most recent reporting period. However, heroin use declined for all age groups in 2018–19 from the previous reporting period.

SUBSTANCE USE AND PREGNANCY

Substance Use and Pregnancy: *Substance Use During and Prior to Pregnancy*

Indicator Description: This indicator reflects the percentage of mothers who reported using substances before or while they were pregnant.

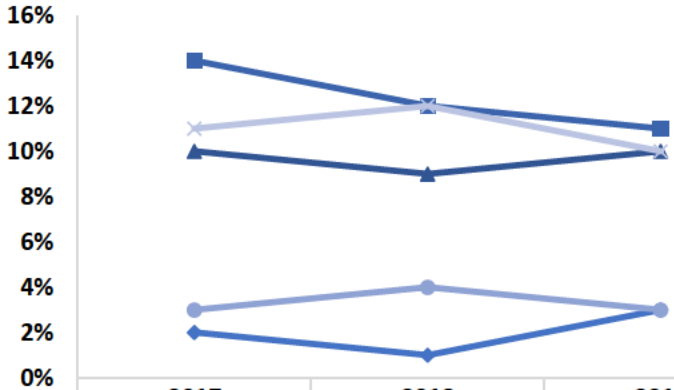
Why Indicator is Important: Exposure to alcohol can damage the fetus during all stages of pregnancy. Because the minimum quantity of alcohol required to produce those damaging effects is unknown, the American Academy of Pediatrics recommends complete abstinence from alcohol. Babies born to mothers who 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.[18] 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, 2015–2019

Summary: In 2019, about one in 10 of women reported using cigarettes (11%), marijuana (10%) or alcohol (10%) while pregnant. The rate of cigarette use among pregnant women has been decreasing in recent years, while we observe an uptick in alcohol use. Prescription pain reliever use (for any reason) one month prior to being pregnant has been around three and four percent since 2015. E-cigarette use during the last trimester has started to increase, rising from one to three percent reporting such use since 2016. Younger mothers and mothers with less education were more likely to report traditional cigarette use during their third trimester. Nearly one-third of women who had less than a high school diploma reported using cigarettes during their last trimester.

[18] Satcher, D., Thompson, T. G., & Koplan, J. P. (2002). Women and smoking: a report of the Surgeon General. *Nicotine & tobacco research: official journal of the Society for Research on Nicotine and Tobacco*, *4*(1), 7–20. Retrieved 6/28/2021 from https://academic.oup.com/ntr/article-abstract/4/1/7/1058982?redirectedFrom=PDF.

Figure 25. Women reporting substance use before or during pregnancy, by substance type: 2015–2019

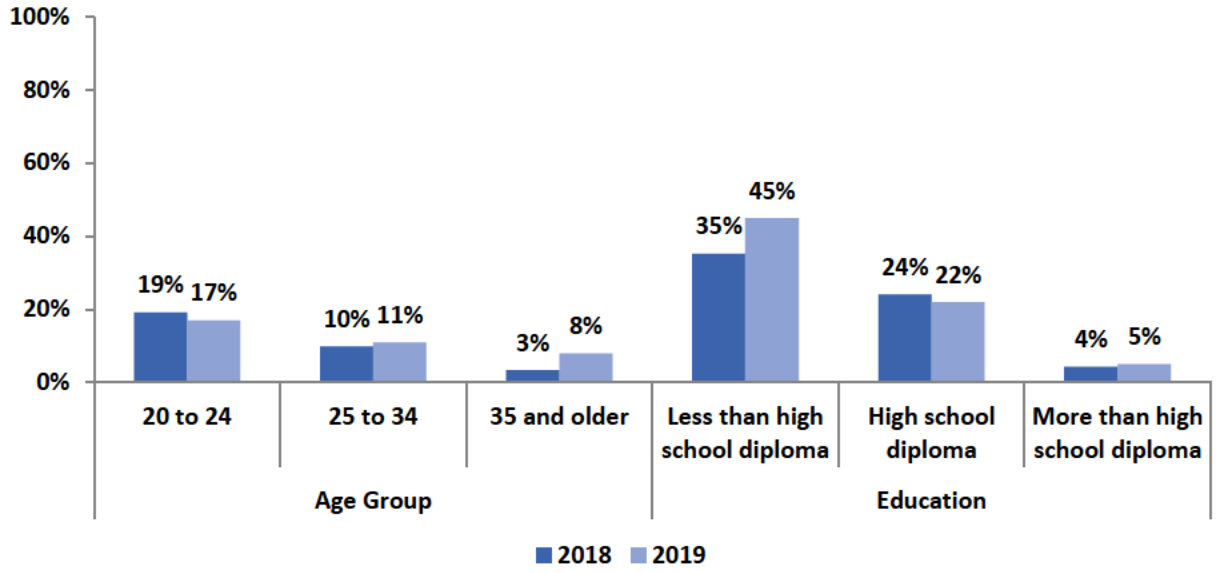


	2017	2018	2019
Alcohol last trimester	10%	9%	10%
Cigarettes last trimester	14%	12%	11%
E-cigarettes last trimester	2%	1%	3%
Prescription pain reliever 1 month before pregnanacy	3%	4%	3%
Marijuna during pregnancy	11%	12%	10%

Source: PRAMS, 2015–19

- In 2019, 11 percent of women who recently had given birth reported smoking at least one cigarette during their last trimester, and 10 percent reported using marijuana at least once during any time throughout their pregnancy. Cigarette use rates among this population have declined in recent years, while marijuana usage has remained stable.
- Between 2015 and 2019, alcohol use has increased slightly from six to 10 percent. Prescription pain reliever use (for any reason) one month prior to pregnancy has been stable around during this same period, ranging from three to four percent. E-cigarette use during the last trimester has also increased slightly from one to three percent.

Figure 26. Women reporting cigarette use during last trimester of pregnancy, by age and education: 2018–2019*



Source: PRAMS, 2018 to 2019

**Due to small sample sizes, reliable estimates are not available for the age group 19 and under*

- Regarding level of education achieved, in both 2018 and 2019, cigarette use rates during the last trimester were highest among those with less than a high school diploma, followed by those with only a high school diploma. As for age, rates of cigarette use were highest among women aged 20 to 24 (17%), followed by 25 to 34-year-olds (11%). Note: The sample size was too small to produce a reliable estimate for cigarette use among those 19 and under in 2018 and 2019.

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Consequences Resulting from Substance Use and Misuse

Consequences are defined as the social, economic, and health problems associated with the use of substances such as alcohol, tobacco, marijuana, prescription, and illicit drugs. While it is important to understand the rate of substance use consumption, information on the effects of that use on individuals and communities can be derived from what has come to be called "consequence" data. Examples of these include illnesses related to alcohol and other drug use, drug overdose death, property, and personal crimes, driving accidents, poisonings, and suicides.

Risky alcohol use continues to be problematic for Mainers, particularly among youth and young adults. However, the consequences related to use were more variable in 2020. Even though the overall number of motor vehicle crashes decreased from 2019 to 2020, the portion involving alcohol/drugs increased from four to five percent. Arrests related to operating under the influence for adults and liquor law violations among youth both decreased in 2020. Additionally, in 2020, the rate of alcoholic cirrhosis-related deaths continued to increase by one death per 100,000 people. Deaths related to alcoholic cirrhosis continue to be substantially higher among men than women.

These mixed outcomes are likely a result of COVID-19 state-mandated social distancing, business closures, and limits on in-person service, the decreased volume of people leaving their home to drink at a bar or restaurant. As Mainers were driving less frequently, they were also likely consuming more alcohol at home. This idea is explored further in terms of contributing factors and retail alcohol sales.

For the past several years, consequences arising from synthetic opiates (*e.g.,* prescription pain relievers) have declined as overall consumption of pain relievers has declined. However, consequences related to illicit opioids (*e.g.,* heroin, non-pharmaceutical fentanyl) have become more prominent. Illicit drug overdose deaths continue to outnumber overdoses related to pharmaceuticals (322 pharmaceutical-related deaths compared to 358 illicit drug-related deaths). Non-pharmaceutical fentanyl was involved in 67 percent of drug deaths in 2020 and is the most commonly observed drug in drug deaths by far. Following nonpharmaceutical fentanyl is cocaine (23%), pharmaceutical opioids (23%), ethanol/alcohol (22%), benzodiazepines (17%), and heroin/morphine (11%). Most overdose deaths continue to occur among Mainers between ages 26 and 49 and involve more than one substance.

While the overall number of reported alcohol related EMS responses decreased in 2020, alcohol continues to be the most common substance for EMS overdose response and Emergency Department (ED) visits. The greatest number of alcohol incidents by both EMS responses and ED visits is seen in older adults aged 35 to 54, and males were more likely than females to be admitted to the ED for substance use regardless of the substance.

However, the greatest number of marijuana and opioid ED visits in 2020 were observed in young adults (18 to 25 years). In 2020, there were 5,632 marijuana related emergency department visits: a 21% increase from 2019. Consequently, the highest rates of opioid and

non-opioid overdose EMS responses were among 25 to 34-year-olds. As opioid EMS responses have increased, it is not surprising that the number of naloxone incidents have also increased. EMS overdose responses related to alcohol or opioids continue to be twice as common among males, and in 2020, nearly seven out of 10 individuals receiving naloxone by EMS were male.

As Maine and the Northeast grapple with the opioid epidemic, the SEOW continues to monitor other emerging drugs and trends as well. In 2020, the most common substance involved in drug trafficking investigations conducted by the Maine Drug Enforcement Agency (MDEA) was heroin; it was also the first time since 2016 that cocaine investigations dropped below 200 per year. However, total trafficking investigations have decreased over the last five years.

The type of investigation related to methamphetamines has also changed over the last few years. Since 2018 investigations for methamphetamine manufacturing have decreased by 60 percent while investigations into sales has increased by 20 percent. This may be due to more methamphetamines being trafficked into the state, whereas less methamphetamine is being made in the state of Maine; this has in turn led to fewer manufacturing arrests and lab incidents than in previous years.

Substance use during pregnancy can cause a myriad of short- and long-term developmental deficits to the fetus and child. In 2020, 903 live births in Maine were reported to involve infants who had been exposed and/or affected by substances; this accounted for eight percent of the live births in Maine. After a decline from 2016 to 2019, the number of substance-exposed infants increased in 2020. This is not an unanticipated consequence as the rate of substance use for pregnant women increases.

CRIMINAL JUSTICE INVOLVEMENT

Criminal Justice Involvement: *Arrests Related to Alcohol*

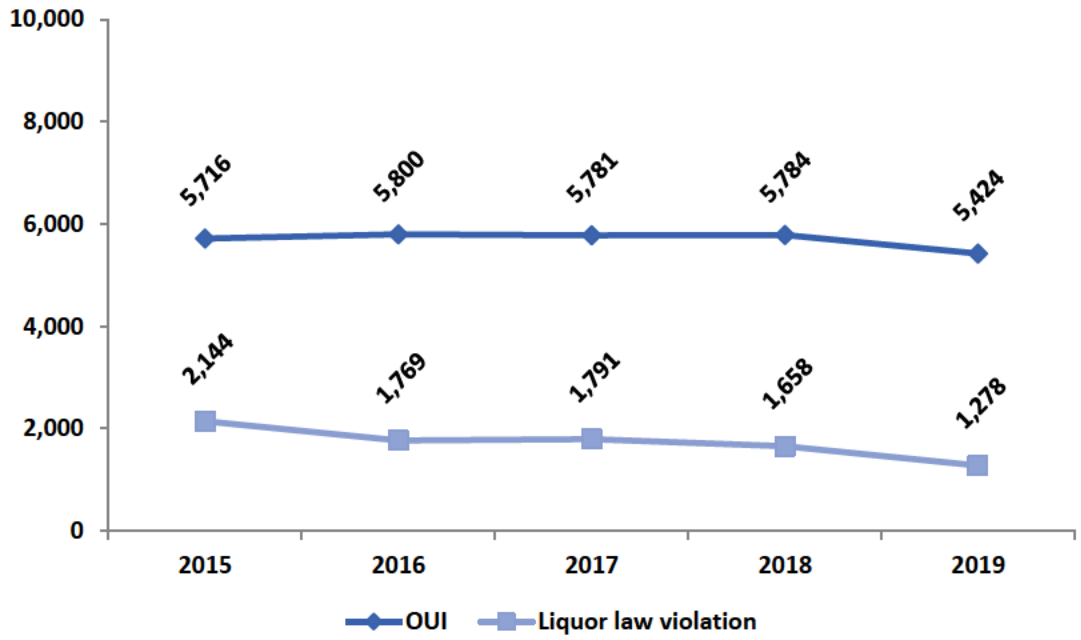
Indicator Description: This indicator reflects arrests related to alcohol and includes operating under the influence (OUI) and liquor law violations. The data includes those who were released without having been formally charged.

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. Arrest rates are expected to increase with increased enforcement regardless of whether criminal behavior changes.

Data Source(s): DPS-UCR, 2015–2019

Summary: The number of OUI arrests and liquor law violations (excluding OUIs) have decreased over the last five years. Liquor law violations among those under 21 have decreased considerably from 2015 to 2019 as have OUI violations among drivers 21 to 29. While adults aged 21 to 29 continue to receive the highest number of OUI arrests, the increase observed among Mainers ages 30 to 39 for OUI arrests in 2018 decreased to previous rates in 2019.

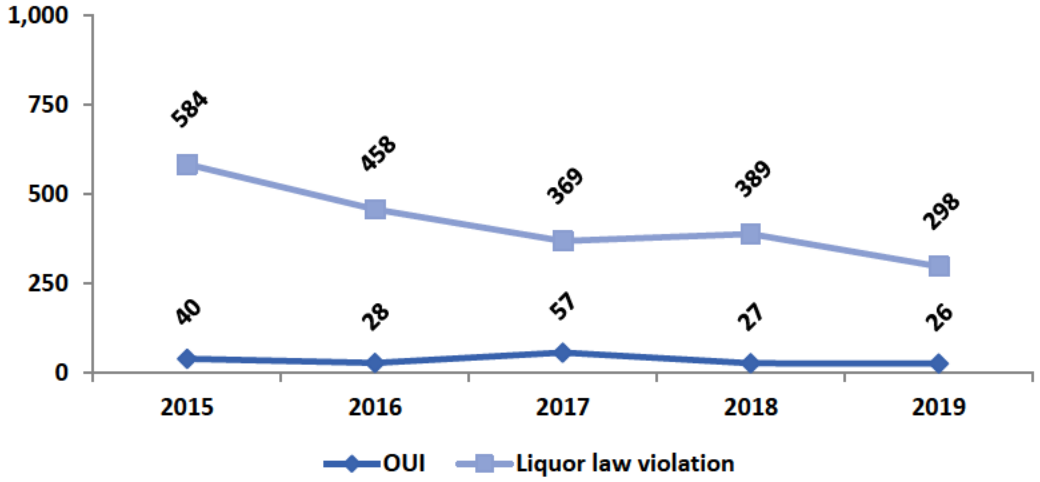
Figure 27. Adult arrests (18+ years old) related to alcohol, by arrest type: 2015–2019



Source: DPS-UCR, 2015 to 2019

- In 2019, there were 5,424 adult arrests for OUIs compared to 1,278 arrests for breaking liquor laws. The number of adult OUI arrests declined from 2018 to 2019, whereas adult liquor violations have steadily declined since 2015.

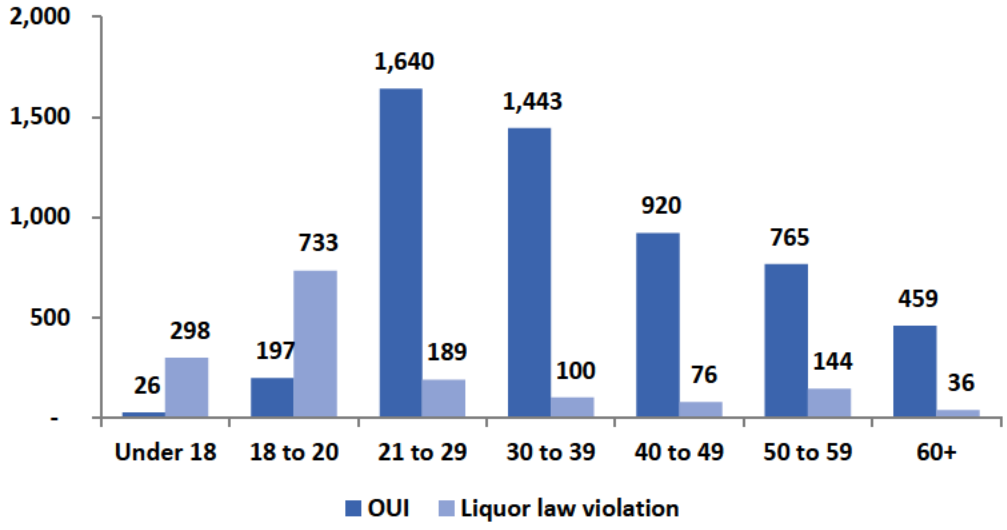
Figure 28. Juvenile arrests (<18 years old) related to alcohol, by arrest type: 2015–2019



Source: DPS-UCR, 2015 to 2019

- Alcohol-related arrests among juveniles differ from those of adults in that the majority of their arrests are related to liquor law violations. In 2019, there were 298 juvenile arrests for breaking liquor laws and 26 for OUI arrests. Juvenile liquor law violations decreased by 23 percent from 2018 to 2019. Juvenile OUI arrests for 2019 remained similar to the 2018 count, which is still more than a 30 percent decrease from 2015.

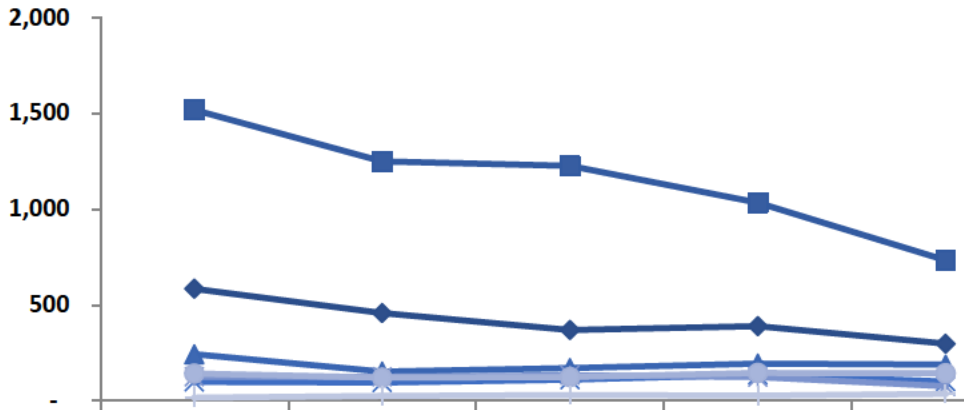
Figure 29. Arrests related to alcohol, by age group: 2019



Source: DPS-UCR, 2019

- In 2019, as is also observed in previous years, juveniles are more likely to be arrested for liquor law violations while adults are more likely to be arrested for OUI.

Figure 30. Arrests related to liquor law violations, by age group: 2015 to 2019

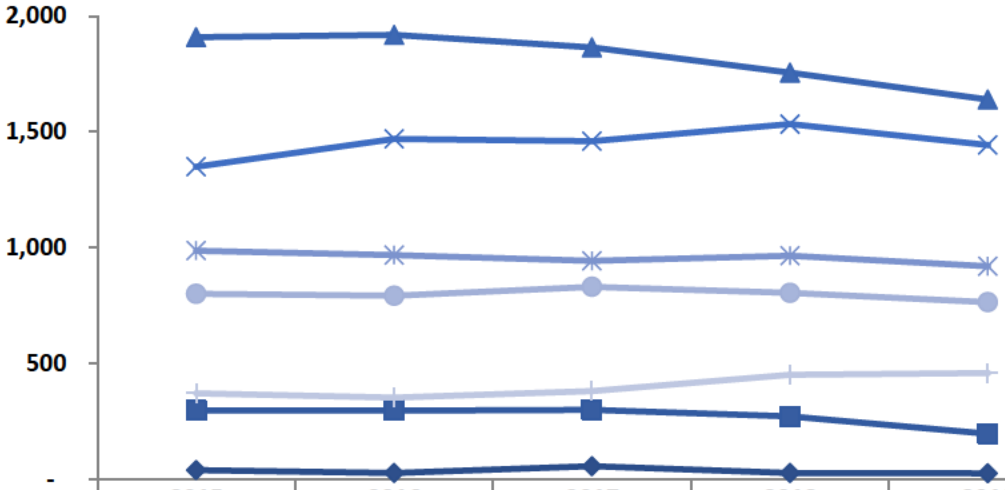


	2015	2016	2017	2018	2019
Under 18	584	458	369	389	298
18 to 20	1,518	1,250	1,225	1,033	733
21 to 29	243	152	170	193	189
30 to 39	99	95	110	136	100
40 to 49	126	126	133	124	76
50 to 59	142	121	123	145	144
60+	16	25	30	27	36

Source: DPS-UCR, 2015 to 2019

- 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 2019, there were 298 liquor law violations for people under 18 and 733 for people between the ages of 18 to 20. In comparison, there were 189 liquor law violations for those between the ages of 21 and 29, and even fewer such violations among older age groups.

Figure 31. Arrests related to OUI, by age group: 2015 to 2019



	2015	2016	2017	2018	2019
Under 18	40	28	57	27	26
18 to 20	298	297	300	272	197
21 to 29	1,909	1,919	1,865	1,756	1,640
30 to 39	1,350	1,470	1,460	1,534	1,443
40 to 49	987	968	944	965	920
50 to 59	801	793	831	805	765
60+	371	353	381	452	459

Source: DPS-UCR, 2015 to 2019

- A different trend can be seen in OUI violations. In 2019, there were 26 arrests for those under the age of 18 and 197 for 18 to 20-year-olds, compared to 1,640 OUIs for those between the ages of 21 and 29 (more than any other age group). The number of OUI violations for other age groups appear to be similar across the review period. It is worth noting that the number of OUIs generally decreases with age.

Criminal Justice Involvement: *Arrests Related to Drugs*

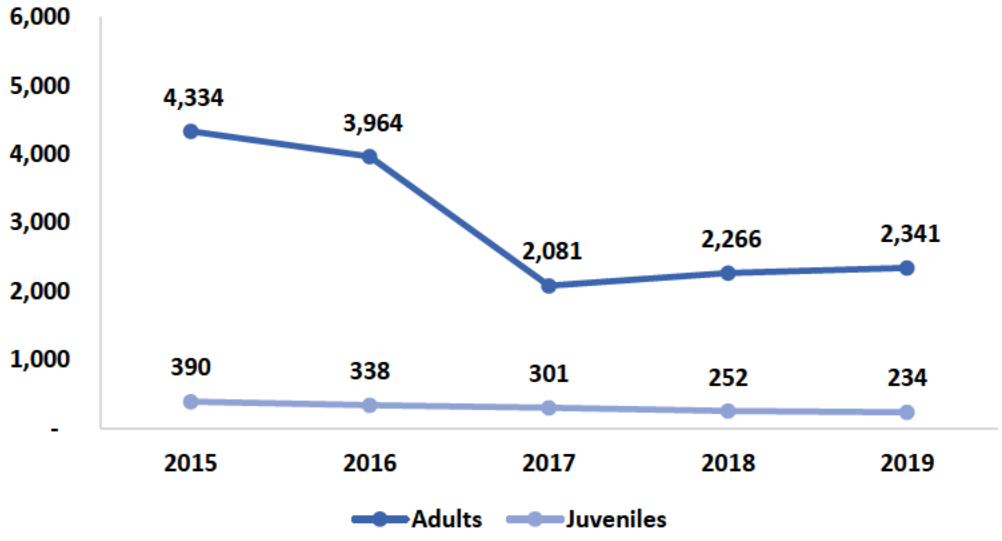
Indicator Description: This indicator reflects the number of arrests made by Maine law enforcement agencies that were related to drugs and includes possession only. Categories for drug arrests are rather broad. "Opium, cocaine, and derivatives" arrests mostly encompass heroin/morphine and cocaine/crack. "Synthetic narcotic" arrests refer mostly to prescription drug opiates. "Other dangerous non-narcotics" include but are not limited to benzodiazepines, steroids, stimulants, synthetic cannabis, bath salts, methamphetamine, hallucinogens, and barbiturates.

Why Indicator is Important: Arrest rates for 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, 2015–2019

Summary: After observing a dramatic drop from 2016 to 2017, arrests related to adult possession of drugs have steadily increased from 2017 to 2019. In 2019 more than one in three drug offense arrests for possession were for other dangerous non-narcotics. The number of arrests due to marijuana possession has continued to decrease. From 2017 to 2018, there was a substantial increase (25%) in opium, cocaine, and derivative possession arrests.

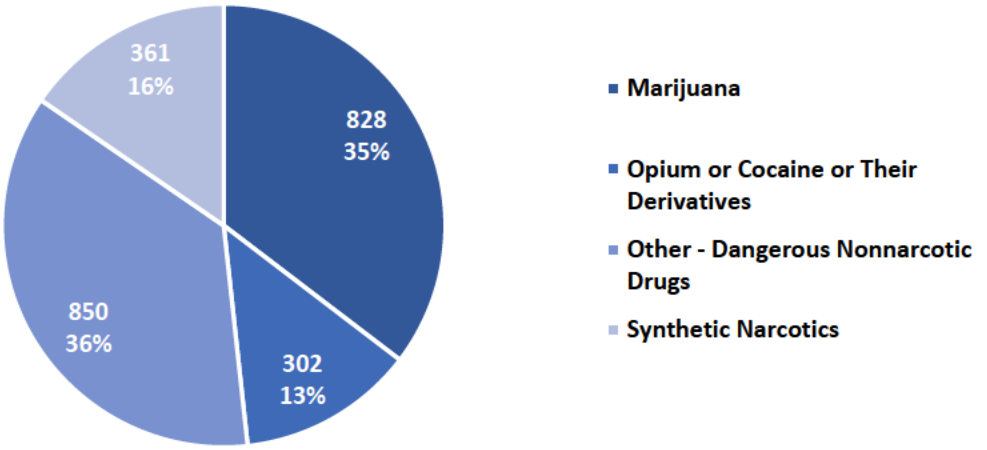
Figure 32. Law enforcement drug offense arrests for possession, by drug age group: 2015–2019



Source: DPS-UCR, 2015 to 2019

- The total number of arrests for drug possession increased by eight percent from 2017 (2,382) to 2019 (2,575). Juvenile drug possession arrests decreased by 40 percent from 2015 (390) to 2019 (234). After observing a dramatic drop from 2016 to 2017, drug possession arrests for adults steadily increased from 2017 (2,081) to 2019 (2,341).

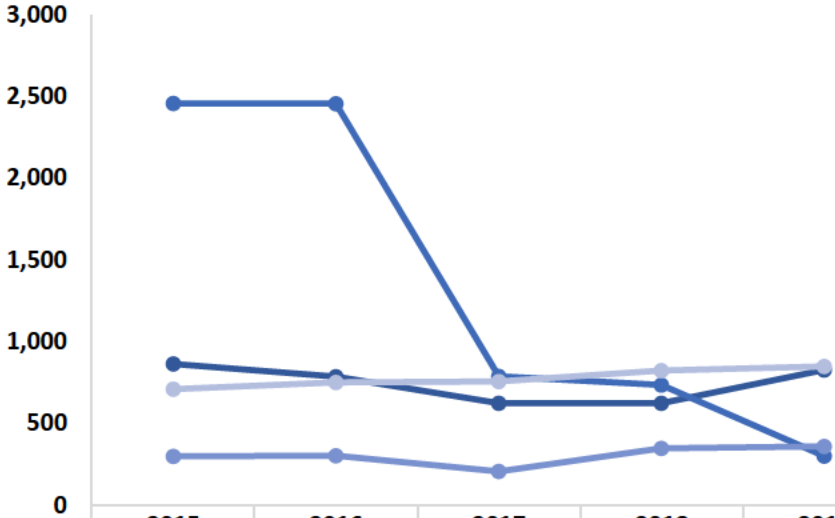
Figure 33. Law enforcement drug arrests for possession by type: 2019



Source: DPS-UCR, 2019

- Other dangerous non-narcotics comprised the largest portion of drug arrests for possession in 2019 at 36 percent, followed closely by marijuana at 35 percent, opium, cocaine, or their derivatives at 13 percent, and synthetic narcotics at 16 percent.

Figure 34. Local law enforcement drug offense arrests (all ages) for possession, by drug type: 2015–2019



	2015	2016	2017	2018	2019
Opium, cocaine, and derivatives	865	788	626	625	828
Marijuana	2,458	2,457	789	736	302
Synthetic narcotics	300	305	208	350	361
Other dangerous non-narcotics	711	752	759	825	850

Source: DPS-UCR, 2015 to 2019

- From 2015 to 2019, arrests for marijuana possession have decreased by 88 percent. Conversely, there was an increase in synthetic narcotic and other dangerous non-narcotic arrests. While arrests for opium, cocaine, and derivative possession declined between 2015 and 2018, the rate increased again drastically in 2019 by 32 percent.

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

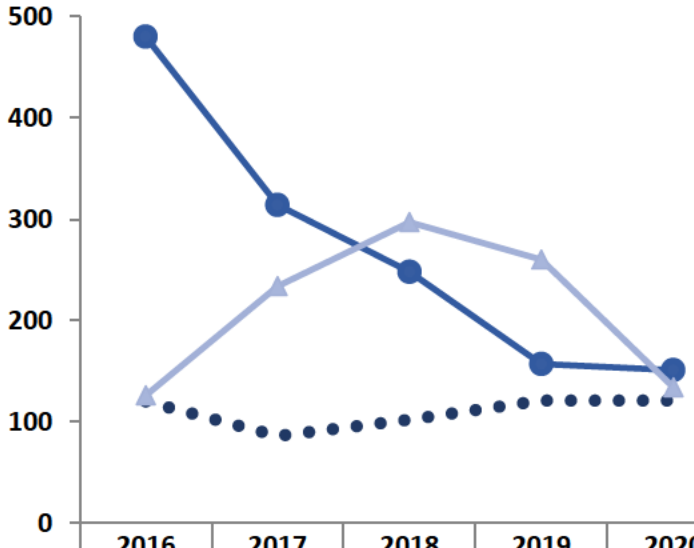
Indicator Description: This indicator reflects trafficking investigations made by Maine's Drug Enforcement Agency, by drug type. The MDEA through its regional multi-jurisdictional task forces is the lead state agency in confronting drug trafficking crime.

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, 2016–2020

Summary: In 2020, the most common substance involved in drug trafficking investigations was heroin, which was involved in 151 investigations. However, heroin investigations have been decreasing since 2016. This is the first time since 2016 that cocaine investigations dropped below 200 per year. There was also a decrease of 60 percent in methamphetamine manufacturing investigations from 2019 (38) to 2020 (15); however, there was a 20 percent increase in investigations related to the sale of methamphetamine during this time frame.

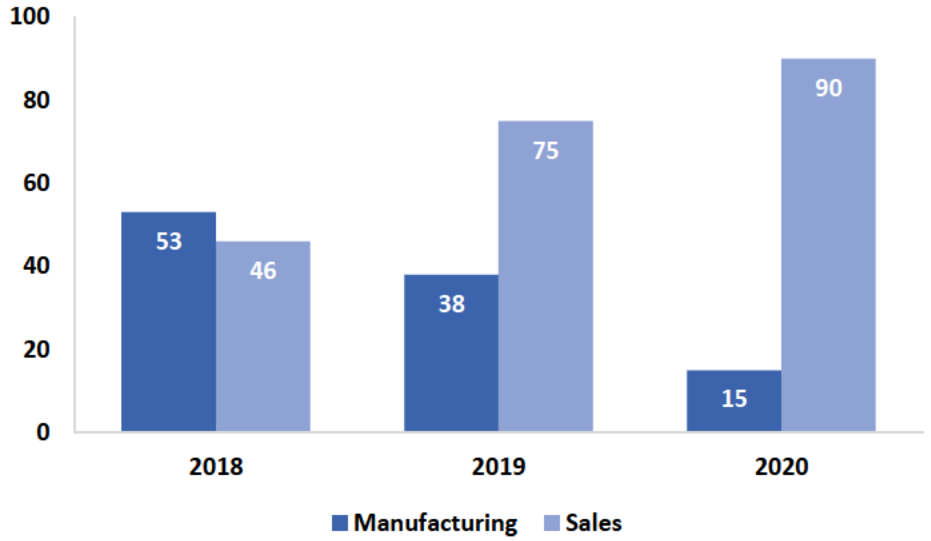
Figure 35. MDEA drug trafficking investigations, by drug type: 2016–2020



	2016	2017	2018	2019	2020
Heroin	480	314	248	157	151
Other Opiates	120	86	102	121	121
Cocaine	126	234	297	260	134

Source: MDEA, 2016 to 2020

Figure 36. MDEA methamphetamine sales and manufacturing investigations: 2018–2020



Source: MDEA, 2018 to 2020

- There was a decrease of 60 percent in methamphetamine manufacturing investigations from 2019 to 2020.
- From 2019 to 2020, there was a 20 percent increase in methamphetamine sale investigations.
- Although not explicitly shown, there were eight methamphetamine lab/dumpsite-related responses by the MDEA in 2020, which is a marked decrease from 51 such responses in 2018.

Criminal Justice Involvement: *Pharmacy Robberies*

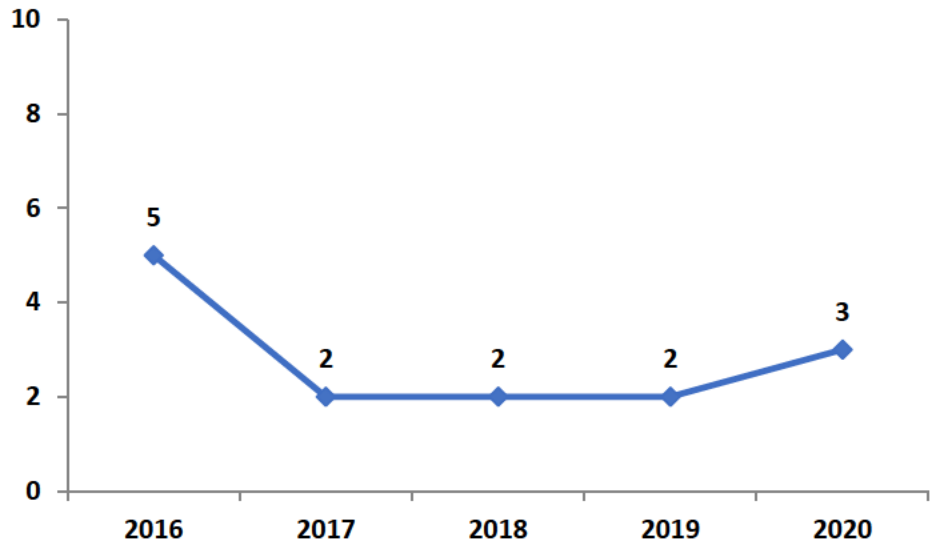
Indicator Description: This indicator reflects the number of pharmacy robberies in the state of Maine as tracked by the Maine Drug Enforcement Agency.

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, 2016–2020

Summary: Pharmacy robberies have decreased from 2016 (55 robberies) and have stayed low since 2017.

Figure 37. Number of pharmacy robberies in Maine: 2016–2020



Source: MDEA, 2016 to 2020

- In 2020, three pharmacies were robbed. This number is similar to previous years and represents a 40 percent decrease from 2016.

MOTOR VEHICLE CRASHES INVOLVING ALCOHOL/DRUGS

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

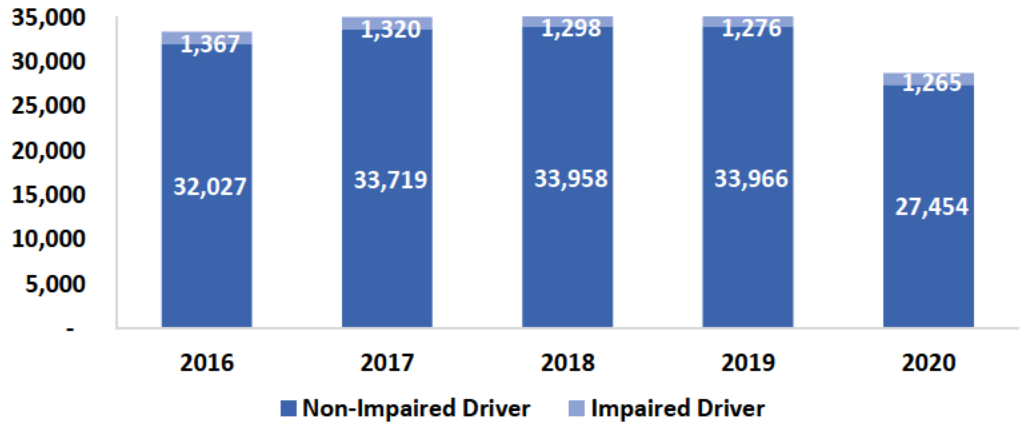
Indicator Description: This indicator shows the number of motor vehicle crashes in which alcohol or other substances were a factor, meaning at least one driver had consumed medication, drugs, or alcohol.

Why Indicator is Important: Nationally, impaired driving crashes account for 28 percent of all traffic-attributed deaths. In Maine, the percentage is higher. Impaired driving crashes account for 32 percent of all traffic-attributed deaths.[19] In 2018, 12 million Americans aged 16 and older reported driving under the influence of marijuana and 2.3 million reported driving under the influence of illicit drugs other than marijuana during the previous 12 months.[20]

Data Source(s): MDOT, BHS, 2016–2020

Summary: The annual number of motor vehicle crashes has decreased by 18.5 percent from 2019 to 2020. However, the proportion of alcohol- and/or drug-related motor vehicle crashes to all motor vehicle crashes has remained relatively stable during the same period, at 3.6 percent in 2019 to 4.4 percent in 2020.

Figure 38. Number of motor vehicle crashes, by whether they involved impaired drivers: 2016–2020



Source: MDOT, BHS, 2016 to 2020

- The total number of motor vehicle crashes decreased by 14 percent from 2016 (33,394) to 2020 (28,719). The number of crashes involving impaired drivers also decreased from 2016 (1,367) to 2020 (1,265). However, it should be noted that the proportion of crashes related to alcohol and/or drugs has remained stable at around four percent.

[19] National Highway Traffic Safety Administration. (2019). 2019 Alcohol-Impaired Driving Fatalities: Maine, US, and Best State. U.S. Department of Transportation, Washington, DC. Available at: https://cdan.nhtsa.gov/tsftables/National%20Statistics.pdf

[20] U.S. Centers for Disease Control and Prevention. (2020). Impaired Driving: Get the Facts. Retrieved 6/25/21 from https://www.cdc.gov/motorvehiclesafety/impaired_driving/impaired-drv_factsheet.html.

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

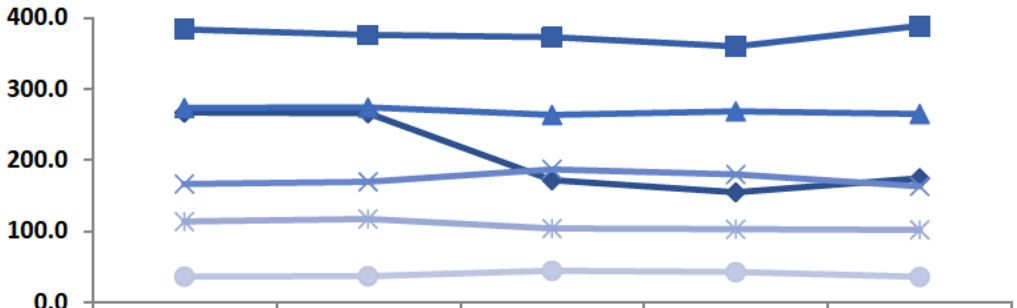
Indicator Description: This indicator presents the number of motor vehicle crashes involving impaired drivers under the influence of alcohol and/or drugs/medication, relative to the licensed population. The rate per 100,000 allows the frequency with which an occurrence emerges within a population over time to be visualized. 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, 2016–2020

Summary: The age group with the most alcohol or drug related crashes continues to be those aged 21–24, with 388.8 crashes related to alcohol and drugs occurring in every 100,000 licensees. The rate of alcohol- and drug-related crashes for Mainers 55 and older continued to decline in 2020, with 35.5 per every 100,000 licensees. However, crashes for 16 to 20-year-olds saw a 13 percent increase from 2019 to 2020 in alcohol- and drug-related crashes.

Figure 39. Alcohol/drug-related motor vehicle crash rate per 100,000 licensees, by age group: 2016–2020



	2016	2017	2018	2019	2020
16-20	266.7	265.7	171.6	154.4	174.3
21-24	383.9	376.2	373.0	359.8	388.8
25-34	273.2	274.0	263.4	268.3	264.6
35-44	165.9	169.1	186.7	179.7	162.9
45-54	113.3	116.8	103.2	102.5	101.5
55+	35.7	36.2	44.0	42.0	35.5

Source: MDOT, BHS, 2016 to 2020

- In 2020, Maine drivers ages 21 to 24 had the highest alcohol-related crash rate (388.8 per 100,000 licensees). The second-highest rates of alcohol/drug-related motor vehicle crashes in 2019 were observed among drivers between the ages of 25 to 34 (264.6 per 100,000 licensees), followed by drivers ages 16 to 20 (174.3 per 100,000 licensees).

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

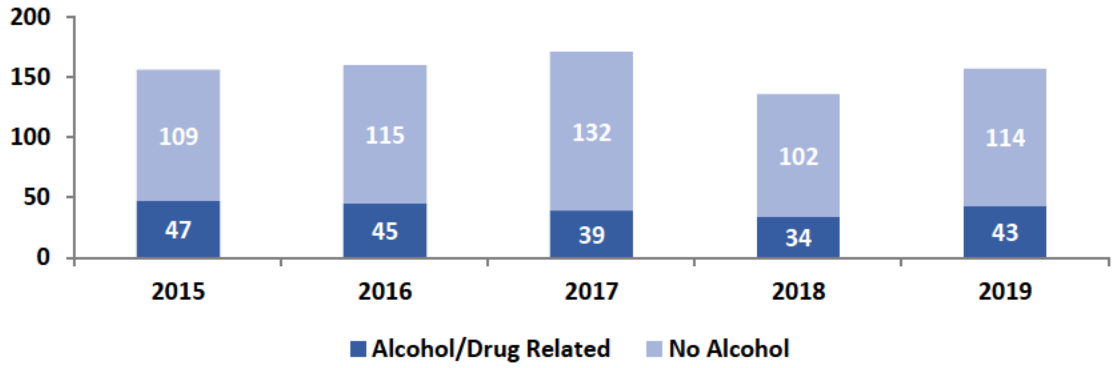
Indicator Description: This indicator presents the number of fatal motor vehicle crashes where alcohol was a factor in the crash. This means that at least one driver was under the influence of drugs/medication. This indicator includes total fatalities of anyone (*e.g.,* pedestrian, passenger) involved 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. Research has also shown that people mix various substances including alcohol which have a number of different effects on the individual's cognitive ability to perform operations while driving, such as swerving or slowed reaction times. Driving is a responsibility and when someone consumes alcohol or drugs, it becomes exponentially more dangerous for the driver, passengers, and others on the road and increases the likelihood of crashes and associated negative consequences, such as death.[21]

Data Source(s): MDOT, BHS, 2015–2019

Summary: Of the fatal motor vehicle crashes occurring in 2019, 27 percent involved alcohol and/or drugs. There were 157 fatal motor vehicle crashes in 2019 and 43 involved an impaired driver.

Figure 40. Number of fatal motor vehicle crashes, by whether they involved impaired drivers: 2015–2019



Source: MDOT, BHS, 2015 to 2019

**2018 and 2019 results are preliminary*

- The number of fatal crashes increased from 136 in 2018 to 157 in 2019, as did the percentage that involved impaired drivers (from 25% in 2018 to 27% in 2019).

[21] National Institute on Drug Abuse. (2019). *Drugged Driving DrugFacts*. Retrieved 7/1/21 from https://www.drugabuse.gov/publications/drugfacts/drugged-driving.

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.

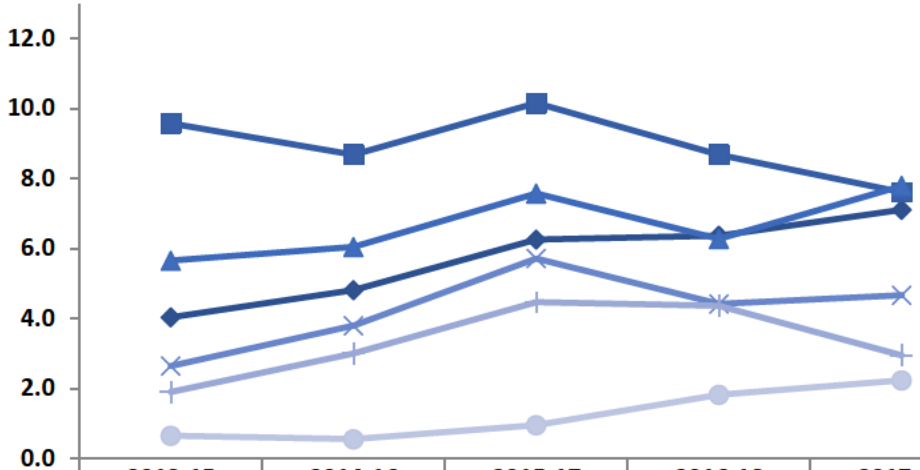
Why Indicator is Important: More than one in four of all motor vehicle crashes resulting in fatalities involve alcohol and/or drugs. The National Traffic Highway Safety Administration reports that approximately one-third of all traffic crash fatalities in the United States involve drunk drivers. In 2019, there were 10,142 people killed in these crashes. In fact, on average over the 10-year period from 2010–2019, more than 10,000 people died every year in drunk-driving crashes.[22]

Data Source(s): MDOT/BHS, 2013–15 to 2017–19

Summary: In 2017–19, the rate of alcohol/drug-related motor vehicle crash fatalities was highest among 25 to 34-year-olds, followed by 21 to 24-year-olds. This is the first period that 21 to 24-year-olds do not have the highest rate of alcohol/drug-related motor vehicle crash fatalities. Rates increased for all age groups with the exception of 21 to 24-year-olds and 45 to 54-year-olds, which both saw a decrease.

[22] National Highway Traffic Safety Administration. (2019). Alcohol-Impaired Driving Fatalities: Maine, US, and Best State. U.S. Department of Transportation, Washington, DC. Available at: https://cdan.nhtsa.gov/tsftables/National%20Statistics.pdf

Figure 41. Alcohol/drug-related motor vehicle crash fatality rate per 100,000 licensees, by age: 2013–15 to 2017–19



	2013-15	2014-16	2015-17	2016-18	2017-19
16-20	4.0	4.8	6.3	6.4	7.1
21-24	9.6	8.7	10.2	8.7	7.6
25-34	5.7	6.0	7.6	6.3	7.8
35-44	2.6	3.8	5.7	4.4	4.7
45-54	1.9	3.0	4.5	4.4	2.9
55+	0.6	0.6	1.0	1.8	2.2

Source: MDOT/BHS, 2013–15 to 2017–19

- For the first time in recent history, more impaired drivers age 25 through 34 had the highest rate of impaired driving fatalities (7.8 per 100,000), surpassing 21 to 24-year olds (7.6 per 100,000).
- Impaired driver fatality rates start to decrease at the age of 35, which is consistent with previous years.

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 (EMS) related to substance use from 2015 to 2019. These data are based on the primary impression (involving an intoxicant) given by the emergency responder at the scene. Alcohol data is trended over the years. Opioid and other drug overdose data is tracked differently starting in 2018, thus cannot be trended with previous years. Opioid overdoses include those that presented with and without a coma. Opioid overdoses can involve either pharmaceutical (*e.g.,* Oxycodone) or illicit (*e.g.,* heroin) opioids.

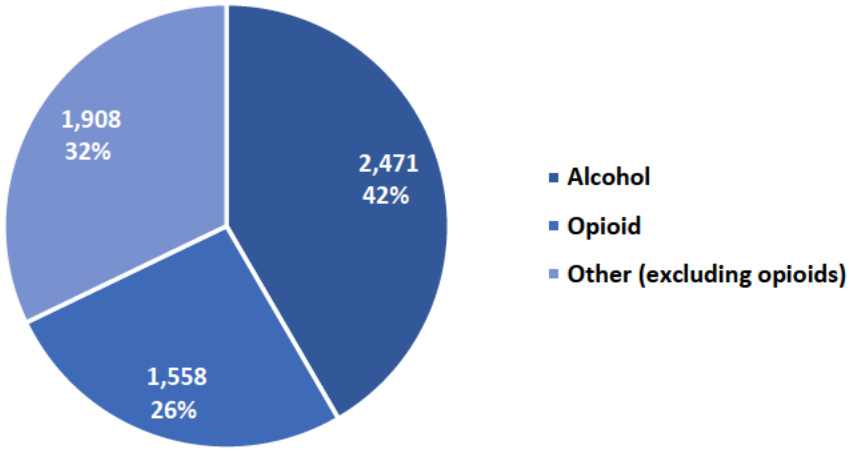
Why Indicator is Important: Overdosing on a substance can cause serious physical harm resulting in hospitalization and even death. Responding to overdoses also uses valuable EMS resources. Overdose prevention data from EMS records have been used for surveillance of opioid overdoses on a local level. Monitoring nonfatal overdose events using EMS records provides a more complete evaluation of the potential injury burden and a means of benchmarking for communities and EMS agencies to better address the evolving opioid epidemic.[23]

Data Source(s): EMS, 2015–2020

Summary: The number of alcohol overdoses decreased by 35 percent from 2019 (3,809) to 2020 (2,471). In 2020, a little under half of EMS substance use related responses were for alcohol, about a third were related to other drugs, excluding opioids, and nearly one in five were for opioids. In general, EMS overdose responses related to alcohol or opioids were twice as common among males. Rates of alcohol overdose responses were slightly higher among Mainers aged 18 to 24 but did not vary much among other adult age groups, while non-opioid and opioid responses were substantially higher among Mainers aged 25 to 34.

[23] Cash, R. E., Kinsman, J., Crowe, R. P., Rivard, M. K., Faul, M., & Panchal, A. R. (2018). Naloxone administration frequency during emergency medical service events—United States, 2012–2016. *Morbidity and Mortality Weekly Report*, *67*(31), 850. Retrieved 6/25/21 from https://www.cdc.gov/mmwr/volumes/67/wr/mm6731a2.htm.

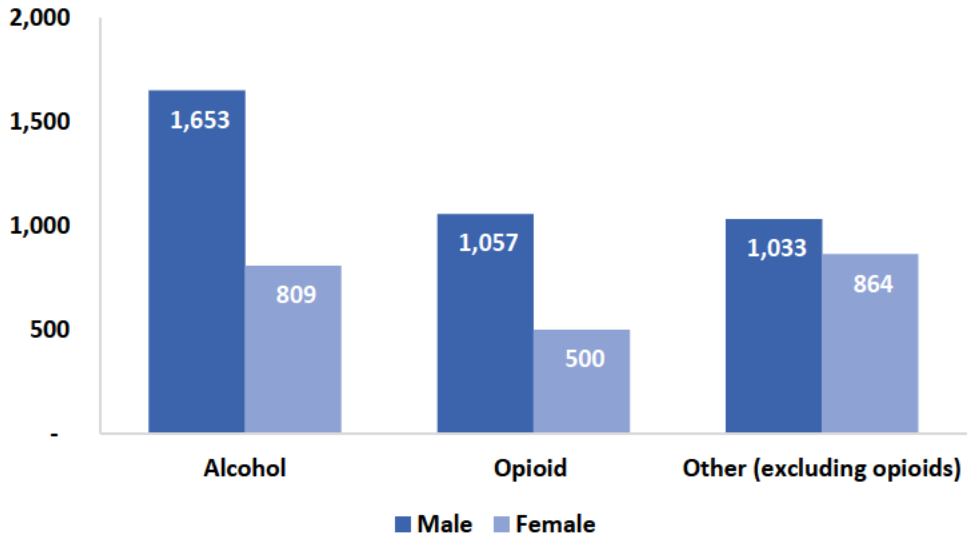
Figure 42. Substance use related EMS responses (based on primary impression) by substance type: 2020



Source: EMS, 2020

- Based on the primary impression of the EMS responder, there were 2,462(42%) responses related to alcohol, followed by 1,897 (32%) responses related to other drugs (excluding opioids) and 1,557 (26%) responses related to opioids.

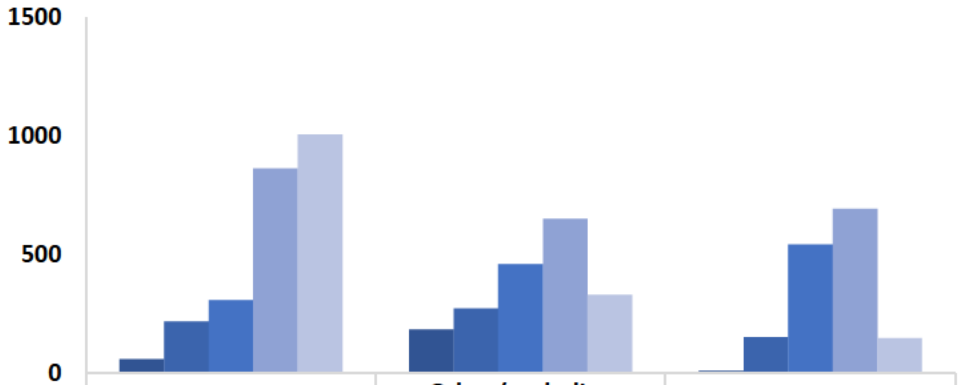
Figure 43. Number of substance use related EMS responses (based on primary impression), by substance type and gender: 2020



Source: EMS, 2020

- In 2020, there were twice as many alcohol overdose EMS responses among males (1,653) as compared to females (809). This is consistent with 2019 findings.
- Similar to alcohol, EMS overdose responses related to opioids were more than twice as common among males (1,057) as compared to females (500).
- There was little variation regarding gender with EMS overdose responses related to other drugs (excluding opioids).

Figure 44. Number of substance use related EMS responses (based on primary impression), by drug type and age group: 2020

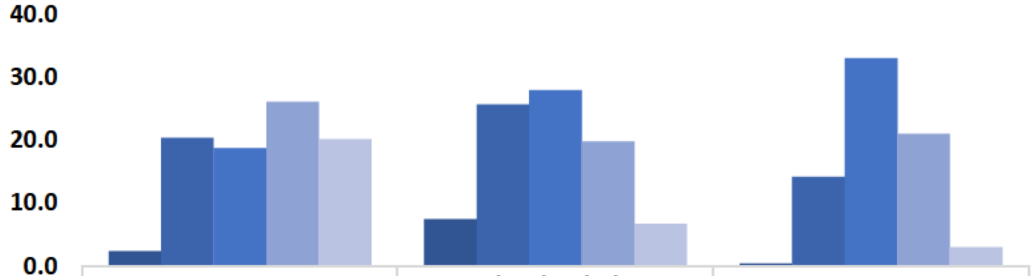


	Alcohol	Other (excluding opioids)	Opioid
under 18	60	185	11
18-24	218	274	152
25-34	309	460	544
35-54	863	651	693
55+	1006	331	148

Source: EMS, 2020

- In 2020, EMS overdose responses related to alcohol were most common among those 55 and older (1,006), followed by Mainers 35 to 54 (863), 25 to 34 (309), 18 to 24 (218), and those under 18 (60).
- EMS responses related to other drugs (excluding opioids) were most common among Mainers 35 to 54 (651), followed by 25 to 34-year-olds (460), the 55 and older population (331), 18 to 24-years-olds (274), and minors under 18 (185).

Figure 45. EMS substance use related response rate (per 10,000 residents), by age and overdose type: 2020

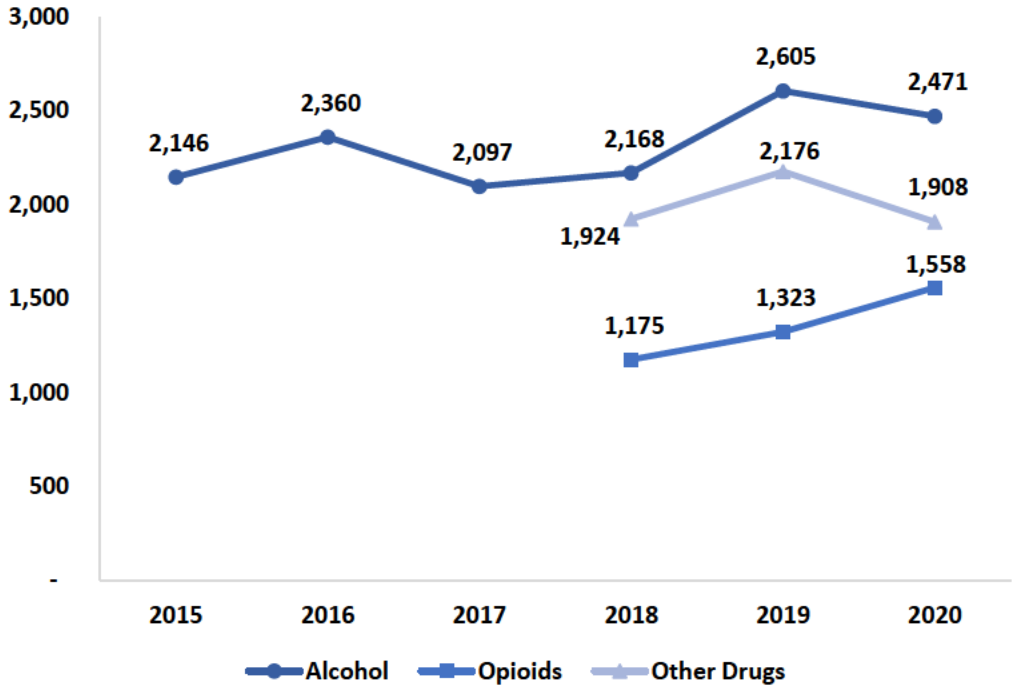


	Alcohol	Other (excludes opioids)	Opioid
under 18	2.4	7.5	0.4
18-24	20.4	25.7	14.2
25-34	18.8	28.0	33.1
35-54	26.1	19.8	21.0
55+	20.2	6.7	3.0

Source: EMS, 2020

- The EMS alcohol-related overdose response rate was highest among adults 35 to 54 in 2020 (26.1 per 10,000), with limited variation among other adult age groups.
- The highest rate of EMS responses related to an overdose of other drugs (excluding opioids) was observed among 25 to 34-year-olds with 28 responses per 10,000 residents; this rate was followed by 18 to 24-year-olds (25.7 per 10,000), and 35 to 54-year-olds (19.8 per 10,000).
- In 2020, the rate of EMS responses related to opioid drug overdoses was highest among Mainers 25 to 34 with 33.1 responses per 10,000 residents.

Figure 46. Number of EMS responses (based on primary impression), by substance type: 2015–2020



Source: EMS, 2015 to 2020

- Alcohol overdoses continue to be the most common EMS responses with 2,471 such responses in 2020. EMS responses related to opioids observed 33 percent increase from 2018 (1,175) to 2020 (1,558).

Overdoses and Related Deaths: *Syndromic Surveillance Overdoses*

Indicator Description: Maine's hospital syndromic surveillance system collects information from hospital emergency departments and, in some cases, their affiliated urgent care centers. Maine CDC has 33 hospital emergency departments that participate in the syndromic system. This indicator shows the number of persons admitted to the emergency department due to substance use from 2018 to 2020.

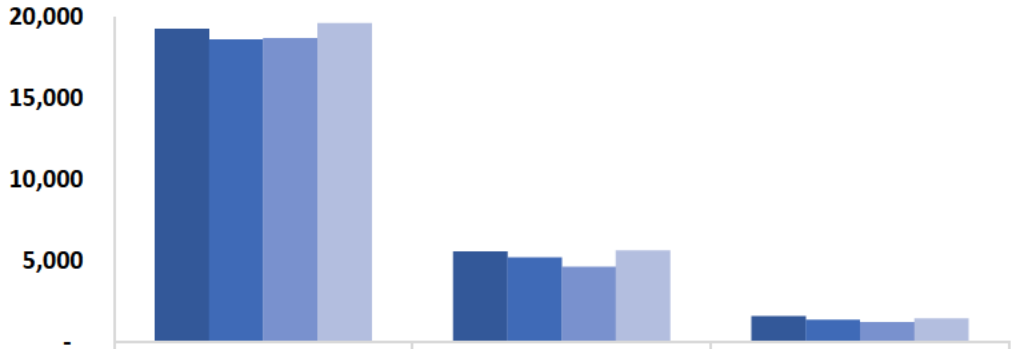
Why Indicator is Important: Overdosing on a substance can cause serious physical harm resulting in hospitalization and even death. Additionally, overdoses utilize valuable emergency department resources. Syndromic surveillance systems are used to rapidly identify outbreaks and provide situational awareness of changes in drug overdose-related emergency department (ED) visits at the local, state, and regional level. These systems gather aggregate data on ED visits involving suspected all drug, all opioid, heroin, and all stimulant overdoses. This data includes demographic characteristics of those who overdosed, such as sex, age, and county of patient residence. Jurisdictions share their data with the CDC as frequently as every two weeks, either by uploading data using a secure server or allowing staff access to their data in CDC's National Syndromic Surveillance Program's (NSSP) web-based BioSense platform.[24]

Data Source(s): CDC Syndromic Surveillance System, 2018–2020

Summary: In 2020, there were nearly 20,000 alcohol-related ED visits, followed by marijuana related visits (5,636), and opioid (pharmaceutical and illicit) overdose visits (1,473). Overall, males are more likely to be admitted to the ED as a result of an overdose regardless of substance. Alcohol, marijuana, and opioid related ED visits are most prevalent among Mainers between the ages of 26 and 54.

[24] U.S. Centers for Disease Control and Prevention. (2020). Drug Overdose Surveillance and Epidemiology (DOSE) System. Retrieved 6/25/21 from https://www.cdc.gov/drugoverdose/data/nonfatal/case.html.

Figure 47. Number of ED visits related to substance use, by substance: 2018–2020

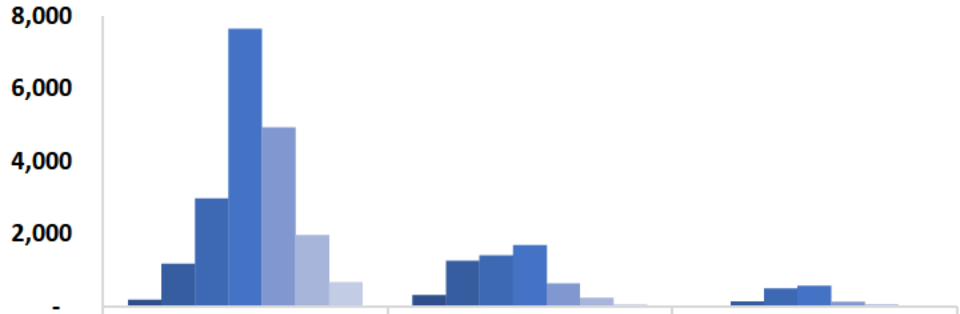


	Alcohol	Marijuana	Opioid
2017	19,250	5,593	1,620
2018	18,600	5,236	1,399
2019	18,682	4,634	1,250
2020	19,602	5,636	1,473

Source: CDC Syndromic Surveillance System, 2018 to 2020

- Alcohol-related ED visits increased in 2020 (19,602) as did marijuana-related and opioid-related visits.

Figure 48. Number of ED visits related to substance use, by age and substance type: 2020

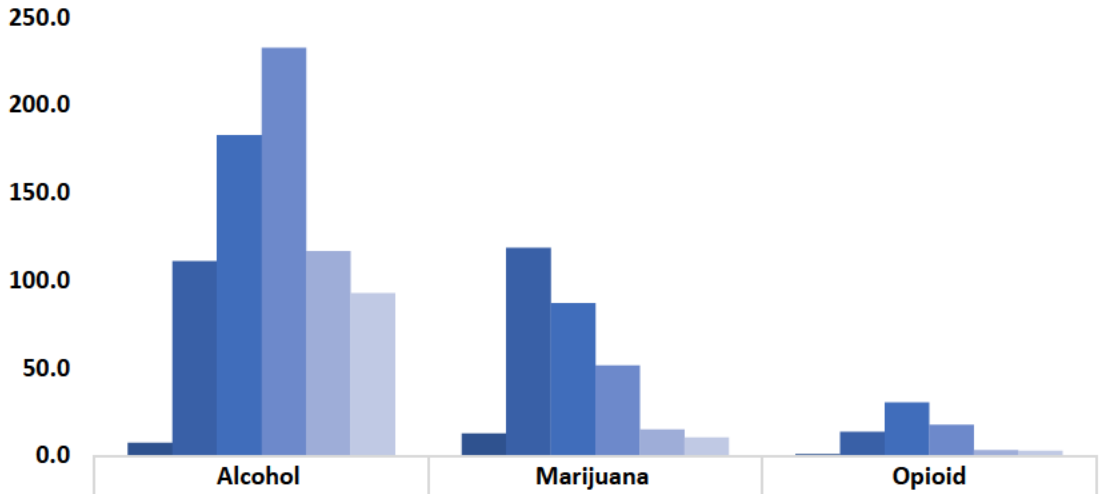


	Alcohol	Marijuana	Opioid
17 Under	188	320	25
18 to 25	1,188	1,269	147
26 to 35	2,980	1,417	497
36 to 54	7,656	1,695	580
55 to 64	4,943	637	138
65 to 74	1,967	244	59
75 and Over	679	54	26

Source: CDC Syndromic Surveillance System, 2020

- In 2020, most alcohol, marijuana, and opioid related emergency department visits were among those 36 to 54 years of age (6,727, 1,582, and 580 respectively).

Figure 49. ED visits related to substance use per 10,000 residents, by age and substance type: 2020

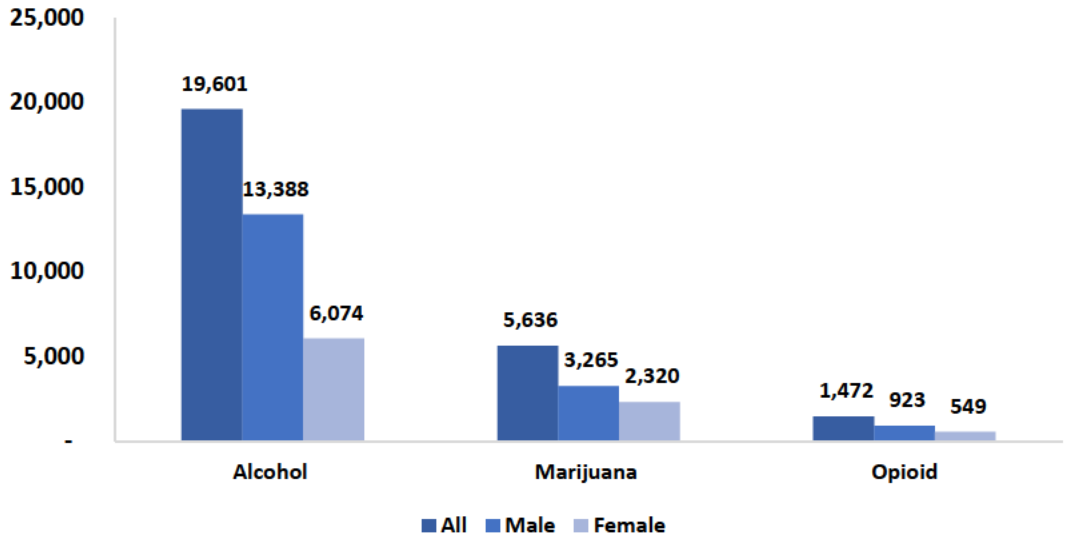


	Alcohol	Marijuana	Opioid
17 Under	7.6	12.9	1.0
18 to 25	111.1	118.7	13.7
26 to 35	183.0	87.0	30.5
36 to 54	232.8	51.6	17.6
55 to 64	116.8	15.1	3.3
65+	92.8	10.4	3.0

Source: CDC Syndromic Surveillance System, 2020

- In 2019, Mainers between the ages of 36 and 54 had the highest rate of alcohol-related emergency department visits with 232.8 visits per 10,000 residents, followed by 26 to 35-year-olds (183 per 10,000). Marijuana-related ED visits were disproportionately higher among younger adults ages 18 to 25 (118.7 per 10,000). The highest rate of overdose ED visits related to opioids was observed among Mainers aged 26 to 35 (30.5 per 10,000).

Figure 50. Number of ED visits related to substance use, by gender and substance type: 2020



Source: CDC Syndromic Surveillance System, 2020

- Males had a greater likelihood of being admitted to the emergency department than females for all three substances in 2020. Compared to females, males were more than twice as likely to be admitted to the emergency department for alcohol, 1.4 times as likely to be admitted for marijuana, and 1.7 times as likely to be admitted for an opioid overdose.

Overdoses and Related Deaths: *Naloxone Administrations*

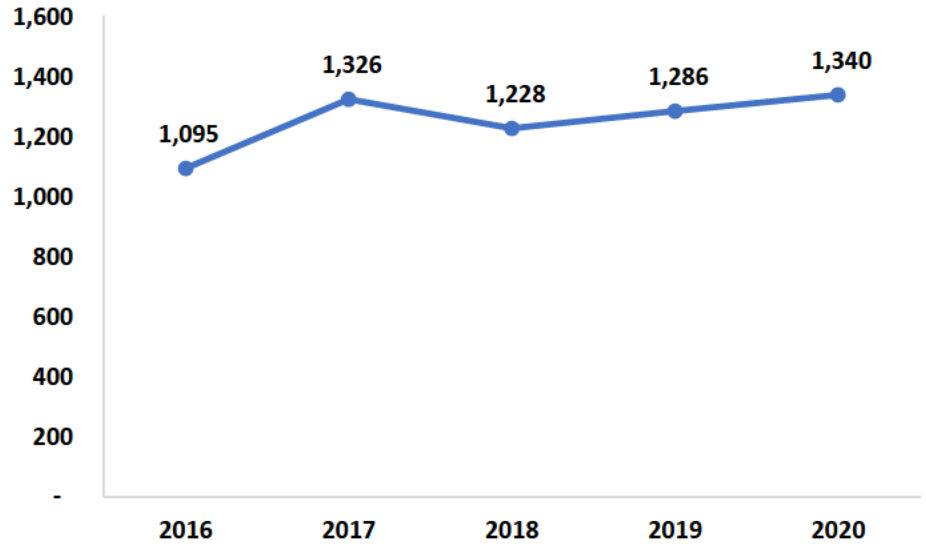
Indicator Description: This indicator shows the number of naloxone administrations and the number of individuals receiving doses from Emergency Medical Services related to an opioid overdose. Naloxone is a medication administered to patients who have experienced an overdose related to an opioid (*e.g.*, 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. It is important to note that this indicator only accounts for overdoses in which EMS was called, knowing that several overdoses and naloxone administrations occur without the presence of EMS.

Data Source(s): EMS, 2016–2020

Summary: The number of incidents where EMS administered naloxone peaked in 2017 with 1,632 incidents and has declined since with 1,340 incidents in 2020. In 2020, nearly seven out of 10 individuals receiving naloxone by EMS were male. Rates continue to be disproportionately higher among males 25 to 34 years old.

Figure 51. Number of EMS responses with naloxone* incidents: 2016–2020

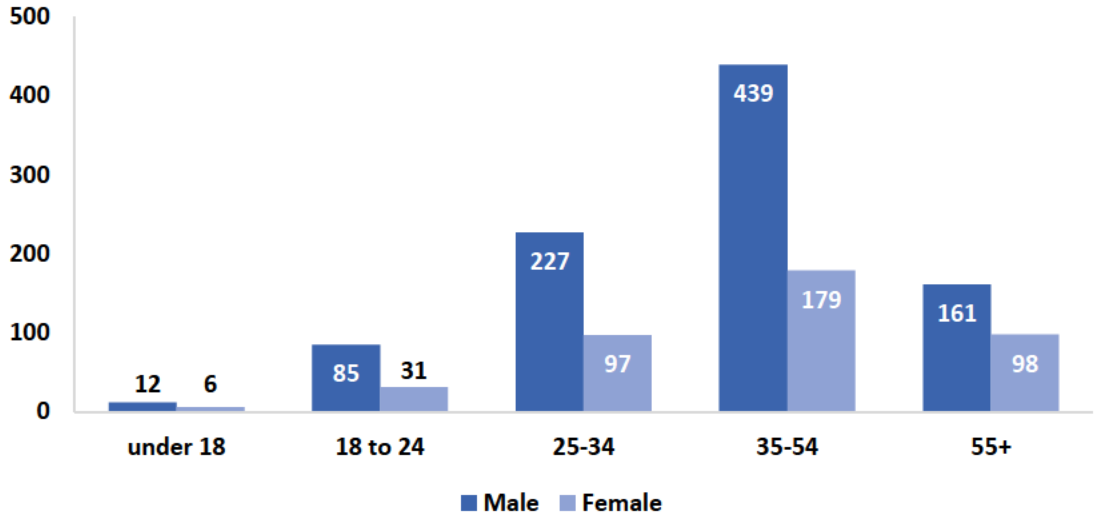


Source: EMS, 2016 to 2020

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

- In 2020, 1,340 individuals were administered naloxone by emergency medical responders. This is an increase from the previous four years.

Figure 52. EMS naloxone* administration incidents, by gender and age: 2020

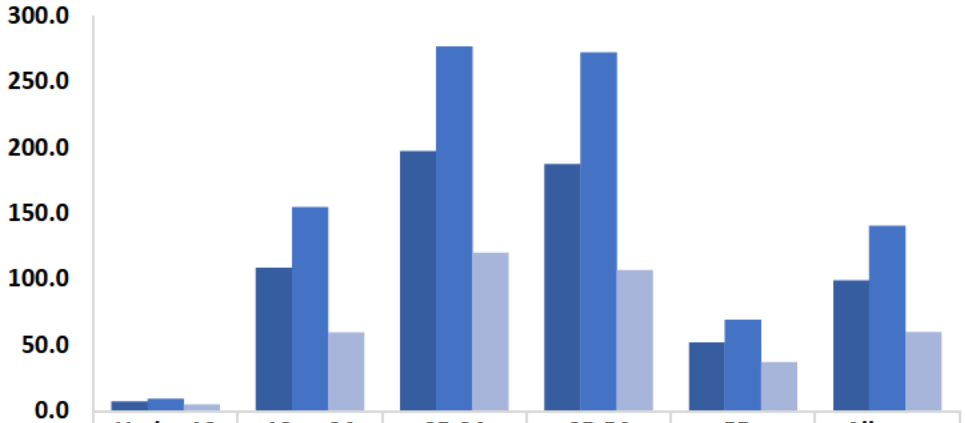


Source: EMS, 2020

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

- In 2020, out of the 1,335 incidents (with known ages) receiving naloxone administrations from EMS responders, 69 percent were male, and 31 percent were female. The group with the greatest number of EMS naloxone administration incidents in 2020 was 35 to 54-year-old males (439). Females most likely to receive a naloxone administration were also in this age group (179). This is consistent with previous years.

Figure 53. EMS naloxone* administrations rate (per 100,000 residents), by gender and age: 2020



	Under 18	18 to 24	25-34	35-54	55+	All ages
All Genders	7.3	108.7	197.3	187.2	52.1	99.3
Male	9.4	154.9	276.6	272.0	69.3	140.4
Female	4.9	59.6	120.1	106.9	37.0	59.9

Source: EMS, 2020

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

- In 2020, the highest rate of individuals receiving naloxone administrations from EMS responders was for males 25 to 34 (276.6 per 100,000). This age group experienced the highest rate regardless of gender as well (197.3 per 100,000). The group with the second-highest rate of naloxone administrations from EMS providers were males ages 35 to 54 (272 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.

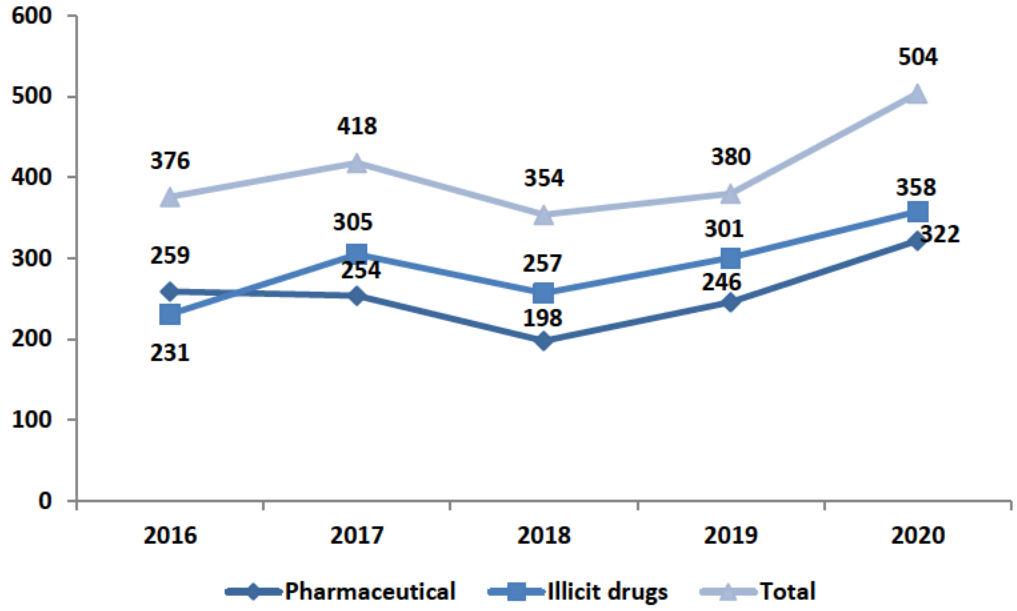
Why Indicator is Important: The most extreme consequences of alcohol and drug use is overdose death, where the substance(s) plays a direct role in an individual's death. These are potentially preventable deaths. In 2019, 70,630 drug overdose deaths occurred in the United States. The age-adjusted rate of overdose deaths increased more than four percent from 2018 (20.7 per 100,000) to 2019 (21.6 per 100,000). Opioids—mainly synthetic opioids (excluding methadone)—are currently the main contributor in drug overdose deaths. Opioids were involved in 49,860 overdose deaths in 2019 (70.6% of all drug overdose deaths).[25]

Data Source(s): Office of Chief Medical Examiner/Dr. Marcella Sorg,[26] 2016–2020

Summary: In 2020, illicit drug deaths (358) continue to be more common than pharmaceutical drug deaths (322). Both drug death types saw an increase from 2019 to 2020. In total, 504 deaths occurred due to illicit and pharmaceutical drugs. It is important to note that deaths involving pharmaceuticals and illicit drugs are not mutually exclusive.

[25] U.S. Centers for Disease Control and Prevention. (2021). Drug Overdose Deaths. Retrieved 5/17/2021 from https://www.cdc.gov/drugoverdose/data/statedeaths.html.
[26] Sorg, M.H. (2019). Margaret Chase Smith Policy Center, University of Maine.

Figure 54. Number of deaths* caused by pharmaceuticals and/or illicit drugs, alone or in combination: 2016–2020



Source: Dr. Marcella Sorg/Office of the Chief Medical Examiner, 2016 to 2020

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

- Drug deaths have been on a rise since 2018. Illicit drug overdose deaths continue to outnumber overdoses related to pharmaceuticals (358 pharmaceutical-related deaths compared to 322 illicit drug-related deaths).

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.

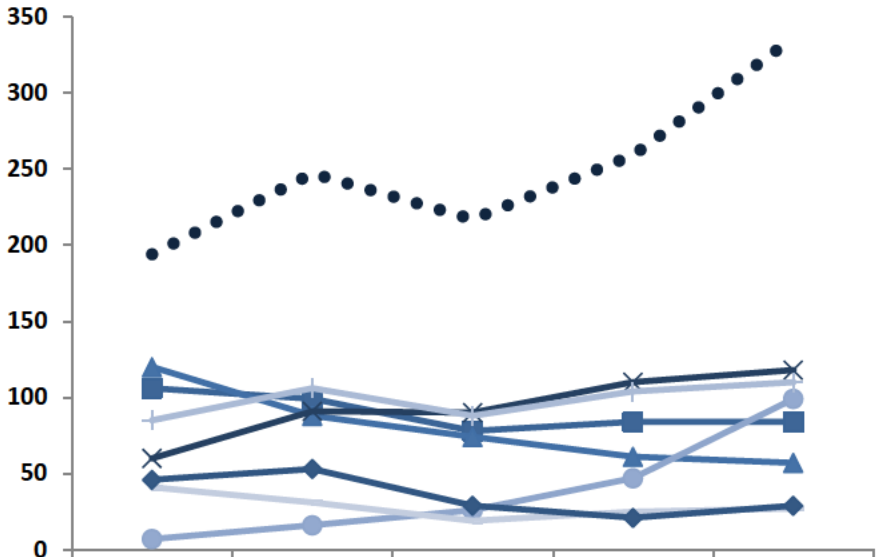
Why Indicator is Important: One of the most extreme consequences of alcohol and drug use is overdose death, where the substance(s) play a direct role in an individual's death. These are potentially preventable deaths. In addition, some substances are more lethal than others. Drug overdose deaths may involve multiple drugs; therefore, a single death might be included in more than one category when describing the number of drug overdose deaths involving specific drugs. For example, a death that involved both heroin and fentanyl would be included in both the number of drug overdose deaths involving heroin and the number of drug overdose deaths involving synthetic opioids other than methadone.[27]

Data Source(s): Office of Chief Medical Examiner/Dr. Marcella Sorg,[28] 2016–2020

Summary: In 2020, non-pharmaceutical fentanyl continues to be the most common drug type involved in drug-related deaths (336). Cocaine (118) and alcohol (110) are also regularly involved in drug-related deaths. Deaths related to heroin/morphine continue to decline, but deaths by all other drug types have stayed the same or increased from 2019 to 2020.

[27] U.S. Centers for Disease Control and Prevention. (2021). Provisional Drug Overdose Death Counts. Retrieved 6/23/21 from https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm.
[28] Sorg, M. H. (2020). Margaret Chase Smith Policy Center, University of Maine.

Figure 55. Number of drug deaths* involving specific drug types†: 2016–2020**



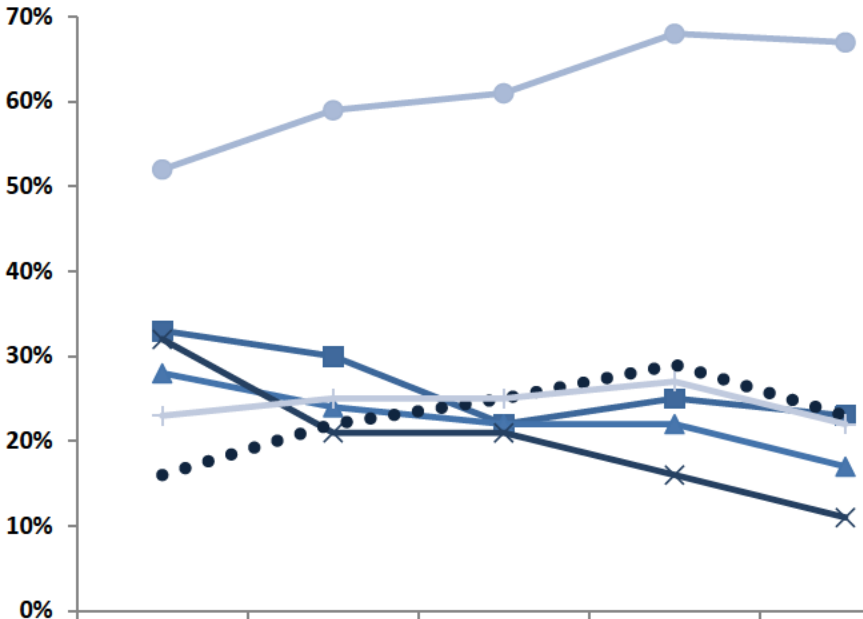
	2016	2017	2018	2019	2020
Benzodiazepines	106	99	78	84	84
Heroin/Morphine	120	88	74	61	57
Cocaine	60	91	90	110	118
Non-Pharm Fentanyl**	194	247	217	259	336
Methamphatamine	7	16	26	47	99
Ethanol/Alcohol*	85	106	88	104	110
Methadone	41	31	19	25	27
Oxycodone	46	53	29	21	29

Source: Dr. Marcella Sorg/OCME, 2016 to 2020

†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).*
** Ethanol/ Alcohol includes deaths where alcohol was a co-intoxicant. This indicator does not include deaths where alcohol poisoning was the primary cause.*

- The number of non-pharmaceutical fentanyl-related deaths has risen by 73 percent since 2016. The number of deaths related to methamphetamines doubled between 2019 and 2020.

Figure 56. Percent of drug deaths involving specific drug types†: 2016–2020**



	2016	2017	2018	2019	2020
Pharmaceutical Opioid	33%	30%	22%	25%	23%
Benzodiazepines	28%	24%	22%	22%	17%
Heroin/Morphine	32%	21%	21%	16%	11%
Cocaine	16%	22%	25%	29%	23%
Non-Pharm Fentanyl*	52%	59%	61%	68%	67%
Ethanol/Alcohol	23%	25%	25%	27%	22%

Source: Dr. Marcella Sorg/OCME, 2016 to 2020

†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).*

- Non-pharmaceutical fentanyl was involved in 67 percent of drug deaths in 2020 and is the most commonly seen drug in drug deaths by far. Following nonpharmaceutical fentanyl is cocaine (23%), pharmaceutical opioids (23%), ethanol/alcohol (22%), benzodiazepines (17%), and heroin/morphine (11%).

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. These data encompass overall substance use and overdose deaths and allow us to see the impact on Maine as a whole in comparison to the breakdown of separate substances seen in the previous indicators.

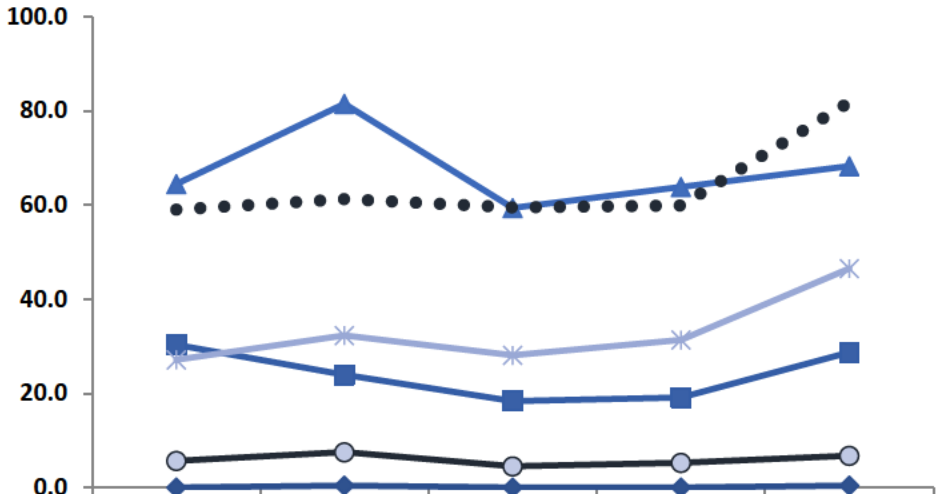
Why Indicator is Important: Drug-induced deaths can be mitigated by programs to prevent substance use, accidental poisoning, suicide, and fatal interaction among medications. In 2019, the age-adjusted rate of drug overdose deaths in the United States increased over 4 percent from 2018. The age-adjusted rate of drug overdose deaths increased from 6.1 per 100,000 standard population in 1999 to 20.7 in 2019.[29]

Data Source(s): DRVS, 2016–2020*

Summary: Drug-related deaths per 100,000 people increased from 2019 to 2020. Adults 36 to 49 years of age had the highest rate increase from 2019 to 2020.

[29]U.S. Centers for Disease Control and Prevention. (2021). Drug Overdose Deaths. Retrieved 5/18/21 from https://www.cdc.gov/drugoverdose/data/statedeaths.html

Figure 57. Substance use and overdose related deaths, per 100,000, by age group: 2016–2020*



	2016	2017	2018	2019	2020
under 18	0.0	0.4	0.0	0.0	0.4
18 to 25	30.3	23.9	18.3	19.1	28.7
26 to 35	64.4	81.5	59.4	63.8	68.2
36 to 49	59.0	61.3	59.5	59.9	81.8
50 to 64	27.1	32.3	28.1	31.3	46.5
65+	5.6	7.5	4.5	5.3	6.8

Source: DRVS, 2016 to 2020

**2020 results are preliminary*

- The highest drug-related death rate was among Mainers between the ages of 36 to 49, at 81.8 per 100,000. This was followed by 26 to 35-year-olds (68.2), 50 to 64-year-olds (46.5), 18 to 25-year-olds (28.7), those over 65 (66.8), and people under 18 (0.44). Rates for all age groups have increased slightly from 2018 to 2020.

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

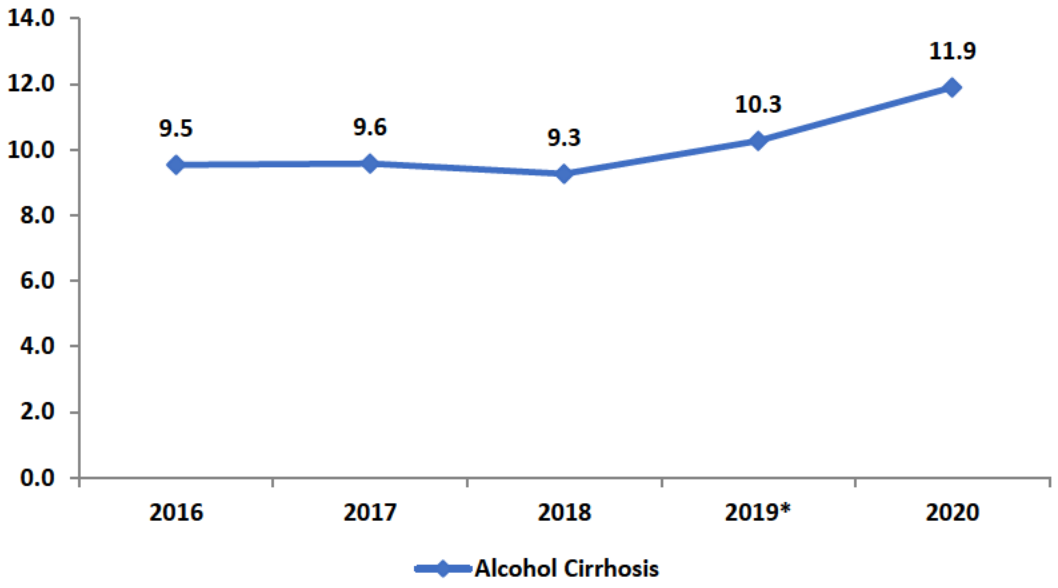
Indicator Description: Every death in Maine has a recorded cause. This indicator examines the rate of chronic diseases commonly associated with substance use, including primary and contributing factors that lead to alcohol-related liver diseases. The rates show all cases where the disease/condition was 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, alcohol cirrhosis-related deaths are considered potentially preventable.

Data Source(s): DRVS, 2016–2020

Summary: In 2020, the rate of alcoholic cirrhosis-related deaths continued to increase by one death per 100,000 people. Deaths related to alcoholic cirrhosis continue to be substantially higher among men than women.

Figure 58. Deaths from alcohol cirrhosis, per 100,000 of the population: 2016–2020*

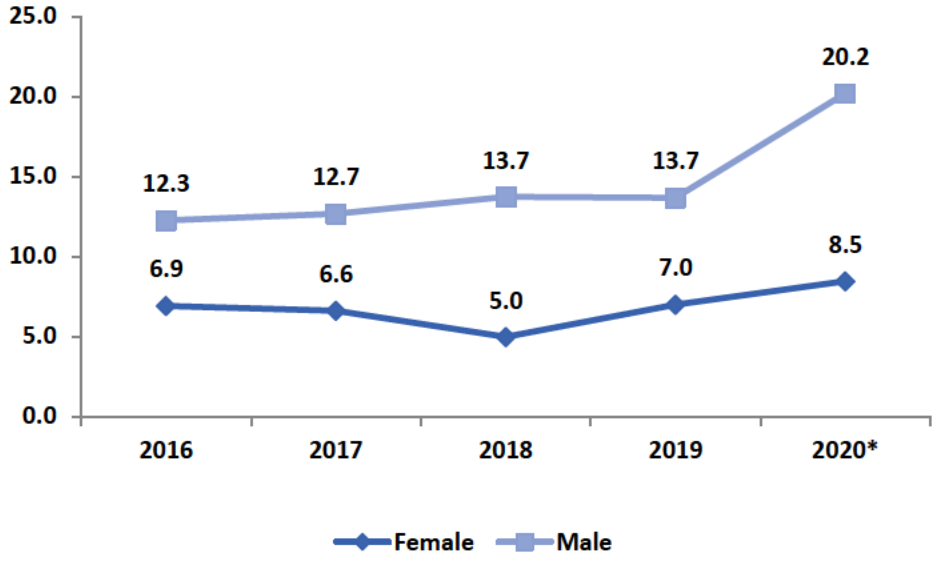


Source: DRVS, 2016 to 2020

**2020 results are preliminary*

- While rates of alcohol cirrhosis deaths are relatively low, an increase from 10.3 per 100,000 residents to 11.9 per 100,000 residents was seen from 2019 to 2020.

Figure 59. Deaths from alcoholic cirrhosis and liver disease per 100,000 of the population, by gender: 2016–2020*



v

Source: DRVS, 2016 to 2020

**2020 results are preliminary*

- In 2020, deaths related to alcoholic cirrhosis and liver disease were more than twice as likely among men (20.2 deaths per 100,000) than women (8.5 deaths per 100,000). The rate for both male and female deaths related to alcoholic cirrhosis and liver disease increased from 2019 to 2020.

Morbidity and Mortality: *Rate of Violent Deaths*

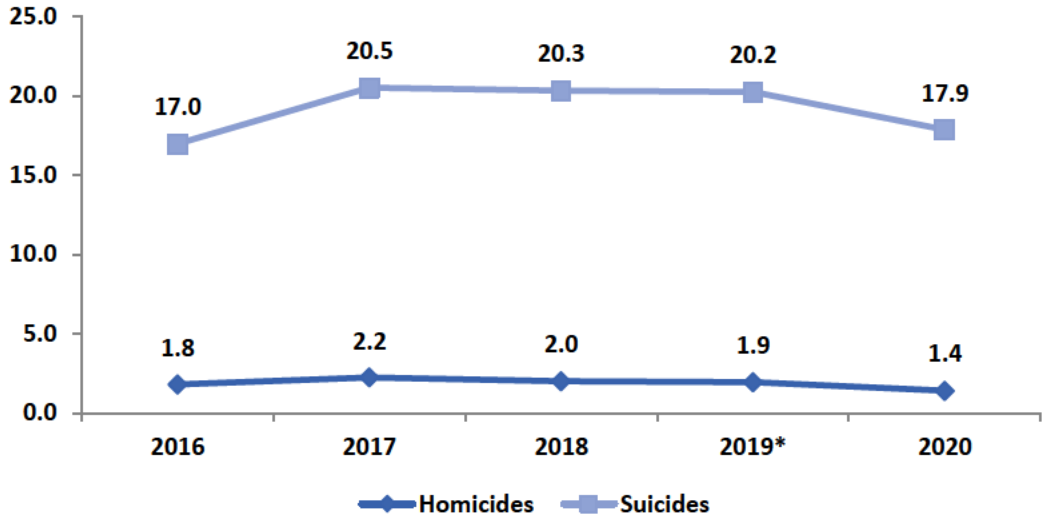
Indicator Description: Every death in Maine has a recorded cause. This indicator examines deaths that were the result of violence, *i.e.*, those classified as a suicide or homicide. In this case, a rate per 100,000 of the state population is used to compare the prevalence across certain populations.

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 Center for Disease Control and Prevention estimated that from 2011 to 2015 the U.S. had annual average of 9,899 suicides related to alcohol and 7,334 homicides related to alcohol.[30]

Data Source(s): DRVS, 2016–2020

Summary: Suicide rates in Maine are more than 10 times higher than homicide rates. Suicide deaths are more than four times as likely in men compared to women, and most prevalent among adults aged 26 to 35 years. In addition, deaths due to homicide are slightly more likely among men; rates for homicide are highest among adults between the ages of 36 and 49.

Figure 60. Deaths from suicide or homicide per 100,000 of the population: 2016–2020*



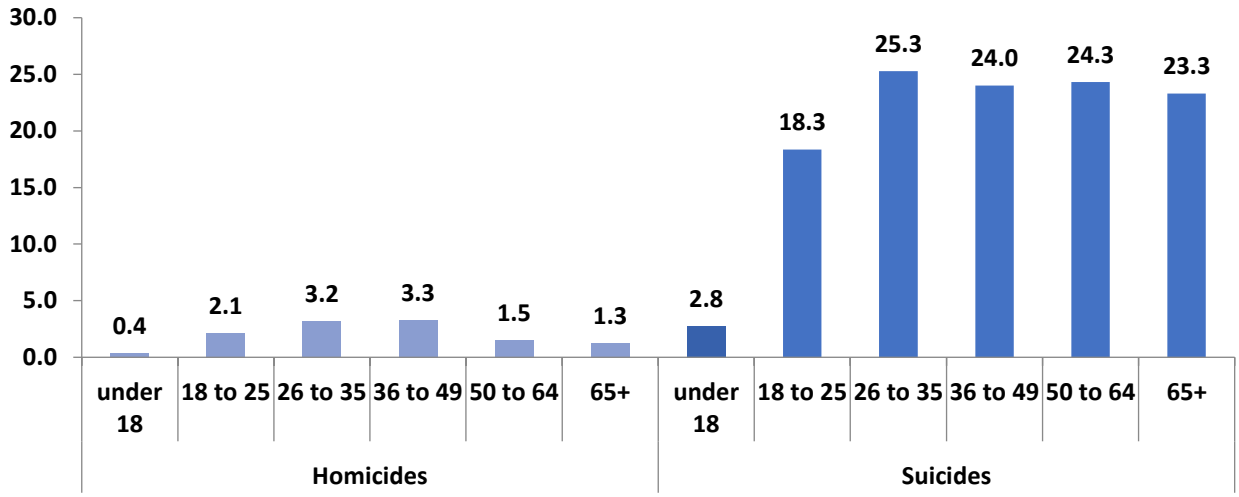
Source: DRVS, 2016 to 2020

**2020 results are preliminary*

- There were 17.9 suicides per 100,000 Mainers in 2020 compared to 1.4 homicides per 100,000 residents. Homicide and suicide rates have trended down slightly over the last three years.

[30] Centers for Disease Control and Prevention. Alcohol Related Disease Impact (ARDI) application, 2019. Available at www.cdc.gov/ARDI.

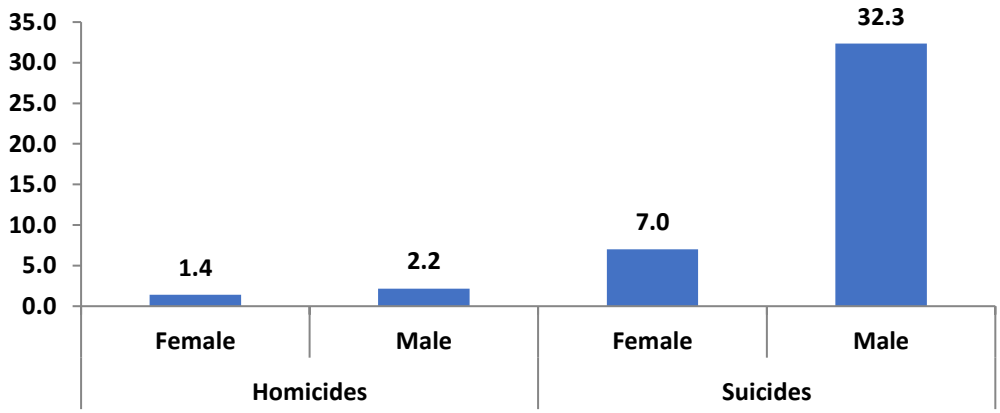
Figure 61. Deaths from suicide or homicide per 100,000 of the population, by age groups: 2018–20



Source: DRVS, 2018–20

- In 2018-20, death by suicide was most prevalent in Mainers aged 26 to 35 (25.3 per 100,000).
- The age group with the highest prevalence of death by homicide is 36 to 49-year-olds (3.3 per 100,000), followed by 26 to 35-year-olds (3.2 per 100,000).

Figure 62. Deaths from suicide or homicide per 100,000 of the population, by gender: 2018–20*



Source: DRVS, 2018-20

- Deaths by suicide were considerably more prevalent among men in 2018-20 (32.3 per 100,000), compared to women (7.0 per 100,000). Although not shown, there was a slight decrease in female suicide rates (from 8.1 to 7 per 100,000) and an increase in male suicide rates (31 to 32.3 per 100,000) from 2016–18 to 2018-20.

SUBSTANCE EXPOSED INFANTS

Substance Exposed Infant Notifications

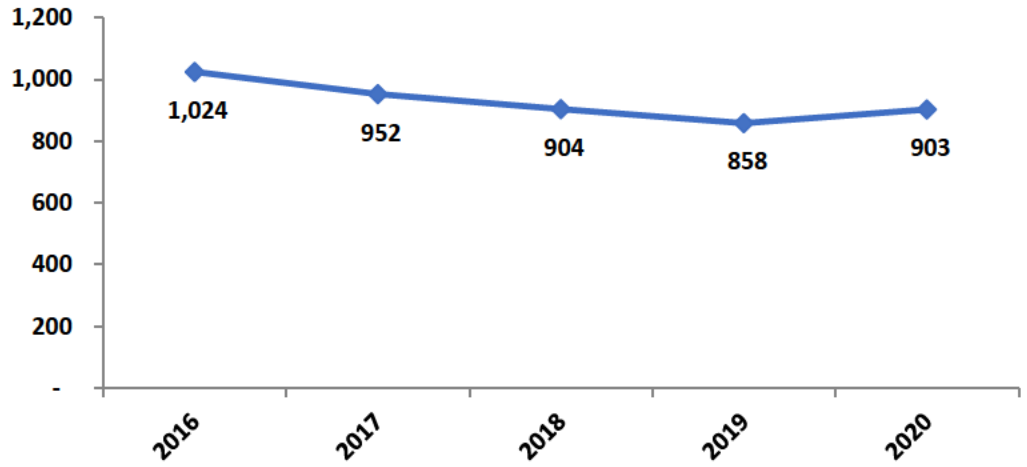
Indicator Description: This indicator reflects the number of infants born in Maine where a healthcare provider reported to the Office of Child and Family Services (OCFS) that there was reasonable cause to suspect the baby may be either affected by illegal substance use, demonstrating withdrawal symptoms 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.[31]

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, some of which are lifelong. 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 2016–2020

Summary: The number of substance exposed infant notifications has decreased steadily since 2016 to 2019 but rose again in 2020. In 2020, 903 substance exposed infant notifications were made, which accounts for about eight percent of the live births in Maine that year.

Figure 63. Number of substance-exposed infant notifications: 2016–2020

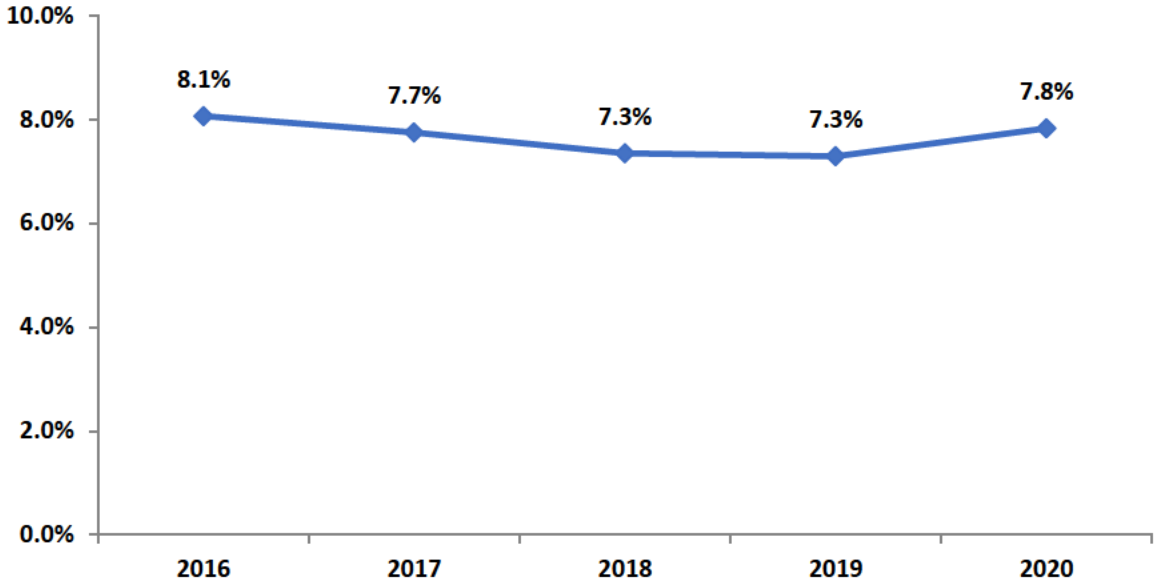


Source: OCFS/MACWIS, 2016 to 2020

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

- Child Protective Services notifications regarding infants born substance-exposed decreased from 2016 to 2019 but increased in 2020.

Figure 64. Proportion of live births with substance exposed notifications: 2016–2020



Source: OCFS, 2016 to 2020

- There was a slight increase in the proportion of live births with substance exposed notifications from 2019 (7.3%) to 2020 (7.8%).

Factors Contributing to Substance Use and Misuse

In addition to substance use consumption and consequences, the SEOW also monitors indicators that prevention research has generally agreed either contribute to 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 or 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).[32, 33]

Acknowledgement of contributing factors is especially important in substance use prevention as it can offer information about what types of behaviors, attitudes, and norms should be targeted to prevent substance use and misuse. Further, it important to think about how these factors are or could be affected by social, political, or environmental climates of the time, such as changes in state policy or funding, introduction of adult-use marijuana stores in Maine, and COVID-19.

Access and availability are still significant contributing factors related to substance use consumption in Maine. The geographic density of alcohol retailers is a community risk factor that may constitute a social influence as drinking behavior is observed and social norms are created. The rate of liquor licenses declined slightly from 2019 to 2020; however, there were still 26 liquor licenses for every 10,000 Mainers, which suggests that there are still plenty of opportunities for access. The MIYHS was not updated for 2021, but in 2019 six out of 10 high school students thought it would be easy to obtain alcohol. As youth are more likely to obtain alcohol from their home or someone giving it to them, it is unlikely that these rates have declined as in-home substance use rose in 2020.

Interestingly, the quantity of prescriptions dispensed for opiate agonists (excluding partial agonists such as buprenorphine) decreased by 23 percent and the number of prescriptions for

[32] Birckmayer, J. D., Holder, H. D., Yacoubian Jr, G. S., & Friend, K. B. (2004). A general causal model to guide alcohol, tobacco, and illicit drug prevention: assessing the research evidence. *Journal of Drug Education*, *34*(2), 121–153.
[33] Bonnie, R. J. (Ed.). (2004). *Reducing underage drinking: A collective responsibility*. National Academies Press.

sedatives decreased by 17 percent, while prescriptions dispensed for stimulants decreased by four percent from 2019 to 2020. Overall, there were fewer scripts dispensed in 2020 than the previous two years. It is likely this decrease in volume was related to multiple factors intertwined with COVID-19. For example, with fewer people going to work, families were less likely to have insurance and less overall income to spend on prescription medication. Additionally, many doctor's offices in Maine cancelled or postponed routine appointments in favor of serving those of most immediate need during the pandemic, which may have influenced how often prescriptions were renewed.

While prescriptions for pain relievers have been curtailed, prescriptions dispensed with the active ingredient of buprenorphine (a partial opiate agonist often used to treat opioid use disorder) remained stable from 2019 to 2020, around 15 percent. Although buprenorphine medications are designed to help treat those that are suffering from an affliction or disorder, there is still a potential for diversion and misuse and with increases in reported overdoses, it is important to continue to monitor prescription drug trends and emphasize diversion control.

Perception of harm is another major contributing factor in Maine. For example, in 2018–19, only 65 percent of 12 to 17-year-olds, 81 percent of 18 to 25-year-olds, and 88 percent of Mainers aged 26 and older reported that trying heroin once or twice was of moderate-to-great risk. Although heroin use has been stable over the last several years, these rates show a slight decrease in perception of risk across all age groups from 2016–17 which is concerning for future consumption trends.

This decrease in perception of risk is also true for marijuana use as previously noted by the 2019 Parent Survey and MIYHS. The perceived overall risk related to alcohol use and especially prescription pain medication use for their children was substantially higher than that for marijuana. As this population makes the transition into adulthood, one can see how their perceptions influence use. For example, the latest NSDUH data from 2018–19, report that few young adults 18 to 25 were unlikely to perceive a great risk from smoking marijuana at least once per month (6%), whereas Mainers who were 26 years old or older had a higher perception of risk (17%). Both age groups' perception of risk has slightly decreased from 2015–16.

Finally, although MIYHS data was not updated for 2021, there has been a long-standing correlation between protective factors, such as adequate sleep and strong family and social supports, and risk for substance use and mental health issues among youth. Prevention strategies should continue to embrace interventions and strategies focused on fostering relationships between parents/ caregivers and youth and other protective factors as fundamental primary prevention.

AVAILABILITY AND ACCESSIBILITY

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

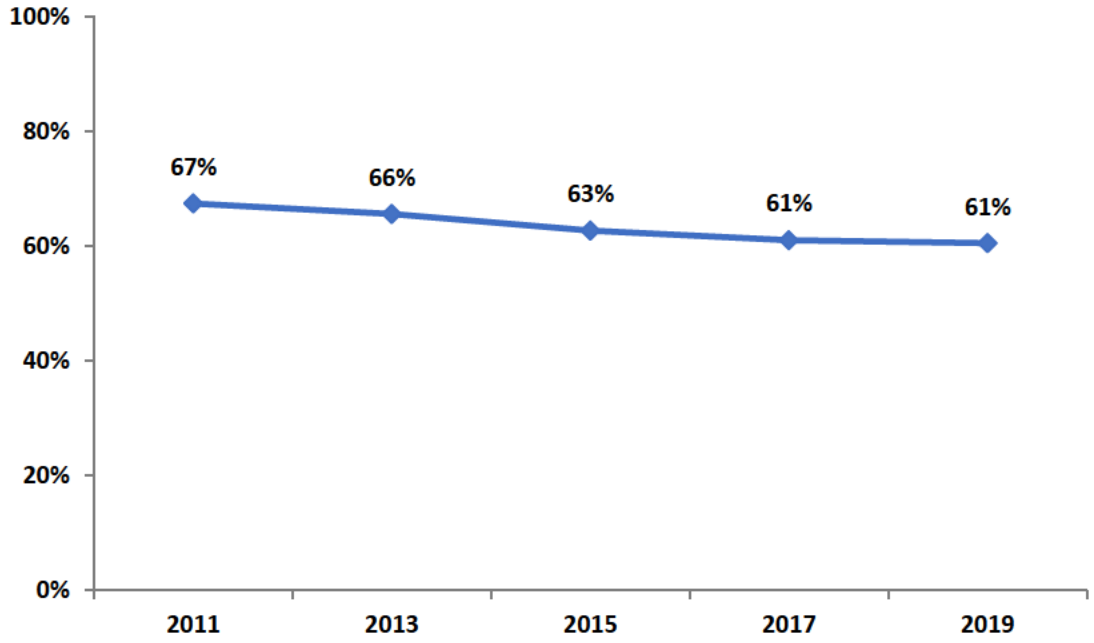
Indicator Description: This indicator reflects the percentage of high school students (grades 9 to 12) who reported that it would be easy or very easy for them to get alcohol if they wanted some.

Why Indicator is Important: High school 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, 2011–2019

Summary: Six out of 10 high school students think it would be easy to obtain alcohol. The rate of high school students perceiving alcohol as being easily accessible steadily decreased from 2011 to 2017 but has plateaued since.

Figure 65. High school students who reported it would be easy to get alcohol: 2011–2019



Source: MIYHS, 2011 to 2019

- In 2019, 61 percent of students felt it would be easy for them to obtain alcohol. Overall, this rate has decreased by six percentage points since 2011 (67%).

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

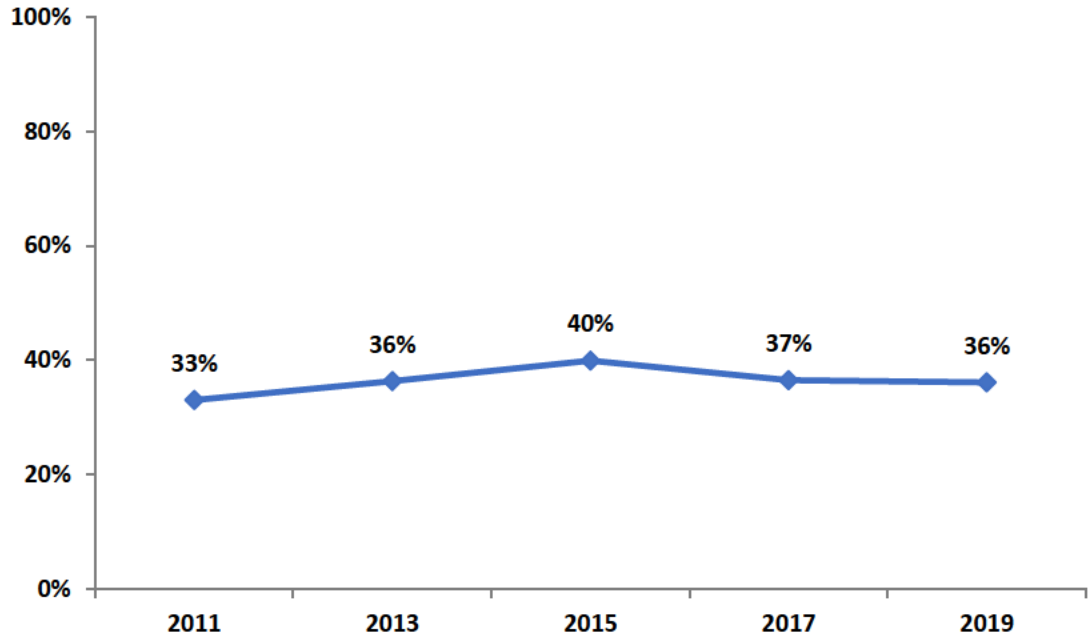
Indicator Description: This measure reflects the percentage of high school students who drank within the past 30 days, reporting that they usually obtain the alcohol they drink from someone giving it to them.

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 2011–2019

Summary: Social access continues to be a primary way that underage youth obtain alcohol. Of those students who obtained alcohol, over one third reported that someone had given it to them.

Figure 66. High school students who obtained alcohol by someone giving it to them, among those who drank in past month: 2011–2019



Source: MIYHS 2011 to 2019

- In 2019, 36 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 four percentage points since 2015 (40%).

Availability and Accessibility: *Parent Perception of Accessibility of Drugs and Alcohol*

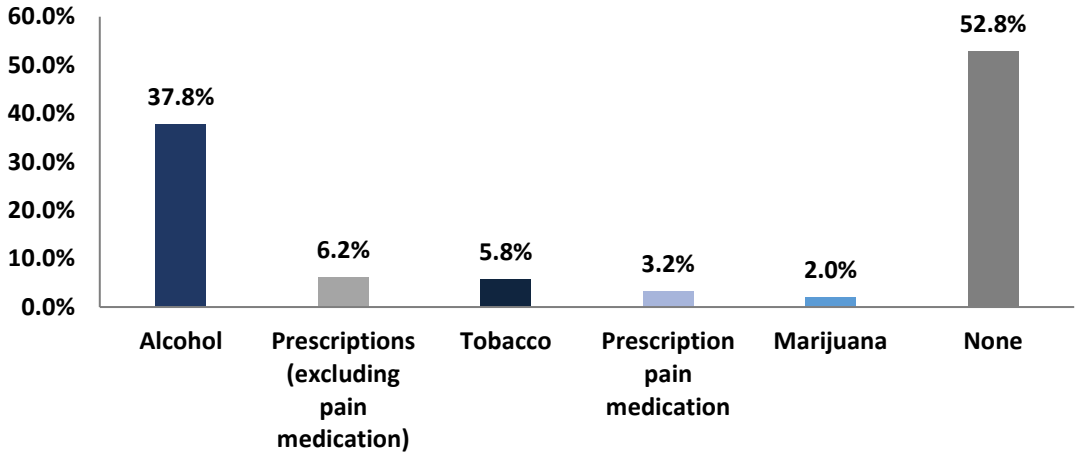
Indicator Description: This indicator measures the percentage of parents, (of 7th thru 12th graders) reporting that their teen would be able to access drugs or alcohol at home without their knowledge. These data come from the Maine Parent Survey, administered by Pan Atlantic Research for the Maine Center for Disease Control and Prevention.

Why Indicator is Important: Easy access to prescription drugs or alcohol is a major contributing factor to substance use. According to the MIYHS, high school 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, 2019

Summary: In 2019, just over half of parents did not think that their teen could access alcohol, prescription drugs, tobacco, or marijuana in their home without their knowledge. Just over one-third of parents thought their child could access alcohol at home without permission. Parents were six times more likely to think their child could access alcohol compared to other substances such as non-pain prescription medications or tobacco. Parents are much less likely to think their teen will access prescription pain medication or marijuana at home (under 4%).

Figure 67. Substances thought to be accessible by teens without parents' knowledge in the home, by substance type: 2019



Source: Parent Survey, 2019

- In 2019, about 38 percent of parents reported that their teen would be able to access alcohol without their knowledge, this was followed by prescription drugs other than pain medication (6.2%), tobacco products (5.8%), prescription pain relievers (3.2%) and marijuana at two percent. Just over half (52.8%) of parents thought their teen would not be able to access any of these substances at home without their knowledge.

Availability and Accessibility: *Liquor License Density*

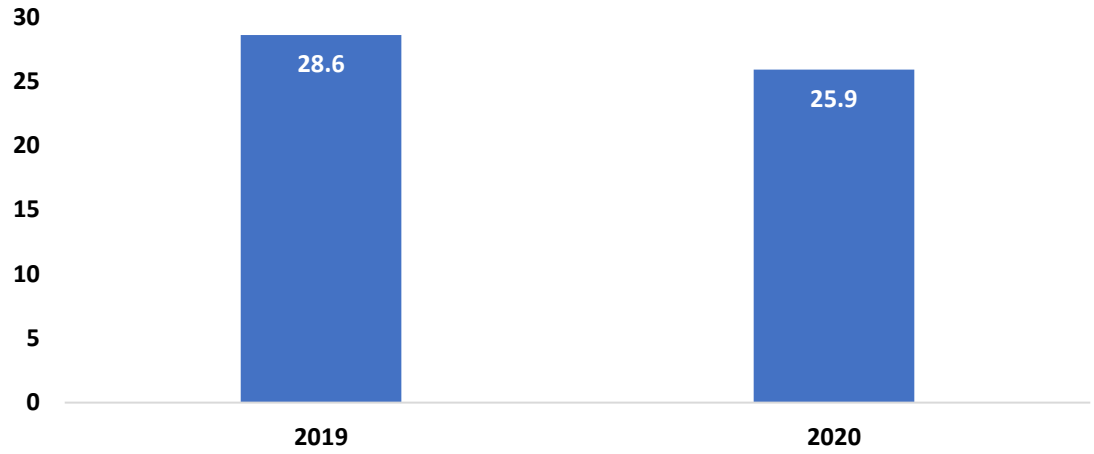
Indicator Description: This indicator measures rate of liquor licenses per 10,000 Maine residents. These data come from the Bureau of Alcoholic Beverages and Lottery Operations.

Why Indicator is Important: Easy access to alcohol is a major contributing factor to substance use. The geographic density of alcohol retailers is a community risk factor that may constitute a social influence as drinking behavior is observed and social norms are created. Density can be used to evaluate the relationship between this exposure and the various health and social harms.[34]

Data Source(s): BABLO, 2019–2020

Summary: The rate of liquor licenses declined slightly, from 28.6 licenses per 10,000 Mainers in 2019 to 25.9 in 2020.

Figure 68. Liquor licenses per 10,000 residents: 2019–2020



Source: BABLO, 2019 to 2020

- In 2020, there were nearly 26 liquor licenses for every 10,000 Mainers. Although not shown, licenses were most heavily concentrated in the Downeast public health district (38.2) and least concentrated in the Central public health district (18.8).

[34] Sacks, J. J., Brewer, R. D., Mesnick, J., Holt, J. B., Zhang, X., Kanny, D., ... & Gruenewald, P. J. (2020). Practice Full Report: Measuring Alcohol Outlet Density: An Overview of Strategies for Public Health Practitioners. *Journal of public health management and practice*, *26*(5), 481. Retrieved from https://journals.lww.com/jphmp/Fulltext/2020/09000/Measuring_Alcohol_Outlet_Density__An_Overview_of.13.aspx.

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

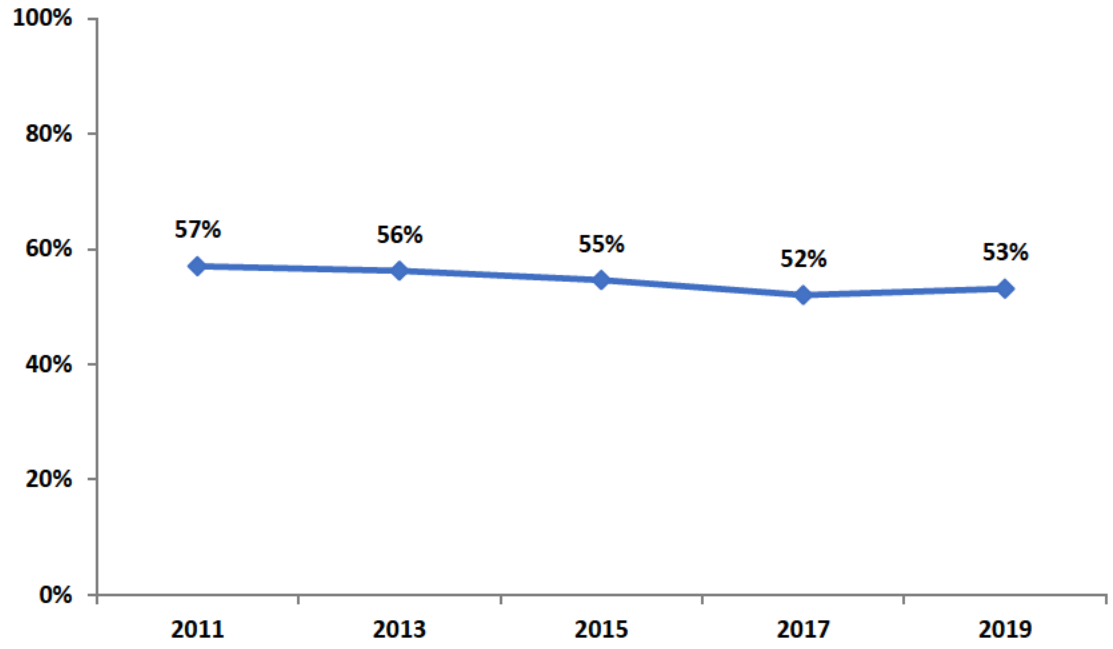
Indicator Description: This indicator shows the percentage of high school students reporting it would be easy or very easy to obtain marijuana if they wanted it.

Why Indicator is Important: According to the MIYHS, high school 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, 2011–2019

Summary: In 2019, a little over half (53%) of high school students believed that marijuana would be easy or very easy to obtain. This rate has plateaued in recent years.

Figure 69. High school students who reported it would be easy to get marijuana: 2011–2019



Source: MIYHS, 2011 to 2019

- After observing a steady decline from 2011 (57%) to 2017 (52%), the rate of students who report it is easy to obtain marijuana has remained relatively constant. In 2019, 53 percent of high school students reported it would be easy to get marijuana.

Availability and Accessibility: *Illegal Drugs on School Property*

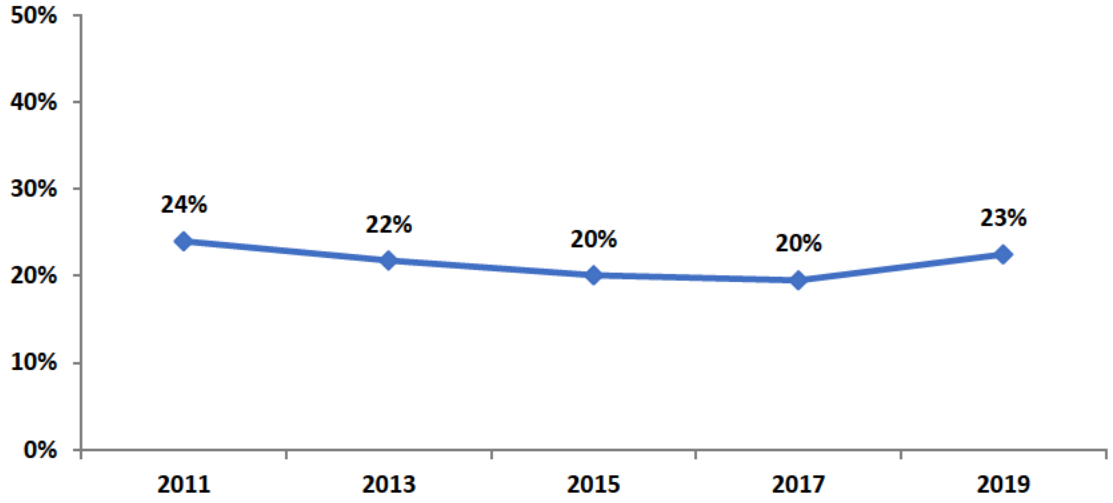
Indicator Description: This measure represents the percentage of high school students reporting they were sold, offered, or given an illegal drug on school property during the past year.

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

Data Source(s): MIYHS, 2011–2019

Summary: In 2019, nearly one in four high school students reported being sold, offered, or given an illegal drug on school property within the past year. This rate has observed an uptick since 2017.

Figure 70. High school students who were sold, offered, or given an illegal drug on school property in past year: 2011–2019



Source: MIYHS, 2011 to 2019

- After observing a four –percentage point decrease from 2011 (24%) to 2017 (20%), the percentage of high school students who reported they were sold, offered, or given an illegal drug on school property increased by three percentage points. In 2019, 23 percent of Maine high schoolers claimed they were sold, offered, or given an illegal drug on school property.

Availability and Accessibility: *Prescriptions Dispensed*

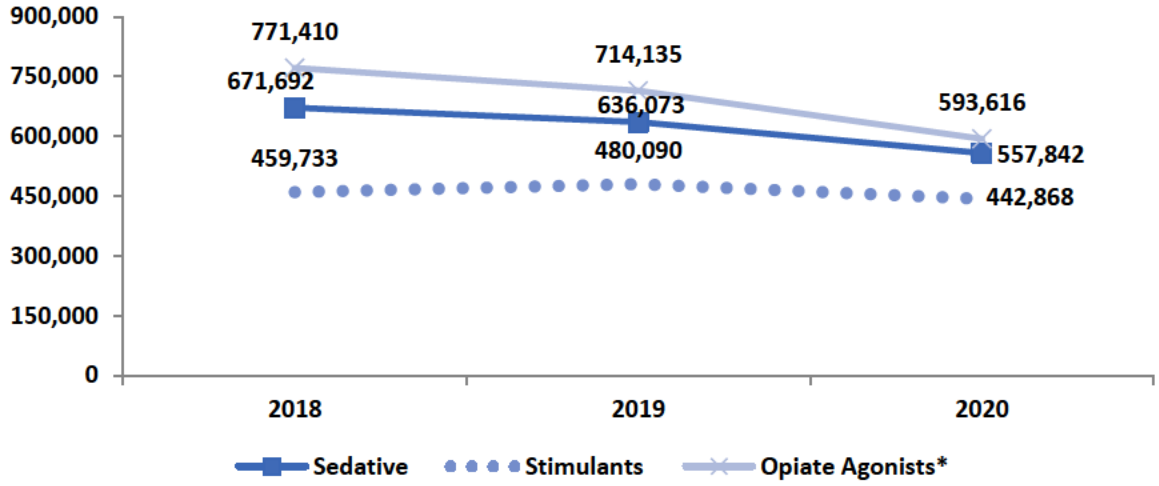
Indicator Description: These indicators reflect the number of opiate agonist (*e.g.*, pain relievers), sedative, and stimulant prescriptions as well as doses dispensed (quantity dispensed) in Maine. These measures reflect prescriptions dispensed to Maine residents only. This is collected through the Maine's Prescription Monitoring Program (PMP).

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. More than half of individuals who reported they misused a prescription pain reliever also reported they had received it from a friend or relative for free.[35]

Data Source(s): PMP, 2018–2020

Summary: From 2018 to 2020, the number of prescriptions dispensed for opiate agonists (excluding partial agonists such as buprenorphine) decreased by 23 percent and the number of prescriptions for sedatives decreased by 17 percent, while prescriptions dispensed for stimulants decreased by four percent. In 2020, just over half of all opiates (agonists as well as partial agonists) dispensed contained the primary active ingredients of either oxycodone or hydrocodone which is consistent with previous years. Overall, there were fewer scripts dispensed in 2020 than the previous two years.

Figure 71. Number of prescriptions dispensed in Maine, by type: 2018–2020



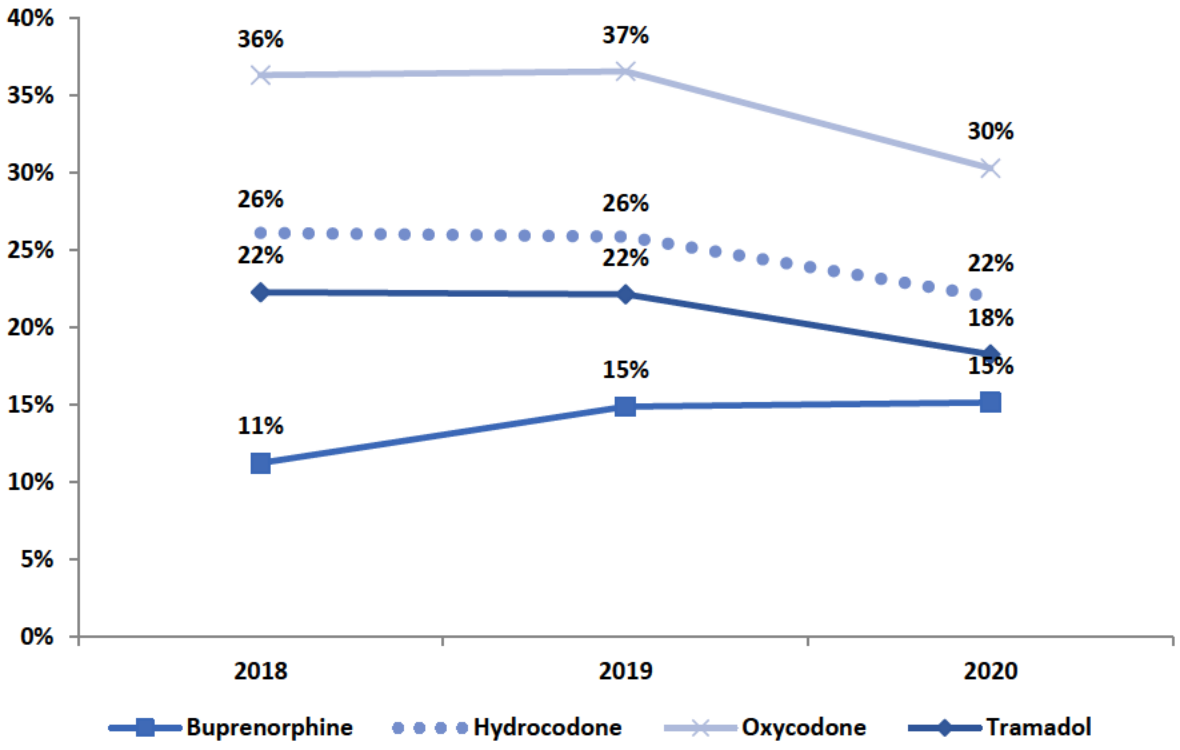
Source: PMP, 2018 to 2020

**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.*

[35] Substance Abuse and Mental Health Services Administration (SAMHSA). (2018). Key substance use and mental health indicators in the United States: Results from the 2017 National Survey on Drug Use and Health (HHS Publication No. SMA 18-5068, NSDUH Series H-53).

- The number of prescriptions dispensed for opiate agonists (excluding partial agonists used in medicated assisted treatment) decreased by 23 percent from 2018 (771,410) to 2020 (593,616) while the count of prescriptions dispensed for sedatives decreased by 17 percent from 2018 (671,692) to 2020 (557,842) and prescriptions dispensed for stimulants decreased by four percent (459,733 in 2018 to 442,868 in 2020).

Figure 72. Percentage of opiates dispensed, by primary active ingredient: 2018–2020*



Source: PMP, 2018 to 2020

- The most common active ingredient within all opiate agonists as well as partial agonists doses dispensed since 2018 has been oxycodone, making up 30 percent of doses dispensed in 2020. This is followed by hydrocodone (making up 22 percent of all narcotic doses dispensed), tramadol at 18 percent, and buprenorphine at 15 percent. All primary active ingredients shown, with the exception of buprenorphine, remained relatively constant since 2017. The proportion of buprenorphine doses has increased from 11 percent in 2018 to 15 percent in 2020.

Availability and Accessibility: *Substances Requested for Verification*

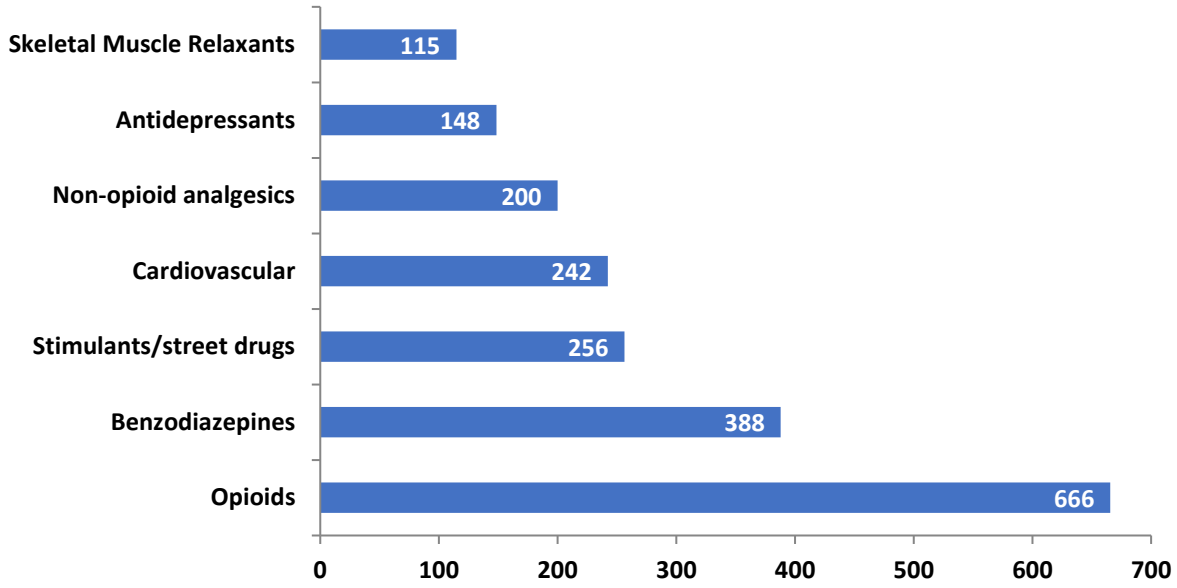
Indicator Description: This indicator shows the number of requests by non-law enforcement for medication verification through the Northern New England Poison Center (NNEPC). A person may call the NNEPC for many reasons, one being to help identify a medication or substance which they or another person 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, 2018–20

Summary: Most calls to Northern New England Poison Center requesting medication verification in 2018–20 involved opioids, followed by benzodiazepines, and stimulants.

Figure 73. Annual average of substances most frequently requested for medication verification by non-law enforcement, by type: 2018–20



Source: NNEPC, 2018 to 20

- During the three-year period of 2018–20, the Poison Center received an average of 666 calls per year requesting verification for substances that were identified as opioids, followed by benzodiazepines (388), and stimulant/street drugs (256), which is 50 percent of the average calls by category for the previous three-year period. Although not shown, the volume of calls 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, or the decrease in the number of prescriptions written.

PERCEIVED HARM

Perceived Harm: *Perceived Risk from Regular Alcohol Use*

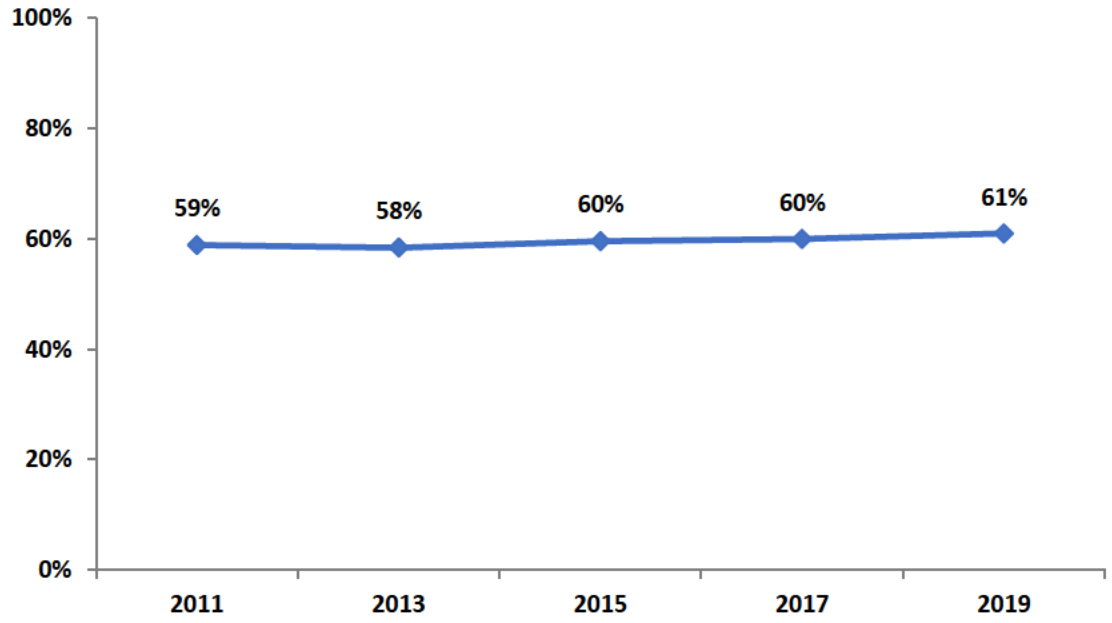
Indicator Description: This indicator reflects the percentage of high school students who report that there is moderate to great risk of harm from drinking one or two alcoholic beverages every day.

Why Indicator is Important: 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, 2011–2019

Summary: In 2019, 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 since 2011.

Figure 74. High school students perceiving moderate to great risk from drinking 1–2 drinks every day: 2011–2019



Source: MIYHS, 2011 to 2019

Perceived Harm: *Perceived Risk from Binge Drinking*

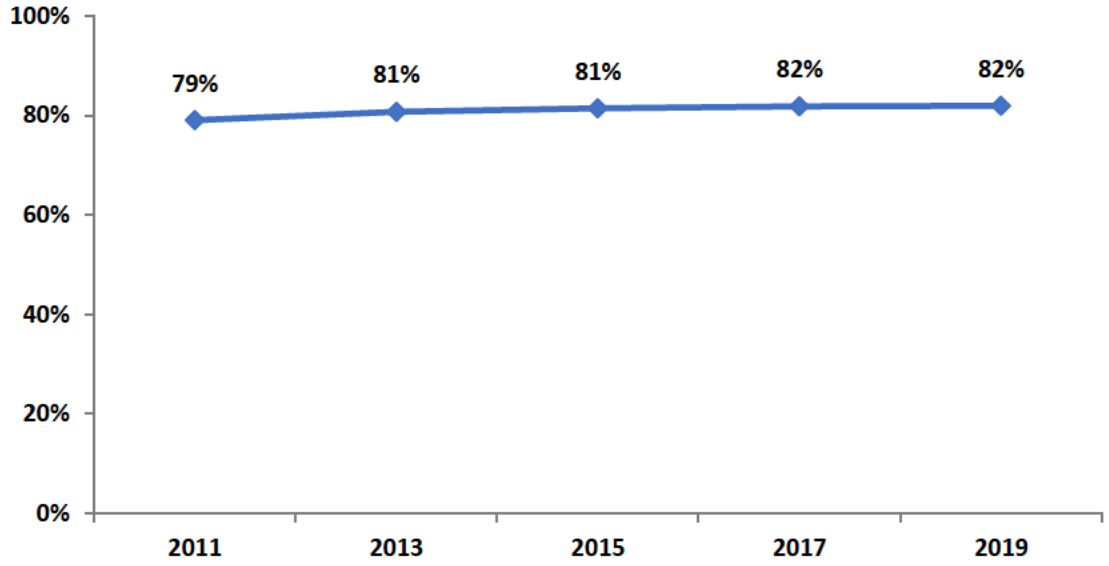
Indicator Description: This indicator reflects the percentage of individuals (high school students and adults) who perceive that there is moderate-to-great risk from drinking five or more drinks in a row once or twice per week.

Why Indicator is Important: According to MIYHS, 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, 2011–2019; NSDUH 2016–17 to 2018–19

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 (ages 18 to 25) thought that binge drinking a few times a week was not risky.

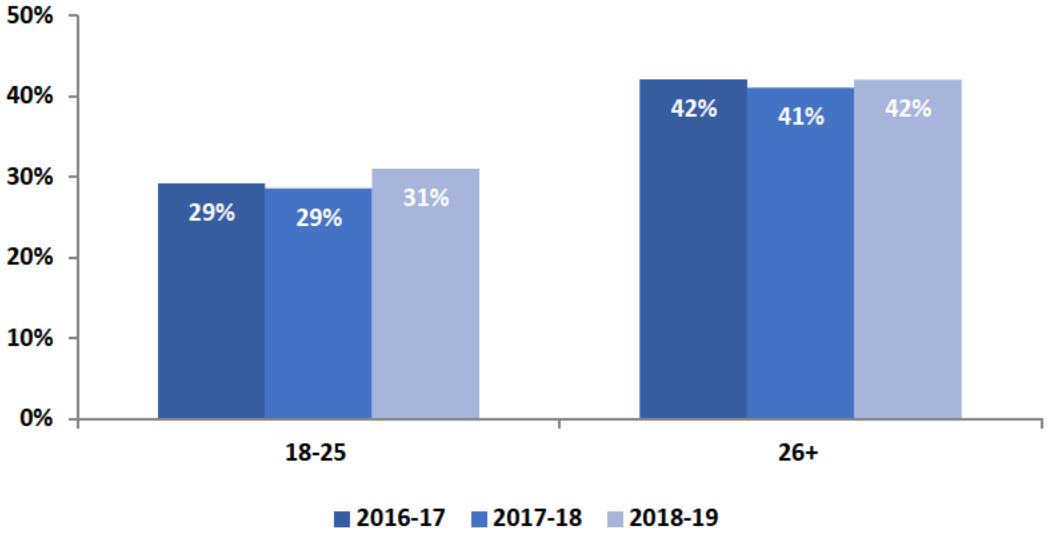
Figure 75. High school students perceiving moderate to great risk from drinking five or more drinks once or twice per week: 2011–2019



Source: MIYHS, 2011 to 2019

- In 2019, 82 percent of Maine high school students reported that they perceived drinking five or more drinks in one sitting once or twice a week was a moderate to great risk. Perception of risk associated with binge drinking has remained relatively steady from 2011 to 2019.

Figure 76. Adults (18 and over) perceiving great risk from drinking five or more drinks once or twice per week, by age group: 2016–17 to 2018–19



Source: NSDUH 2016–17 to 2018–19

- Forty-two 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 2018–19. Perception of harm from binge drinking was consistently lower among 18 to 25-year-olds between 2016 and 2019.

Perceived Harm: *Perceived Risk of Regular Marijuana Use*

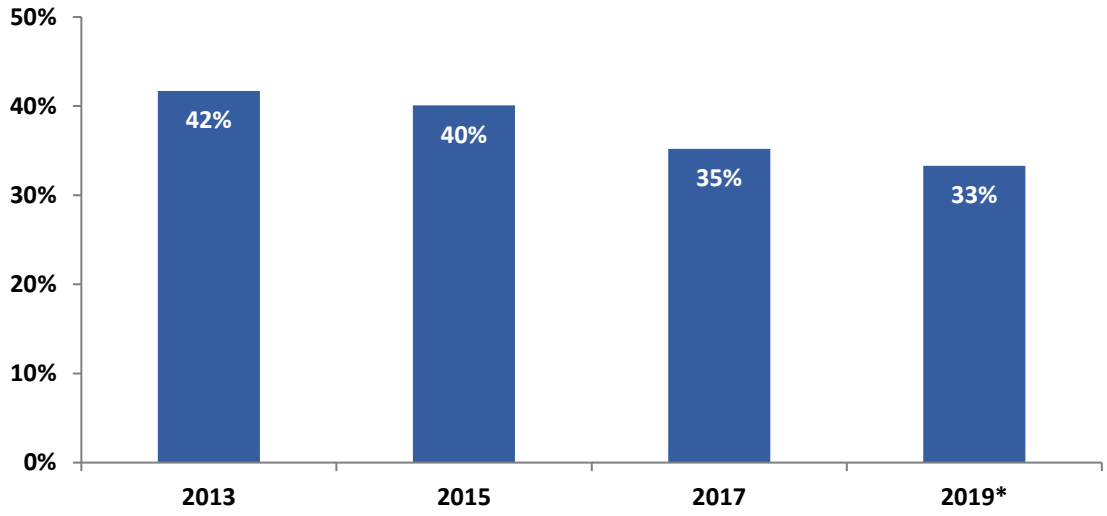
Indicator Description: This measure demonstrates the percentage of individuals (high school students and adults) who perceive a moderate-to-great risk of harm from smoking marijuana once or twice per week.

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. In addition to the risk of developing a marijuana use disorder (MUD) and using other illegal substances, research has indicated significant associations between adolescent marijuana use and poor social and educational development and functioning, as well as having other mental health problems. In addition, adverse consequences of marijuana use can extend into adulthood, including substance use and misuse, cognitive impairment, criminal justice involvement, and ongoing mental and physical health problems.[36]

Data Source(s): MIYHS, 2013–2019; NSDUH, 2015–16 to 2018–19

Summary: In 2019, one-third of high school students perceived using marijuana once or twice a week as risky. In 2017–18, six percent of 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 77. High school students perceiving moderate-to-great risk from using marijuana once or twice a week: 2013–2019*

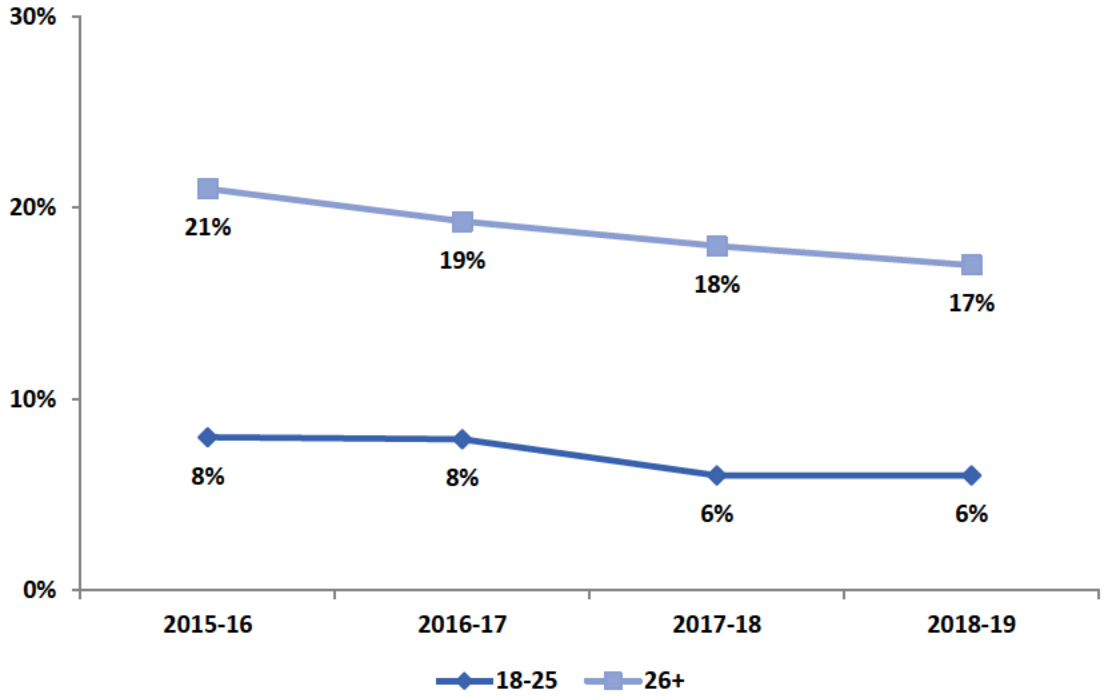


Source: MIYHS, 2013 to 2019
**Question changed in 2017 from asking about "smoking marijuana" to "using marijuana"*

[36] Forman-Hoffman, V. L., Glasheen, C., & Batts, K. R. (2017). Marijuana use, recent marijuana initiation, and progression to marijuana use disorder among young male and female adolescents aged 12–14 living in US households. *Substance abuse: research and treatment, 11*, 1178221817711159. Retrieved 6/25/21 from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5462494/.

- The proportion of high school students who perceived a moderate-to-great risk of harm from using marijuana once or twice a week has declined by nine percentage points from 2013 to 2019. In 2019, one-third (33%) of high school students thought that using marijuana once or twice per week was risky. Inversely, this implies that 67 percent of students thought that it was not risky to do so.

Figure 78. Adults (age 18 and older) perceiving great risk from smoking marijuana once per month, by age group: 2015–16 to 2018–19



Source: NSDUH, 2015–16 to 2018–19

- In 2018–19, young adults 18 to 25 were unlikely to perceive a great risk from smoking marijuana at least once per month (6%), whereas Mainers who were 26 years old or older had a higher perception of risk (17%). Both age groups' perception of risk has slightly decreased from 2015–16.

Perceived Harm: *Perceived Risk of Prescription Drug Misuse*

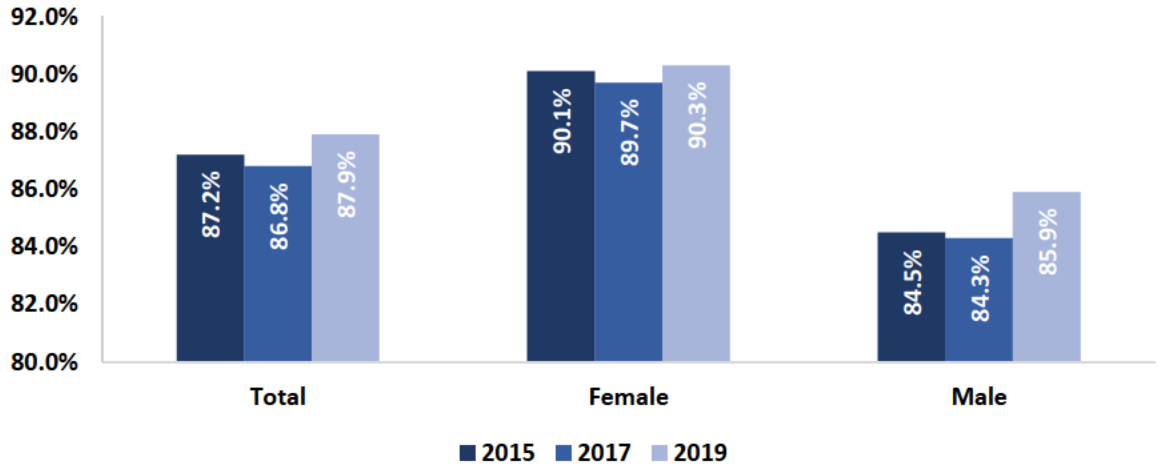
Indicator Description: This measure demonstrates the percentage of high school students who perceive a moderate to great risk of harm from taking a prescription drug that was not prescribed to them.

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, 2015–2019

Summary: In 2019, the vast majority of high school students (88%) reported 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. Males did perceive a greater risk in 2019 than in 2017, while perceived risk in females remained the same.

Figure 79. High school students who felt using a prescription drug not prescribed to them was harmful, by age group: 2015–2019



Source: MIYHS, 2015 to 2019

- In 2019, 88 percent of Maine high school students reported that they believed it would be harmful if an individual took a prescription drug that was not prescribed to them. When broken out by gender, females were more likely to perceive a risk than males, 90 percent compared to 86 percent, respectively.

Perceived Harm: *Perceived Risk of Heroin Use*

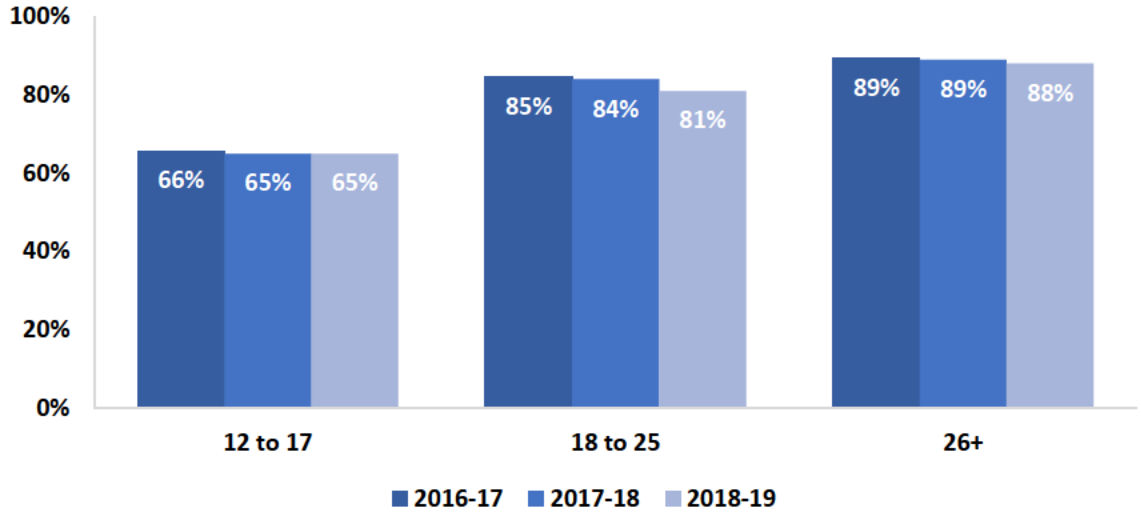
Indicator Description: This measure demonstrates the percentage of individuals (youth and adults) who perceive a moderate to great risk of harm from trying heroin once or twice.

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 to 2018-19

Summary: In 2018–19, nearly nine 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. About two-thirds of 12 to 17-year-olds thought there was great risk from trying heroin once or twice.

Figure 80. Mainers perceiving great risk from trying heroin once or twice, by age group: 2016–17 to 2018–19



Source: NSDUH, 2016–17 to 2018-19

- In 2018–19, 65 percent of 12 to 17-year-olds, 81 percent of 18 to 25-year-olds, and 88 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 decrease in perception of risk across all age groups from 2016–17.

Perceived Harm: *Parent Perceived Risk of Child's Substance Use*

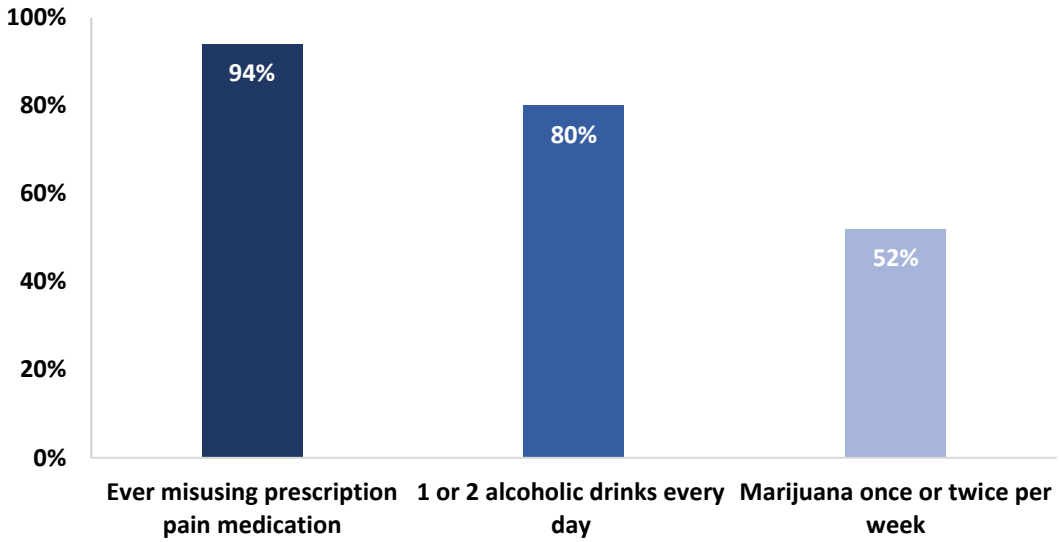
Indicator Description: This measure demonstrates the percentage of parents of 7th through 12th graders who perceive a moderate to great risk of harm from their child using substances regularly.

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 of substance use.

Data Source(s): Parent Survey, 2019

Summary: For parents, the perceived overall risk of use of alcohol and especially prescription pain medication for their children was substantially higher than that for marijuana. In 2019, only half of parents surveyed thought using marijuana on weekly basis would be harmful.

Figure 81. Parent's perception of risk from child's substance use, by type: 2019



Source: Parent Survey, 2019

- In 2019, 94 percent of parents of 7th through 12th graders reported that they think it would be risky if their child ever misused prescription pain medication, 80 percent agreed it would be a moderate-to-great risk for their child to consume one or two drinks every day, and just over one-half (52%) believed using marijuana once or twice per week would be harmful.

PERCEIVED ENFORCEMENT

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

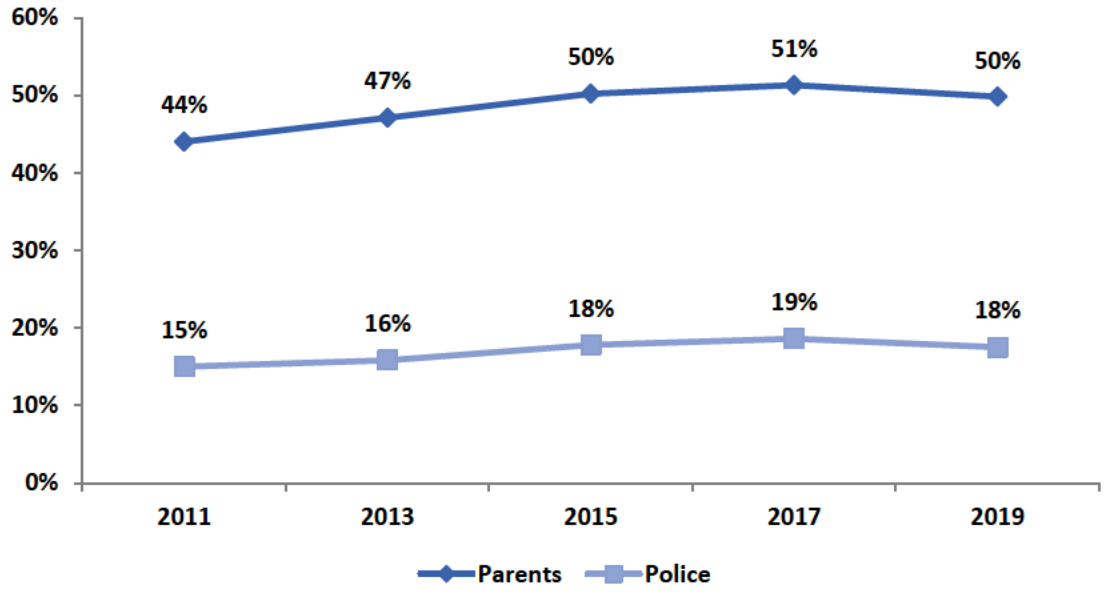
Indicator Description: This indicator shows the percentage of high school students perceiving they would be caught by their parents or by police if they drank alcohol.

Why Indicator is Important: According to the MIYHS, 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, 2011–2019

Summary: In 2019, half of high school students thought they would be caught by their parents for drinking alcohol while 18 percent believed they would be caught by the police. Perceptions of getting caught by parents or police decreased from 2017 to 2019.

Figure 82. High school students reporting they would be caught by parents or the police if they drank in their neighborhood: 2011–2019



Source: MIYHS, 2011 to 2019

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

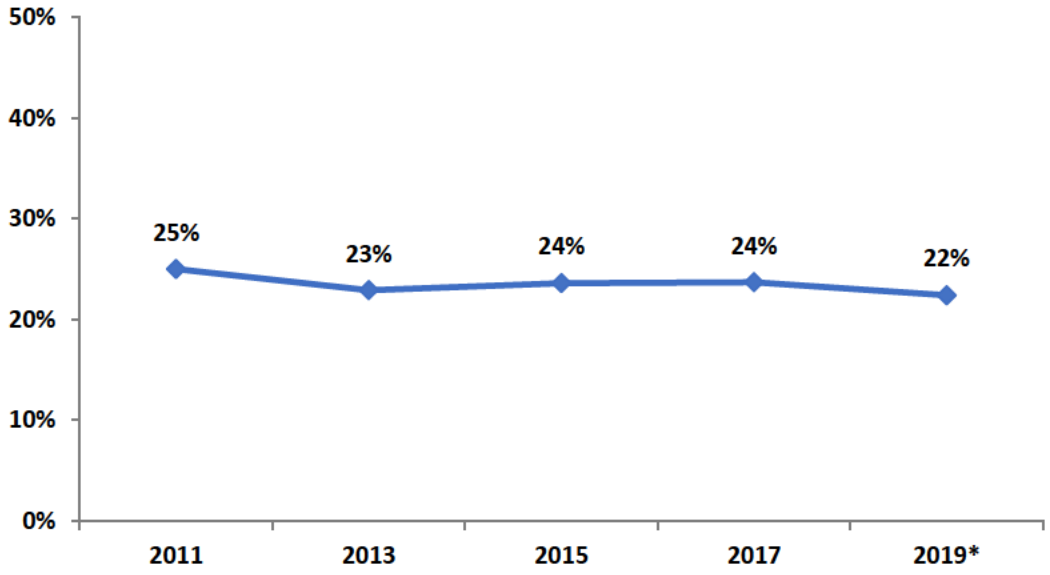
Indicator Description: This indicator represents the percentage of high school students perceiving they would be caught by police if they smoked marijuana.

Why Indicator is Important: According to the MIYHS, 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, 2011–2019

Summary: In 2019, 22 percent of high school students thought they would be caught by police in their neighborhood for using marijuana. Therefore, the majority of high school students were not worried about being caught by police for using marijuana. Rates have remained relatively stable since 2013.

Figure 83. High school students reporting they would get caught by the police if they used marijuana in their neighborhood: 2011–2019*



Source: MIYHS, 2011 to 2019
**In 2017, the indicator changed from "smoking" marijuana to "using" marijuana*

COMMUNITY AND CULTURAL NORMS

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

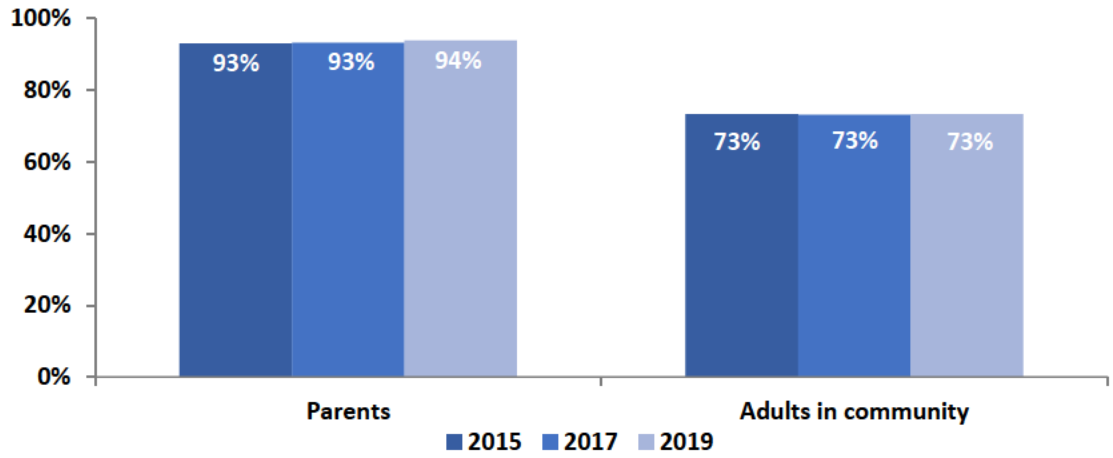
Indicator Description: This indicator depicts the percentage of high school students who thought that their parents feel it would be wrong for them to drink regularly. It also examines the proportion who reported that adults in their community think it would be wrong for kids their age to consume alcohol.

Why Indicator is Important: According to the MIYHS, 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, 2015–2019

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 2019, 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 for both parents and adults in the community from 2017 to 2019.

Figure 84. High school students who reported perceiving that their parents and adults in their community think student alcohol use is wrong: 2015–2019



Source: MIYHS, 2015 to 2019

- 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 increased one percentage point from 2017 (93%) to 2019 (94%).
- In 2019, 73 percent of students reported that adults in their community think it is wrong for youth to use alcohol. This has remained unchanged since 2015.

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

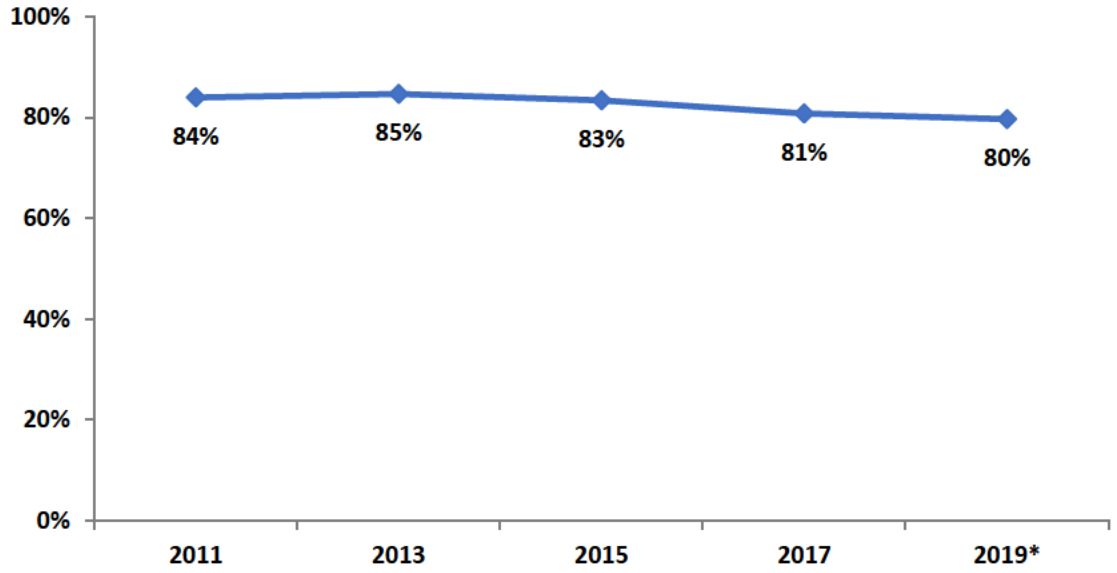
Indicator Description: This indicator shows the percentage of high school students who reported that their parents feel it would be wrong for them to smoke marijuana.

Why Indicator is Important: According to the MIYHS, high school students who do not 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, 2011–2019

Summary: Although high school students generally believe that their parents think it would be wrong for them to use marijuana, perceptions of disapproval have gradually decreased from 2011 (84%) to 2019 (80%). One in five high school students thought their parents would not disapprove of them using marijuana.

Figure 85. High school students who reported that parents would think it was wrong to use marijuana: 2011–2019*



Source: MIYHS, 2011 to 2019

**In 2017 this indicator changes from "smoked" marijuana to "used" marijuana*

Community and Cultural Norms: *Parental Attitudes Regarding Marijuana Use*

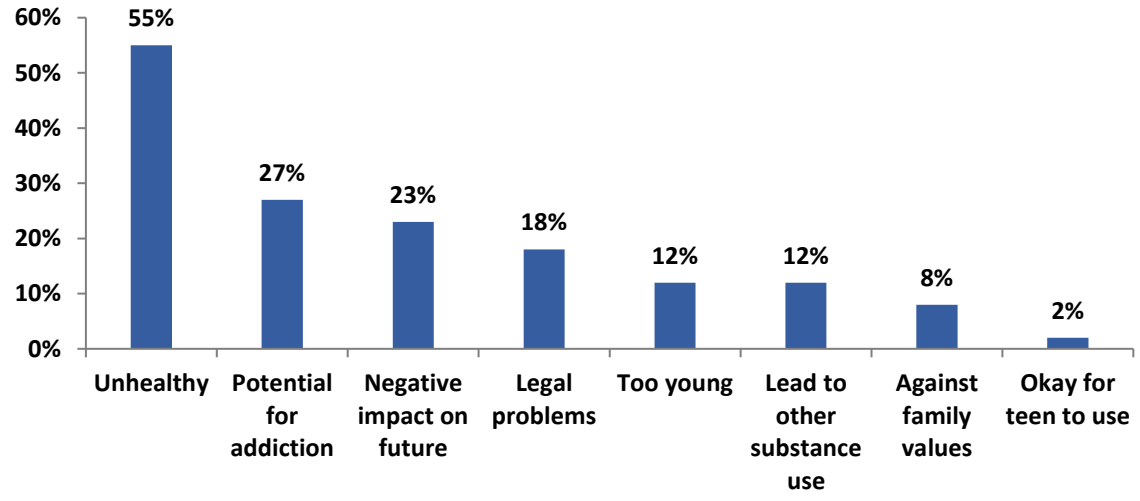
Indicator Description: This indicator reflects how parents felt about their teen using marijuana. Maine parents of teenagers (7th to 12th graders) were asked to select the response that best described their attitude about marijuana use by their child. Response options were mutually exclusive. These data 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, 2019

Summary: Over half of parents of 7th through 12th graders cited that their child should not use marijuana because it was unhealthy. About one in four parents thought there was a potential for addiction or there would be a negative impact on their child's future. Nearly one-fifth of parents believed that marijuana use among their teens could potentially cause legal problems. Two percent of parents thought it was okay for their teen to use marijuana.

Figure 86. Parent's top reasons for their teen not to use marijuana: 2019



Source: Parent Survey, 2019

- In 2019, the most commonly cited reason from parents as to why their teen should not use marijuana was that it was unhealthy (55%); this was followed by potential for addiction (27%), negative impact on their child's future (23%), potential legal problems (18%), teen was too young to use (12%), could lead to other substance use (12%), or it was against the family's values (8%). Two percent of parents surveyed felt it was okay for their teen to use marijuana.

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

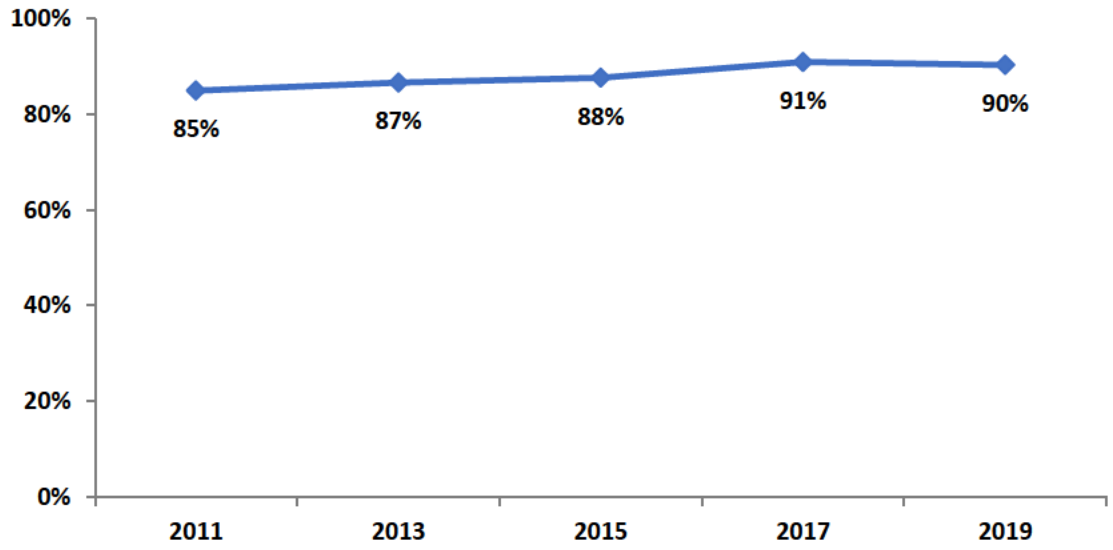
Indicator Description: This indicator reflects the percentage of high school students who reported that their family has clear rules about the use of alcohol, tobacco, and other drugs (substance use).

Why Indicator is Important: According to the MIYHS, 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, 2011–2019

Summary: In 2019, nine out of 10 high school students reported that their family has clear rules around substance use. Conversely, 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 had been steadily increasing since 2011 but decreased slightly in 2019.

Figure 87. High school students who reported their family has clear rules about alcohol and drug use: 2011–2019



Source: MIYHS, 2011 to 2019

- High school students who agreed their family has clear rules about the use of alcohol, tobacco and other drugs increased by five percentage points from 2011 (85%) to 2019 (90%).

Community and Cultural Norms: *Parent Perception of Child's Substance Use*

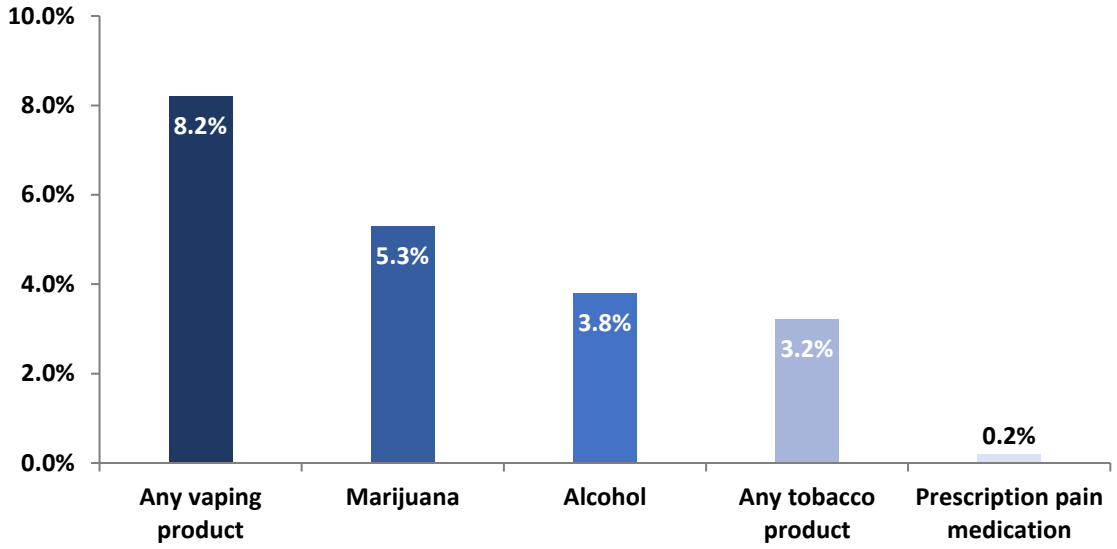
Indicator Description: This indicator reflects the percentage of parents who perceived that their child (7th through 12th graders) was using substances.

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, 2019

Summary: In 2019, nearly one in 10 (8.2%) parents of 7th through 12th graders thought their teen had used a vapor product within the past 30 days. One in twenty parents thought their child had used marijuana and four percent believed their teen had drank any alcohol. Furthermore, only 0.2 percent of parents surveyed thought that their teen had misused a prescription pain medication in the past 30 days.

Figure 88. Parent's perception of child's substance use within the past 30 days, by substance type: 2019



Source: Parent Survey, 2019

- In 2019, 8.2 percent of parents of 7th through 12th graders believed their teen had used a vapor product in the past 30 days; this was followed by marijuana (5.3%), alcohol (3.8%), any tobacco product (3.2%), and prescription pain medication (0.2%).

IMPACT OF PROTECTIVE FACTORS ON SUBSTANCE USE AND MENTAL HEALTH

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

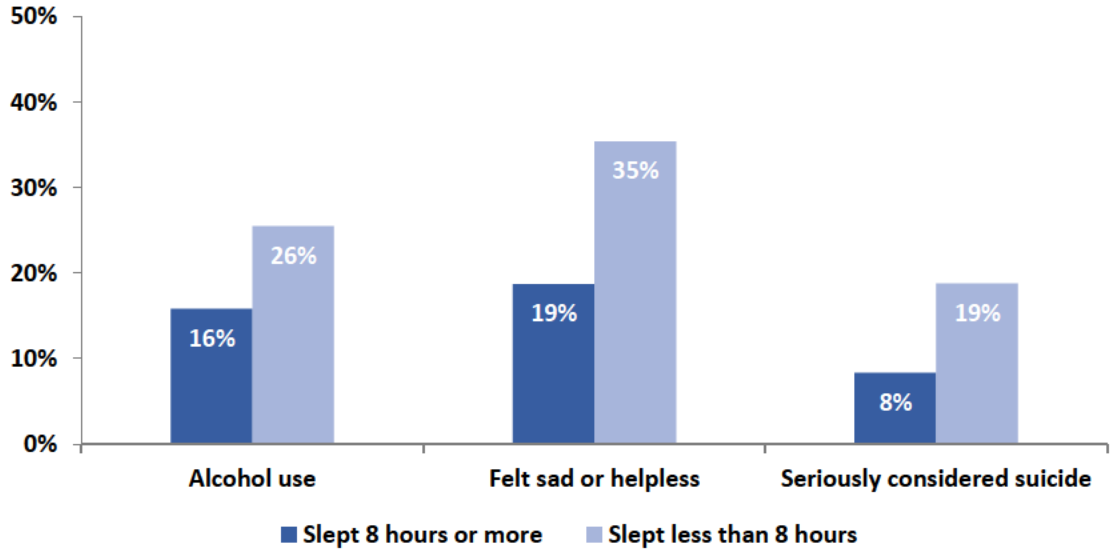
Indicator Description: This indicator explores the extent to which protective factors or behaviors influence substance use and mental health among youth.

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, 2019

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. Teens who had less than eight hours of sleep were twice as likely to experience feelings of depression or suicide ideation. In addition, teens are much more likely to report feelings of sadness and helplessness, as well as substance use and suicide ideation if they do not think that they matter to their community, have three or more adverse childhood experiences, or report that their parents do not know where they are when not at home.

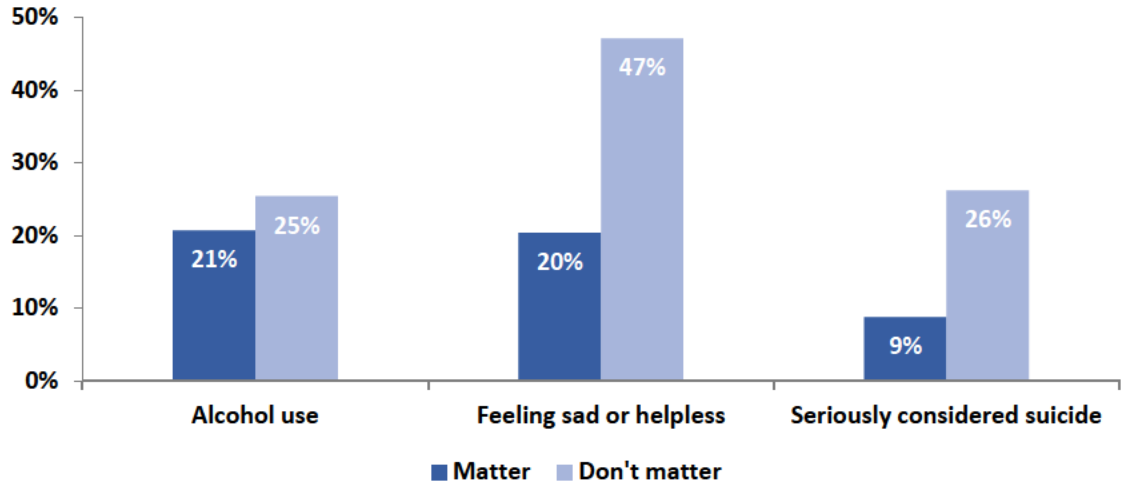
Figure 89. Alcohol use, feelings of sadness and suicide ideation among youth who sleep eight hours or more and those who do not: 2019



Source: MIYHS, 2019

- High school students reporting sleeping more than eight hours on average during school nights were less likely to drink alcohol (16% versus 26% of those who did not get a full night's rest), feel sad or helpless (19% versus 35%), or seriously consider suicide (8% compared to 19%) compared to those who sleep less than eight hours.

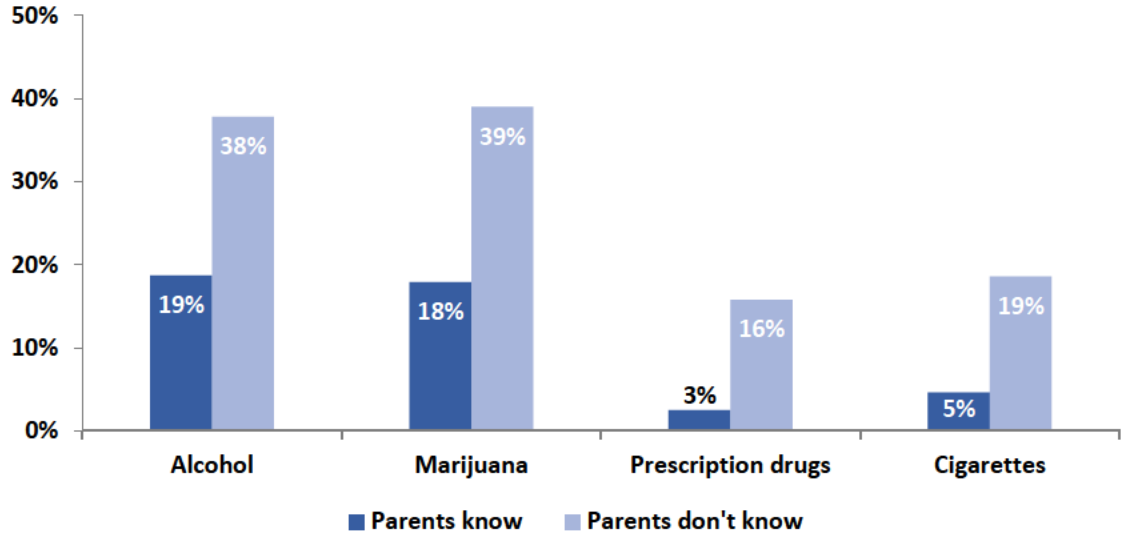
Figure 90. Alcohol use, feelings of sadness and suicide ideation among youth who feel like they matter to people in the community and those who do not: 2019



Source: MIYHS, 2019

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

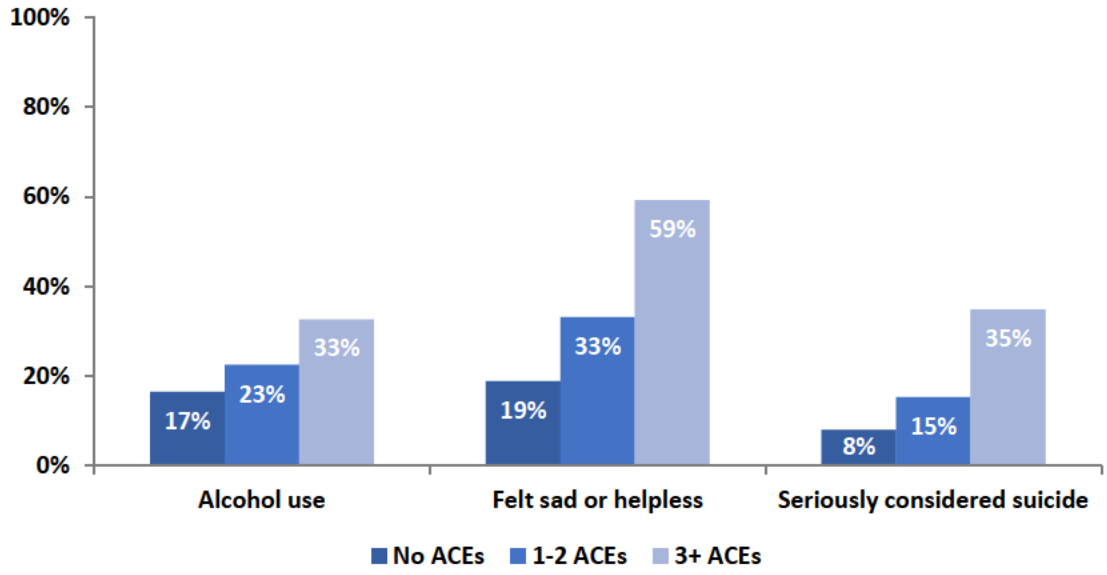
Figure 91. Past-month high school substance use by whether or not their parents know where they are when not at home: 2019



Source: MIYHS, 2019

- High school students who thought 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 and nearly four times as likely to have smoked cigarettes.
- Although not pictured, high school students who thought 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. This is also true of students who believe their family loves and supports them.

Figure 92. Alcohol use, feelings of sadness and suicide ideation among youth based on the number of adverse childhood experiences reported: 2019



Source: MIYHS, 2019

- High school students who identified three or more adverse childhood experiences (ACEs) reported greater alcohol use, feeling sad or helpless, and having serious suicidal consideration compared to those who reported fewer ACEs. Those who reported having one or two ACEs were also more likely to report alcohol use, feeling sad or helpless, and having serious suicidal consideration than those who did not report any ACEs.

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Mental Health, Suicide and Co-occurring Disorders

According to the National Institute on Drug Abuse, about half of people in the nation who experience a mental illness will also experience a substance use disorder at some point in their lives and vice versa. At the individual level, it is important to know if either condition exists because the symptoms of each can affect the other; for example, 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 indicator interacts with the other so that prevention and intervention efforts can better address the needs of both.

This past year has brought new challenges. Communities have faced mental health challenges related to COVID-19 associated morbidity, mortality, and mitigation. According to the CDC, young adults, minorities, essential workers, and caregivers report experiencing substantially worse mental health outcomes, increased substance use, and thoughts of suicide.[37] Data in this section represent multiple mental health indicators that can be routinely monitored in relation to substance use, so that a better understanding can be gained for co-occurring disorders and the prevention and intervention initiatives needed to address them.

According to 2018–19 estimates, roughly one in four adults experienced 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 16 percent; an increase of five percentage points since 2016–17. Rates of depression among 2019 young Mainers in high school reflected similar indicators of risk with about one in three high school students reporting feeling so sad or helpless for at least two weeks in the past year and nearly one in 10 reported they had attempted suicide in the past year.

However, there is some indication that these numbers have worsened in the last year. The number of 2-1-1 Maine referral calls for mental health services increased by 32 percent from 2019 to 2020. Over the same period, housing/shelter calls increased by 33 percent, calls for substance use services increased by 36 percent, and calls related to problem gambling decreased by 24 percent. With the National Institute of Health reporting increased incidence of social isolation due to the pandemic, the impact on mental health and substance use, in turn, for youth and adults remains to be fully seen in available data sets.[38] With continued comorbidity of substance use and mental illness, it is crucial that preventionists continue to integrate mental health promotion with substance use prevention.

[37] Czeisler MÉ , Lane RI, Petrosky E, et al. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic — United States, June 24–30, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1049–1057. DOI: http://dx.doi.org/10.15585/mmwr.mm6932a1

[38] Hwand, Tzung-Jeng, Rabheru, Kiran, Peisah, Carmelle, Reichman, William, and Ikeda, Manabu. (2020) Loneliness and social isolation during the COVID-19 pandemic. Retrieved on 7/1/2021 from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7306546/

MENTAL ILLNESS, DEPRESSION, AND ANXIETY

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

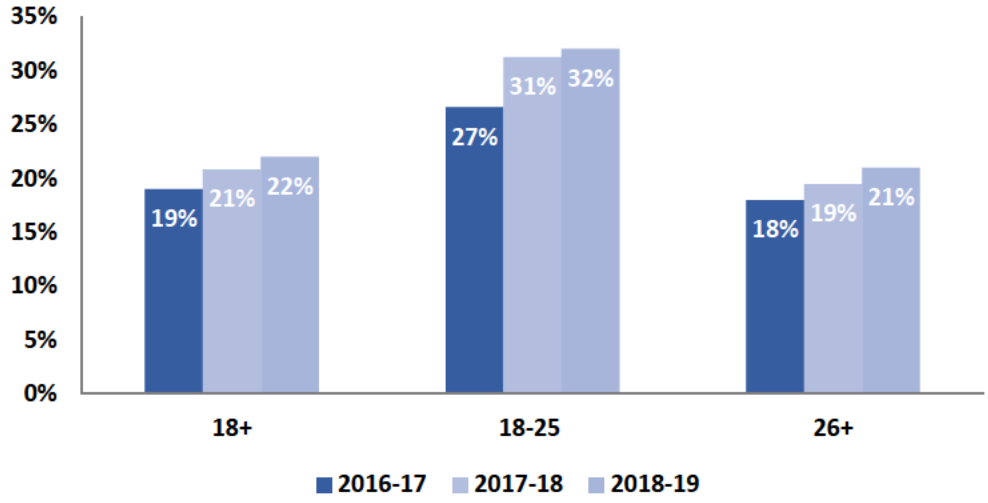
Indicator Description: This indicator reflects the percentage of Maine residents age 18 and older reporting experiencing any mental illness, serious mental illness or having experienced at least one major depressive episode.[39]

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 2018–19

Summary: Nearly one in four 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 16 percent; an increase of five percentage points since 2016–17.

Figure 93. Adults (age 18 and older) experiencing any mental illness in past year, by age group: 2016–17 to 2018–19

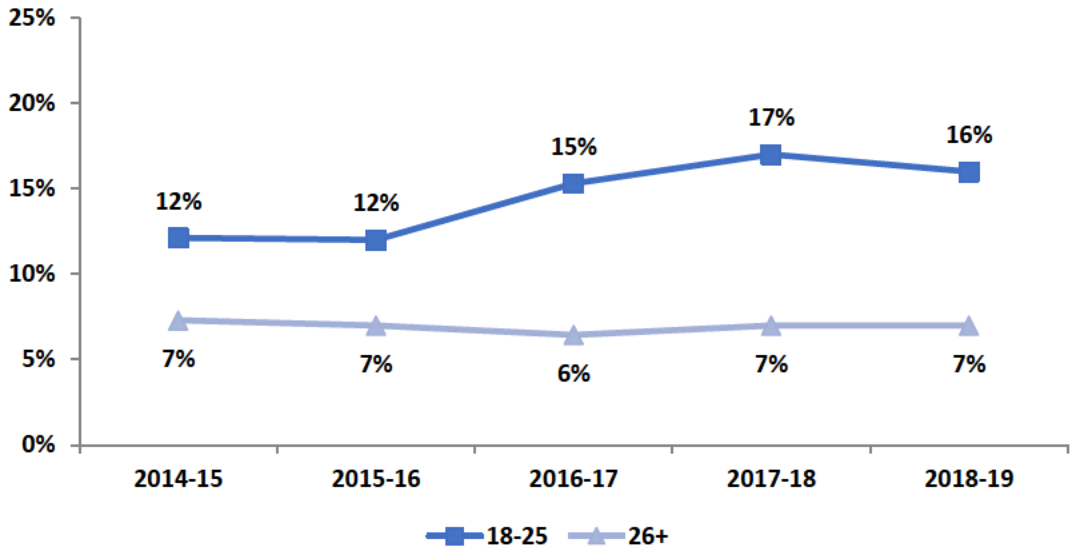


Source: NSDUH, 2016–17 to 2018-19

- In 2018-19, 22 percent of adults ages 18 and over, 32 percent of adults between 18 and 25 years old, and 21 percent of adults 26 and older reported that they have experienced any mental illness in the past year. These rates have all increased since 2016–17.

[39] 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-V 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.

Figure 94. Adults experiencing at least one major depressive episode in the past year, by age group: 2014–15 to 2018–19



Source: NSDUH, 2014–15 to 2018–19

- In 2018–19, major depressive episodes[40] continue to be more prevalent among young adults ages 18 to 25 (16%) compared to adults 26 and older (7%). Major depressive episode rates have increased for youth adults but stayed consistent for Mainers 26 and older since 2014-15.

[40] 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*

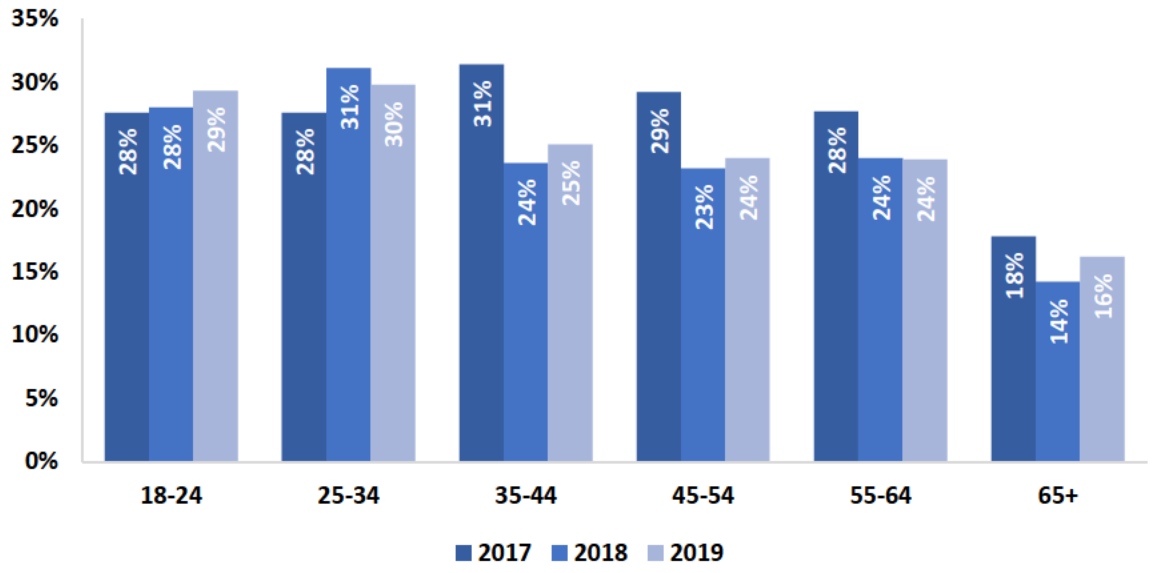
Indicator Description: This indicator examines the percentage of Maine residents age 18 and older who have been told they have a depression or anxiety disorder.

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, 2013-2019

Summary: In 2019, 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 in 2015–17. Rates of depression have been relatively stable since 2017, but they have increased slightly for 18- to 24-year-olds. However, rates of anxiety among adults increased slightly among most age groups for the 2015–17 year.

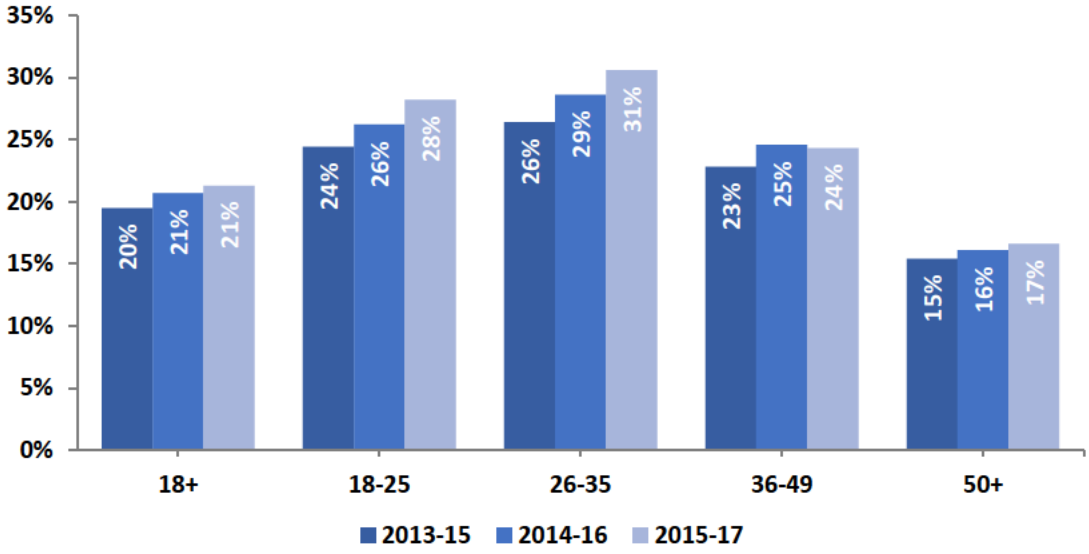
Figure 95. Adults who have been told they have a depressive disorder by age group: 2017–2019



Source: BRFSS 2017–2019

- In 2019, about one quarter (24%) of adults in Maine reported having ever been diagnosed with a depressive disorder.

Figure 96. 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

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

Mental Illness, Depression and Anxiety: *Depression Among Youth*

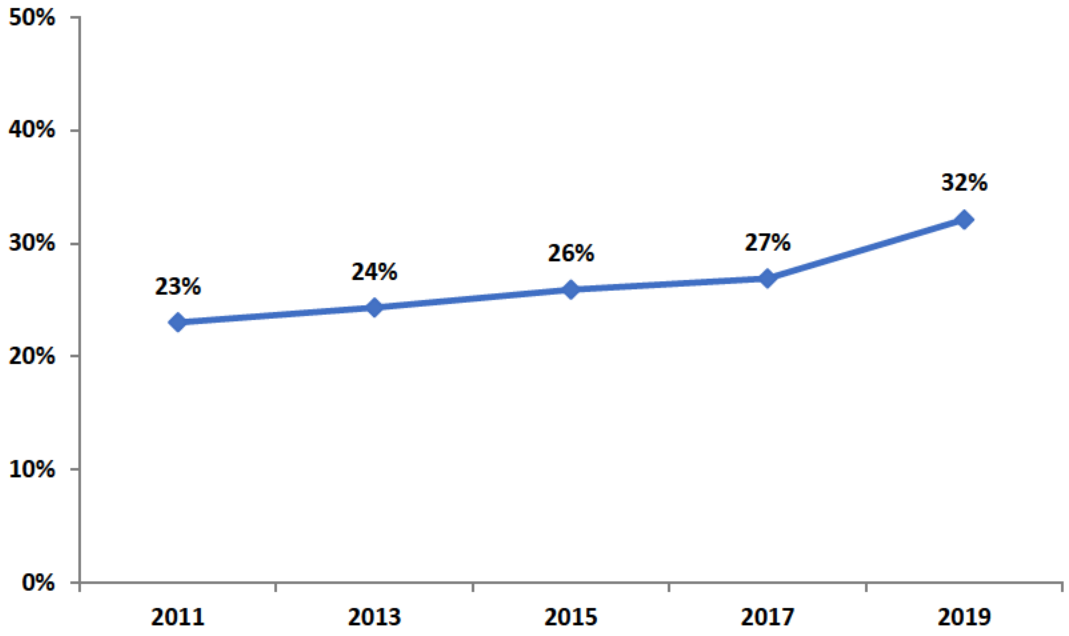
Indicator Description: This indicator measures the percentage of high school students reporting they felt sad or hopeless almost every day for two weeks in a row during the past year.

Why Indicator is Important: Experiencing depression in the past year is associated with higher rates of substance use and suicide. High school 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 2011–2019

Summary: In 2019, nearly one in three (32%) high school students felt so sad or helpless for at least two weeks in the past year that they stopped doing their usual activities. Rates of hopelessness among high students in Maine have been steadily increasing since 2011 with a five-percentage point increase observed from 2017 to 2019.

Figure 97. High school students who reported feeling sad or hopeless in past year: 2011–2019



Source: MIYHS 2011 to 2019

- 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 less than one quarter (23%) in 2011 to nearly one third (32%) in 2019.

SUICIDAL IDEATION

Suicidal Ideation: Suicidal Ideation Among Youth

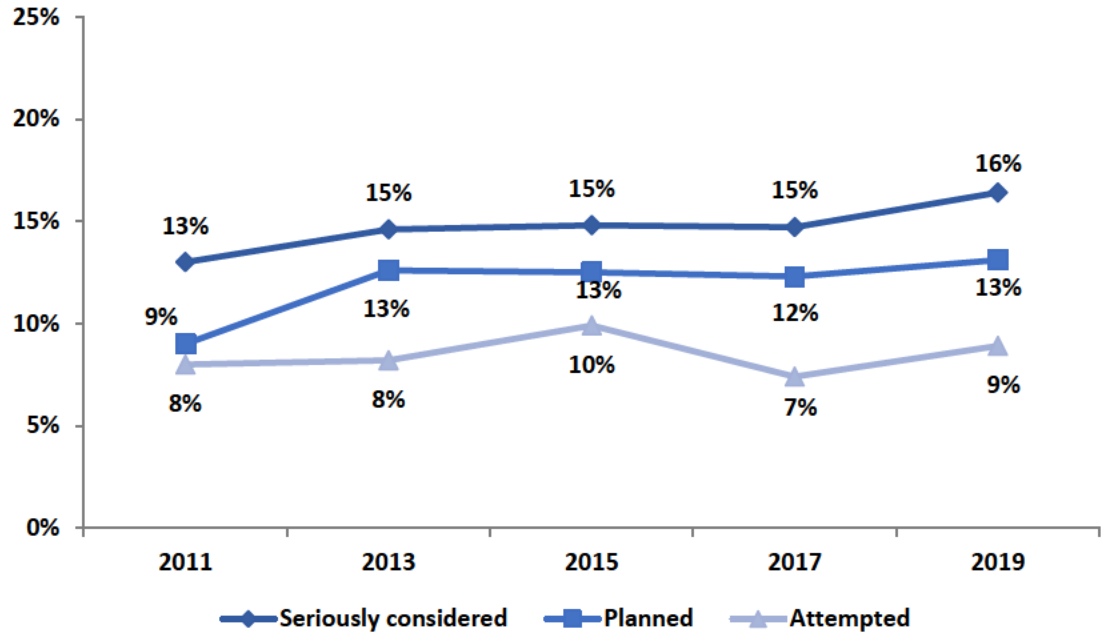
Indicator Description: This measure examines the percentage of high school students who reported that they seriously considered attempting suicide, planned about how they would attempt suicide, or attempted to commit suicide during the past year.

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 2011–2019

Summary: In 2019, 16 percent of Maine high school students seriously considered suicide and 13 percent had planned for suicide in the past year; rates have increased slightly from 2017. The percentage of students who reported that they had attempted suicide increased from 2017 (7%) to 2019 (9%).

Figure 98. High school students who considered, planned, or attempted suicide in past year: 2011–2019



Source: MIYHS 2011 to 2019

MENTAL HEALTH AND SUBSTANCE USE CO-OCCURRENCE

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

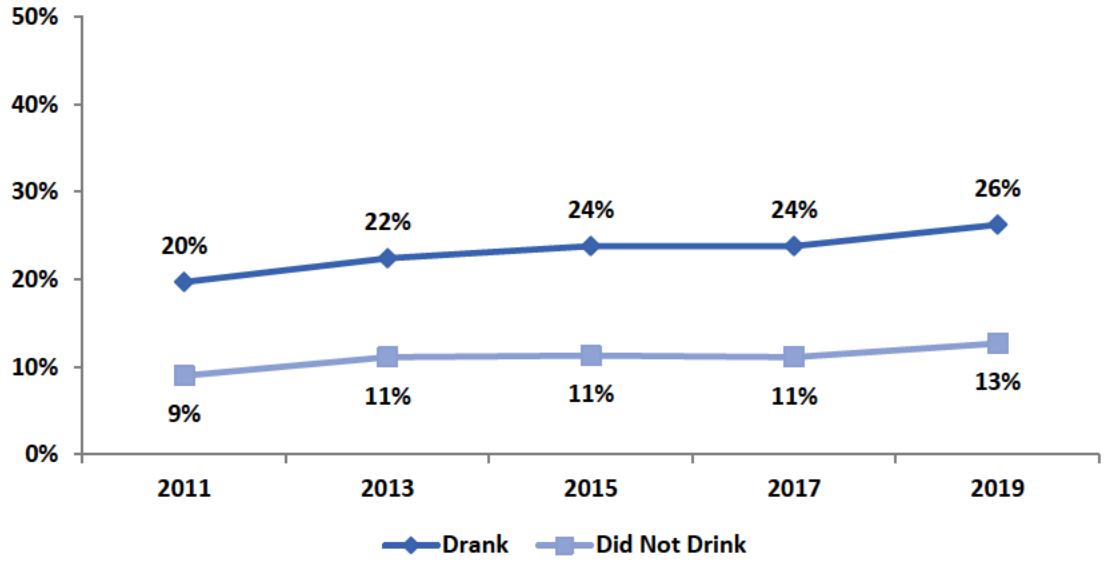
Indicator Description: This indicator explores the relationship between alcohol use within the past 30 days and suicidal behavior. It reflects the likelihood of high school students to report that they planned or attempted suicide during the past year by whether they reported consuming alcohol in the 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, 2011–2019

Summary: In 2019, the percentage of high school students who had consumed alcohol in the past month and had serious thoughts of suicide within the past year is just over one in four (26%); this is double the rate compared to students who did not drink.

Figure 99. High school students reporting seriously considering suicide in the past year, by alcohol use in the past month: 2011–2019



Source: MIYHS 2011 to 2019

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

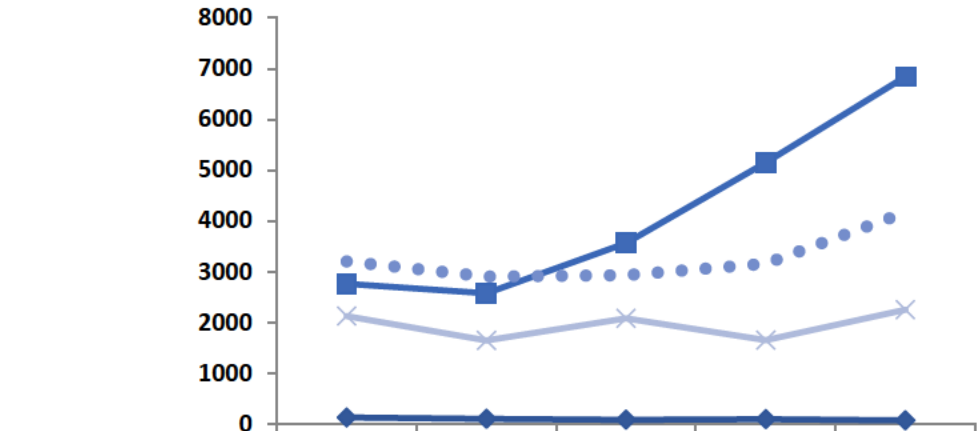
Indicator Description: *2-1-1 Maine* is a telephone and internet service that provides information and referrals to health and human services. This indicator reflects the number of calls received by *2-1-1 Maine* by the type of service requested.

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*, 2016–2020

Summary: *2-1-1 Maine* referral calls related to housing/shelter outnumbered calls related to mental health services as well as substance use in 2020. Referral calls for housing/shelter, mental health, and substance use observed increases from 2019 to 2020, while calls related to gambling decreased.

Figure 100. Number of *2-1-1 Maine* referral calls, by service type: 2016-2020



	2016	2017	2018	2019	2020
Gambling	125	95	80	90	68
Housing/Shelter	2,762	2,573	3,562	5,151	6,842
Mental Health	3,204	2,902	2,930	3,160	4,167
Substance Use	2,125	1,644	2,078	1,652	2,249

Source: 2-1-1 Maine, 2016 to 2020

- In 2020, there were 6,842 calls to *2-1-1 Maine* relating to requests for housing/shelter, followed by 4,167 calls for mental health services, 2,249 calls for substance use, and 68 calls for problem gambling. The number of *2-1-1 Maine* referral calls for mental health services increased by 32 percent from 2019 to 2020. Over the same period, housing/shelter calls increased by 33 percent, calls for substance use services increased by 36 percent, and calls related to problem gambling decreased by 24 percent.

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PRIMARY TREATMENT ADMISSIONS

Primary Treatment Admissions: *Primary Treatment Admissions by Substance*

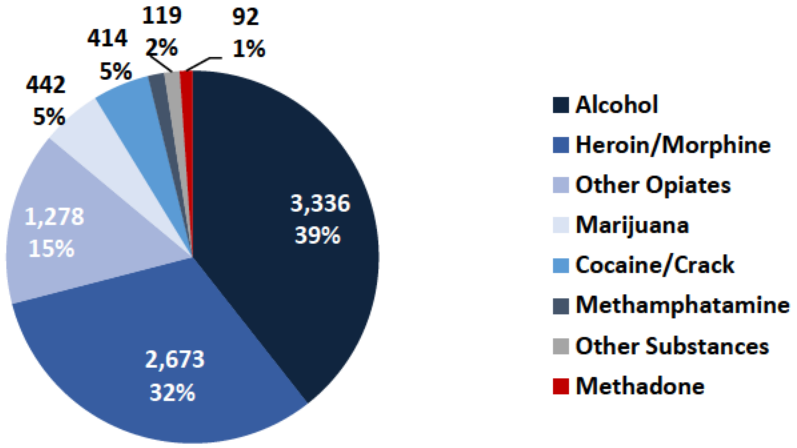
Indicator Description: This indicator reflects substance use treatment admissions in which a substance was listed as the primary reason for admission. The following analysis excludes admissions for shelter/detoxification services as well as those who were identified as co-affected or codependents (*e.g.,* 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 10 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 101. Number and percentage of primary treatment admissions, by substance type: 2018*

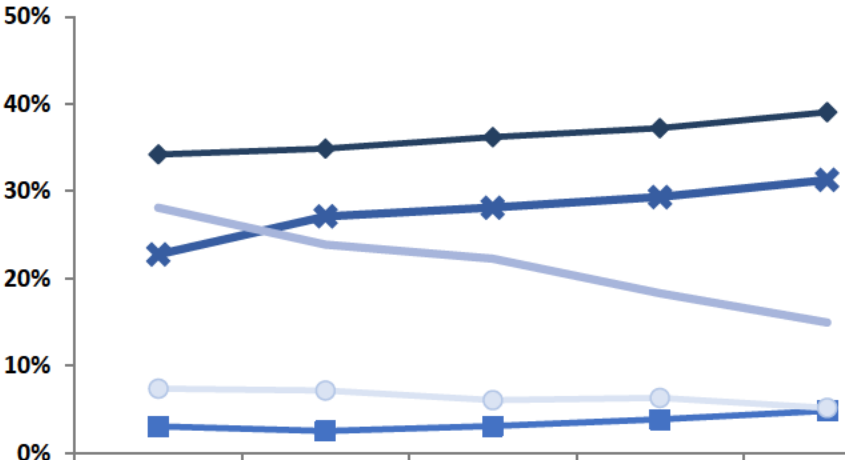


Source: WITS, 2018

**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, 32%), other opiates and synthetics (1,278, 15%), marijuana/hashish/THC (442, 5%), cocaine/crack (414, 5%), and methamphetamine (119, 2%).

Figure 102. 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 eight 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: *Secondary Treatment Admissions by Substance*

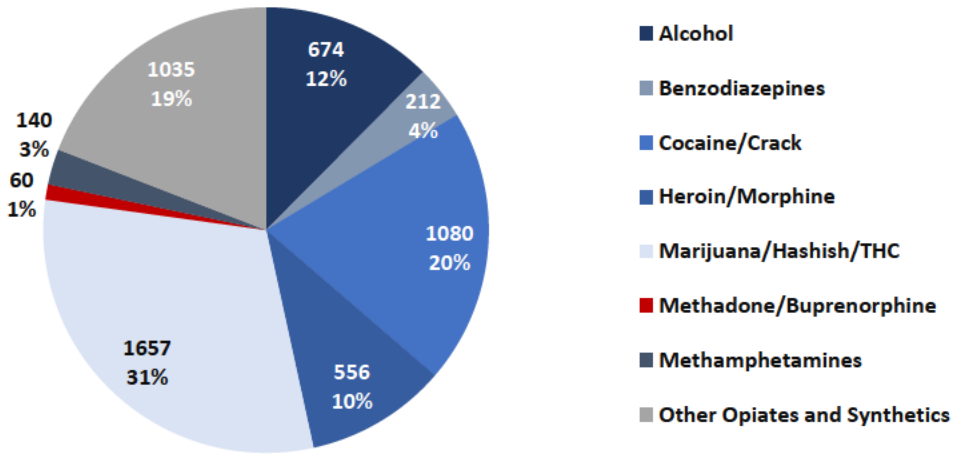
Indicator Description: This indicator reflects substance use treatment admissions in which a substance was listed as the secondary reason for admission. Not every admission includes a secondary reason or substance. The following analysis excludes admissions for shelter/ detoxification services as well 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, 2014–2018

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 (excluding Heroin/morphine). Rates related to synthetic opiates have steadily decreased while rates involving cocaine/crack have gradually increased.

Figure 103. Number and percentage of secondary treatment admissions, by substance type: 2018*

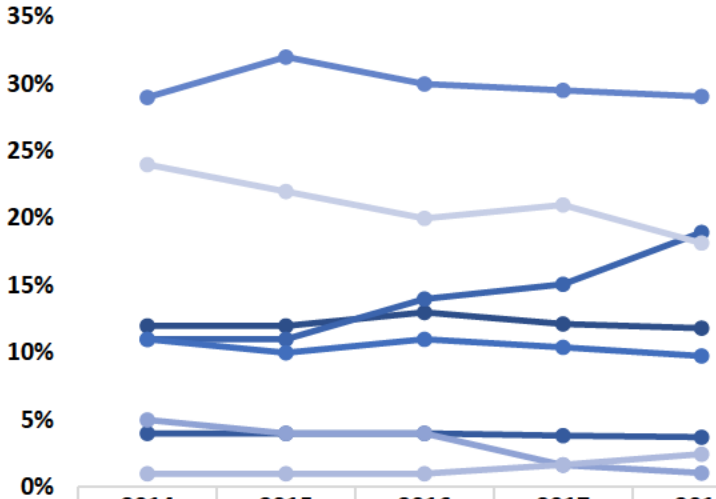


Source: WITS, 2018

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

- In 2018, there were a total of 5,414 admissions that listed a secondary substance or reason for treatment. Of those admissions, 1,642 (31%) were related to marijuana, followed by cocaine/crack (837, 20%) and other opiates and synthetics (1,035, 19%).

Figure 104. Percent of secondary treatment admissions, by substance: 2014–2018



	2014	2015	2016	2017	2018
Alcohol	12%	12%	13%	12%	12%
Benzodiazepines	4%	4%	4%	4%	4%
Cocaine/Crack	11%	11%	14%	15%	19%
Heroin/Morphine	11%	10%	11%	10%	10%
Marijuana/Hashish/THC	29%	32%	30%	30%	29%
Methadone/Buprenorphine	5%	4%	4%	2%	1%
Methamphetamines	1%	1%	1%	2%	2%
Other Opiates and Synthetics	24%	22%	20%	21%	18%

Source: WITS, 2014 to 2018

- Marijuana/hashish/THC still has the highest proportion of admissions where a secondary substance was listed. The proportion of admissions related to 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.

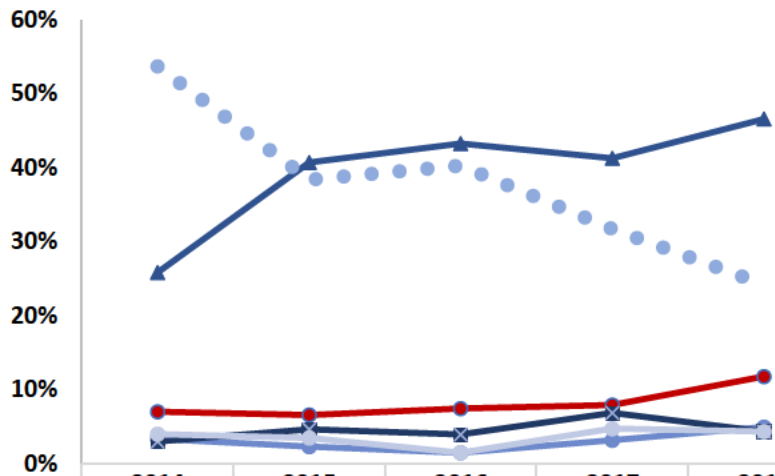
Why Indicator is Important: Exposure to alcohol and drugs damage a fetus during all stages of pregnancy. Babies born to mothers who used drugs during pregnancy are at greater risk of experiencing long-term behavioral difficulties and developmental delays. The American Academy of Pediatrics recommends complete abstinence from alcohol and drugs for pregnant women.[41] However, medical professionals advise pregnant women suffering from addiction to seek treatment rather than attempt to quit without medical supervision.

Data Source(s): WITS, 2014–2018

Summary: In 2018, three-quarters of primary 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 seeking treatment primarily for alcohol has increased steadily in recent years.

[41] American Academy of Pediatrics. (2021). Fetal Alcohol Spectrum Disorders Toolkit: Frequently Asked Questions. Retrieved 6/25/21 from https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/fetal-alcohol-spectrum-disorders-toolkit/Pages/Frequently-Asked-Questions.aspx.

Figure 105. Pregnant treatment admissions, by primary substance: 2014–2018



	2014	2015	2016	2017	2018
Heroin/Morphine	26%	41%	43%	41%	47%
Other Opiates	54%	38%	40%	32%	24%
Alcohol	7%	7%	7%	8%	12%
Marijuana	3%	2%	1%	3%	5%
Cocaine/Crack	3%	5%	4%	7%	4%
Methadone	4%	3%	1%	5%	4%

Source: WITS, 2014 to 2018

**WITS system is not static and is continually updated*

- In 2018, 47 percent of pregnant women who were seeking treatment upon admission were seeking treatment for heroin/morphine, followed by other synthetic opiates (24%), alcohol (12%), marijuana (5%), cocaine/crack (4%), and methadone (4%), as the primary reason.
- The proportion of pregnant women who were admitted for treatment primarily due to other synthetic opiates has been declining since 2014, from 54 percent to 24 percent. Over the same period, the proportion of pregnant women admitted for heroin increased from 26 percent in 2014 to 47 percent in 2018.
- The proportion of pregnant women seeking treatment primarily for alcohol increased steadily from 2016 (7%) to 2018 (12%).

Conclusion

It has been an unprecedented year with the COVID-19 pandemic having a significant impact globally with government-mandated quarantines, social distancing, and business shut-downs. The pandemic has led to decreased access to services, increased isolation and limited supportive resources, which have in turn influenced substance use and related factors across the country, including in Maine. In early 2021, large-scale public vaccinations against the virus have enabled scaling back of public health restrictions, but SAMHSA and Maine SEOW recognize that the pandemic has already had a substantial impact on substance use. Unfortunately, the magnitude and longevity of the effects are still unfolding, and as new data become available there will be an opportunity to learn and invest in those who need it the most.

Substance use prevention is a critical component of the continuum of care and is important to implement across the lifespan. There is growing and continued need to support a collaborative approach and increase upstream prevention efforts and build resilience for future generations. Examining the consumption, consequences and intervening variables related to substance use allows stakeholders to take a triangulated approach to data-driven decision making and planning. It is important to stay abreast of emerging trends, and programming should address factors that target multiple shared risk and protective factors related to substance use for maximum impact.

While it will take some time for the population-wide surveillance data sources to determine the short-term and long-term impact of COVID on substance use and related consequences, preliminary analyses are showing increased consumption and risky use. Similar to past years, alcohol remains the most used substance in Maine across the lifespan. Arrests related to alcohol decreased while car crashes, ED visits and longer-term consequences such as alcoholic cirrhosis increased. High-risk drinking (binge drinking) also remains a concern for Mainers 18 to 34 years old.

Rates of cigarette smoking have remained consistent over the last three years, while there have been increases in e-cigarette and vaping product use, although these changes were not significant. While smoking marijuana is still the most prevalent mode of administration, vaping marijuana products (e.g., oils) has been gaining in popularity. Marijuana use is of particular concern with increased access and availability due to adult-use legalization and reductions in perceptions of harm. While marijuana use among high school students remained stable from 2011 to 2019, at around 20 percent, there have been increases in marijuana use among young adult Mainers, as well as use by those 26 and older. Also concerning is that Mainers appear to be initiating use of marijuana at a younger age. While the consequences related to marijuana use are continuing to be better understood, one indicator of note was ED visits. In 2020, there were 5,632 marijuana related emergency department visits: a 21 percent increase from 2019. Rates were disproportionately higher among males and Mainers ages 18 to 25, indicating young adults as a population of concern.

While the number of pharmaceutical and non-pharmaceutical opioid deaths has been on the rise since 2018, the pandemic appears to have exacerbated the rate. Non-pharmaceutical fentanyl continues to play a major role in drug-related deaths. The number of non-pharmaceutical fentanyl-related deaths has risen by 54.8 percent since 2018. The number of deaths related to methamphetamines also doubled between 2019 and 2020. Additionally, a majority of calls to Northern New England Poison Center requesting medication verification during the 2018–2020 period involved opioids, followed by benzodiazepines and stimulants. This continued the trend from the previous reporting period.

Additional emphasis needs to be placed on contributing factors (e.g., risk and protective factors), especially access, availability, and perceptions of harm to substances such as alcohol and marijuana. Changing legislation related to adult-use marijuana and loosened restrictions related to the purchase of alcohol appear to have greatly increased access and availability. Agent spirit sales in Maine increased by 10 percent from 2019 to 2020. Marijuana retail stores are also opening at a precipitous pace across the state, and it will be important to include this data in future reports as data become available. Access to prescription narcotics continues to decrease as a result of the improved use and promotion of the PMP. Perceptions of harm from using substances and perceptions of peer use should continue to be monitored and addressed. Additional protective factors such as adequate sleep and strong family and social supports, and risk for substance use and mental health issues among youth should be closely monitored as new data becomes available.

In 2018, nearly four in 10 admissions for substance use treatment listed alcohol as the primary reason for treatment, followed by heroin/morphine, and other opiates/ synthetics. Additionally, almost 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. It is still unclear due to lack of data availability the impact that COVID-19 has had on treatment; but with many services halted and still slowly becoming available, one can presume that there was a decrease in treatment services in 2020.

A special population that continues to be monitored and supported in Maine is our pregnant population. In 2019, about one in 10 of women reported using cigarettes (11%), alcohol (10%), or e-cigarettes (3%) while pregnant. In recent years, the percentage of pregnant treatment admissions primarily due to other synthetic opioids has steadily declined while the proportion related to heroin and alcohol has increased. In 2020, there were 903 notifications to Child Protective Services regarding infants born exposed to substances (drug-affected babies); this accounted for nearly eight percent of the live births in Maine.

Now more than ever, addressing the connection between substance use and mental health is necessary due to contributors such as stress and social isolation due to COVID-19. Recent studies suggest that younger adults, minorities, essential workers, and unpaid adult caregivers experienced disproportionately worse mental health outcomes, increased substance use, and higher rates of suicide ideation as a result of COVID-19. It is crucial that we continue to monitor

and study the impact of COVID-19 on substance use and mental health, particularly among vulnerable populations. According to 2018–19 estimates, roughly one in four Maine adults experienced 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 16 percent; an increase of five percentage points since 2016–17. In 2019, rates of depression among Maine high school students reflected similar indicators of risk with, about one in three reporting feeling so sad or helpless for at least two weeks in the past year and nearly one in 10 reported they had attempted suicide in the past year. As data becomes available it will be critical to monitor change specific to this population. Although many in-person treatment services were unavailable, the number of 2-1-1 Maine referral calls for mental health services increased by 32 percent from 2019 to 2020. Over the same period, housing/shelter calls increased by 33 percent, calls for substance use services increased by 36 percent, and calls related to problem gambling decreased by 24 percent.

As this was an unprecedented year and several new or current data sources and indicators were limited largely due to the pandemic- it will be critical to continue to monitor and update data as they become available. It will also be important to consider the timeline of COVID-19 and the reopening of states in conjunction with consumption, consequence and intervening variable data. The Maine SEOW will continue to align and leverage efforts with data stakeholders across the state, monitor trends, collect new and improved data, triangulate results and disseminate data products. Continued investment and expansion of the Maine SEOW will prove fruitful to ensure substance use prevention leaders, stakeholders, and program implementors have the necessary information to make data-driven decisions, inform program planning, and create valuable impact for our communities.

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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 as Maine's Tribes and American Indian & Alaska Native (AL/AN) populations are located throughout the state. 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; and
- Building sustainable infrastructure through regional co-location of Maine CDC and DHHS staff, and through an interactive, fully participatory District Coordinating Council.[42]

The following section will outline several key indicators and similarities and/or differences related to Maine's PHDs.

[42] Maine Center for Disease Control and Prevention. (n.d.). Local Public Health Districts. Retrieved 6/25/21 from https://www.maine.gov/dhhs/mecdc/public-health-systems/lphd/index.shtml.

PUBLIC HEALTH DISTRICT

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

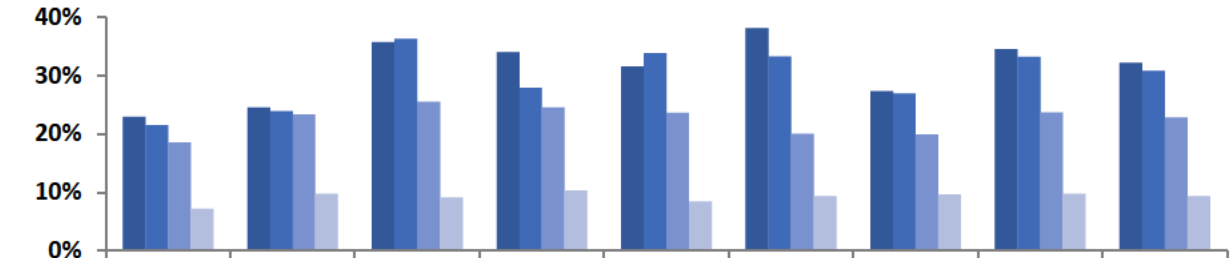
Indicator Description: This indicator reflects the percentage of adults who reported consuming several alcoholic beverages in a row for at least one day within the past month.[43]

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, 2014–17

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 106. 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, 2014–17

[43] 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: *Alcohol Use Last Three Months of Pregnancy*

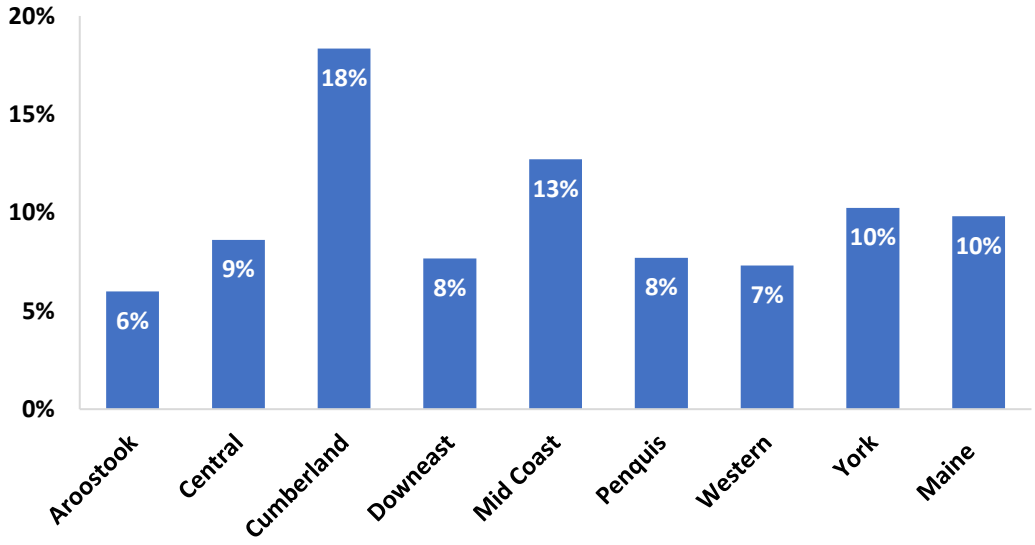
Indicator Description: This indicator reflects the percentage of mothers who reported using alcohol during the last three months of their pregnancy.

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.

Data Source(s): PRAMS, 2016–19

Summary: In 2016–19, one in 10 women reported using alcohol during their last trimester of pregnancy. Rates were highest among women who lived in Cumberland (18%) and lowest among women in Aroostook (6%).

Figure 107. Percent of women by Public Health District who reported alcohol use during the last three months of their pregnancy: 2016–19



Source: PRAMS, 2016–19

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

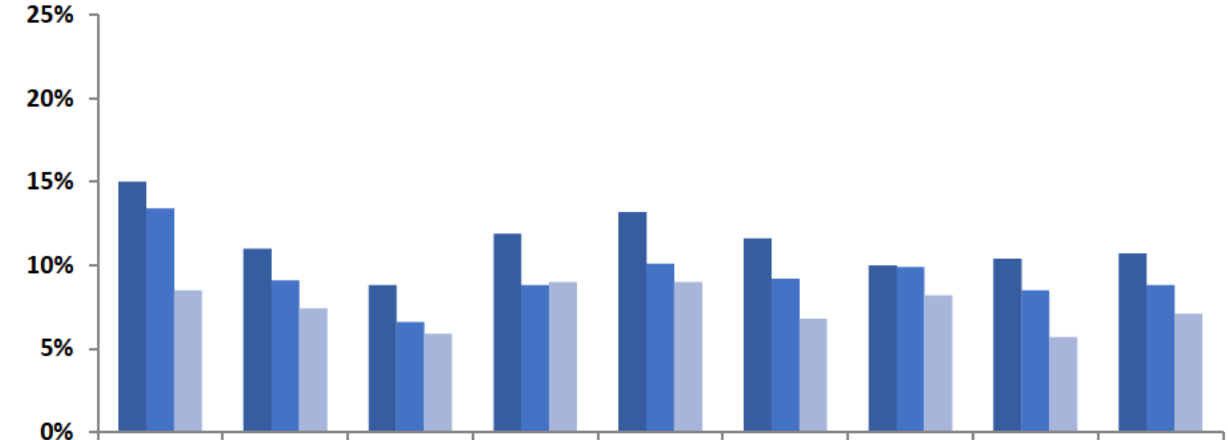
Indicator Description: This indicator illustrates the percentage of Maine high school students who reported smoking a cigarette on at least one occasion within 30 days prior to the survey.

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, 2015–2019

Summary: The use of tobacco products among high school students continues to steadily decline. In 2019, seven percent of high school students in Maine reported having smoked a cigarette within the past month. Rates ranged from the highest (at 9%) observed in Aroostook, Downeast and Midcoast, to the lowest (at 6%) in Cumberland and York. With the exception of Downeast, all public health districts observed decreased rates from 2017 to 2019.

Figure 108. Percent of high school students by Public Health District who reported smoking one or more cigarettes during past 30 days: 2015–2019



	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
2015	15%	11%	9%	12%	13%	12%	10%	10%	11%
2017	13%	9%	7%	9%	10%	9%	10%	9%	9%
2019	9%	7%	6%	9%	9%	7%	8%	6%	7%

Source: MIYHS, 2015 to 2019

Key Indicators at the Public Health District Level: *Smoking Last Three Months of Pregnancy*

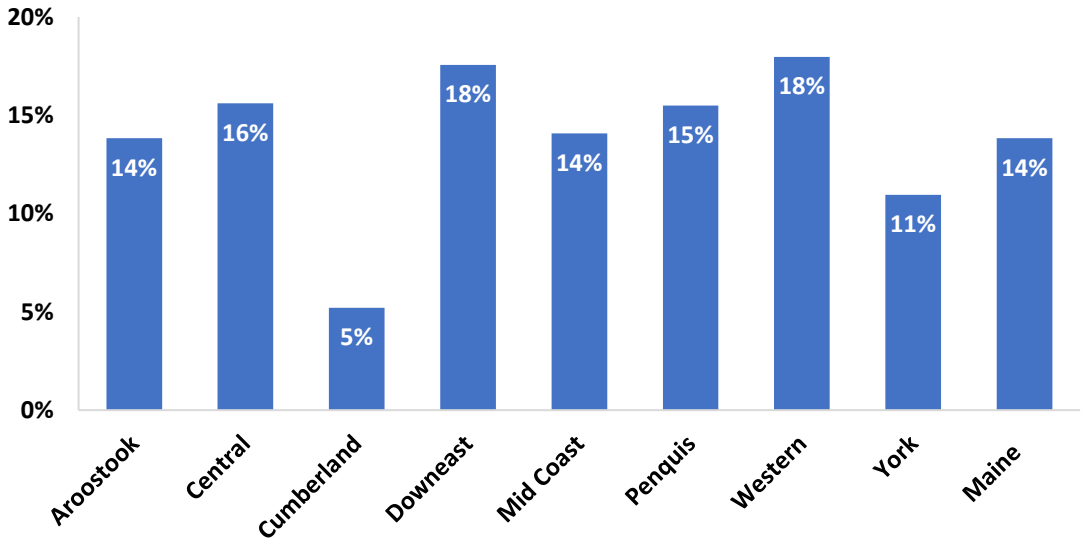
Indicator Description: This indicator reflects the percentage of mothers who reported smoking during the last three months of their pregnancy.

Why Indicator is Important: 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, 2016–19

Summary: Approximately one in six women reported smoking during their last trimester of pregnancy in 2016–19. Rates were highest among women who lived in the Western and Downeast (18%) public health districts and lowest among women in Cumberland (5%).

Figure 109. Percent of women by Public Health District who reported smoking during the last three months of their pregnancy: 2016–19



Source: PRAMS, 2016-19

Key Indicators at the Public Health District Level: *Misuse of Prescription Drugs Among Youth*

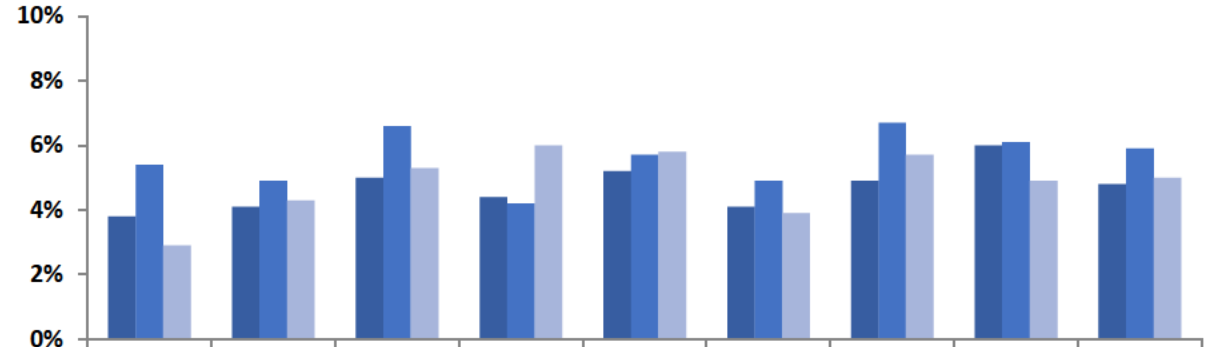
Indicator Description: This indicator represents the percentage of youth who reported using prescription medications (any type) that were not prescribed to them by a doctor.

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, 2015–2019.

Summary: On a statewide level, the percentage of high school students in Maine reporting that they had misused a prescription medication in the past month decreased slightly from 2017 (6%) to 2019 (5%). In 2019, rates did not vary much across public health districts, ranging from three percent in Aroostook to six percent in the Downeast, Midcoast, and Western districts. Rates of prescription drug misuse have remained steady at both the state and district level.

Figure 110. Percent of high school students by Public Health District who have taken prescription drugs not prescribed to them by a doctor (past 30 days): 2015–2019



	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
2015	4%	4%	5%	4%	5%	4%	5%	6%	5%
2017	5%	5%	7%	4%	6%	5%	7%	6%	6%
2019	3%	4%	5%	6%	6%	4%	6%	5%	5%

Source: MIYHS, 2015 to 2019

Key Indicators at the Public Health District Level: *Misuse of Prescription Drugs Among Adults*

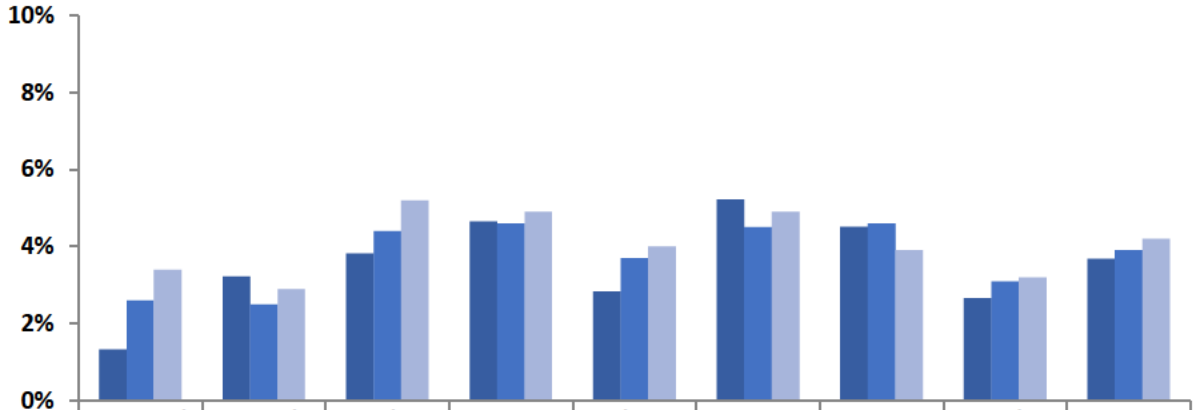
Indicator Description: This measure reflects the percentage of adults in Maine who reported using prescription drugs (any type) not prescribed to them by a doctor or using them in a way other than in which they were prescribed, at least once in their lifetime.

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 2015–17

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%). Western was the only district not to observe an increase from the previous year.

Figure 111. Misuse of prescription drugs among Maine residents (18 and older) in their lifetime, by Public Health District: 2013–15 to 2015–17

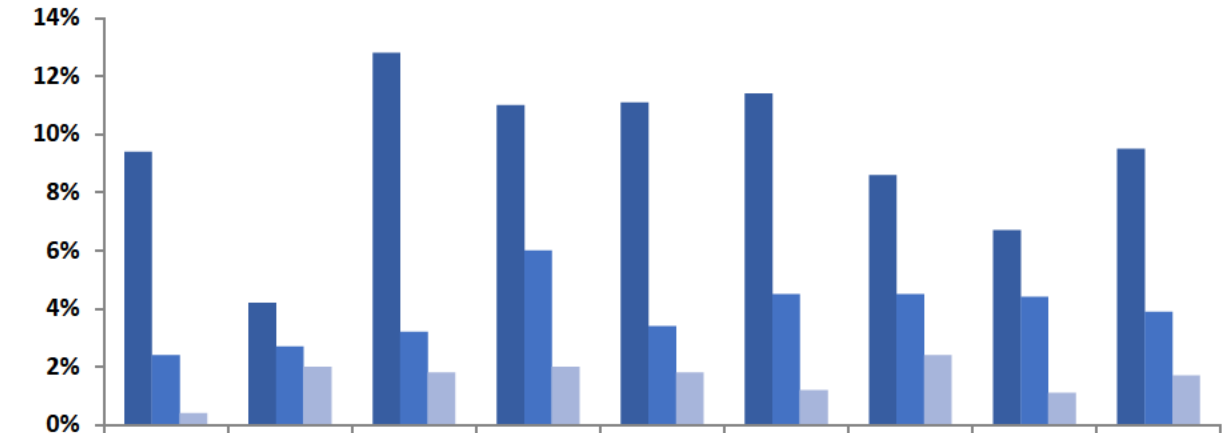


	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
2013-15	1.3%	3.2%	3.8%	4.7%	2.8%	5.2%	4.5%	2.7%	3.7%
2014-16	2.6%	2.5%	4.4%	4.6%	3.7%	4.5%	4.6%	3.1%	3.9%
2015-17	3.4%	2.9%	5.2%	4.9%	4.0%	4.9%	3.9%	3.2%	4.2%

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 112. 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.[44]

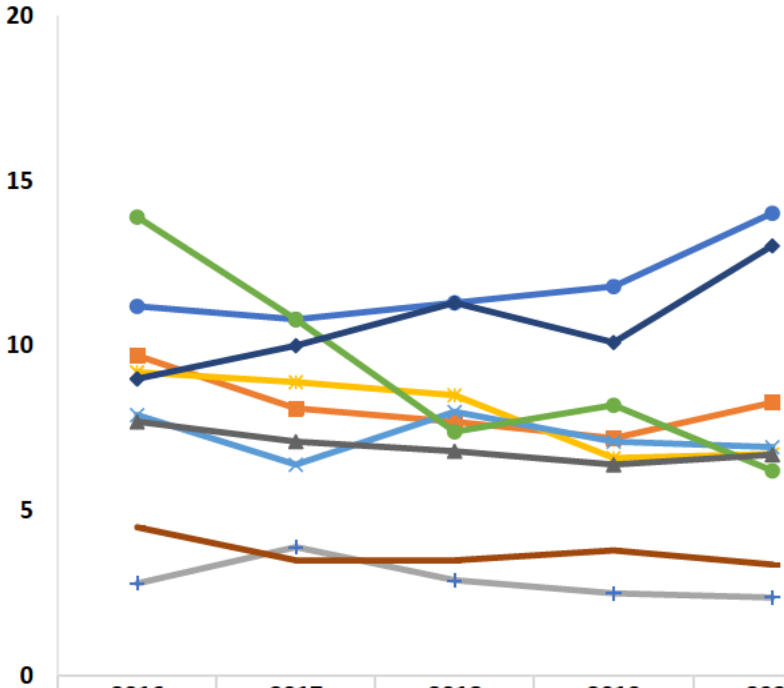
Why Indicator is Important: Prenatal exposure to alcohol, tobacco, and illicit drugs has the potential to cause a wide spectrum of physical, emotional, and developmental problems for these infants. The harm caused to the child can be significant and long-lasting, especially if the exposure is not detected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

Data Source(s): OCFS/MACWIS, 2016–2020

Summary: In 2020, there were 903 notifications submitted to OCFS regarding substance exposed infants; this is a rate of 6.7 notifications per 10,000 residents. Among public health districts, the highest rates were observed in Aroostook (14) and Western (13) while the lowest rates were observed among Cumberland (2.4) and York (3.4). Aroostook, Western, and Central public health districts observed increases in rates from 2019 to 2020.

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

Figure 113. Number of substance-exposed infant notifications per 10,000 residents, by Public Health District: 2016–2020



	2016	2017	2018	2019	2020
Aroostook	11.2	10.8	11.3	11.8	14.0
Central	9.7	8.1	7.7	7.2	8.3
Cumberland	2.8	3.9	2.9	2.5	2.4
Downeast	9.2	8.9	8.5	6.6	6.7
Midcoast	7.9	6.4	8	7.1	6.9
Penquis	13.9	10.8	7.4	8.2	6.2
Western	9	10	11.3	10.1	13.0
York	4.5	3.5	3.5	3.8	3.4
Maine	7.7	7.1	6.8	6.4	6.7

Source: OCFS/MACWIS, 2016 to 2020

Key Indicators at the Public Health District Level: *Annual Drug-Related Arrest Rate*

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.

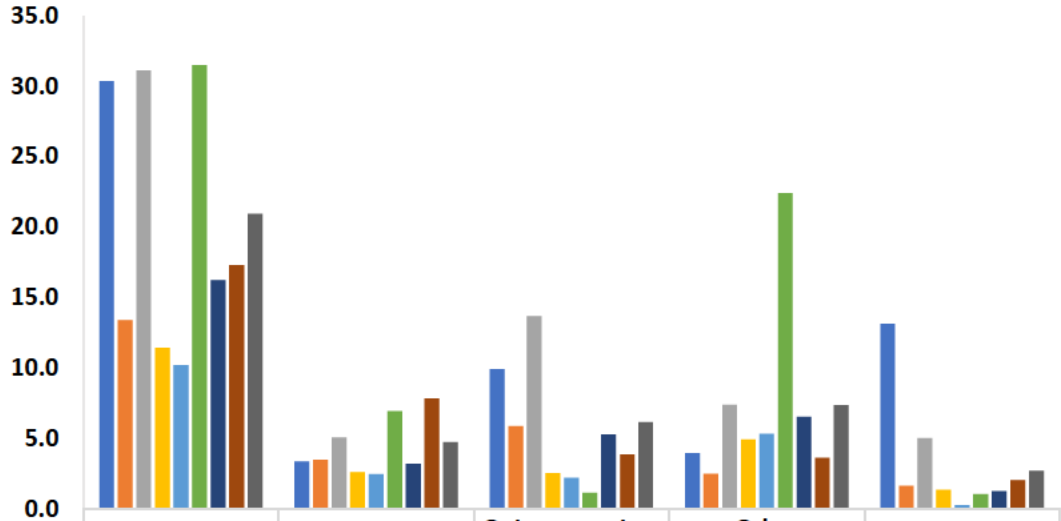
Operationalized as: $\left(\frac{\#\ of\ drug\ arrests}{population}\right) \times 10{,}000$

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, 2018–19

Summary: In 2018–19 there was an annual average of 20.9 drug-related arrests per 10,000 residents in Maine. During this time, rates among public health districts ranged from 10.2 in Midcoast to 31.5 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 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 (*e.g.*, prescription opiates) was observed in Aroostook. Downeast and Midcoast generally saw lower drug-related arrest rates when compared to other districts.

Figure 114. Drug-related arrest rate per 10,000 residents (all ages), by drug type and Public Health District: 2018–19



	All drugs	Marijuana	Opium, cocaine, and derivatives*	Other dangerous non-narcotics**	Synthetic narcotics
Aroostook	30.3	3.4	9.9	4.0	13.1
Central	13.4	3.5	5.8	2.5	1.6
Cumberland	31.1	5.1	13.7	7.4	5.0
Downeast	11.4	2.6	2.5	4.9	1.3
Midcoast	10.2	2.4	2.2	5.3	0.2
Penquis	31.5	6.9	1.1	22.4	1.0
Western	16.2	3.2	5.3	6.5	1.3
York	17.3	7.8	3.8	3.6	2.0
Maine	20.9	4.7	6.2	7.4	2.7

Source: DPS--UCR 2018–19

**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.*

Key Indicators at the Public Health District Level: *Overdoses*

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.

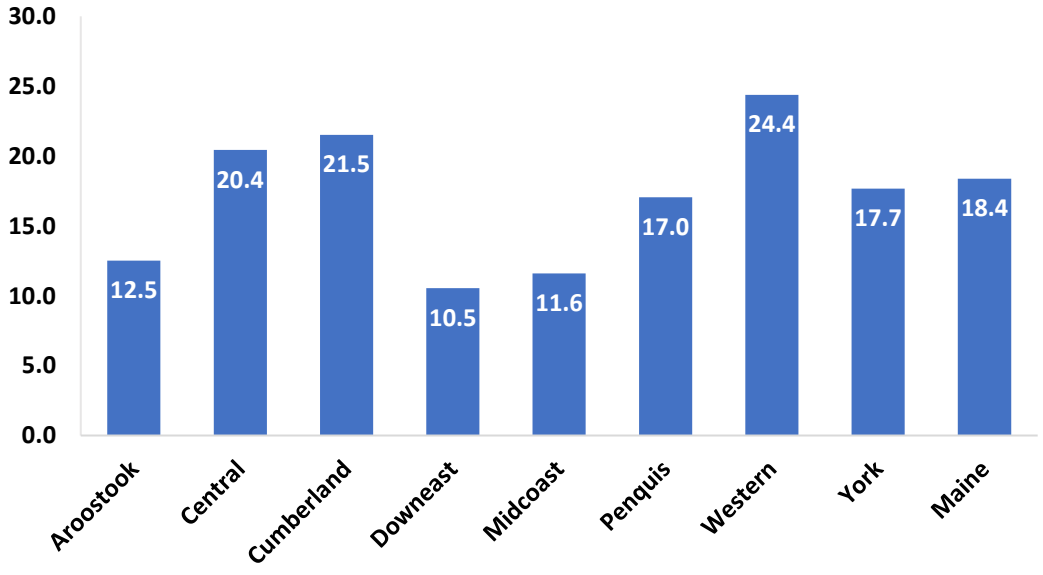
Why Indicator is Important: Overdosing on a substance can cause serious physical harm resulting in hospitalization and even death. Responding to overdoses also uses valuable EMS resources. The rate per 10,000 allows us to see the frequency with which an occurrence happens within a population over time, 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, 2020

Summary: In 2020, Maine observed 18.4 Emergency Medical Service responses per 10,000 residents due to an alcohol overdose. Over the same period, Maine reported 11.6 EMS responses related to opioids per 10,000 residents.

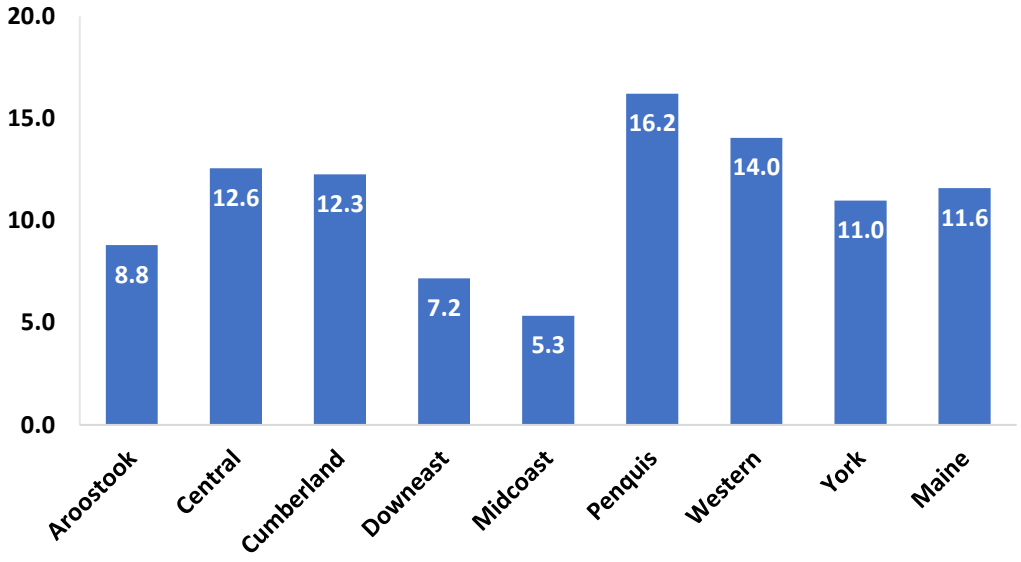
Figure 115. Number of EMS responses due to alcohol (based on primary impression) per 10,000 residents, by Public Health District: 2020



Source: EMS, 2020

- The public health district with the highest rate of EMS responses due to alcohol overdose was Western (24.4 per 10,000). Downeast (10.5 per 10,000) and Midcoast (11.6 per 10,000) reported the lowest rates of EMS response to alcohol.

Figure 116. Number of overdose EMS responses (based on primary impression) due to opioids per 10,000 residents, by Public Health District: 2020



Source: EMS, 2020

- The highest rate of EMS responses due to opioid overdose occurred in the Penquis public health district (16.2 per 10,000); the public health district with the lowest rate was Midcoast (5.3 per 10,000).

Key Indicators at the Public Health District Level: *Naloxone Administrations*

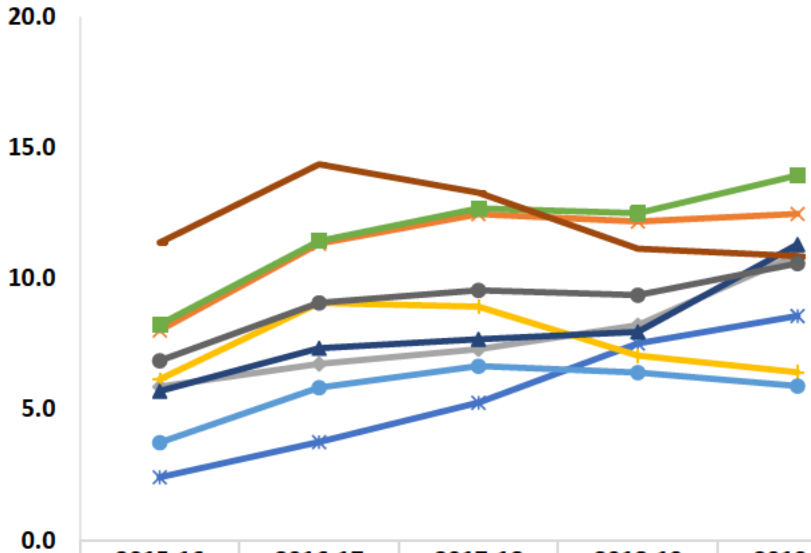
Indicator Description: This indicator shows the number of unique persons receiving naloxone administrations from Emergency Medical Services (EMS) related to an opioid overdose. Naloxone, also known as Narcan, is a medication administered to patients who have experienced an overdose related to an opioid (*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 adult 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 medical 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. However, this indicator does not account for naloxone administrations which occurred without EMS presence.

Data Source(s): EMS, 2015–16 to 2019–20

Summary: In 2019-20, Maine observed a rate of 10.6 EMS-administered naloxone incidents per 10,000 residents; rates ranged from the highest observed in Penquis (13.9) to the lowest reported in Midcoast (5.9). From 2018–19 to 2019–20, only Downeast, Midcoast, and York public health districts experienced a decrease in their rates of EMS-administered naloxone. All other public health district rates increased.

Figure 117. Individuals receiving EMS naloxone* incidents per 10,000 residents, by Public Health District: 2015-16 to 2019-20



	2015-16	2016-17	2017-18	2018-19	2019-20
Aroostook	2.4	3.8	5.3	7.5	8.6
Central	8.0	11.3	12.5	12.2	12.5
Cumberland	5.9	6.7	7.3	8.2	10.9
Downeast	6.2	9.1	8.9	7.1	6.4
Mid Coast	3.7	5.8	6.7	6.4	5.9
Penquis	8.2	11.4	12.7	12.5	13.9
Western	5.7	7.3	7.7	8.0	11.3
York	11.4	14.4	13.3	11.1	10.9
Maine	6.9	9.1	9.6	9.4	10.6

Source: EMS, 2015-16 to 2019-20

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

Key Indicators at the Public Health District Level: *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. 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: $\left(\frac{\#\ of\ overdose\ deaths}{population}\right) \times 10{,}000$

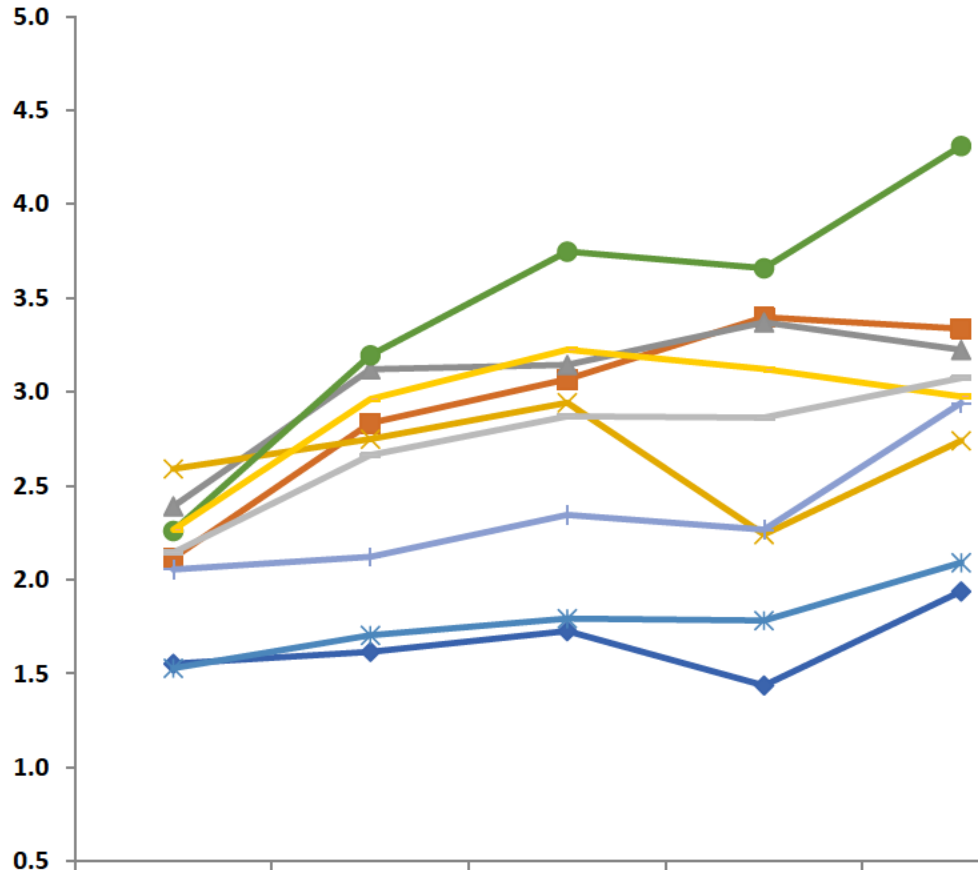
Why Indicator is Important: The most extreme consequences of alcohol and drug use is overdose death, where the substance(s) plays a direct role in an individual's death. These are potentially preventable deaths. In 2018, 67,367 drug overdose deaths occurred in the United States. The age-adjusted rate of overdose deaths decreased by 4.6 percent from 2017 (21.7 per 100,000) to 2018 (20.7 per 100,000). Opioids—mainly synthetic opioids (other than methadone)—are currently the main contributor in drug overdose deaths. Opioids were involved in 46,802 overdose deaths in 2018 (69.5% of all drug overdose deaths). Two out of three (67.0%) opioid-involved overdose deaths involve synthetic opioids.[45]

Data Source(s): Dr. Marcella Sorg, OCME, 2014–16 to 2018–20

Summary: During 2018–20 (combined years), Maine observed an average of 3.1 drug-related overdose deaths per 10,000 residents per year; rates were highest among the Penquis (4.3), Central (3.3), and Cumberland (3.2) public health districts and lowest among the Aroostook (1.9) and Midcoast (2.1) districts. Central, Cumberland, and York were the only public health districts to have observed decreases in drug-related overdose deaths from 2017–19 to 2018–20.

[45] U.S. Centers for Disease Control and Prevention. (2020). Drug Overdose Deaths. Retrieved 6/25/21 from https://www.cdc.gov/drugoverdose/data/statedeaths.html

Figure 118. Drug-related death rate per 10,000 residents, by Public Health District: 2014–16 to 2018–20



	2014-16	2015-17	2016-18	2017-19	2018-20
Aroostook	1.6	1.6	1.7	1.4	1.9
Central	2.1	2.8	3.1	3.4	3.3
Cumberland	2.4	3.1	3.1	3.4	3.2
Downeast	2.6	2.7	2.9	2.2	2.7
Midcoast	1.5	1.7	1.8	1.8	2.1
Penquis	2.3	3.2	3.7	3.7	4.3
Western	2.1	2.1	2.3	2.3	2.9
York	2.3	3.0	3.2	3.1	3.0
Maine	2.1	2.7	2.9	2.9	3.1

Source: Dr. Marcella Sorg/OCME, 2014–16 to 2018–20

Key Indicators at the Public Health District Level: *Perceived Risk of Regular Marijuana Use Among Youth*

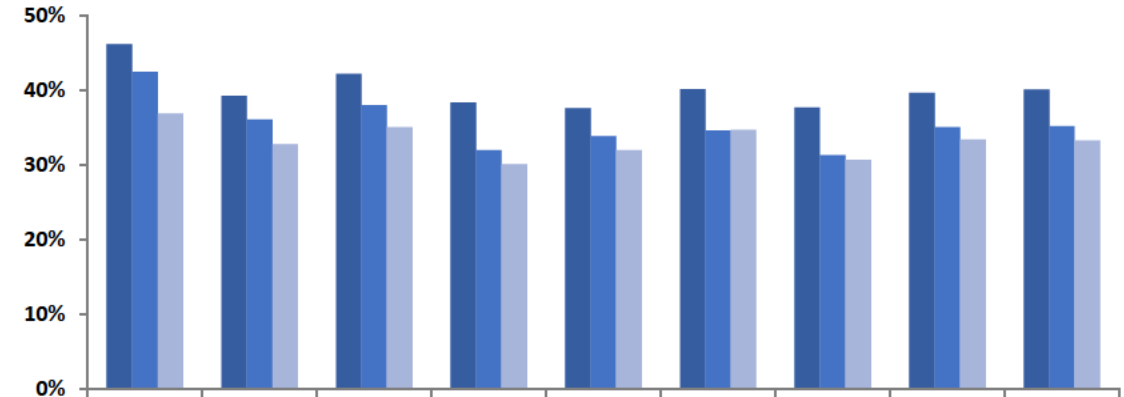
Indicator Description: This measure demonstrates the percentage of individuals who perceive a moderate-to-great risk of harm from smoking marijuana regularly.

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, 2015–2019

Summary: In 2019, one out of three (33%) of Maine high school students reported that they thought using marijuana once or twice a week would pose a risk of harm; rates were highest in Aroostook (37%) and lowest in Downeast (30%). Most public health districts, with the exceptions of Penquis and Western (remained the same), observed decreases in the rates of perception of harm from 2017 to 2019.

Figure 119. Percent of high school students by Public Health District who reported a risk of harm from smoking marijuana once or twice per week: 2015–2019*



	Aroostook	Central	Cumber.	Downeast	Midcoast	Penquis	Western	York	Maine
2015	46%	39%	42%	38%	38%	40%	38%	40%	40%
2017	43%	36%	38%	32%	34%	35%	31%	35%	35%
2019	37%	33%	35%	30%	32%	35%	31%	33%	33%

Source: MIYHS 2015 to 2019

**Indicator changed from "smoked" marijuana to "used" marijuana in 2017.*

Key Indicators at the Public Health District Level: *Marijuana Use During Pregnancy*

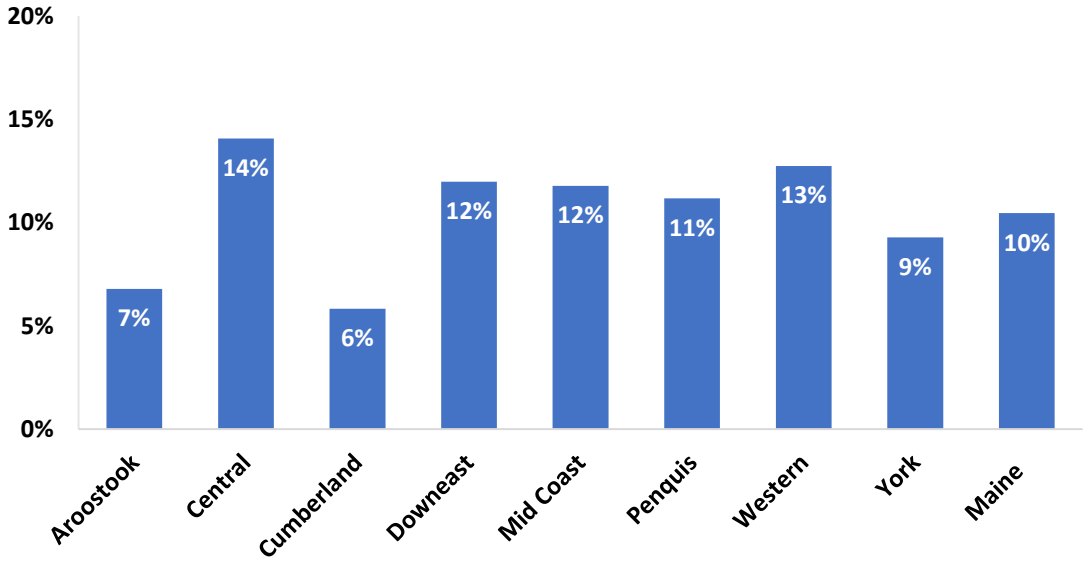
Indicator Description: This indicator reflects the percentage of mothers who reported using marijuana while they were pregnant.

Why Indicator is Important: Women who reported marijuana use before, during, or after pregnancy were more likely to give birth to a baby weighing less than 2500 grams (≈5 pounds, 8.2 ounces). According to the National Institute on Drug Abuse, substance use in pregnancy remains a significant public health problem, which can lead to several harmful maternal and neonatal outcomes.

Data Source(s): PRAMS, 2016–19

Summary: Central (14%) and Western (13%) public health districts had the highest percentages of women reporting marijuana use during their pregnancy in 2016–19. Women in Cumberland (6%) and Aroostook (7%) were the least likely to report use during the same time period.

Figure 120. Percent of women by Public Health District who reported marijuana use during their pregnancy: 2016–19



Source: PRAMS 2016–19

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

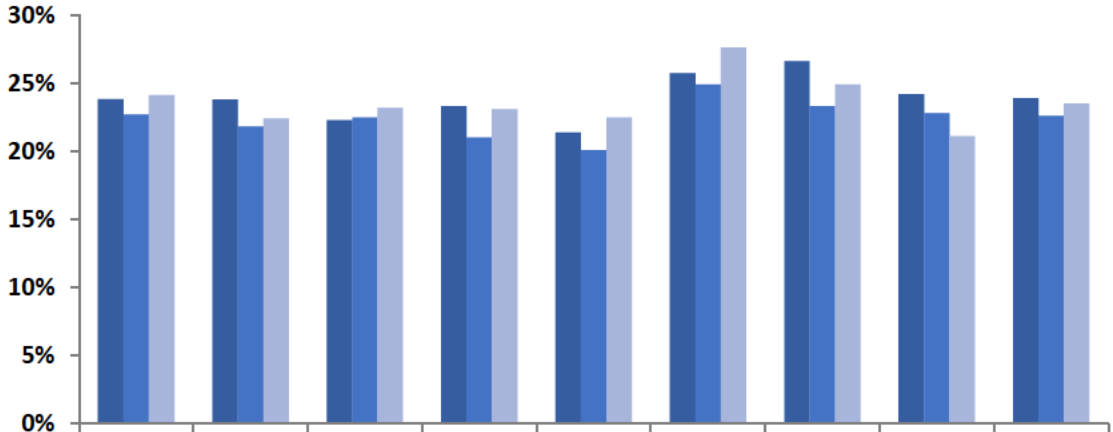
Indicator Description: This indicator examines the percentage of Maine residents age 18 and older who have ever been told by a doctor that they have a depressive disorder.

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.[46]

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

Summary: In 2016–17, nearly one-quarter (24%) of adults in Maine reported they had ever been diagnosed with depression. Rates of depression did not vary much across districts and ranged from 21 percent in York to 28 percent in Penquis. Overall, rates of depression among adults in Maine have been relatively stable since 2014-15.

Figure 121. 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

[46] 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*

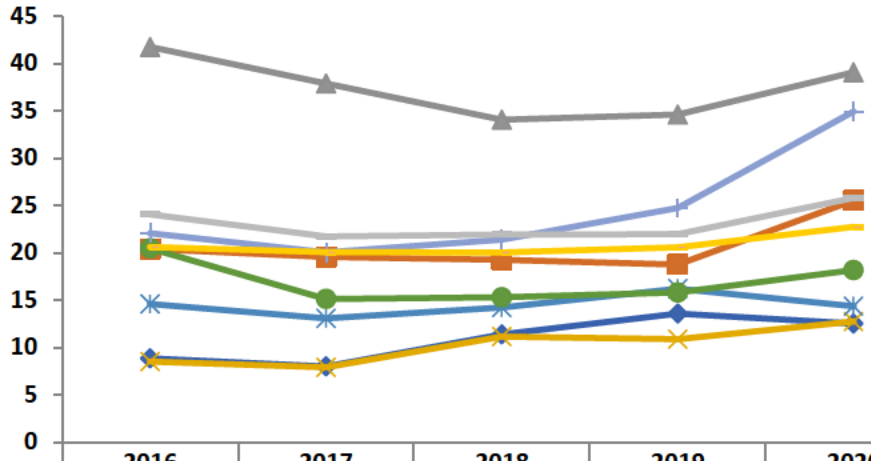
Indicator Description: *2-1-1 Maine* is a telephone and internet service that provides information and referrals to health and human services. This indicator reflects the number of calls received by *2-1-1 Maine* by the type of service requested.

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*, 2016–2020

Summary: In 2019, there was an average of 25.8 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 (39.1) to the lowest in Aroostook (12.5) and Downeast (12.7). Seven public health districts observed increases in call rates to 2-1-1 regarding seeking mental health resources in 2020.

Figure 122. Number of *2-1-1 Maine* referral calls related to mental health services per 10,000 residents, by public health districts: 2016–2020



	2016	2017	2018	2019	2020
Aroostook	8.8	8.0	11.4	13.6	12.5
Central	20.4	19.5	19.3	18.8	25.5
Cumber.	41.7	37.9	34.1	34.6	39.1
Downeast	8.5	7.9	11.2	10.9	12.7
Midcoast	14.6	13.1	14.2	16.2	14.3
Penquis	20.5	15.1	15.3	15.8	18.2
Western	22.1	20.0	21.4	24.7	34.9
York	20.6	20.1	20.0	20.6	22.7
Maine	24.1	21.7	21.9	22.0	25.8

Source: 2-1-1 Maine, 2016–2020

Key Indicators at the Public Health District Level: *Rate of Suicide Deaths*

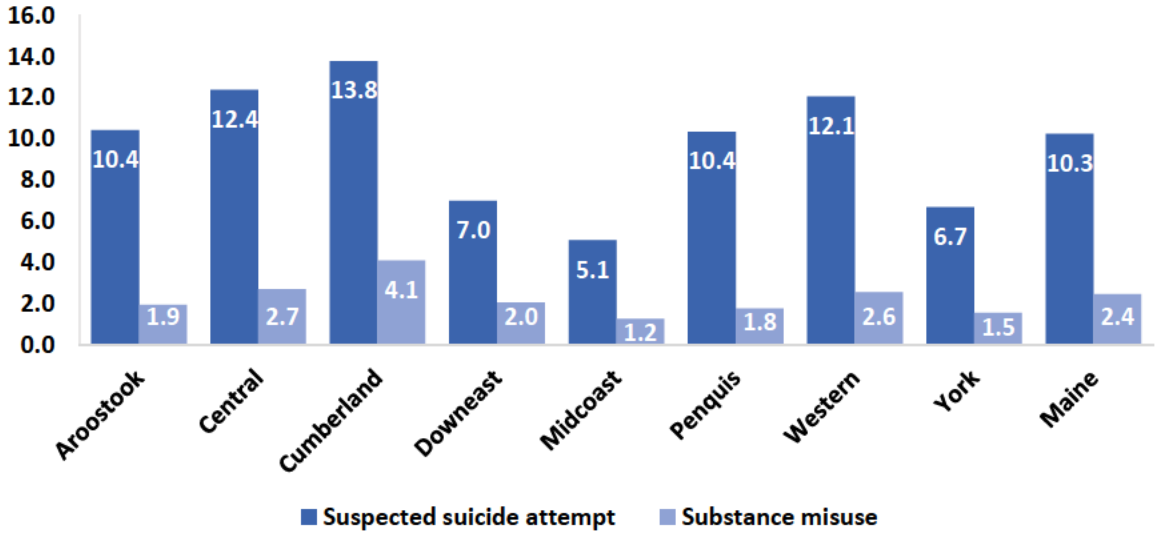
Indicator Description: Every death in Maine has a recorded cause. This indicator examines deaths that were classified as a suicide. In this case, a rate per 10,000 residents is used to compare the prevalence across the public health districts.

Why Indicator is Important: Although not the leading cause of death, substance use is often a factor in suicides. SAMHSA estimates that nationally, 22 percent of suicides involve alcohol intoxication.[47]

Data Source(s): NNEPC, 2018–20; DRVS, 2015–18 to 2018–20

Summary: The rate of suicide deaths remained stable for the 2018-20 time period. Calls for medication verification related to suspected suicide attempts were approximately three times higher than calls related to substance misuse. The highest rate of calls for suspected suicide attempts occurred in the Cumberland (13.8 per 10,000 residents) public health district and the lowest rate in Midcoast (5.1). Maine experienced an average of two suicides per 10,000 residents during the review period; rates were highest in the Downeast (2.2) public health district and lowest in the Cumberland (1.4) and Aroostook (1.4) public health districts.

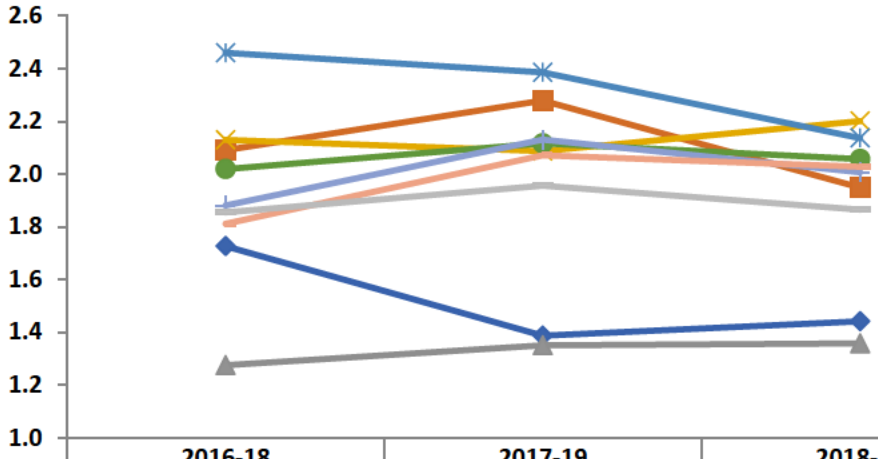
Figure 123. Medication verification calls per 10,000 residents by reason, by Public Health District: 2018–20



Source: NNEPC, 2018–20

[47] Substance Abuse and Mental Health Services Administration. (2016). 2016Substance Use and Suicide: A Nexus Requiring a Public Health Approach. Retrieved 5/27/2021 from https://store.samhsa.gov/sites/default/files/d7/priv/sma16-4935.pdf.

Figure 124. Number of suicide deaths per 10,000 residents, by Public Health District: 2016–18 to 2018–20



	2016-18	2017-19	2018-20
Aroostook	1.7	1.4	1.4
Central	2.1	2.3	1.9
Cumberland	1.3	1.4	1.4
Downeast	2.1	2.1	2.2
Midcoast	2.5	2.4	2.1
Penquis	2.0	2.1	2.1
Western	1.9	2.1	2.0
York	1.8	2.1	2.0
Maine	1.9	2.0	1.9

Source: DRVS, 2016–18 to 2018–20

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