



2019 DELAWARE STATE EPIDEMIOLOGICAL PROFILE

SUBSTANCE USE AND RELATED ISSUES

prepared for

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&
The Delaware State Epidemiological Outcomes Workgroup*

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Introduction: The Role of the Delaware State Epidemiological Outcomes Workgroup and the Purpose of the Epidemiological Profile

All states, including Delaware, have received support from the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Substance Abuse Prevention (CSAP) to establish a Statewide Epidemiological Outcomes Workgroup (SEOW). Some SEOWs, including Delaware's, are incorporated as part of a SAMHSA Strategic Prevention Framework-State Incentive Grant (SPF-SIG) or Strategic Prevention Framework-Partnerships for Success (SPF-PFS) grant. The Division of Substance Abuse and Mental Health (DSAMH) in the Delaware Health and Social Services has been the recipient of an SPF-SIG grant and, more recently, of a SPF-PFS grant. The SEOW is a group of people and organizations in the state that have and use analytical data concerning drug and alcohol use and abuse and related behaviors and consequences; this information can be used to establish and monitor indicators related to substance abuse prevention. Formerly known as the Delaware Drug and Alcohol Tracking Alliance (DDATA), Delaware's SEOW mission is to bring data on substance abuse and related behavioral problems to the forefront of the prevention planning process by pursuing the following goals:

- To build monitoring and surveillance systems to identify, analyze, and profile data from state and local sources
- To provide current benchmarks, trends, and patterns of substance abuse consumption and consequences
- To create data-guided products that inform prevention planning and policies
- To train agencies and communities in understanding, using, and presenting data effectively

This report, the Delaware State Epidemiological Profile, was developed by the SEOW to disseminate data for strategic planning, decision-making, and evaluation. Using indicators that are available on an ongoing basis, the report briefly describes Delaware-specific patterns of consumption, context, consequences, and trends of substance use, especially among young people.

The Delaware Epidemiological Profile is available, along with all SEOW data products, on the [Center for Drug and Health Studies](#) at the University of Delaware website.

SEOW Collaborators

Thank you for your participation and commitment to data-driven prevention planning, practice, and evaluation! We are especially grateful for the support from Director Elizabeth Romero and the team at the Delaware Division of Substance Abuse and Mental Health for their guidance and collaboration.

atTACK Addiction

Christiana Care Health System

Delaware Academy of Medicine

Delaware Afterschool Network

Delaware Criminal Justice Council

Delaware Coalition Against Domestic Violence

Delaware Council on Gambling Problems

Delaware Courts - Office of the Child Advocate

Delaware Criminal Justice Information System

Delaware Department of Education

Delaware Department of Services for Children, Youth and their Families

Division of Prevention and Behavioral Health Services

Delaware Health and Social Services

Division of Medicaid and Medical Assistance

Division of Public Health

Division of Services for Aging and Adults with Physical Disabilities

Division of Substance Abuse and Mental Health

Delaware Information and Analysis Center

Delaware Multicultural and Civic Organization

Delaware Prevention Coalition

Delaware State Police

Department of Safety and Homeland Security

Division of Alcohol and Tobacco Enforcement

Division of Forensic Science

KIDS COUNT in Delaware, University of Delaware Center for Community Research & Service

La Esperanza Community Center

Latin American Community Center

Mental Health Association in Delaware

Nemours Health and Prevention Services

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Executive Summary

Each year, the Center for Drug and Health Studies at the University of Delaware, the facilitator of the State Epidemiological Outcomes Workgroup (SEOW), releases the Delaware State Epidemiological Profile, a project funded under the federal Strategic Prevention Framework-Partnerships for Success initiative. This report (2019) highlights the most recently available data on substance use among various populations across both Delaware and nationwide. Its information is intended to help decision-makers and stakeholders across the state accomplish goals related to needs assessments, strategic planning, and evaluation. This report includes the following chapters:

1. State Demographic Background
2. Tobacco and Electronic Cigarettes
3. Alcohol
4. Marijuana
5. Opioid Use and Other Trends
6. Other Illegal Drugs
7. Substance-Exposed Infants
8. Gambling
9. Mental Health
10. Persons with Disabilities (new to the report this year)
11. Adverse Childhood Experiences
12. Lesbian, Gay, Bisexual, and Questioning Youth
13. Transgender Youth
14. Protective Factors

State Demographic Background: Delaware is the United States' second-smallest state; it has three counties (New Castle, Kent, and Sussex) and an estimated population of just under one million people. The northern part of the state is more densely populated than the two southern counties, which are largely rural. The median age of Delaware residents is slightly older than the national average, and the median household income is slightly higher, as well. Just over two-thirds of Delaware residents are white, nearly a quarter are African American, and almost 10% are Hispanic or Latinx (U.S. Census Bureau, n.d.). Much of Delaware is considered a [Medically Underserved Area](#) (Health Resources and Services Administration [HRSA], n.d.), with the entirety of Kent and Sussex counties fitting this criteria, as well as communities in southern and eastern New Castle County.

Tobacco/Electronic Cigarettes: While tobacco use is still a serious national and local issue that warrants substantial funding for education and prevention programming, data from five major

survey sources show that Delaware youth and adults have been reporting a steady decline in cigarette use since the late 1990s. Data from the Delaware School Survey (DSS) show that 20 years ago, more than a third of Delaware's 11th graders reported regularly using cigarettes; today, only about 3% of 11th graders report current past-month cigarette usage. Youth report a greater use of e-cigarettes and other electronic vaping devices than traditional tobacco products. While the perception may be that these devices are safer alternatives to cigarette smoking and other forms of tobacco use, e-cigarette use can still lead to health complications, including an increased likelihood of using other tobacco products (Office of the Surgeon General, 2016).

Alcohol: Alcohol use is a major concern that presents real public health risks and social costs. Data from the most recent DSS and Youth Risk Behavior Surveys (YRBS) show that alcohol remains the most commonly reported substance used by students across the state. Driving while intoxicated is a major public health concern associated with alcohol. Alcohol was involved in a substantial number of fatal car crashes across all three counties in Delaware (Delaware State Police, 2018). In 2018, nearly 15% of 11th graders reported that they had driven a car after drinking (Delaware School Survey [DSS], 2018). Heavy drinking can also lead to serious health complications, including diseases of the liver and pancreas and various cancers. Adults in the 18-25-year-old age range have the highest rate of binge drinking of any age group (National Survey on Drug Use and Health [NSDUH], 2018). Overall, adults in Delaware tend to report drinking alcohol at rates comparable to national estimates (NSDUH, 2018; Behavioral Risk Factor Surveillance System [BRFSS], 2018).

Marijuana: Over the past couple decades, states have enacted various laws that have changed the legal status of marijuana. Delaware currently permits medical marijuana for certain conditions and, since 2015, has decriminalized the possession of small amounts of marijuana by adults. Lawmakers have proposed legislation to legalize adult recreational marijuana use, although it has not yet passed (Bittle, 2019). Given the shifting legal status of marijuana, the perception of risk of harm from marijuana usage has declined among students surveyed by the DSS over the past decade, while rates of use among high school students have increased. Alternate methods of ingesting marijuana have become more popular among youth in Delaware, including vaping, edibles, and marijuana concentrates. The use of marijuana concentrates is particularly concerning because of the high potency of tetrahydrocannabinol (THC) in these products (Carlini, Garrett, & Harwick, 2017). To date, there is little data that measures the use of these concentrates.

Opioid Use and Other Trends: Delaware has been hit hard by the opioid epidemic. In 2017, Delaware had the fifth-highest [overdose death rate](#) of the 50 states and District of Columbia (CDC, n.d.), and overdose deaths in the state have increased since that time. Treatment data from the U.S. Department of Health and Human Services indicate that heroin was the primary drug used in half of all substance use treatment admissions in Delaware in 2018 (Treatment Episode Data Set, 2018). Among students surveyed by the DSS, prescription painkillers are the second-most misused category of illicit drugs, after marijuana. DSS data from 2018 indicate a slow decline in both 8th and 11th graders' self-reported past-month misuse of prescription

painkillers. Roughly 5% of Delaware 11th graders in 2018 reported ever misusing prescription painkillers.

Other Illegal Drugs: The bulk of this epidemiological report focuses on the four major substances outlined above: alcohol, tobacco, marijuana, and opiates. These are not the only drugs misused by Delawareans; illicit drug use also includes cocaine and crack, hallucinogens, inhalants, and the nonmedical use of other prescription drugs. When excluding marijuana, the largest category of illicit drugs used by Delaware students remains any prescription drug used in ways other than prescribed, including stimulants, benzodiazepines, opioids, sleeping medications, and other prescription drugs that are commonly abused. Cocaine is a specific illicit drug of concern, and nationally, nearly one in five drug overdose deaths involved cocaine in 2017 (Centers for Disease Control and Prevention [CDC], n.d.). There are increasing reports of fentanyl, a potent synthetic opiate, being found in cocaine and other pills sold illicitly (Hedegaard, Warner, & Menio, 2017).

Substance-Exposed Infants: Infants are a special population that can be uniquely impacted by substance use. Substance-exposed infants (SEI) are babies born after exposure to illicit drugs or alcohol. Heavy prenatal substance exposure can lead to conditions such as neonatal abstinence syndrome, fetal alcohol spectrum disorders, or other developmental delays. Prenatal exposure has the potential to create additional health issues during infancy and later in life, especially if the child's parents or caregivers engage in continued substance use after birth. In 2017, there were 450 prenatally exposed infants reported to the Delaware Division of Family Services. Among infants exposed to a single substance, marijuana exposure was the most prevalent. For those infants exposed to two or more substances, opioids were the most commonly identified substance.

Gambling: Gambling has become an area of interest. Most forms of gambling are legal in Delaware, with three casinos across the state and sports betting recently legalized. While many people can enjoy gambling harmlessly, for others, problem gambling and gambling disorders can present numerous challenges and negative consequences. There is evidence that gambling disorders often co-occur with other mental health and substance use disorders among adults (Petry, Stinson, & Grant, 2005; Martin, Usdan, Cremeens, Vail-Smith, 2014). Data from the Delaware YRBS suggest that there may be a correlation between gambling behavior and youth substance use as well: among both middle and high school students, those who reported gambling in the past year tended to report using substances at higher rates than their non-gambling peers.

Mental Health: With respect to the overall mental health of Delaware residents, nearly 16% of adults report receiving mental health care in the past year, while close to 19% report experiencing some symptoms of mental illness in this time (SAMHSA, 2018). Sussex County in particular has been recognized as a high-priority area, with a [shortage of mental health facilities](#) (HRSA, n.d.). Data from the latest YRBS survey show that more than a quarter of Delaware high school students reported feeling sad or hopeless for at least two weeks in the past year, and about 14% had purposefully cut or hurt themselves in the past year. Among adults, approximately 4% report seriously considering suicide in the past year (Substance Abuse and

Mental Health Services Administration [SAMHSA], 2018). These data indicate that there is a need for mental health services across all age groups.

Persons with Disabilities: New to the epidemiological report this year is a chapter on persons with disabilities. It is likely that Delaware’s behavioral health systems come into contact with a disproportionate number of people with disabilities. Data related to disability status, however, are not routinely collected in prevention, treatment, and mental health service settings, so it is difficult to estimate the true prevalence of disabilities across the population. Most available data are self-reported and come from statewide and national surveys; these estimates suggest that people with disabilities experience increased rates of substance use in Delaware and exhibit poorer indicators of mental health. Young people with disabilities report experiencing bullying in school at higher rates than their peers without disabilities.

Adverse Childhood Experiences: The role of adverse childhood experiences (ACEs) on health and life course outcomes is a topic of concern within the prevention field. ACEs are traumatic events or conditions such as abuse, neglect, or parental separation that, when experienced in childhood, can have long-lasting negative impacts on individuals. Furthermore, experiencing one type of trauma increases the risk of experiencing additional traumas, and multiple individual ACEs can have a compounded impact. The National Survey of Children’s Health found that nearly half of all Delaware children have experienced at least one ACE: the three most common are divorce/parental separation, economic hardship, and parental incarceration. Results from the 2017 YRBS survey indicate that high school students who have experienced trauma report higher rates of all substance use, as well as indicators of poor mental health such as self-harm and suicide attempts.

Lesbian, Gay, Bisexual, and Questioning Youth: In 2017, 14% of high school students identified as lesbian, gay, bisexual, questioning (LGBQ). Survey results indicate that LGBQ-identifying youth report significantly higher rates of past-month substance use than their peers who identify as heterosexual. LGBQ students are also at elevated risk for self-harm and suicide.

Transgender Youth: In 2017, for the first time, the YRBS asked students whether they identified as transgender. Just over 1% of students reported that they identified as transgender. While this population sample size is too small at present to conduct further analysis, compiling multiple years of data, or partnering with other states, may provide enough data to look at the health behaviors of this population in future years.

Protective Factors: While childhood trauma can function as a risk factor for substance use and other health risk behaviors, it is important to recognize other conditions that can function as protective factors against risky behavior for young people. A special section of the report focuses specifically on the role of protective factors at the individual, family, peer, and community level. Data from the 2017 YRBS indicate that middle and high school students who reported the following characteristics—good grades in school, feelings of support and connectedness at school, consistent discipline and structure at home, engaged parents, and a peer group that believes substance use is wrong—also reported lower consumption of substances. Prevention

programming in schools and communities may be more successful if it focuses on bolstering these types of protective factors among youth.

The Delaware State Epidemiological Profile is a comprehensive and robust document containing a wealth of information originating from primary data collected by the Center for Drug and Health Studies and other state and national resources. The findings from this report can serve as a powerful tool for stakeholders to make informed decisions and to implement policies and interventions that are responsive to the health needs of Delaware's residents.

Chapter 1 State Demographic Background

State Overview

Delaware is the second smallest state in the United States, with total landmass equaling 1,949 square miles (U.S. Census Bureau, n.d.). It has three counties: New Castle, the most populated, and Sussex and Kent counties, which are primarily rural. The U.S. Census Bureau estimated the state population in 2018 at 967,171 residents. The 2013-2017 American Community Survey (ACS) indicated the median age in Delaware was 39.8 years. Of the state's overall population, 21.6% were under the age of 18, and 17% were age 65 and older (U.S. Census Bureau, n.d.). The demographic snapshot for this period indicates that approximately 69.1% of the state population reported their race as White, 21.9% as Black or African American, 3.9% as Asian, 2.8% as two or more races, and the remaining population of the state identified as Pacific Islander/Native Hawaiian, American Indian/Alaska Native, or Other. Nine percent of the population reported their ethnicity as Hispanic or Latinx, and 12.8% of Delawareans spoke a language other than English at home (U.S. Census Bureau, American Fact Finder, n.d.).

Delaware's median household income, based on the 2013-2017 ACS estimates, was \$63,036. In March 2019, 3.3% of Delawareans in the labor force were unemployed (U.S. Bureau of Labor Statistics, n.d.). Approximately 8.2% of all families in Delaware lived below the poverty line, while 12.1% of all individuals were below the poverty line (American Community Survey [ACS], 2013-2017). In 2017, 6% of the Delaware population were uninsured, 18% enrolled in Medicaid, and 17% on Medicare (Kaiser Foundation, 2017). In November 2018, 63,005 families received assistance from the Supplemental Nutrition Assistance Program (SNAP) in Delaware (KIDS COUNT in Delaware, Annie E. Casey Foundation, 2019).

Due to unique tax and corporate policies and access to the Delaware Court of Chancery, Delaware has attracted more than half of all U.S. publicly traded companies to incorporate in the state. For this reason, Delaware is often named the "corporate capital of the world." Two of Delaware's major industries are corporate financing and banking. Delaware's economy is also driven by chemical manufacturing, aviation, health services, tourism, and agriculture. In Kent and Sussex counties, agriculture has greater predominance. The state's largest agricultural output is broiler chickens, followed by soybeans and corn. Many thousands of people from across the country visit Delaware's beach resort towns every year, making tourism a great driver of economic development in Sussex County (Division of Small Business Development and Tourism, n.d.).

New Castle County Overview

The northernmost and most densely populated county, New Castle, has an estimated population of 559,335 (U.S. Census Bureau, July 2018 population estimates). Delaware's largest city, Wilmington, is located in the county, with an estimated 71,106 people living in the city during this time period (U.S. Census Bureau, n.d.). There is an upsurge in the number of people in the downtown business district during the day, with much of that population leaving the city for homes in the suburban outlying areas at night. Recent residential and business developments along the waterfront in the city were designed, in part, to attract more working professionals to the city to live, dine, and find entertainment. Efforts to motivate locals to dine and entertain in the city are hampered by concerns over high crime rates. In 2014, *Newsweek* featured an article on the troubling homicide rate within the city, which was nicknamed [Murder Town USA](#) (Jones, 2014). Attention to increasing homicide rates led local residents and policymakers to call gun violence a public health epidemic, and epidemiologists from the CDC treated it as such and spent several months in 2015 identifying risk factors that led to gun violence within the city (Sumner et al., 2015).

Newark, the state's third largest city, with an estimated 33,858 people in 2017, is also located in New Castle County (U.S. Census Bureau, n.d.). Delaware's flagship university, the University of Delaware, is located in Newark. Towns in lower New Castle County have seen explosive growth in the past two decades. Between the 2000 and 2010 census reporting periods, Middletown grew by 206%, and Townsend by 492%.

Kent County Overview

An estimated 178,550 residents live in Kent County. Dover, the state's capital and second largest city, is located in Kent County. An estimated 37,538 people lived in Dover in 2017 (U.S. Census Bureau, n.d.). The city is home to the Dover Air Force Base and the Dover Downs International Speedway. Delaware State University and Wesley College are based in Dover, and Delaware Technical Community College and Wilmington University also have locations in the city. Recent residential developments have attracted more people to Kent County. Two towns saw large increases in population from 2000-2010: Cheswold increased by 341% during this time period and Clayton by 129%. Kent County had an overall 28% increase in population between 2000-2010.

Sussex County Overview

Sussex County, the southernmost county, is home to several beach resort towns that support a large influx of people during the warmer months but do not host a large year-round population. In 2018, the population of Sussex County was estimated at 229,286 residents. During the tourist season, tremendous congestion and traffic are evident in these coastal towns. Milford, Georgetown, and Seaford are the three largest cities in the county, all of which are inland from the coast and have primarily year-round populations. Poultry processing is a major industry in Sussex County, and a significant immigrant and migrant worker population is associated with the industry. From 2000-2010, Sussex County experienced a 26% increase in its population. These

official numbers may still reflect an undercount of total population growth, as migrant and immigrant workers are often uncouncted on the U.S. Census.

Medically Underserved Areas

The Health Resources and Services Administration (HRSA) uses existing data to determine areas of the country that are medically underserved and lack access to primary care doctors. Occasionally, areas do not fit official criteria for being medically underserved, but local stakeholders, aware of local context and realities, can petition to designate the area as medically underserved if additional data show that the population does have difficulty in accessing primary care. In Delaware, much of the southern and eastern communities in New Castle County are currently considered a Medically Underserved Area (MUA) under the Governor's Exception Criteria, with several census tracts within the city of Wilmington considered an MUA using the HRSA coding criteria. All of Kent County is considered an MUA under the Governor's Exception Criteria. Sussex County is considered an MUA under the HRSA coding criteria (Health Resource and Services Administration, n.d.).

In addition to physical health concerns, nearly 30% of adults reported poor mental health status in 2016 (Kaiser Family Foundation, n.d.). These factors, coupled with under-resourced service areas, amplify the need for preventive health services, including strategies to bolster behavioral health. (For an interactive map of areas of need within the state, visit the [Delaware Health Tracker 2018 SocioNeeds Index](#).)

2018 Delaware School Survey Reported Use of Selected Substances in the Past Year among Delaware 8th and 11th Grade Students (in percentages)

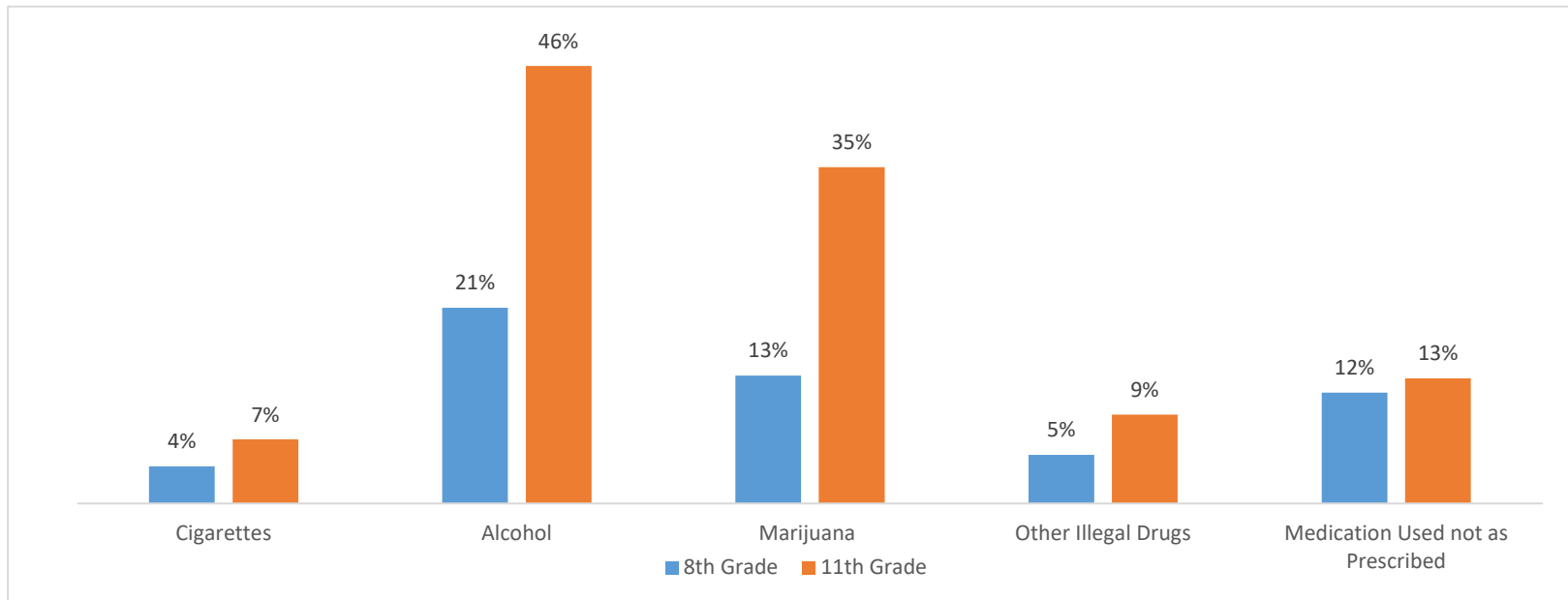


Figure 1: Selected substance use, past year, 8th and 11th graders

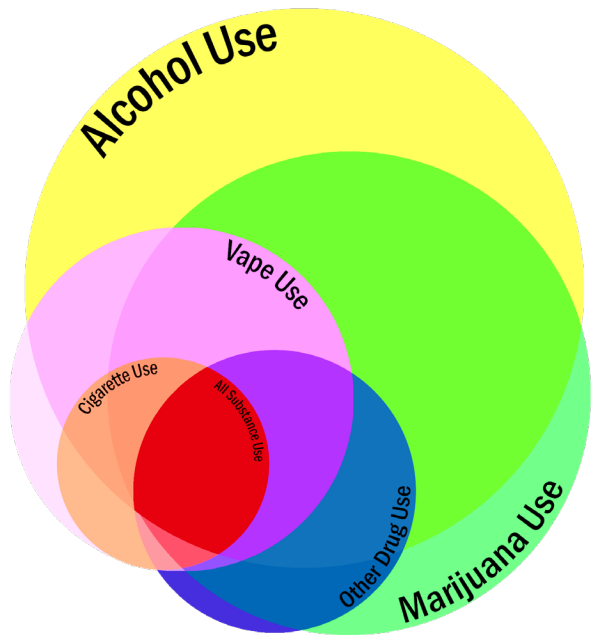
Notes: Medication used not as prescribed includes steroids, over-the-counter medication, prescription uppers (diet pills, Ritalin, Concerta, Adderall), downers (Xanax and other benzodiazepines), and painkillers.

Other illegal drugs include ecstasy, hallucinogens, street uppers, inhalants, cocaine, crack, heroin, and synthetic marijuana used to get high.

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware](#)

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2018 Delaware School Survey Reported Polysubstance Use in the Past Year among Delaware 11th Grade Students



This Venn diagram illustrates the prevalence of past-year polysubstance use among 11th grade students in Delaware. Each circle has been scaled relative to the number of students who report using that substance in the past year, and the areas where circles overlap are accurate to the proportion of students who reported using multiple substances. Overall, 55% of students report using at least one substance in the past year, meaning that 45% of students did not report past-year substance use.

As in previous years, alcohol remains the most commonly used substance, with marijuana as the second most used substance. Most students who reported using a different substance were also using alcohol or marijuana, if not both. Also of note, every student who reported smoking cigarettes also reported the use of an e-cigarette or vaping device. Two percent of students reported using substances from all five categories of drugs here.

Substance	% Reporting Past-Year Use
Alcohol	45%
Marijuana	34%
E-cigarette/Vape	17%
Cigarettes	7%
At least one other drug	12%
All of the above categories	2%

Figure 2: Polysubstance use, past-year, 11th graders, 2018

Note: This includes ecstasy, hallucinogens, steroids, over-the-counter drugs, amphetamines, crack, cocaine, heroin, synthetic marijuana, and/or any prescription medication used in ways other than prescribed.

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware](#)

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2018 Delaware School Survey Reported Use of Selected Substances in the Past 30 Days among Delaware 8th and 11th Grade Students (in percentages)

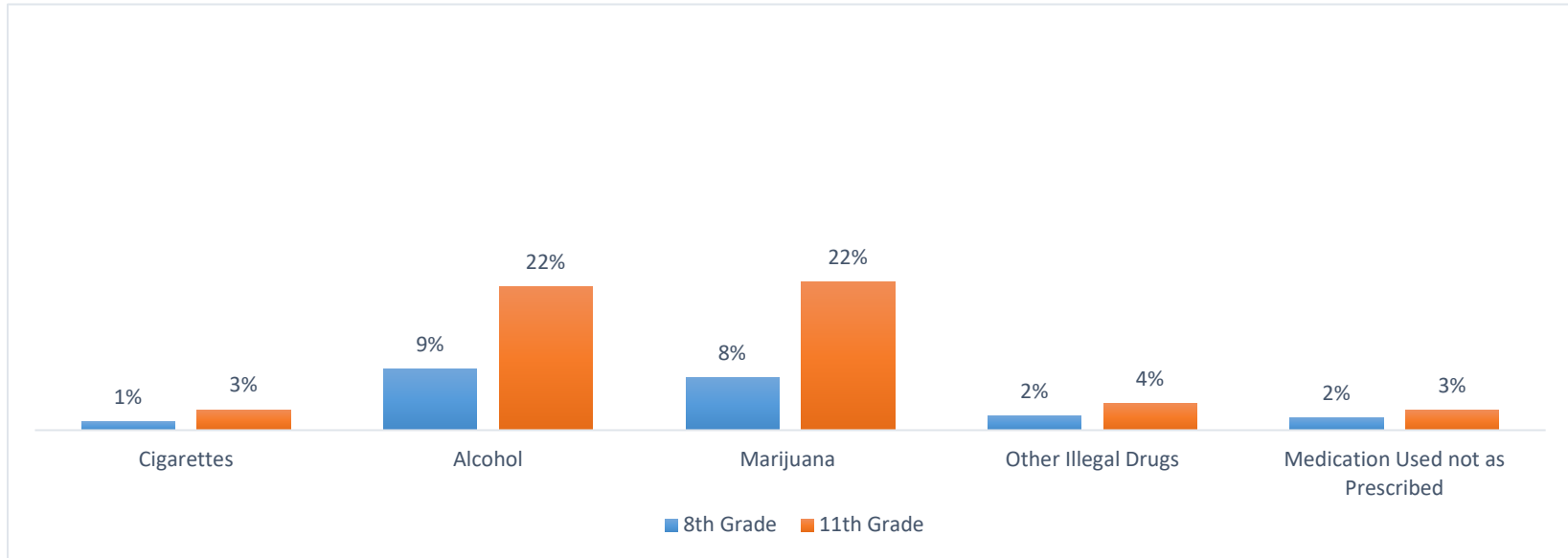


Figure 3: Selected substances used in past 30 days, 8th and 11th graders, 2018

Notes: Medication used not as prescribed includes steroids, over-the-counter medication, prescription uppers (diet pills, Ritalin, Concerta, Adderall), downers (Xanax and other benzodiazepines), and painkillers.

Other illegal drugs include ecstasy, hallucinogens, street uppers, inhalants, cocaine, crack, heroin, and synthetic marijuana used to get high.

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware](#)

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Reported Past Month Cigarette Use Among Delaware 8th Grade Public School Students: 2017-2018

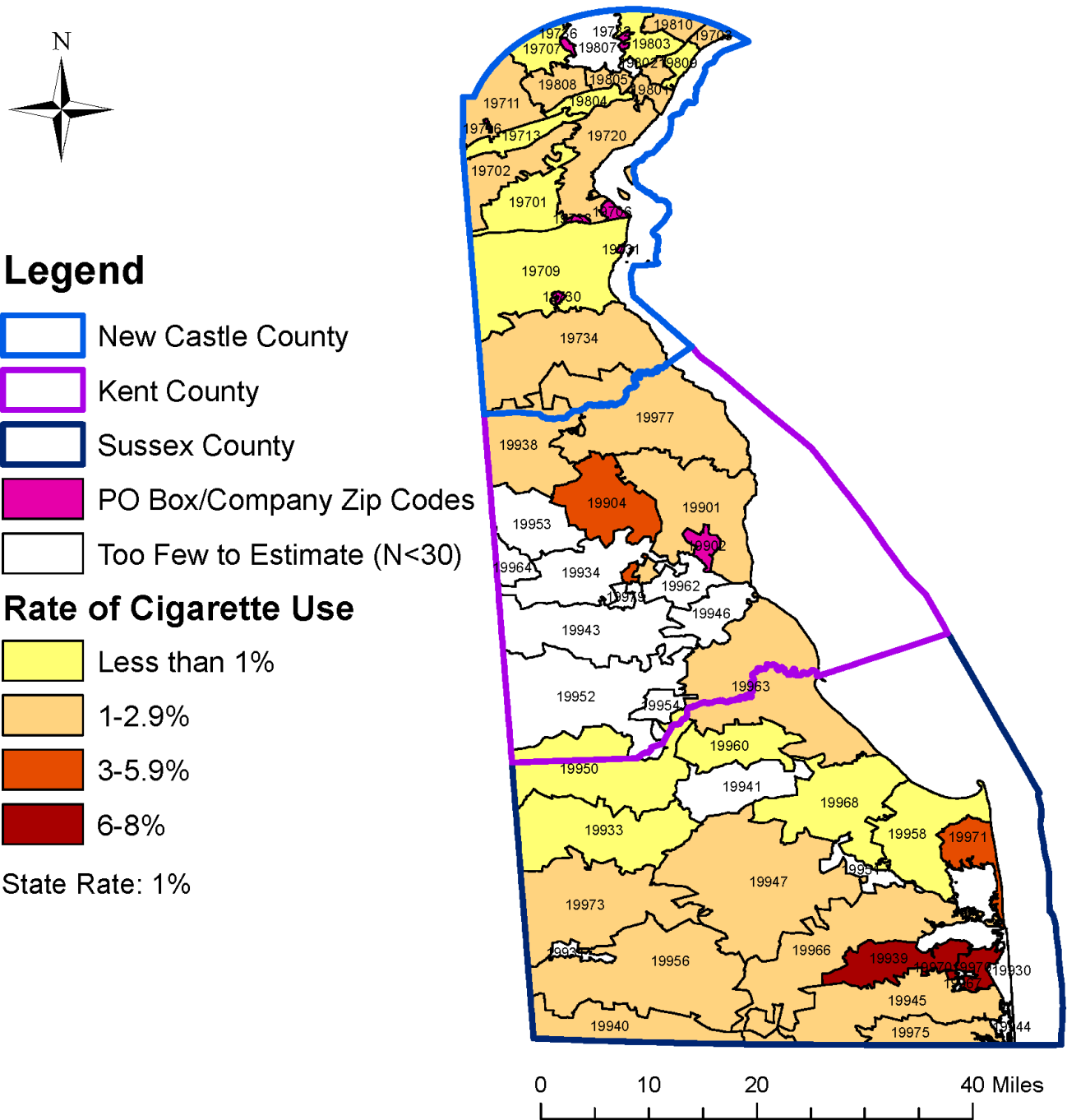


Figure 4: Map of past-month cigarette use, 8th graders

Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Month Cigarette Use Among Delaware 11th Grade Public School Students: 2017-2018

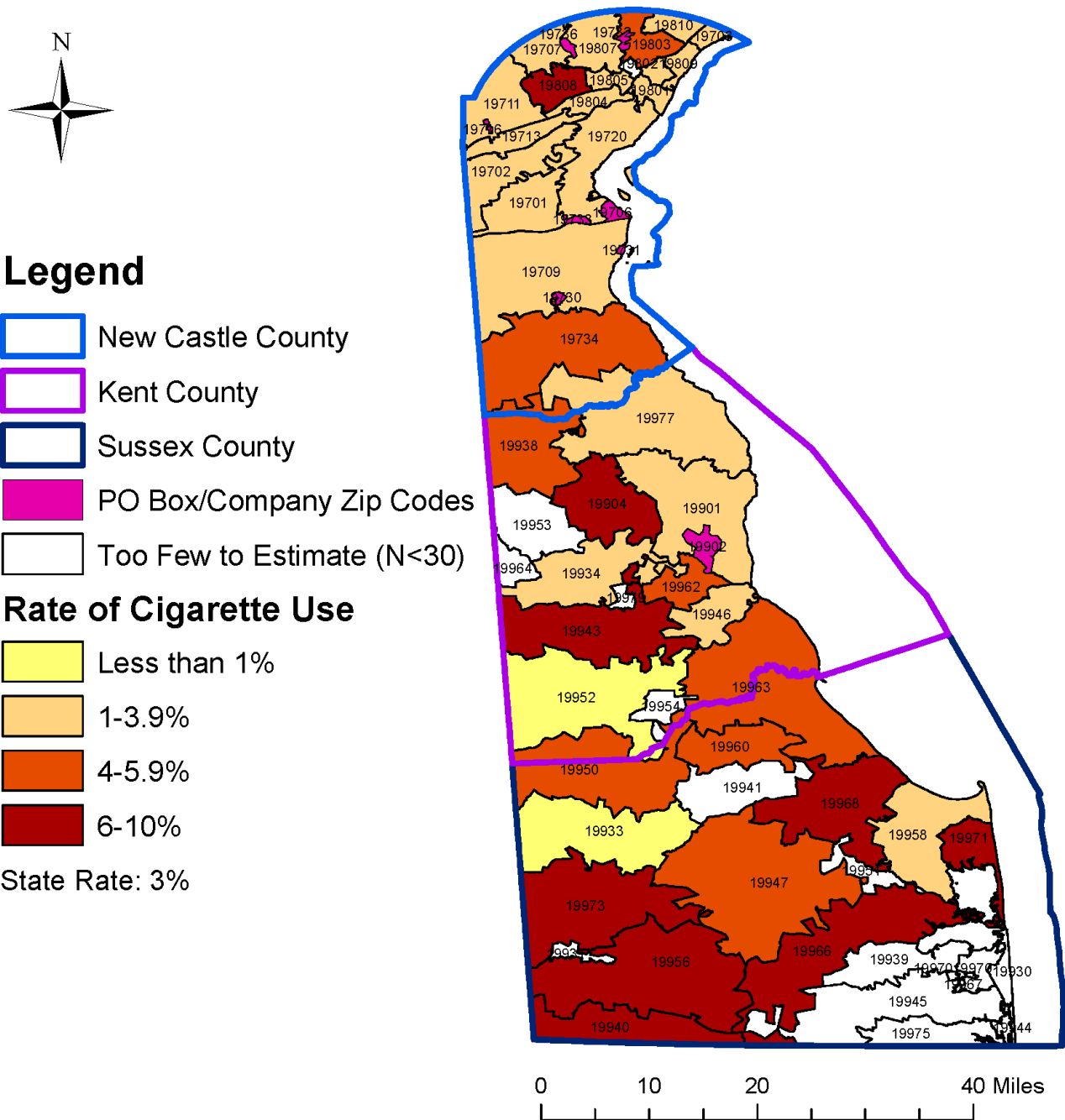


Figure 5: Map of past-month cigarette use, 11th graders

Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Month Alcohol Use Among Delaware 8th Grade Public School Students: 2017-2018

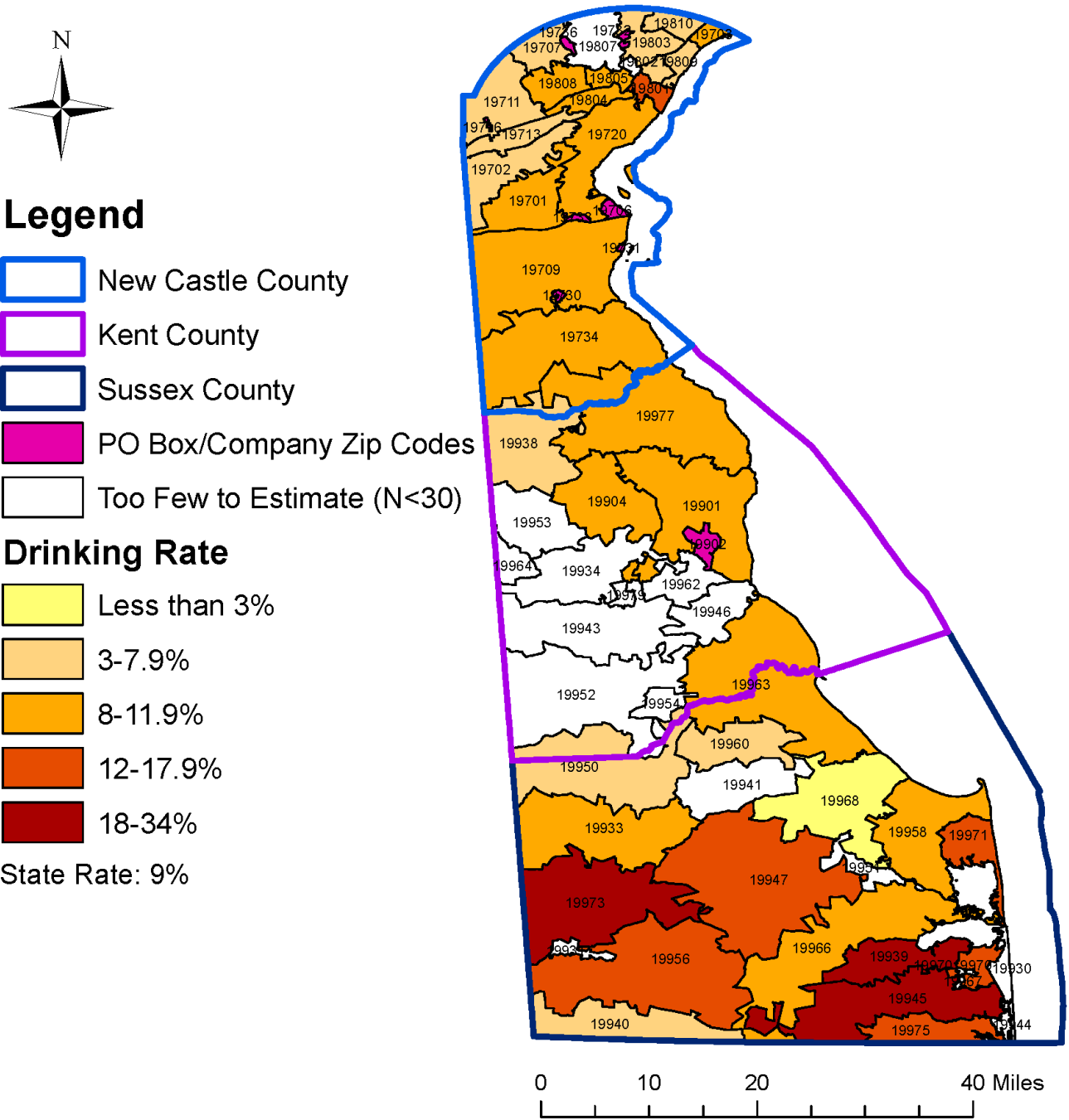


Figure 6: Map of past-month alcohol use, 8th graders

Source: ["2016-2017 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Month Alcohol Use Among Delaware 11th Grade Public School Students: 2017-2018

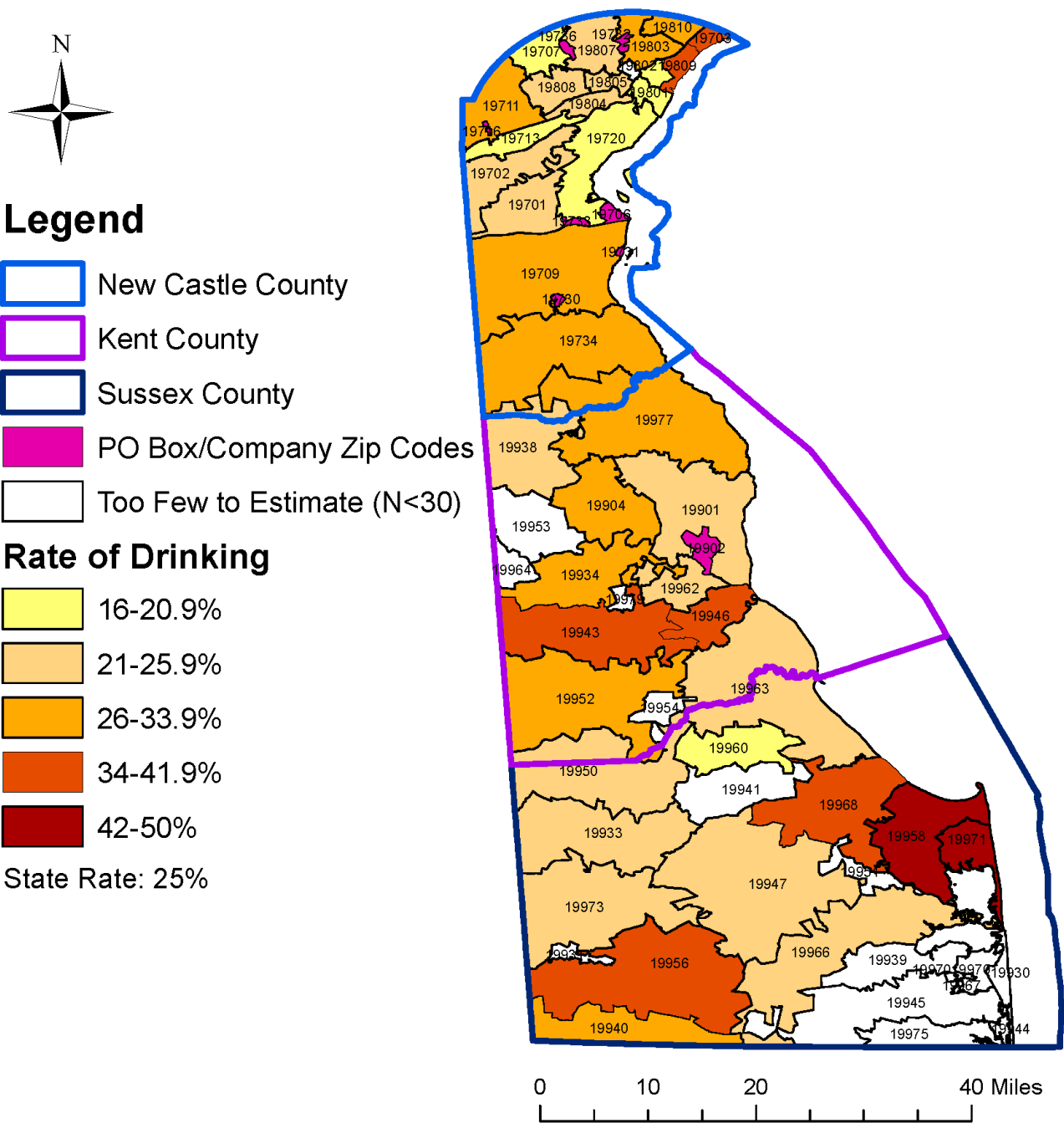


Figure 7: Map of past-month alcohol use, 11th graders

Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Two Week Binge Drinking* Among Delaware 8th Grade Public School Students: 2017-2018

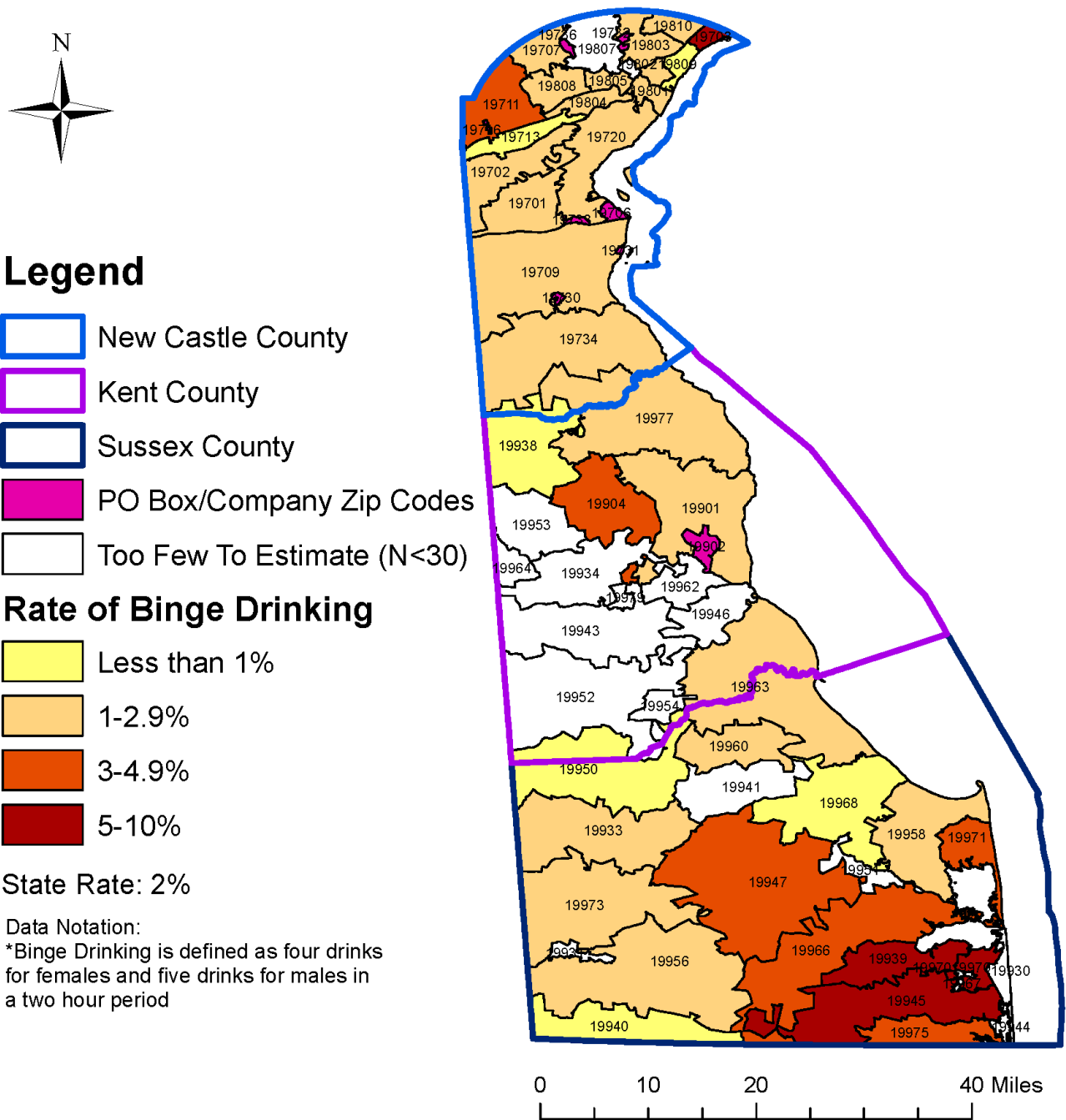


Figure 8: Map of two-week binge drinking, 8th graders

Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Two Week Binge Drinking* Among Delaware 11th Grade Public School Students: 2017-2018

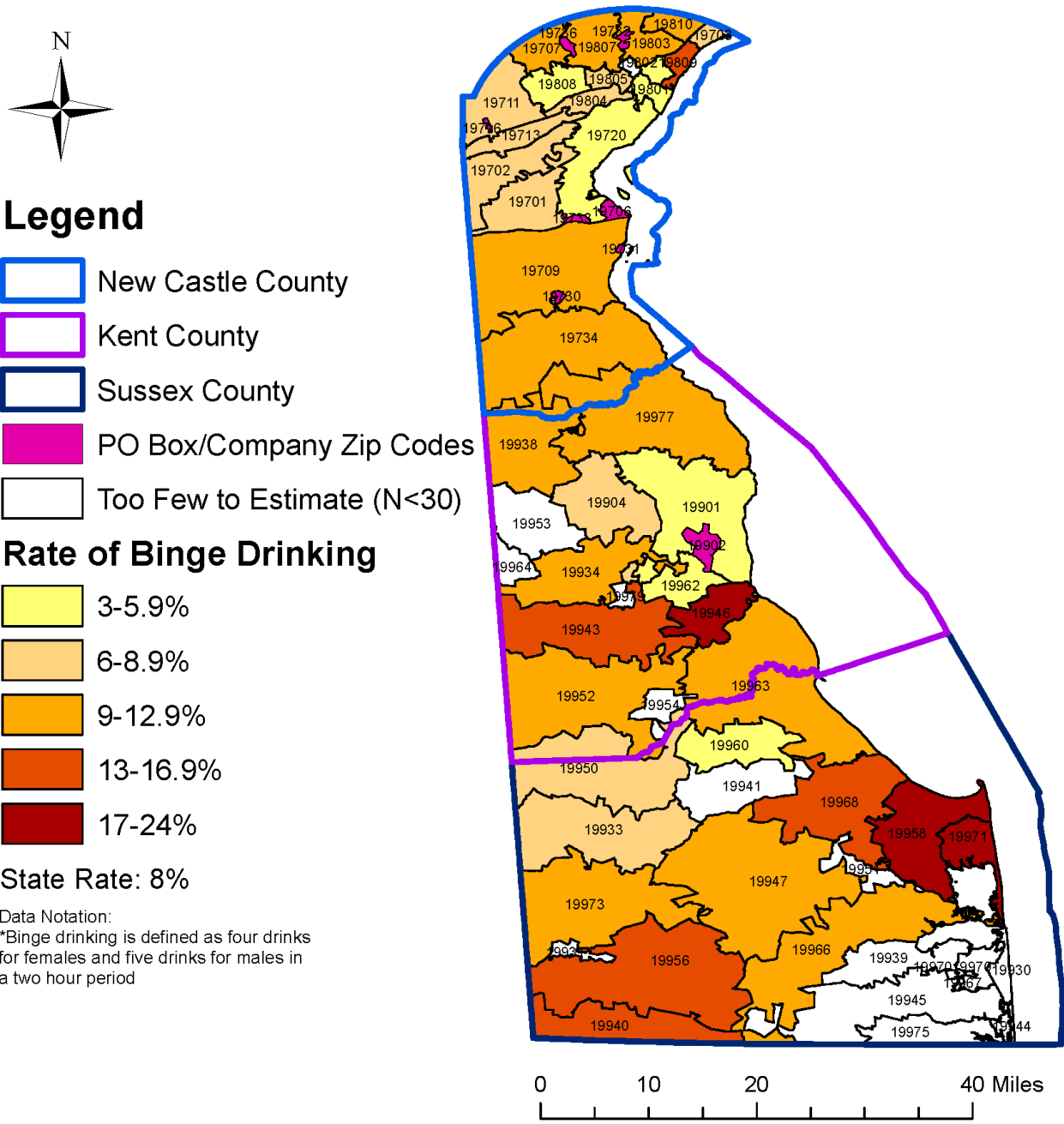


Figure 9: Map of two-week binge drinking, 11th graders

Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Month Marijuana Use Among Delaware 8th Grade Public School Students: 2017-2018

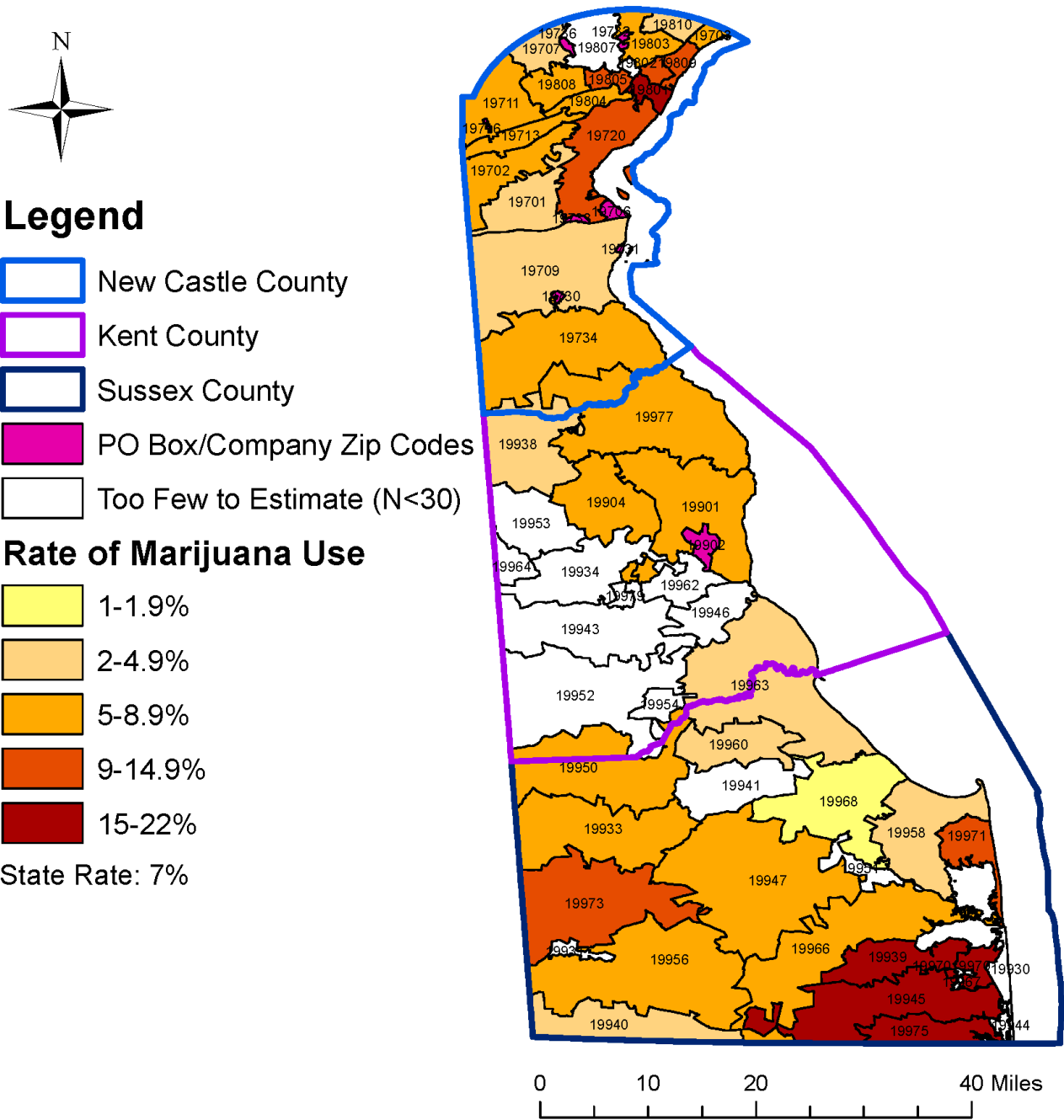


Figure 10: Map of past-month marijuana use, 8th graders

Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Month Marijuana Use Among Delaware 11th Grade Public School Students: 2017-2018

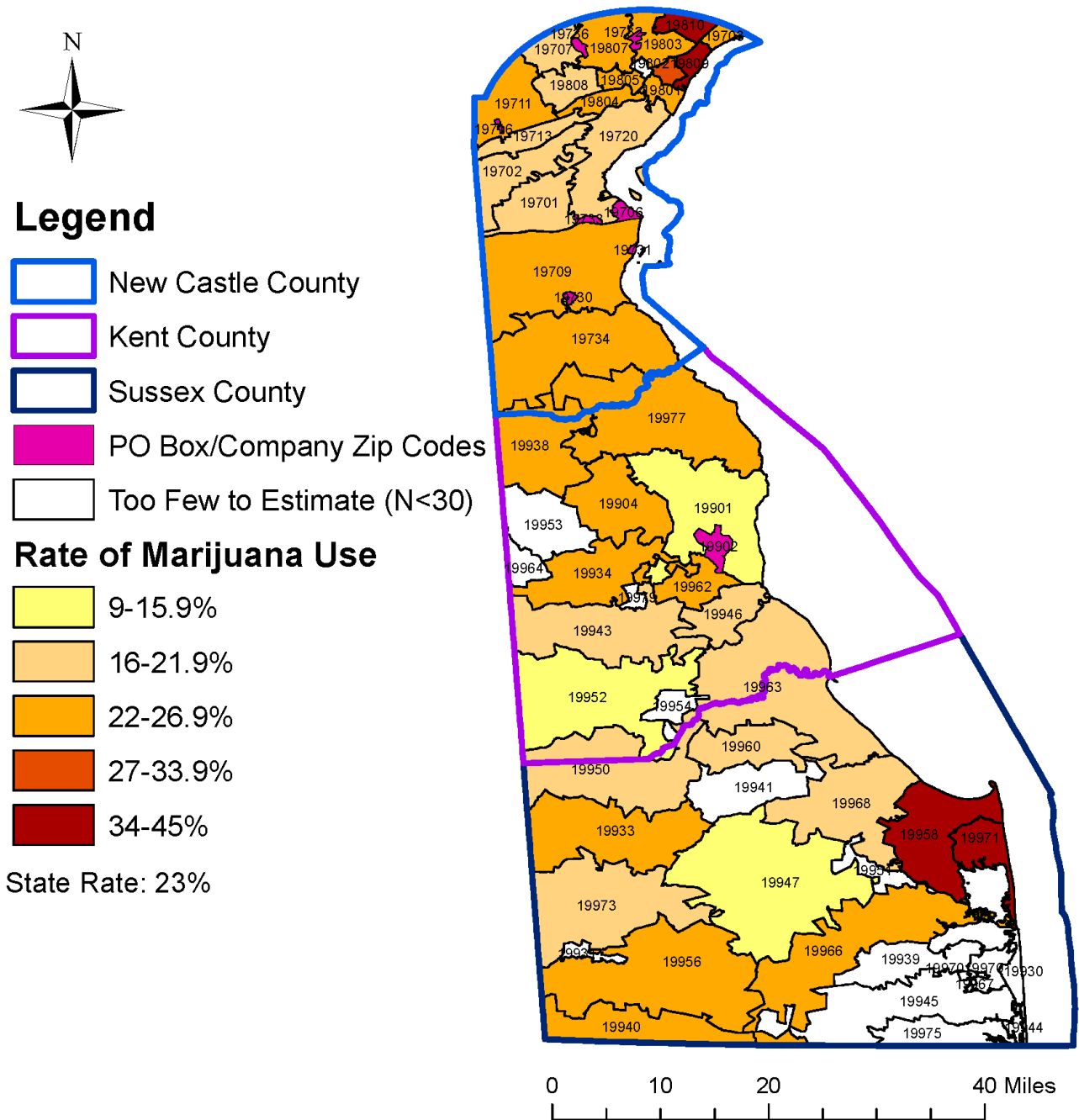


Figure 11: Map of past-month marijuana use, 11th graders

Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Year Prescription Painkiller Use Without a Prescription Among Delaware 8th Grade Public School Students: 2017-2018

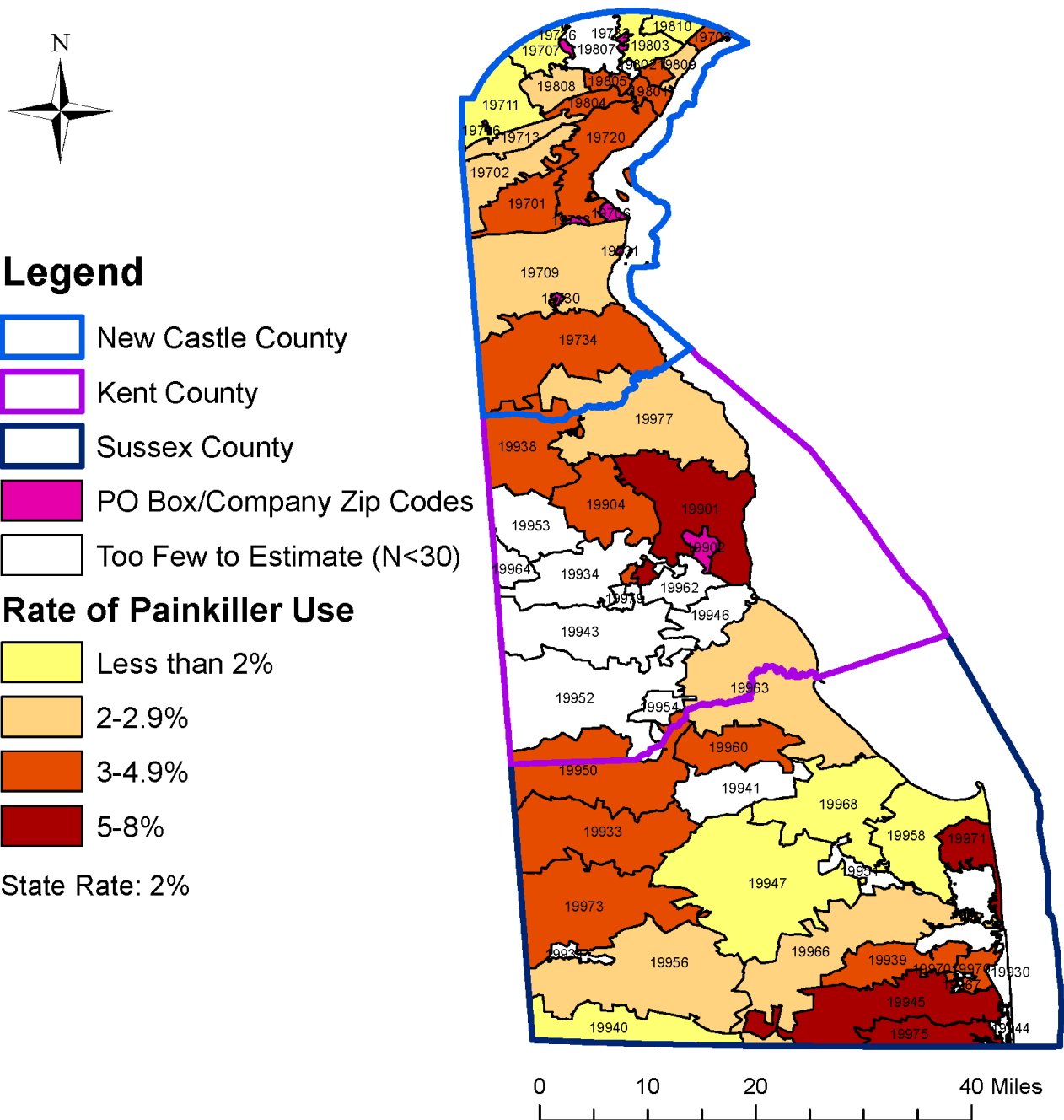


Figure 12: Map of past-year prescription painkiller use, 8th graders

Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Year Prescription Painkiller Use Without a Prescription Among Delaware 11th Grade Public School Student: 2017-2018

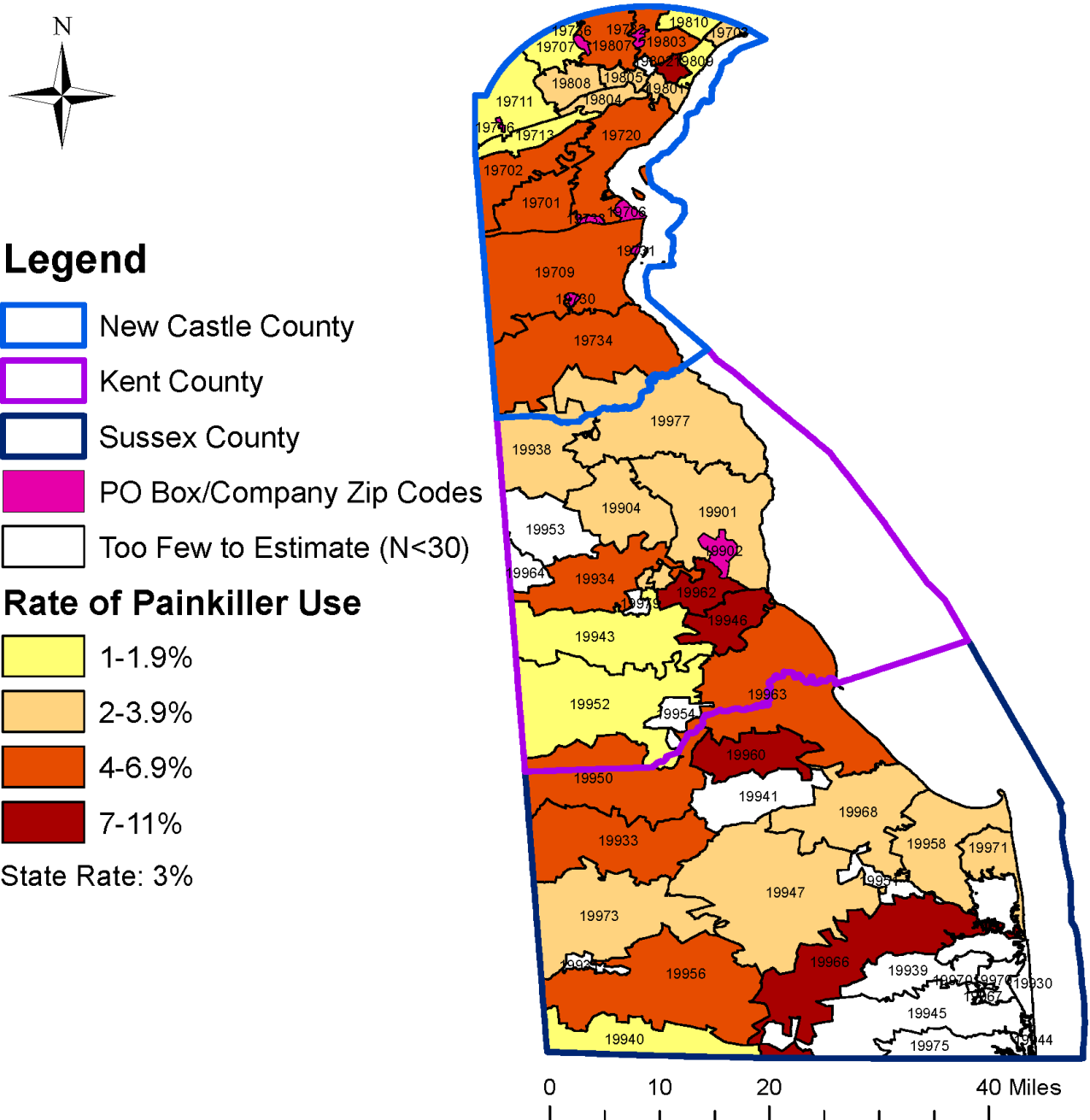


Figure 13: Map of past-year prescription painkiller use, 11th graders
Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Year Prescription Drug* Use Without a Prescription Among Delaware 8th Grade Public School Students: 2017-2018

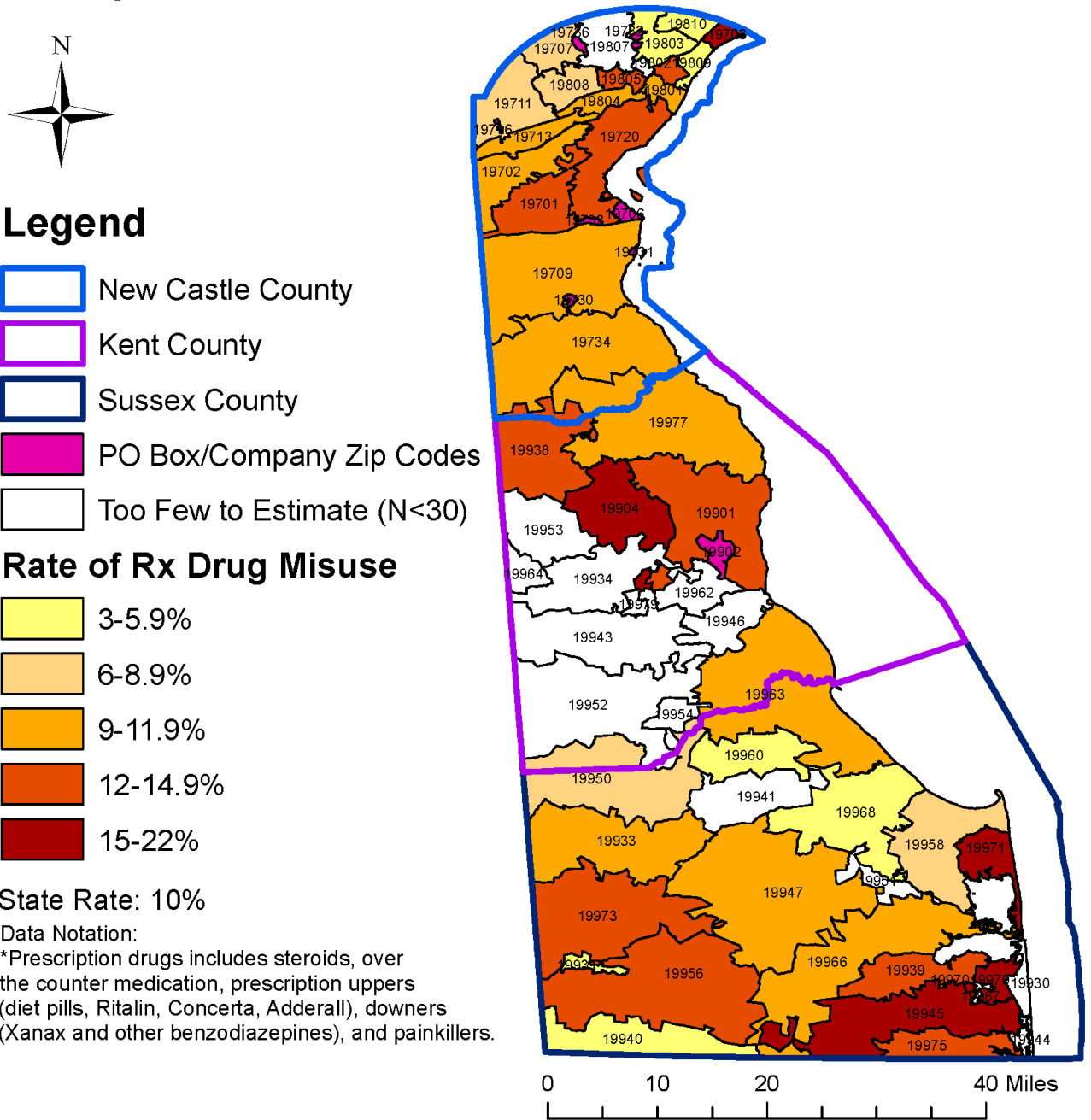


Figure 14: Map of past-year prescription drug use, 8th graders
Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Reported Past Year Prescription Drug* Use Without a Prescription Among Delaware 11th Grade Public School Students; 2017-2018

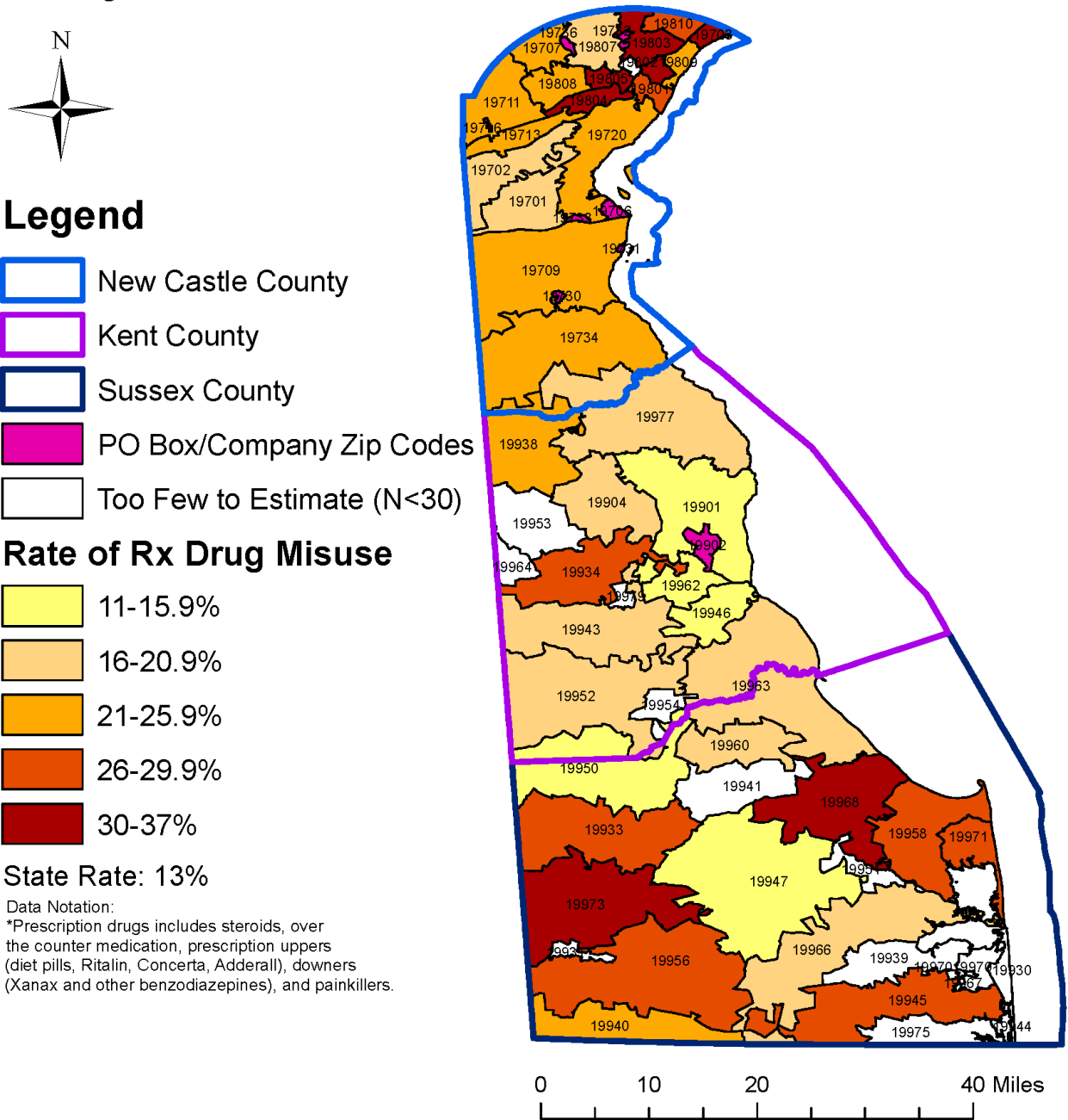


Figure 15: Map of past-year prescription drug use, 11th graders
Source: ["2017-2018 Delaware School Survey."](#) Center for Drug and Health Studies, University of Delaware

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Chapter 2 Tobacco and Electronic Cigarettes (Vaping)

National Overview

More than 50 years ago, the United States surgeon general released a [comprehensive report](#) documenting the strong evidence that linked cigarette smoking to lung cancer and other conditions. Today, tobacco use has been linked to cancers throughout the body, heart, and respiratory systems; fetal distress; and other dangerous health conditions. Between 1965 and 2014, the Centers for Disease Control and Prevention (CDC) estimated that more than 20 million Americans died due to smoking-related causes (U.S. Delaware Health and Social Services, Office of the Surgeon General, 2014). Currently, almost one in five deaths in the United States are linked to cigarettes, and these deaths are entirely preventable. The use of cigarettes and other tobacco products have high public health costs: the CDC estimates more than \$300 billion in public costs associated with smoking each year (CDC, n.d.). Over the decades, increased knowledge of the risks and dangers of smoking has had a positive impact; however, tobacco use remains an issue nationally and locally.

Nationwide, there has been a decrease in the use of tobacco products over the past several decades. In 2017, roughly 14% of adults in the United States reported being current cigarette smokers, reflecting a 67% decrease in cigarette use since 1965 (Wang, Asman, Gentzke, et al., 2018). Among adults who smoke, more than two-thirds report that they want to quit, although rates of quitting decrease with age (Babb, Malarcher, Schauer, Asman, & Jamal, 2017). High school respondents to the National Youth Risk Behavior Survey (NYRBS) reported current smoking at 28% in 1991 and 9% in 2017 (CDC, 2018). During that same time period, the number of high school youth who reported ever trying cigarette smoking declined from approximately 70% of respondents to 29% (CDC, 2018). The CDC reports that the rate of decline has slowed in recent years. In addition, sharp disparities in use between populations are apparent (CDC, n.d.). While cigarette use has been declining over past years, use of smokeless tobacco and cigar/cigarillo smoking, while still only used by a fraction of tobacco users, has risen slightly (U.S. Department of Health and Human Services, Office of the Surgeon General, 2014).

Increasingly, youth and adults are using electronic cigarettes in place of, or in addition to, cigarettes. Nationally, youth use e-cigarettes at a greater rate than any other tobacco product, including cigarettes (Jamal et al., 2017). A [2016 surgeon general's report](#) estimated a 900% increase in youth use of e-cigarettes between 2011-2015. One analysis of results from the 2016 National Youth Tobacco Survey found that the three main reasons middle and high school students give for using e-cigarettes are a friend or family member used them, there are multiple flavor options, and there is a perception of lower risk (Tsai et al., 2018). While e-cigarettes are marketed as less dangerous than regular cigarettes, they still contain nicotine, aerosol, and additional chemicals that may be toxic to the health of the user (Office of the Surgeon General, 2016). Use of e-cigarettes has also been linked to a greater risk of using other tobacco products, including regular cigarettes. The health impacts of e-cigarettes are still being

studied, and some risks may not be known at this time. The use of e-cigarettes is particularly problematic for youth: nicotine is addicting and has been shown to interfere with healthy brain development during adolescence and young adulthood. E-cigarette devices can also be used for marijuana and other illegal substances (Office of the Surgeon General, 2016). New products, such as JUUL (a brand featuring small devices that look like flash drives and thus are deceptive in appearance), seem to be specifically designed to appeal to youth.

Delaware Overview

The CDC reports that approximately 1,400 adults die due to illness related to smoking every year in Delaware. [The latest available data on health costs associated with tobacco usage](#) showed an estimated \$532 million in 2009. Efforts to control and prevent tobacco use also have high costs; the CDC provided \$727,843 in National Tobacco Control Program Funding to the State of Delaware in 2018 (CDC, 2019). Additional federal and state funding sources were also used for these efforts. If current tobacco usage trends stay stable, the CDC projects that approximately 17,000 Delawareans who were minors in 2012 will die from a smoking-related illness at some point in their lives (Office of Surgeon General, 2014, p. 693).

Mirroring national trends, data from five major survey sources (Behavioral Risk Factor Surveillance System, National Survey of Drug Use and Health, Youth Risk Behavior Survey, Delaware School Survey, and Youth Tobacco Survey) show that Delaware youth and adults have reported a steady decline in cigarette use since the late 1990s. Twenty years ago, more than a third of 11th graders reported regularly using cigarettes; today, only approximately 3% of 11th graders report currently smoking cigarettes (Delaware School Survey [DSS], 2018). Adult smoking rates in the United States have declined from 20% in 2005 to 14% in 2017, according to prevalence data from the CDC (CDC, 2019). Data from the DSS indicate that the reported age of first use has increased slightly since 2001. In 2018, 11th graders reported an average age of 13.9 years old as first time using tobacco; 8th graders reported 12 years of age.

The CDC's Youth Tobacco Survey (YTS) is conducted every other year at both state and national levels and allows us to gain insights and correlations regarding tobacco use behaviors. Findings of the 2018 Delaware YTS indicate that 18% of high school and 15% of middle school students report someone smoking in their home in the past seven days. One in five high school students reported riding in a vehicle with someone who was smoking in the past seven days. Along with the associated health risks of secondhand smoke, exposure to cigarette use increases the likelihood of smoking later in life. Peer pressure can also play a major role; however, according to the 2018 YTS, most students do not believe people who smoke have more friends or that smoking helps you to "fit in." Students in high school are more likely than students in middle school to report having a close friend who smokes.

While the decline in cigarette use in Delaware is promising, there has been a troubling concern over the past decade in the use of e-cigarettes/vaping devices for both youth and adults. Consistent with national trends, youth in Delaware currently report a greater use of e-

cigarettes/vaping than regular cigarettes, and 33% of high school students report that one of their four closest friends uses a vaping product. Of note, twice as many middle school students report a close friend using a vaping device or electronic cigarette (16%) as smoking a cigarette (8%) (Delaware Youth Tobacco Survey [DYTS], 2018). A preference for e-cigarettes over cigarettes may be explained by individuals perceiving these products as safer alternatives to cigarettes—only 19% of 11th graders and 17% of 8th graders report a perception of “great risk” in the use of e-cigarettes and vaping devices. According to the 2017 Delaware Youth Risk Behavior Survey, high school youth reports of ever trying and current use of e-cigarettes and vaping devices have declined in the past two years (from 41% to 38% and from 24% to 14%, respectively). The Delaware School Survey, conducted annually, while generally reporting lower rates, has also showed slight declines. However, it is too early to tell whether these are consistent trends that will be continued. As we continue to learn more about the health risks associated with e-cigarettes and vaping devices, it will become increasingly important to inform Delaware adolescents, parents, and educators of these risks, because as research illustrates, smoking habits form at a young age.

Data in Action: Raising the Minimum Purchasing Age

In April 2019, Governor Carney signed into law a bill that raises the legal age to purchase tobacco products and tobacco substitutes such as electronic cigarettes to age 21 (Read, 2019). Research has shown that the majority of smokers begin smoking before the age of 18, and efforts to delay the age of first use may reduce the number of future smokers (Office of the Surgeon General, 2012). In addition, as noted in this chapter, state and national trends show an alarming increase in the use of e-cigarettes among youth, after decades of decline in youth use of other nicotine products. Increasing the minimum purchasing age of tobacco products and e-cigarettes is one strategy to reduce their use among young people. In addition to Delaware, 11 other states have increased the legal purchasing age to 21. At the federal level, bills to raise the purchasing age to 21 have been, or will be, introduced in both the House and the Senate. Outgoing commissioner of the Food and Drug Administration (FDA), Dr. Scott Gottlieb, also issued a proposal that requires stores to hold flavored e-cigarettes in areas out of view of people under the age of 18, among other requirements (FDA, 2019).

**National Survey on Drug Use and Health
 Past-Month Tobacco and Cigarette Use
 and Perceptions of Great Risk in Delaware
 by Age Group, 2016- 2017
 Annual Average Percentages**

Rates of past month use and perceptions of great risk in Delaware by age group: annual average percentages based on 2016- 2017 NSDUH ^a				
Measure	Total 12 or Older	AGE GROUP		
		12-17	18-25	26 or Older
Tobacco products				
Past month tobacco product use ^b	21.77	4.02	27.74	22.80
Past month cigarette use	18.36	2.56	21.69	19.56
Perceived great risk of smoking one or more packs of cigarettes per day	71.90	69.23	70.28	72.42

Figure 16: Tobacco/cigarette use & perceptions of great risk, 2016-2017

Notes:

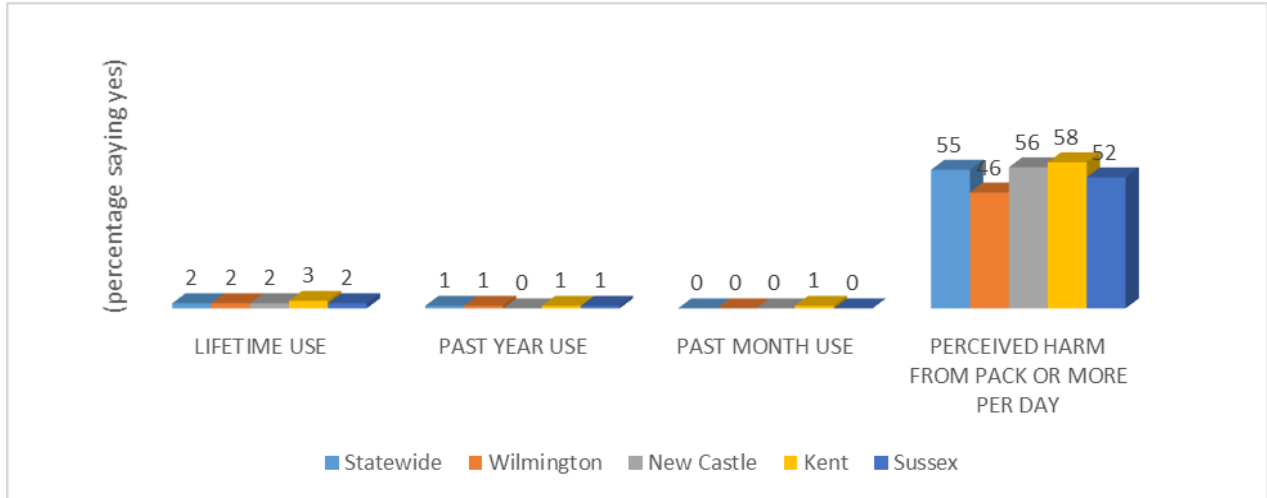
^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b Tobacco products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

Source: [“National Survey on Drug Use and Health: Comparisons of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.](#)

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2018 Delaware School Survey Cigarette Use among Delaware 5th Graders (in percentages)



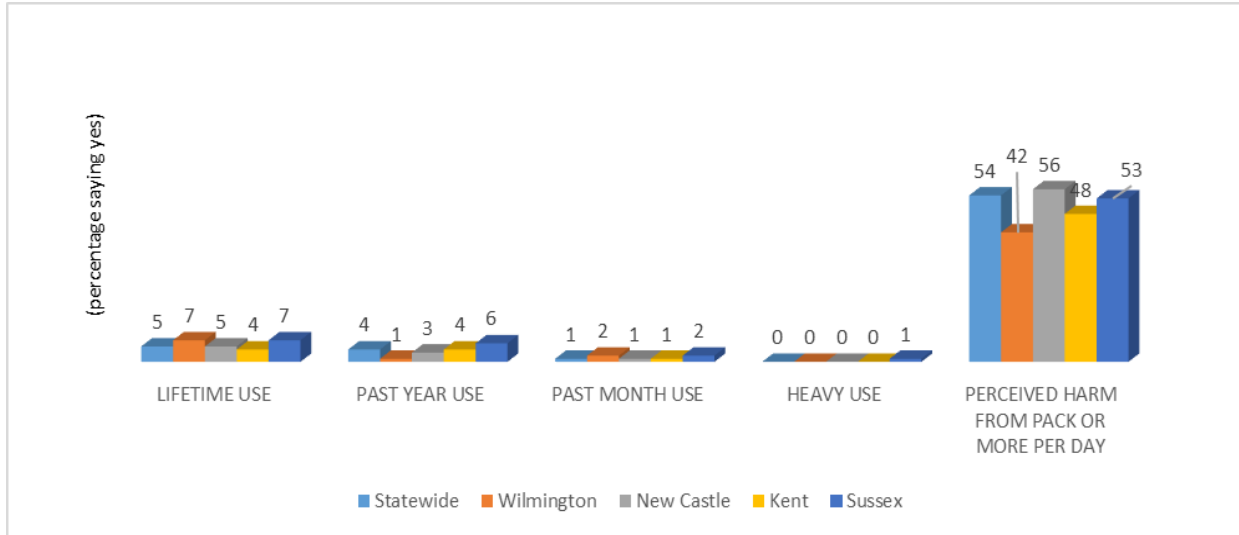
	Lifetime Use	Past-Year Use	Past-Month Use	Perceived Harm from Pack or More a Day
Statewide	2	1	0	55
Males	2	1	0	52
Females	2	1	0	58
Wilmington	2	1	0	46
Males	1	1	0	41
Females	2	0	0	50
New Castle	2	0	0	56
Males	2	0	0	54
Females	2	1	0	59
Kent	3	1	1	58
Males	4	1	1	55
Females	3	1	0	61
Sussex	2	1	0	52
Males	2	1	1	51
Females	1	1	0	53

Figure 17: Cigarette use, 5th graders

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Cigarette Use among Delaware 8th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use	Heavy Use ^a	Perceived Harm from Pack or More a Day
Statewide	5	4	1	0	54
Males	5	5	2	0	55
Females	4	3	1	0	54
Wilmington	7	1	2	0	42
Males	9	1	3	0	45
Females	4	1	1	0	40
New Castle	5	3	1	0	56
Males	5	4	2	0	56
Females	4	2	0	0	55
Kent	4	4	1	0	48
Males	5	5	2	0	46
Females	4	3	1	0	50
Sussex	7	6	2	1	53
Males	8	6	3	1	56
Females	7	6	2	0	51

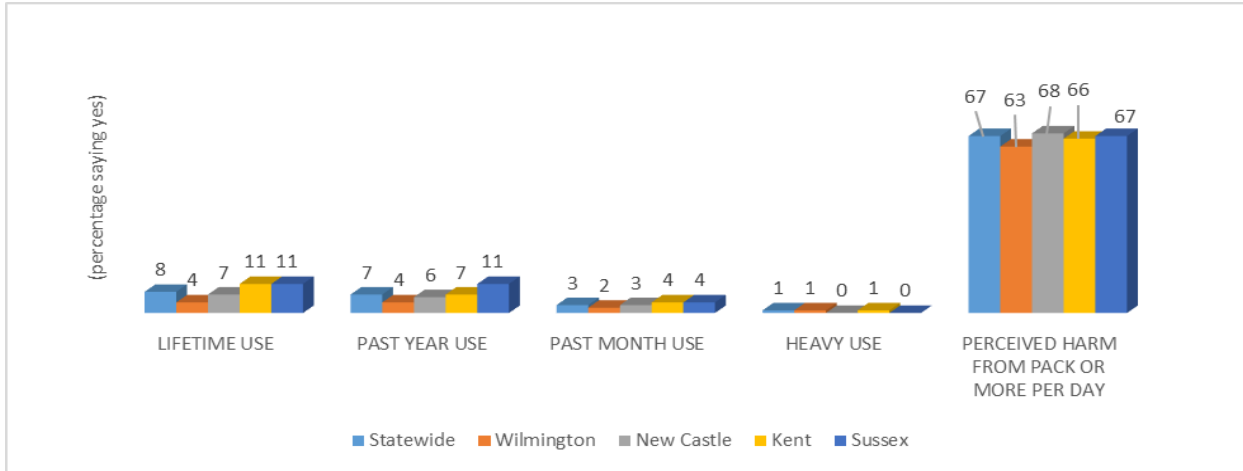
Figure 18: Cigarette use, 8th graders

Note: ^a "Heavy Use" is more than one-half pack per day in last 30 days

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Cigarette Use among Delaware 11th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use	Heavy Use ^a	Perceived Harm from Pack or More a Day
Statewide	8	7	3	1	67
Males	10	9	4	1	64
Females	7	5	2	0	70
Wilmington	4	4	2	1	63
Males	7	5	3	0	59
Females	2	3	1	1	66
New Castle	7	6	3	0	68
Males	8	7	3	1	65
Females	6	5	2	0	71
Kent	11	7	4	1	66
Males	14	11	6	1	64
Females	8	4	2	1	60
Sussex	11	11	4	0	67
Males	13	15	5	0	63
Females	9	6	4	0	72

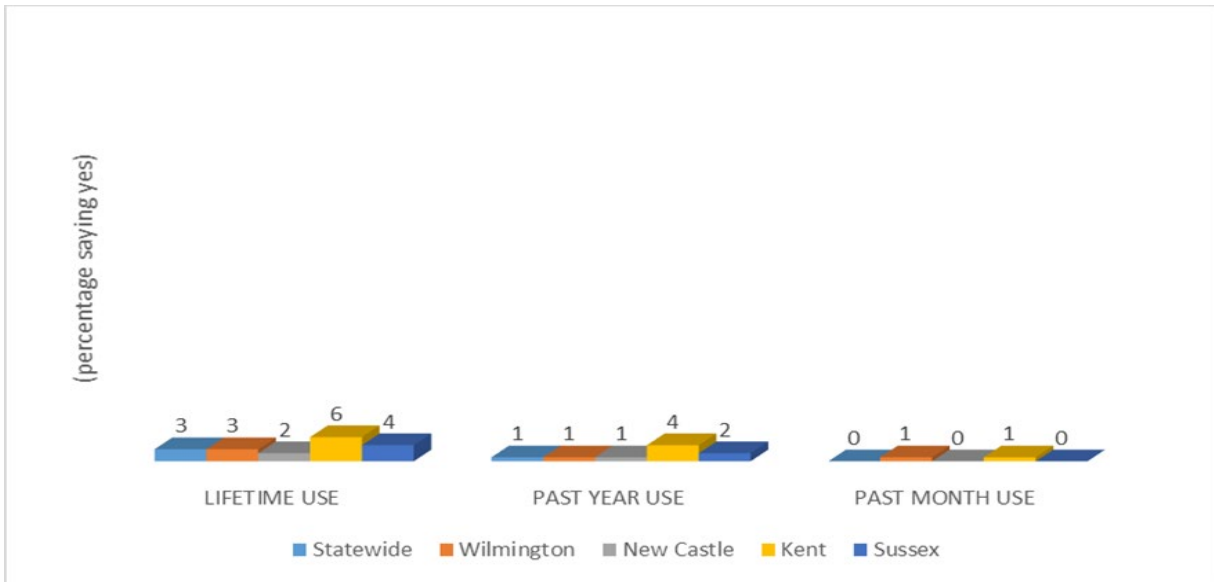
Figure 19: Cigarette use, 11th graders

Note: ^a "Heavy Use" is more than one-half pack per day in last 30 days.

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Electronic Cigarette/Vaping Device Use among Delaware 5th Graders (in percentages)



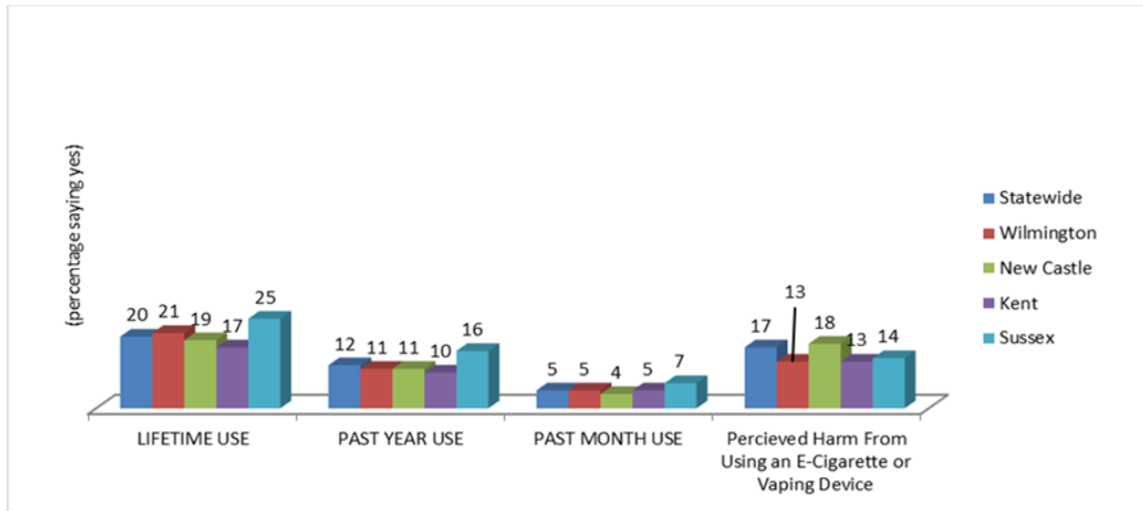
	Lifetime Use	Past-Year Use	Past-Month Use
Statewide	3	1	0
Males	4	2	1
Females	3	1	0
Wilmington	3	1	1
Males	3	2	1
Females	2	0	0
New Castle	2	1	0
Males	3	2	1
Females	2	0	0
Kent	6	4	1
Males	7	5	1
Females	5	3	1
Sussex	4	2	0
Males	5	2	0
Females	4	1	0

Figure 20: Electronic cigarette/vaping device use, 5th graders

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Electronic Cigarette/Vaping Device Use among Delaware 8th Graders (in percentages)



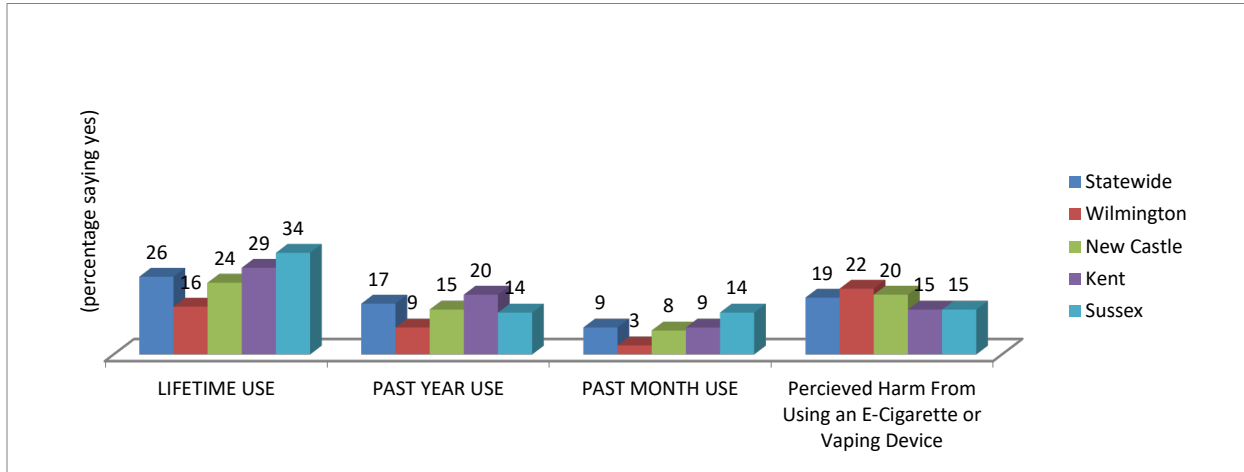
	Lifetime Use	Past-Year Use	Past-Month Use	Perceived Harm from Using an E-Cigarette or Vaping Device
Statewide	20	12	5	17
Males	19	12	5	16
Females	20	12	4	18
Wilmington	21	11	5	13
Males	24	14	8	13
Females	18	8	3	14
New Castle	19	11	4	18
Males	18	11	5	17
Females	19	11	3	19
Kent	17	10	5	13
Males	18	10	6	11
Females	15	10	4	15
Sussex	25	16	7	14
Males	25	15	7	13
Females	25	17	8	15

Figure 21: Electronic cigarette/vaping device use, 8th graders

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Electronic Cigarette/Vaping Device Use among Delaware 11th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use	Perceived Harm from Using an E-Cigarette or Vaping Device
Statewide	26	17	9	19
Males	27	18	10	17
Females	25	16	8	22
Wilmington	16	9	3	22
Males	20	12	4	21
Females	12	6	2	24
New Castle	24	15	8	20
Males	24	15	8	17
Females	23	15	8	23
Kent	29	20	9	15
Males	32	23	13	16
Females	26	17	7	15
Sussex	34	14	14	15
Males	34	16	16	11
Females	34	12	12	19

Figure 22: Electronic cigarette/vaping device use, 11th graders

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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**Delaware Youth Risk Behavior Survey
Middle School Students Who Smoked Cigarettes
on One or More of the Past 30 Days, 2017
(in percentages)**

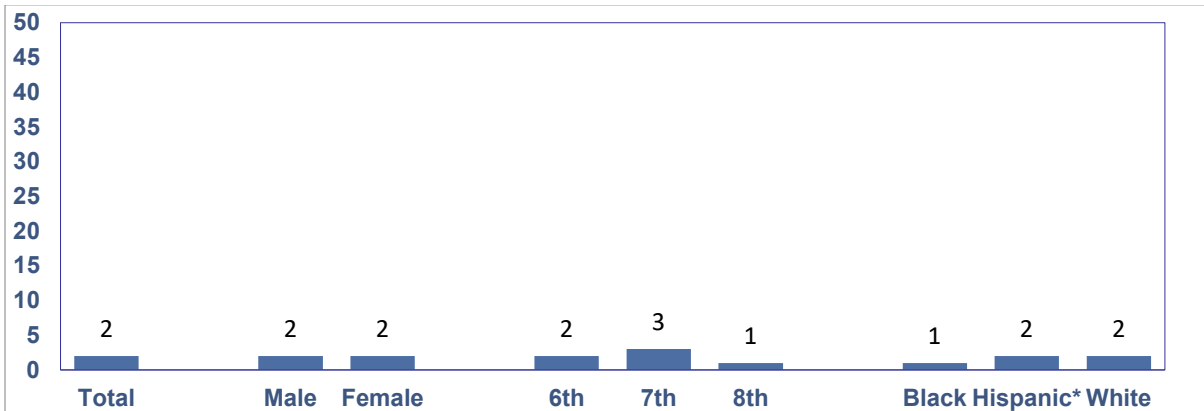


Figure 23: Cigarette smoking in past 30 days, MS, 2017

**High School Students Who Smoked Cigarettes
on One or More of the Past 30 Days, 2017
(in percentages)**

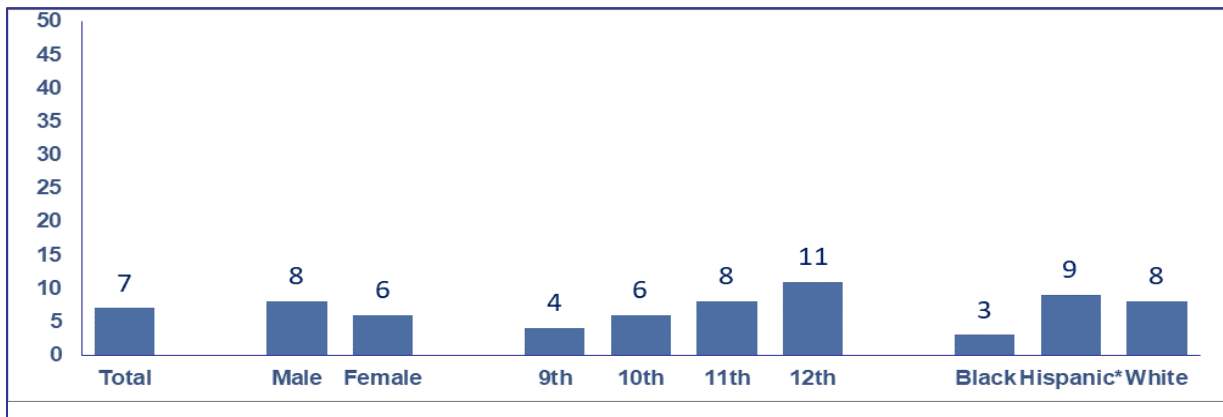


Figure 24: Cigarette smoking in past 30 days, HS, 2017

Notes: *All Hispanic students are included in the Hispanic category. All other races are non-Hispanic.

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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Delaware Youth Risk Behavior Survey High School Students Who Have Ever Used an Electronic Vapor Product^a, 2017

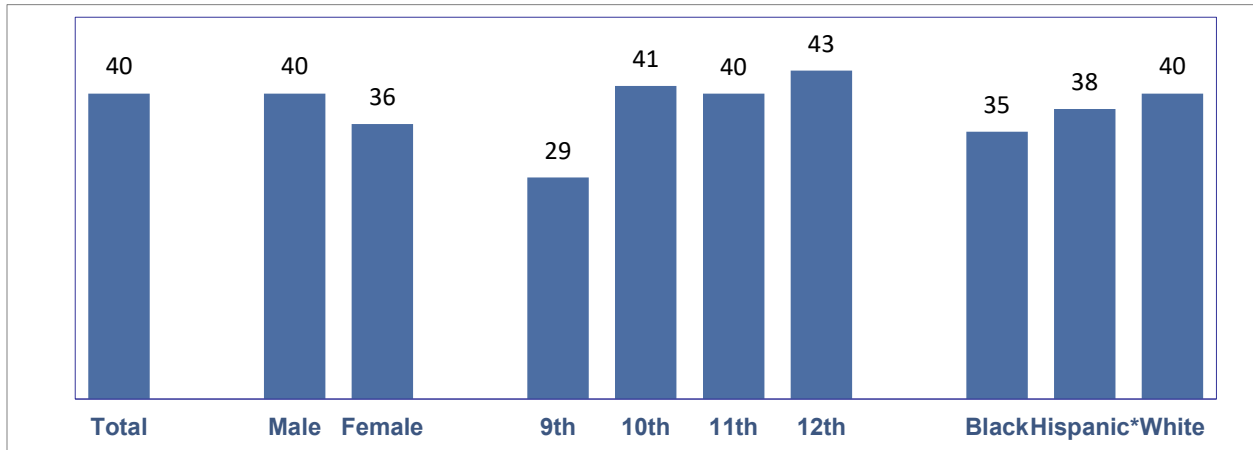


Figure 25: Electronic vapor product use, HS, 2017

High School Students Who Used an Electronic Vapor Product^a in the Past Month, 2017

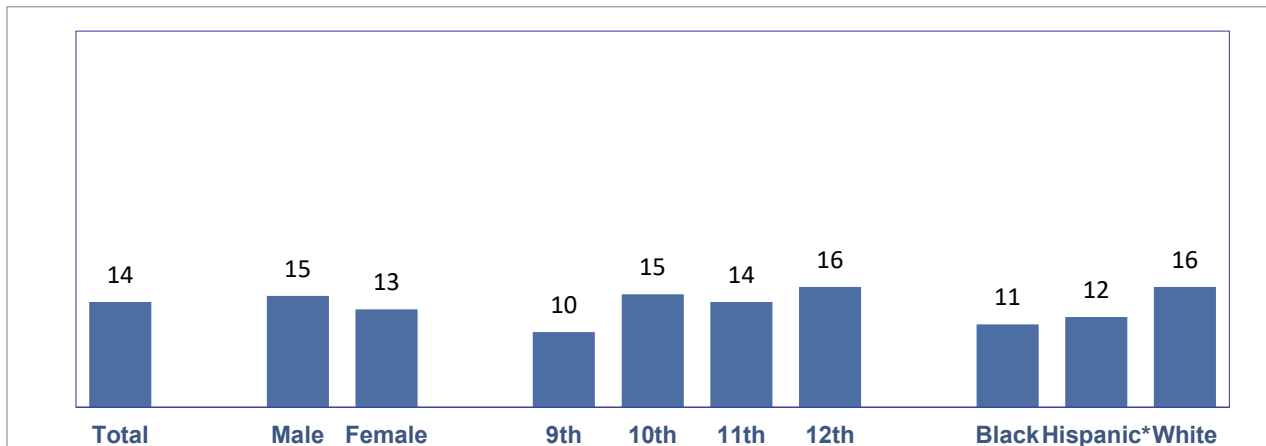


Figure 26: Electronic vapor product use in past month, HS, 2017

Notes: ^a Electronic Vapor Products include e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs (such as blu, NJOY, Vuse, MarkTen, Vapin Plus, eGo, and Halo)

*All Hispanic students are included in the Hispanic category. All other races are non-Hispanic.

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Average Age of Onset for Tobacco Use

8th Grade	11th Grade
12 years	13.9 years

Figure 27: Average age of onset for tobacco use, 8th and 11th graders

2017 High School Youth Risk Behavior Survey High School Students Who Smoked a Whole Cigarette for the First Time Before Age 13 Years (in percentages)

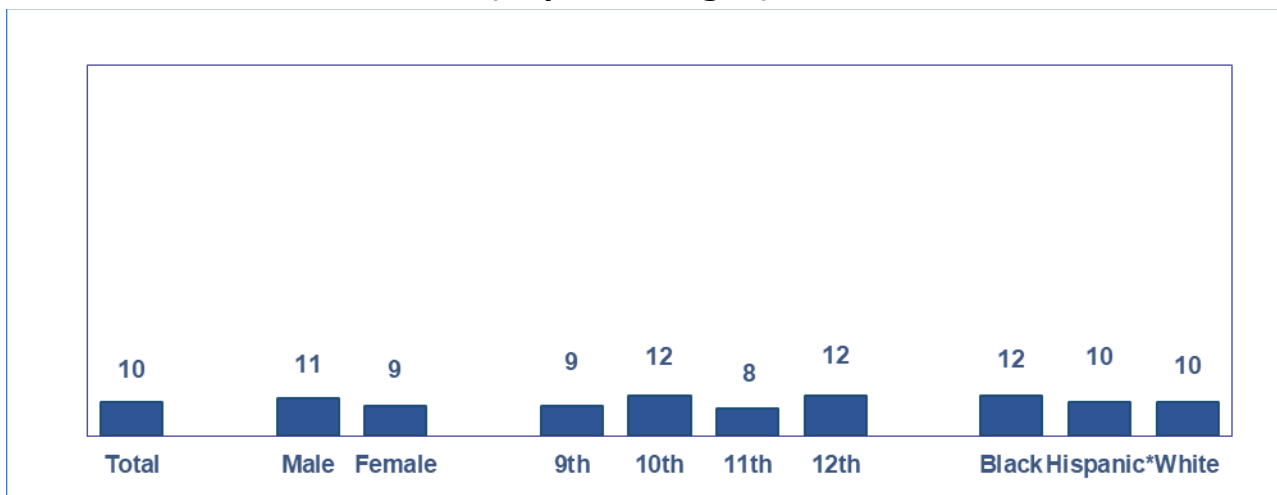


Figure 28: Smoking whole cigarette before age 13, HS, 2017

Notes: *All Hispanic students are included in the Hispanic category. All other races are non-Hispanic.

Weighted Data

Sources: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)
["2017 Delaware Youth Risk Behavior Survey \(YRBS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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**Delaware Behavior Risk Factor Surveillance System
Adult Cigarette Smoking by Sex, 2017**

Gender	Current Smokers	Smoke Everyday	Smoke Some Days
Male	17.9%	11.4%	6.5%
Female	16.2%	11.1%	5.2%

Figure 29: Cigarette smoking by sex, adult, 2017

Adult Cigarette Smoking by Race/Ethnicity, 2017

Race/Ethnicity	Current Smokers	Smoke Everyday	Smoke Some Days
White, non-Hispanic	17.4%	12%	5.4%
Black, non-Hispanic	17.7%	11.0%	6.7%
Hispanic	9.4%	4.8%	-
American Indian or Alaskan Native, non-Hispanic	39.6%	31.5%	-

Figure 30: Cigarette smoking by race/ethnicity, adult, 2017

Note: “-” indicates that the prevalence estimate was not available if the unweighted sample size for the denominator was <50 or the Relative Standard Error (RSE) is >0.3

Source: [“2017 Delaware Behavior Risk Factor Surveillance System.” BRFSS Prevalence & Trends Data, Centers for Disease Control and Prevention.](#)

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Delaware Behavior Risk Factor Surveillance System Adult Cigarette Smoking by Educational Level, 2017

Educational Level	Current Smokers	Smoke Everyday	Smoke Some Days
Less Than High School	28.4%	22.2%	6.2%
High School / G.E.D.	17.7%	11.1%	6.7%
Some Post-H.S.	18.6%	11.1%	7.5%
College Graduate	6.5%	3.8%	2.6%

Figure 31: Cigarette smoking by educational level, adult, 2017

Source: ["2017 Delaware Behavior Risk Factor Surveillance System." BRFSS Prevalence & Trends Data, Centers for Disease Control and Prevention.](#)

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Delaware Behavior Risk Factor Surveillance System Adult Cigarette Smoking by Age Group, 2017

Age Group	Current Smokers	Smoke Everyday	Smoke Some Days
18 - 24	13.0%	9.1%	-
25 - 34	26.2%	14.1%	12.1%
35 - 44	21.6%	13.5%	8.2%
45 - 54	18.5%	13.0%	5.5%
55 - 64	17.8%	12.9%	4.9%
65 and Older	7.7%	6.2%	1.6%

Figure 32: Cigarette smoking by age group, adult, 2017

Note: “-” indicates that the prevalence estimate was not available if the unweighted sample size for the denominator was <50 or the Relative Standard Error (RSE) is >0.3

Source: [“2017 Delaware Behavior Risk Factor Surveillance System.” BRFSS Prevalence & Trends Data, Centers for Disease Control and Prevention.](#)

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2018 Youth Tobacco Survey
Students Who Reported Perception
that Second-Hand Smoke is Harmful
(in percentages)

	Middle School	High School
Statewide	86	84
Males	84	82
Females	89	86
New Castle	86	85
Males	86	84
Females	87	86
Kent	80	83
Males	72	80
Females	91	86
Sussex	93	83
Males	92	78
Females	93	87

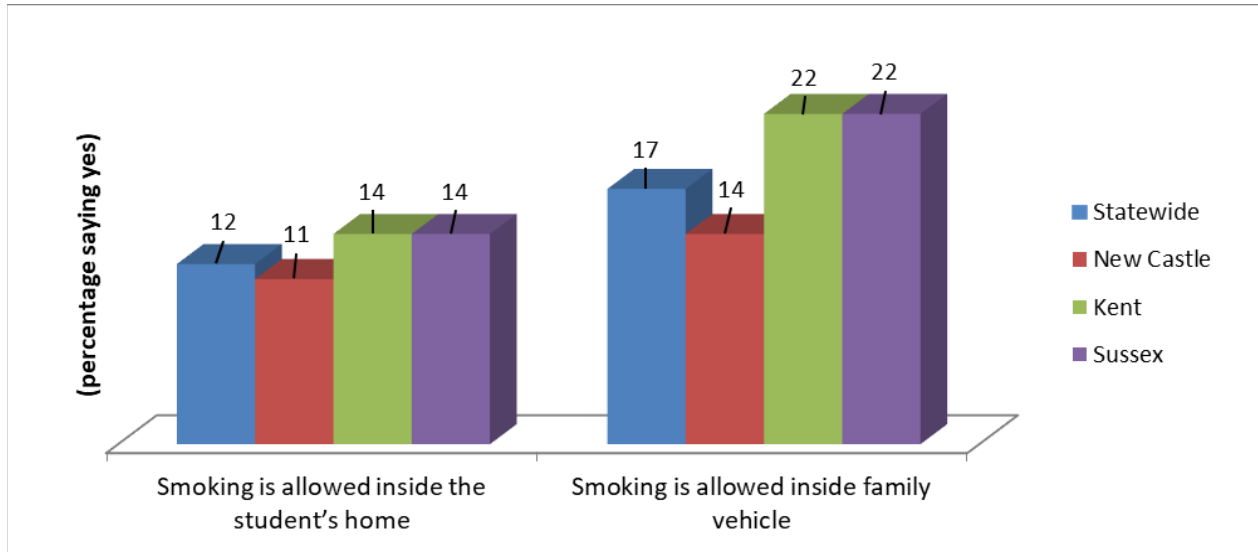
Figure 33: Perception that second-hand smoke is harmful, MS & HS, 2018

Weighted data

Source: ["2018 Delaware Youth Tobacco Survey \(YTS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Youth Tobacco Survey Middle School Students' Reported Smoking Rules (in percentages)



	Smoking is Allowed Inside the MS Student's Home	Smoking is Allowed Inside MS Family Vehicle
Statewide	12	17
Males	11	15
Females	13	19
New Castle	11	14
Males	11	13
Females	11	14
Kent	14	22
Males	12	19
Females	18	26
Sussex	14	22
Males	12	18
Females	16	26

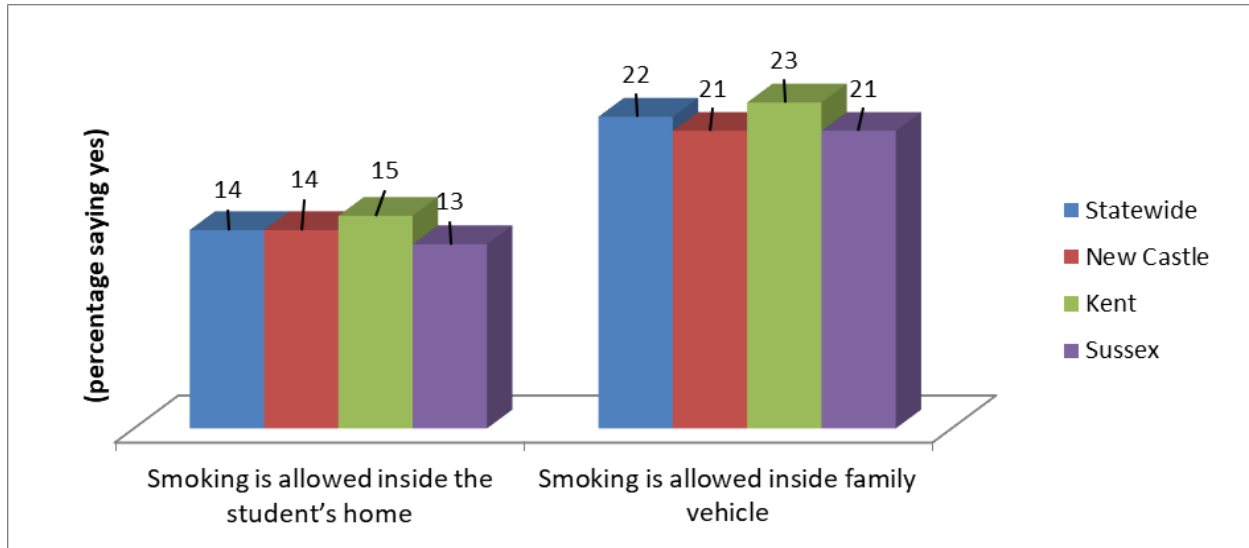
Figure 34: Cigarette smoking rules, MS, 2018

Weighted data

Source: ["2018 Delaware Youth Tobacco Survey \(YTS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Youth Tobacco Survey High School Students' Reported Smoking Rules (in percentages)



	Smoking is Allowed Inside the HS Student's Home	Smoking is Allowed Inside HS Family Vehicle
Statewide	14	22
Males	14	22
Females	14	22
New Castle	14	21
Males	14	22
Females	14	20
Kent	15	23
Males	14	20
Females	16	26
Sussex	13	21
Males	12	22
Females	14	22

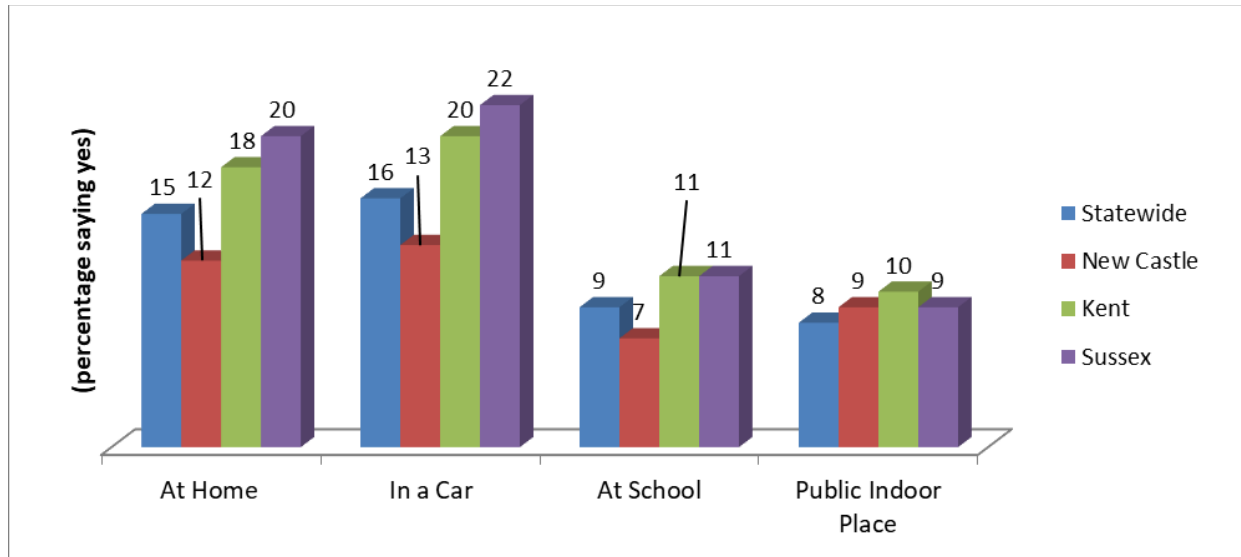
Figure 35: Cigarette smoking rules, HS, 2018

Weighted data

Source: ["2018 Delaware Youth Tobacco Survey \(YTS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Youth Tobacco Survey Middle School Students' Exposure to Secondhand Smoke in the Past Week (in percentages)



	At Home	In a Vehicle	At School	In an Indoor Public Place Last Week
Statewide	15	16	9	8
Males	14	15	8	8
Females	15	17	10	10
New Castle	12	13	7	9
Males	12	12	7	8
Females	12	14	8	9
Kent	18	20	11	10
Males	17	20	9	6
Females	19	21	13	16
Sussex	20	22	11	9
Males	17	18	7	7
Females	23	26	15	11

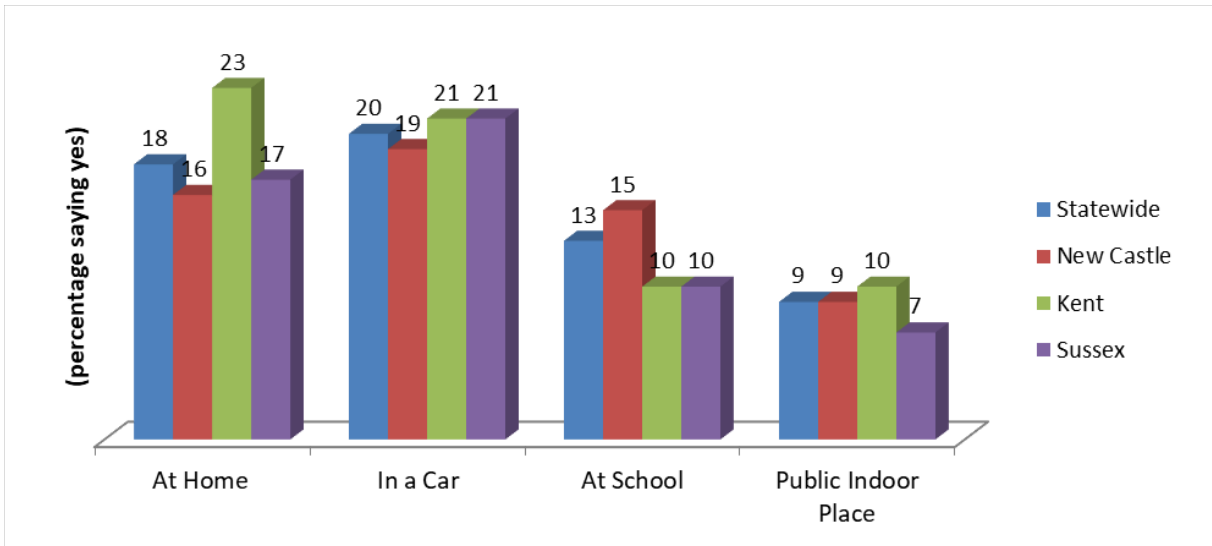
Figure 36: Exposure to secondhand smoke in past week, MS, 2018

Weighted data

Source: ["2018 Delaware Youth Tobacco Survey \(YTS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Youth Tobacco Survey High School Students' Exposure to Secondhand Smoke in the Past Week (in percentages)



	At Home	In a Vehicle	At School	In an Indoor Public Place Last Week
Statewide	18	20	13	9
Males	17	19	13	9
Females	19	21	13	9
New Castle	16	19	15	9
Males	16	19	16	9
Females	16	18	13	9
Kent	23	21	10	10
Males	22	20	8	10
Females	25	23	13	11
Sussex	17	21	10	7
Males	14	19	5	5
Females	20	24	13	9

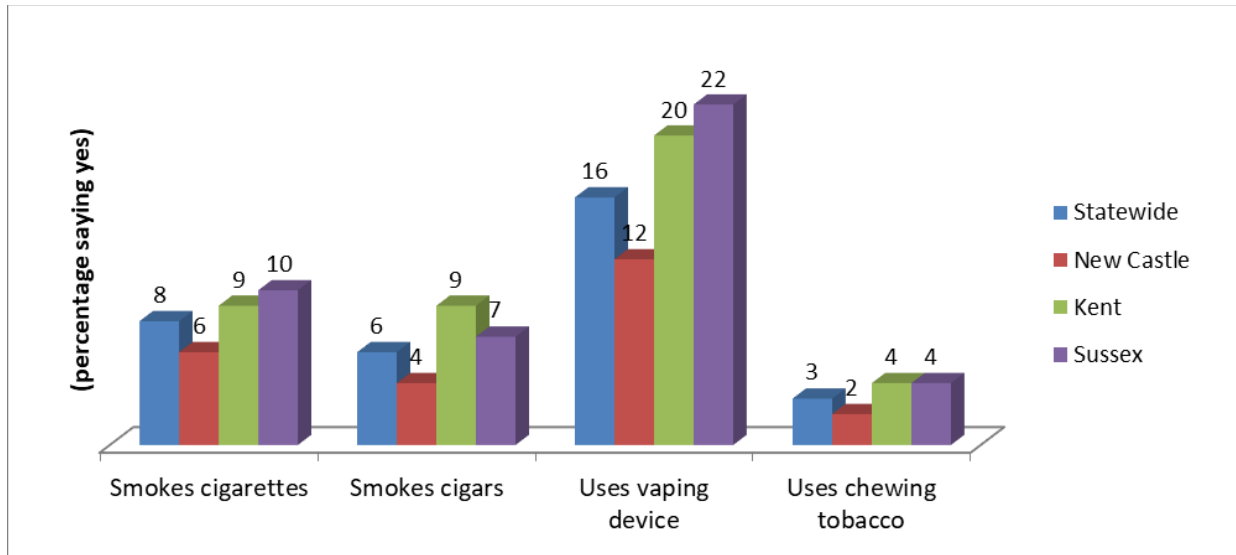
Figure 37: Exposure to secondhand smoke in past week, HS, 2018

Weighted data

Source: ["2018 Delaware Youth Tobacco Survey \(YTS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Youth Tobacco Survey
Middle School Students Who Reported
One of their Four Closest Friends Uses Tobacco Product
(in percentages)



	Smokes Cigarettes	Smokes Cigars	Uses Vaping Device	Uses Chewing Tobacco
Statewide	8	6	16	3
Males	8	7	15	4
Females	7	5	16	2
New Castle	6	4	12	2
Males	6	5	12	3
Females	6	4	12	1
Kent	9	9	20	4
Males	12	11	19	4
Females	6	6	20	4
Sussex	10	7	22	4
Males	9	6	16	3
Females	12	9	28	5

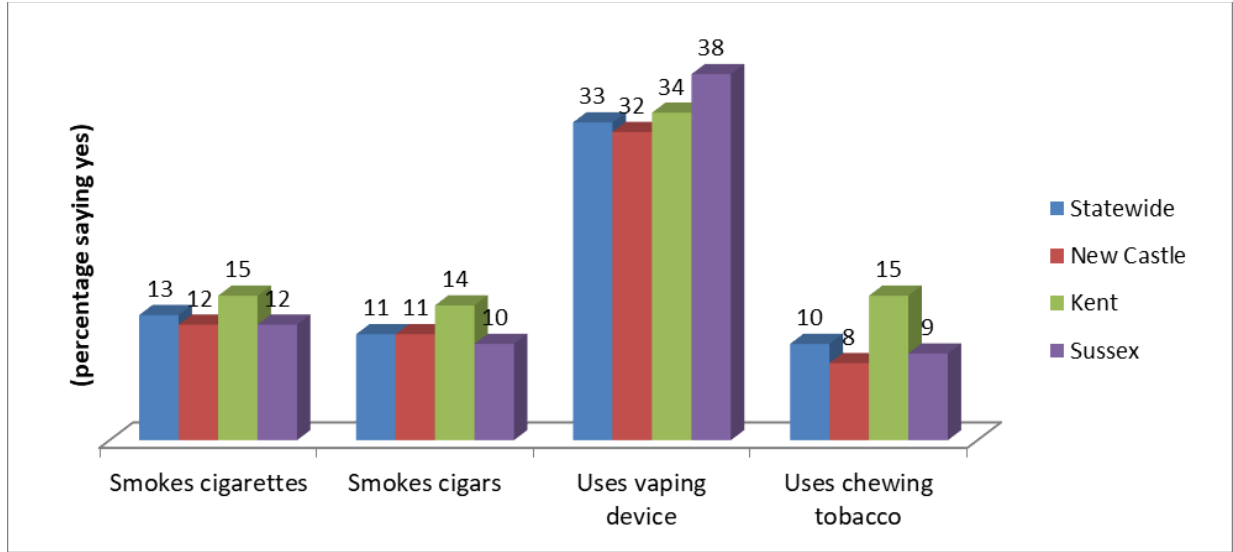
Figure 38: One of four closest friends uses tobacco product, MS, 2018

Weighted data

Source: ["2018 Delaware Youth Tobacco Survey \(YTS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Youth Tobacco Survey
High School Students Who Reported
One of their Four Closest Friends Uses a Tobacco Product
(in percentages)



	Smokes Cigarettes	Smokes Cigars	Uses Vaping Device	Uses Chewing Tobacco
Statewide	13	11	33	10
Males	13	13	34	13
Females	12	9	33	7
New Castle	12	11	32	8
Males	13	13	33	12
Females	10	7	30	4
Kent	15	14	34	15
Males	14	13	35	17
Females	15	15	33	12
Sussex	12	10	38	9
Males	12	11	33	13
Females	12	9	42	6

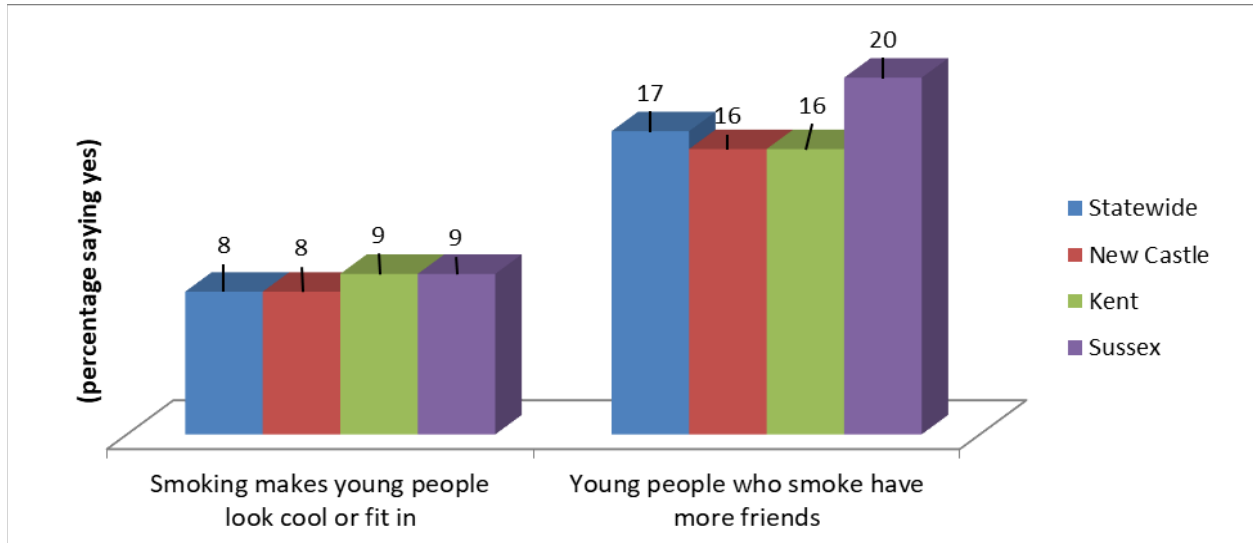
Figure 39: One of four closest friends uses tobacco product, HS, 2018

Weighted data

Source: [“2018 Delaware Youth Tobacco Survey \(YTS\)”](#). Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.

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2018 Youth Tobacco Survey Middle School Students' Attitudes Toward Smoking (in percentages)



	Smoking Makes Young People Look Cool or Fit In	Young People Who Smoke Have More Friends
Statewide	8	17
Males	10	15
Females	7	19
New Castle	8	16
Males	10	14
Females	6	18
Kent	9	16
Males	11	14
Females	6	20
Sussex	9	20
Males	10	17
Females	8	22

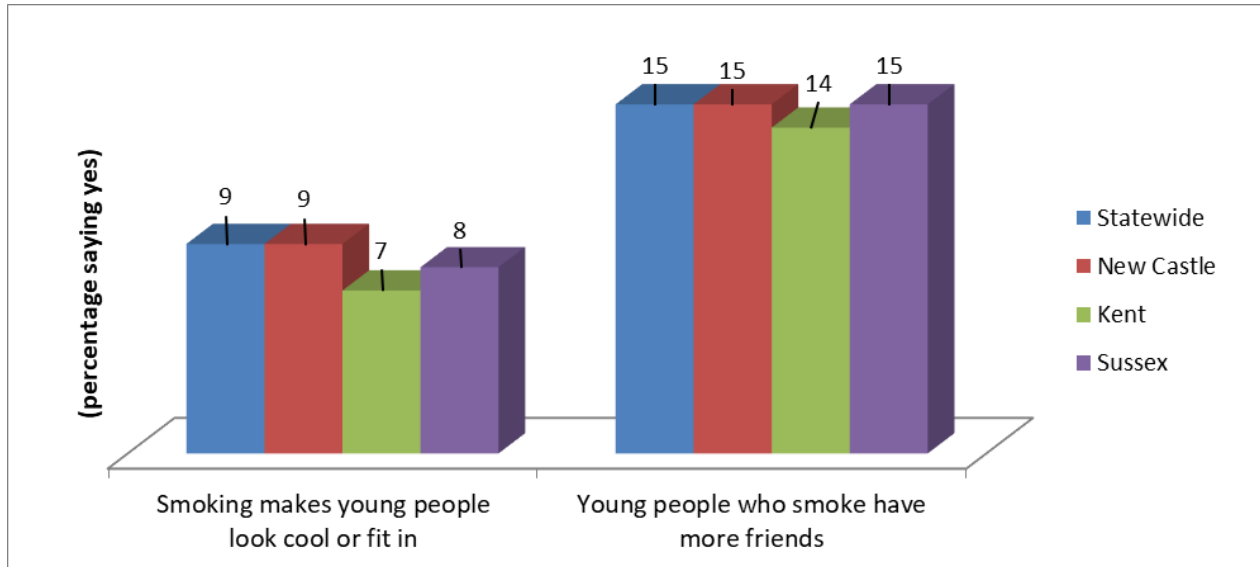
Figure 40: Attitudes toward smoking, MS, 2018

Weighted data

Source: ["2018 Delaware Youth Tobacco Survey \(YTS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Youth Tobacco Survey High School Students' Attitudes Toward Smoking (in percentages)



	Smoking Makes Young People Look Cool or Fit In	Young People Who Smoke Have More Friends
Statewide	9	15
Males	10	15
Females	7	14
New Castle	9	15
Males	12	16
Females	6	15
Kent	7	14
Males	6	15
Females	8	13
Sussex	8	15
Males	10	14
Females	7	15

Figure 41: Attitudes toward smoking, HS, 2018

Weighted data

Source: ["2018 Delaware Youth Tobacco Survey \(YTS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Trends in Delaware Students

Who Reported Past-Month Cigarette Use by Grade, 1989-present

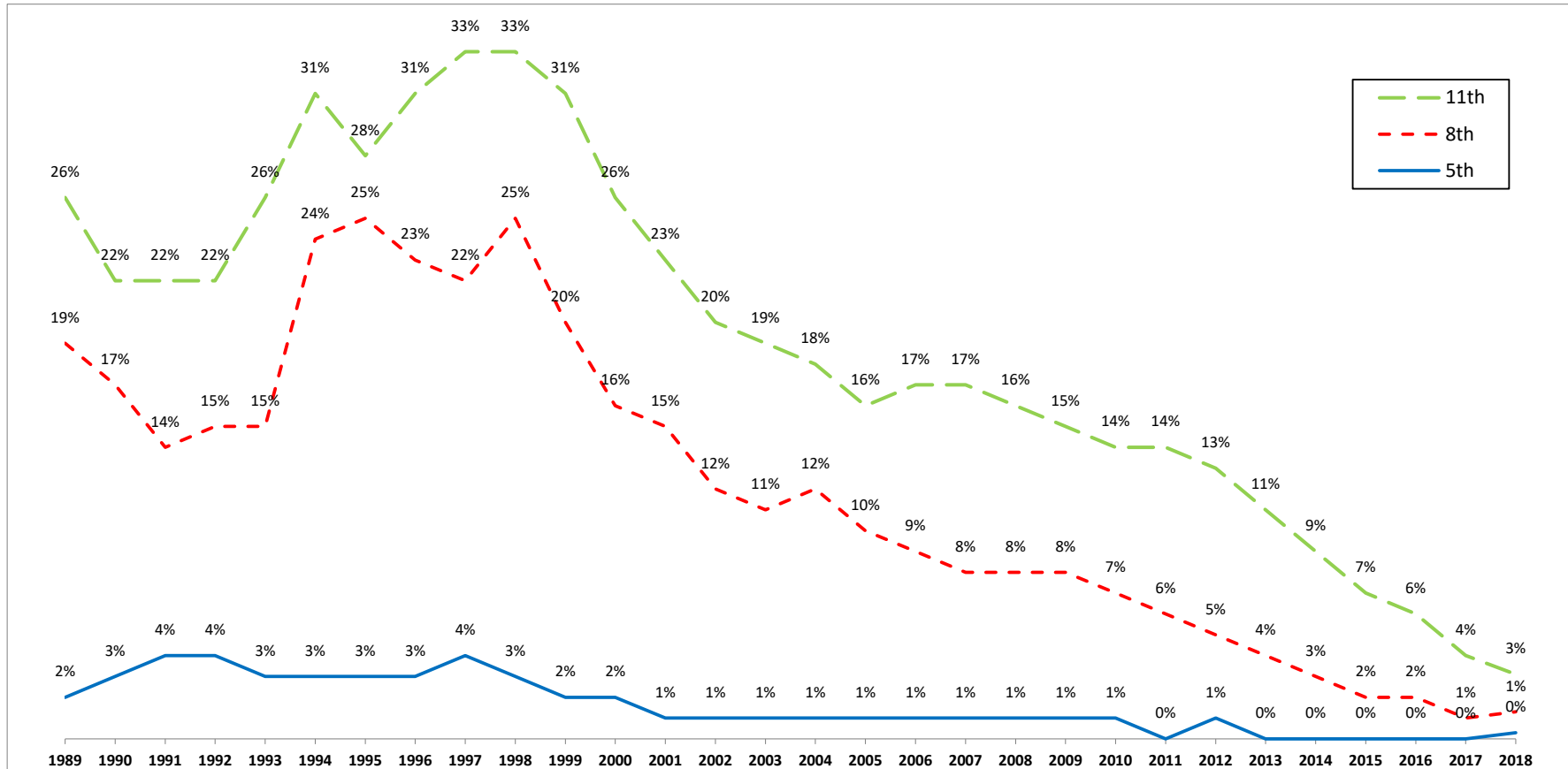


Figure 42: Trends in students' past-month cigarette use by grade, 1989-present

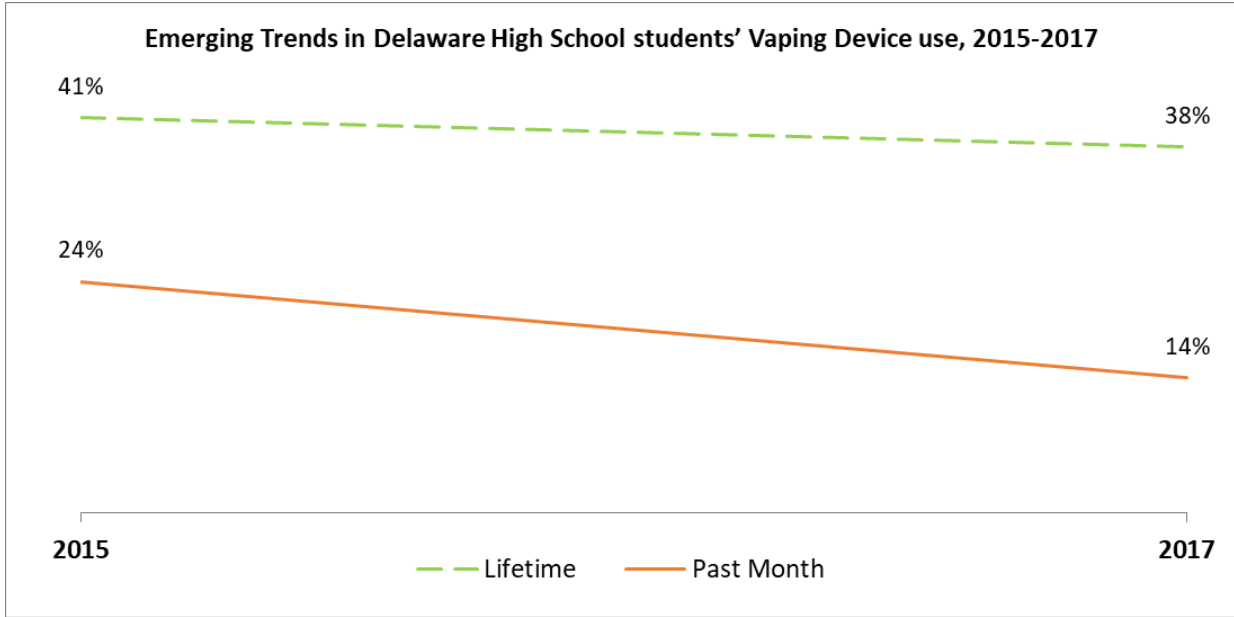
Source: Data Base/DiagnosticsPlus (1989-1993); Department of Public Instruction (1994);

["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#) (1995- Present)

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2017 Youth Risk Behavior Survey

Emerging Trends in High School Students' Vaping Device Use^a, 2015-2017



	Vaping Device Use	
	Lifetime	Past-Month
2017 High School Students	38	14
2015 High School Students	41	24

Figure 43: Emerging trends in vaping device use, HS, 2015-2017

Notes: ^aElectronic Vapor Products include e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs (such as blu, NJOY, Vuse, MarkTen, Vapin Plus, eGo, and Halo)

All Hispanic students are included in the Hispanic category. All other races are non-Hispanic.

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)". Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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National Survey on Drug Use and Health Past-Month Tobacco Product Use by Age Group and State 2015-2016 and 2016-2017 (in ages)

State	12 or Older			AGE GROUP								
				12-17			18-25			26 or Older		
	2015-2016	2016-2017	<i>p</i> value ^b	2015-2016	2016-2017	<i>p</i> value ^b	2015-2016	2016-2017	<i>p</i> value ^b	2015-2016	2016-2017	<i>p</i> value ^b
Total U.S.	23.72	22.99	.000	5.66	5.10	.000	31.48	29.52	.000	24.58	24.04	.016
Northeast	22.75	21.91	.012	5.39	4.59	.003	31.65	29.91	.002	23.21	22.50	.092
Delaware	22.55	21.77	.390	4.68	4.02	.270	29.86	27.74	.190	23.37	22.80	.606
Maryland	22.04	19.10	.001	5.57	4.45	.077	31.95	26.10	.000	22.38	19.69	.012
New Jersey	19.25	20.78	.050	4.64	4.14	.337	30.27	29.89	.794	19.31	21.34	.033
Pennsylvania	26.96	26.48	.475	6.36	5.88	.397	36.17	34.60	.150	27.74	27.43	.706

Figure 44: Tobacco product use, past-month, by age group and state

Past-Month Cigarette Use by Age Group and State 2015-2016 and 2016-2017 (in percentages)

State	12 or Older			AGE GROUP (Years)								
				12-17			18-25			26 or Older		
	2015-2016	2016-2017	<i>p</i> value ^b	2015-2016	2016-2017	<i>p</i> value ^b	2015-2016	2016-2017	<i>p</i> value ^b	2015-2016	2016-2017	
Total U.S.	19.23	18.47	.000	3.80	3.29	.000	25.12	22.90	.000	20.09	19.54	
Northeast	18.46	17.54	.004	3.44	2.94	.011	24.93	22.38	.000	19.05	18.34	
Delaware	19.03	18.36	.432	3.22	2.56	.142	23.53	21.69	.237	20.07	19.56	
Maryland	17.78	15.70	.006	3.46	2.68	.078	24.05	19.79	.002	18.44	16.56	
New Jersey	15.82	16.67	.209	2.90	2.50	.295	25.05	24.00	.442	15.93	17.21	
Pennsylvania	21.47	20.55	.142	3.91	3.71	.624	28.06	25.32	.013	22.34	21.61	

Figure 45: Cigarette use, past-month, by age group and state

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b *p* value: Bayes significance levels for the null hypothesis of no change between the 2014-2015 and 2015-2016 population percentages

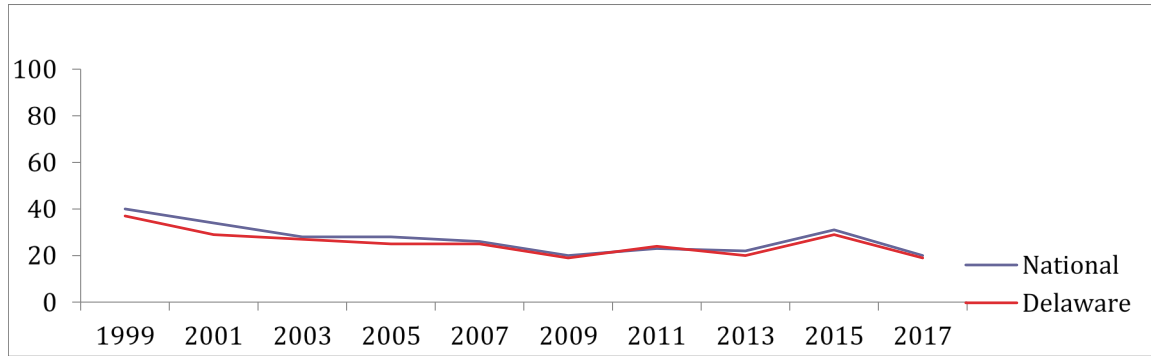
Source: ["National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages \(50 States and District of Columbia\)." Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.](#)

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Youth Risk Behavior Survey

National and Delaware, 1999-2017

Past-Month Use of Tobacco Products among High School Students (cigarette, smokeless tobacco, cigar, or electronic cigarette^a) (in percentages)



Year	National	Delaware
1999	40	37
2001	34	29
2003	28	27
2005	28	25
2007	26	25
2009	20	19
2011	23	24
2013	22	20
2015	31	29
2017	20	19

Figure 46: Trends in tobacco product use, past-month, HS, 1999-2017

Notes:

^a Electronic cigarette was added to the overall past month tobacco use measure in 2015; this had a noticeable impact on the past month tobacco rate.

Weighted data

Sources: ["Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#) (1999-2017)

["National High School Youth Risk Behavior Survey." Center for Disease Control and Prevention.](#) (1999-2017)

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National Survey on Drug Use and Health National and Delaware Students (12 and Older) Reporting Cigarette Use in Past Month

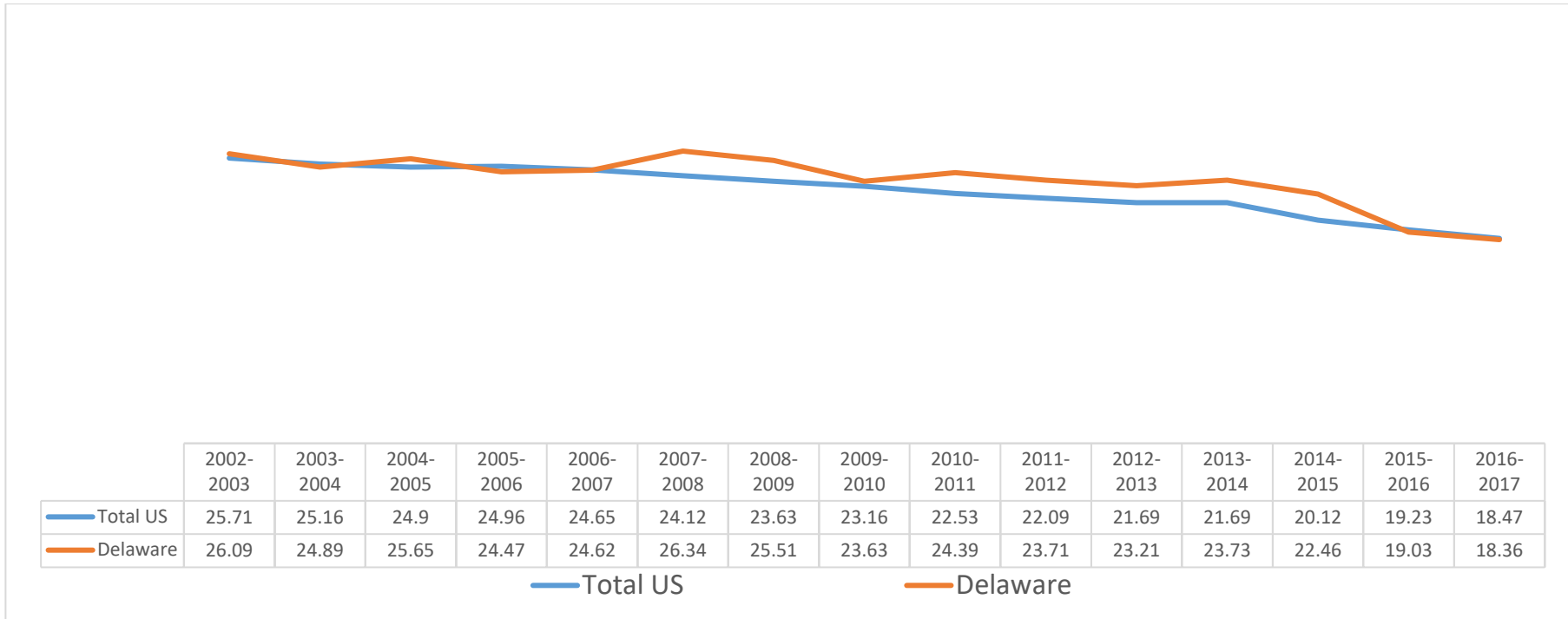


Figure 47: Trends in cigarette use, past-month, national & Del., ages 12+

Source: [“National Survey on Drug Use and Health” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.](#)

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National Survey on Drug Use and Health National and Delaware Students (12-17) Reporting Cigarette Use in Past Month

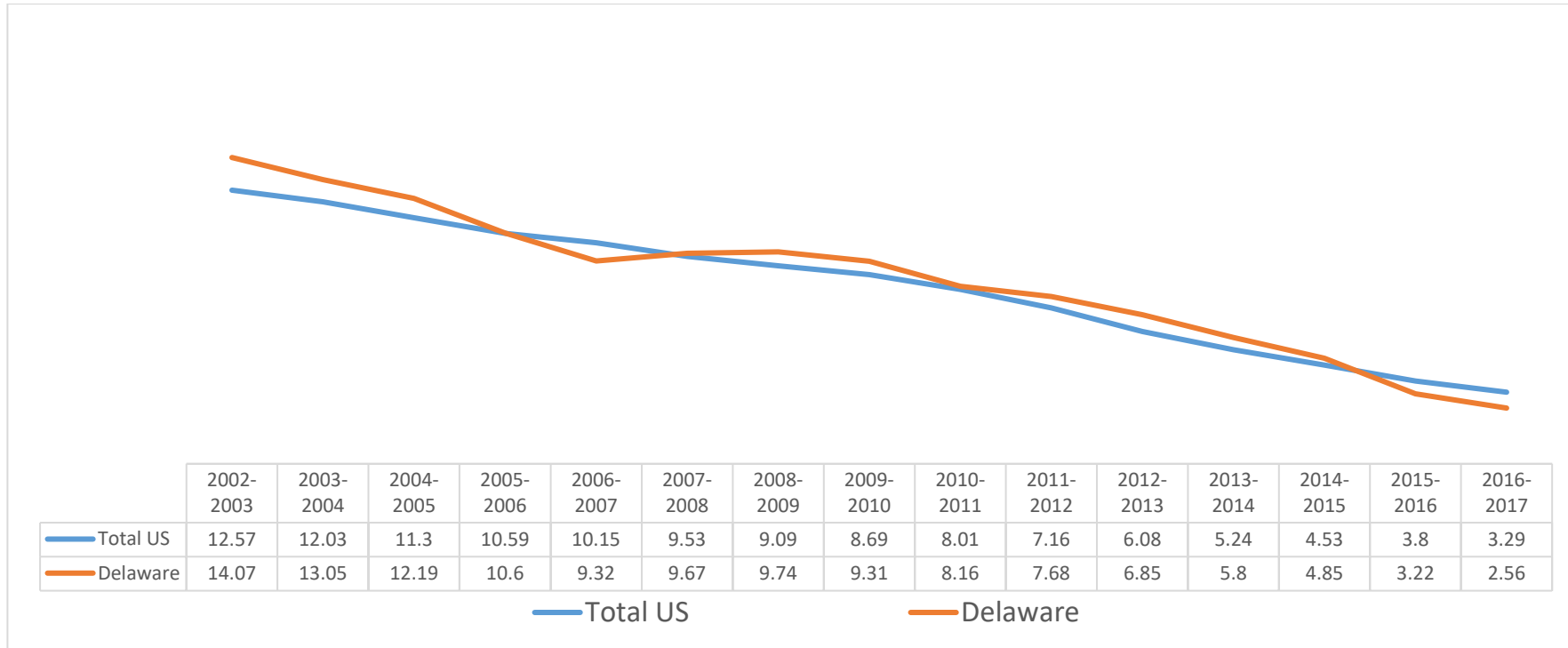


Figure 48: Trends in cigarette use, past-month, national & Del., ages 12-17

Source: ["National Survey on Drug Use and Health." Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.](#)

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**Delaware School Survey, Youth Risk Behavior Survey,
and Monitoring the Future**
**Comparison of Recent National and Delaware Estimates
of Cigarette Use among High School Students
(in percentages)**

	Cigarettes	
	Past-Year	Past-Month
2018 11th Grade Delaware School Survey	7	3
2017 11th Grade Delaware School Survey	7	4
2016 11th Grade Delaware School Survey	9	6
2017 9th – 12th Grade Delaware YRBS	--	7
2015 9th – 12th Grade Delaware YRBS	--	11
2018 12th Grade MTF^a	--	8
2017 12th Grade MTF	--	10

Figure 49: Cigarette use, national and Del., HS, 2017-2018

Notes:

"--" Not Available

*weighted data

^aMonitoring the Future (MTF) is a nationally representative survey

Sources: ["Delaware School Survey, 2015-2017."](#) Center for Drug and Health Studies, University of Delaware.

["Delaware Youth Risk Behavior Survey \(YRBS\), 2015-2017."](#) Centers for Disease Control and Prevention (Administered by the Center for Drug and Health Studies, University of Delaware).

[Monitoring the Future, National Survey Results on Drug Use, 1975-2018.](#) University of Michigan.

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Delaware School Survey

Students' Perceptions of Great Risks from Smoking a Pack of Cigarettes Daily, 2002-2018

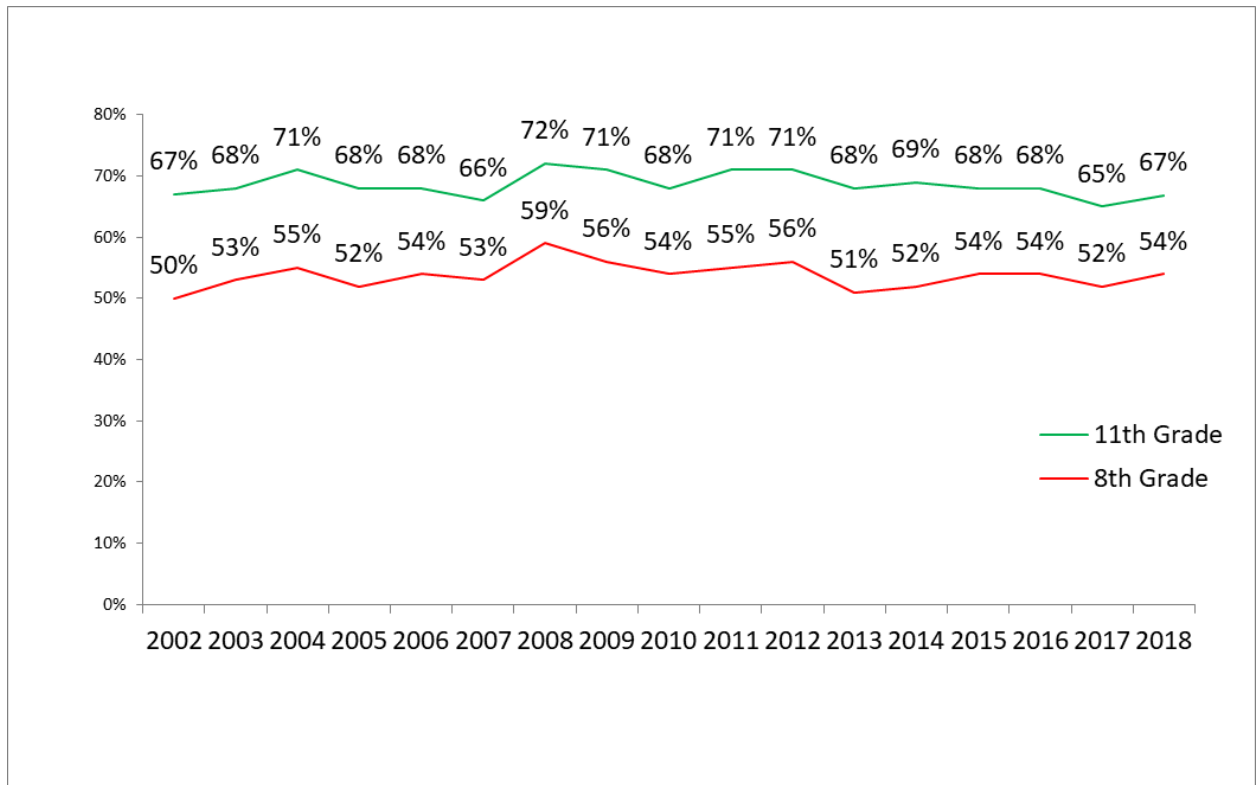


Figure 50: Trends in perceived risk from smoking pack daily, 2002-2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware \(2002-2018\).](#)

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National Survey of Drug Use and Health
Perceptions of Great Risks
from Smoking One or More Packs of Cigarettes per Day
by Age Group and State, 2015-2016 and 2016-2017
(in percentages)^a

State	AGE GROUP											
	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b
Total U.S.	72.80	72.21	.002	68.71	68.24	.163	68.29	67.57	.034	74.04	73.44	.010
Northeast	74.59	74.26	.321	71.53	71.19	.557	69.57	69.24	.590	75.74	75.39	.391
Delaware	71.98	71.90	.933	68.02	69.23	.432	70.32	70.28	.985	72.66	72.42	.839
Maryland	76.56	76.27	.715	71.55	71.94	.797	71.31	72.33	.525	77.96	77.36	.548
New Jersey	77.37	77.11	.722	73.43	74.20	.567	70.18	68.46	.240	78.91	78.73	.843
Pennsylvania	70.22	69.83	.574	69.84	67.74	.059	67.52	67.40	.919	70.68	70.42	.760

Figure 51: Perception of risk in smoking 1+ packs/day by age, group, state

Notes:

“-” p values were not available for this data

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b p value: Bayes posterior probability of no change.

Source: “National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration

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Chapter 3 Alcohol

National Overview

There are serious public health and social costs that stem from alcohol misuse and addiction. One national study found that approximately \$250 billion in costs were associated with excessive drinking in the United States in 2010 (Sacks et al., 2015). The Centers for Disease Control and Prevention (CDC) reports that between 2006 and 2010, approximately one in 10 deaths that occurred to working-age adults were attributable to alcohol use (Stahre et al., 2014). Frequent drinking can lead to alcohol use disorder, which can reduce daily functioning, impair social relationships, and lead to critical health outcomes. Data from the 2017 National Survey of Drug Use and Health (NSDUH) indicate that approximately 6% of people over the age of 12 fit the criteria for an alcohol use disorder in the United States (Substance Abuse and Mental Health Services Administration [SAMHSA], 2018). Long-term alcohol use has been linked to a number of chronic and deadly conditions, including diseases of the liver and pancreas, various types of cancers, and risk of stroke (Rehm et al., 2009). Infants of mothers who drink during pregnancy are at great risk of developing Fetal Alcohol Spectrum Disorder, which can lead to severe complications, including lifelong developmental delays and disabilities (Streissguth et al., 2004). Data from the NSDUH show that adult reports of past-month use have remained relatively stable over the past six years. High school youth reports of past-month use declined from 51% in 1999 to 30% in 2017, according to the National Youth Risk Behavior Survey (NYRBS) (Centers for Disease Control and Prevention [CDC], 2018). While the downward trend of high school students' past-month use is heartening, alcohol misuse and dependency continue to be a major public health concern.

Delaware Overview

Even a one-time excessive use of alcohol can have dangerous repercussions. Across the three Delaware counties, alcohol was involved in an estimated 17-47% of all fatal car crashes. Kent County had the highest reported rate of traffic fatalities involving alcohol-impaired drivers in 2017. Binge drinking, in particular, is associated with an increased risk of victimization. Data from the 2018 College Risk Behavior Survey show that approximately one out of five University of Delaware students who report that they frequently binge drink alcohol (consume five or more drinks in a single sitting) also reported that they had been a victim of assault, compared to the roughly one in 16 students who reported being a victim of assault and abstaining from alcohol use. Students who reported binge drinking also reported sexual assault victimization twice as frequently as non-binge drinkers (Center for Drug and Health Studies, 2017). Nationally, researchers have consistently shown a clear association between alcohol use and intimate partner violence (Deveries et al., 2013), and this is also true in Delaware. For example, higher rates of teen dating violence are associated with rates of more frequent drinking among Delaware high school students (see Figures 177, 179, and 181 in Chapter 11 in this report). However, it is important to note that this type of survey data does not allow us to draw

conclusions that binge drinking causes victimization or that being victimized causes binge or frequent drinking; it simply shows that students who experience one are more likely to experience the other.

Despite popular news emphasis on opioid misuse, among students, alcohol remains the most commonly reported substance used. According to the 2018 Delaware School Survey (DSS), 22% of 11th graders and 9% of 8th graders reported that they drank alcohol in the past month. Though alcohol use among Delaware students declined over the past five years, mirroring national trends, student surveys show that too many students still do not adequately understand the risks involved with alcohol misuse. Only 38% of 11th graders surveyed responded that there is a “great risk” to drinking daily. Approximately 7% of 11th graders reported binge drinking in the past two weeks, while 3% reported drinking and driving in the past month.

Preventing and responding to the risk of underage drinking has a high social cost. A report compiled by the Pacific Institute for Research and Evaluation (PIRE), a national nonprofit organization that focuses on public health and is funded by the federal Office of Juvenile Justice and Delinquency Prevention, estimates that underage drinking cost Delaware taxpayers \$176.4 million in 2013 (Pacific Institute for Research and Evaluation [PIRE], 2015). Early intervention can reduce some of the risks associated with alcohol misuse. However, DSS data show that the average age of onset for drinking reported by students who drink is 12.1 years old for 8th grade students and 14.6 years old for 11th grade students. The use of alcohol at an early age has been linked to future alcohol dependence and a greater likelihood of using illicit substances later in life (Barry et al., 2016).

According to data from the 2016-2017 National Survey of Drug Use and Health (NSDUH) estimates, adults between the ages of 18-25 have the highest rates of binge drinking; nearly 38% of adults in this age range reported binge drinking in the past 30 days. Data from the Delaware Behavioral Risk Factor Surveillance System (BRFSS) show an overall decrease in adult drinking since 2011; comparisons with national estimates from the NSDUH indicate that Delaware adults drink at about the same rate as the overall national estimates. Nearly 15% of adults in Delaware surveyed by BRFSS in 2017 reported binge drinking in the past 30 days, and 6% met the criteria for heavy drinking (consuming 14 drinks a week for men and 7 drinks a week for women). Data from the Treatment Episode Data Set (TEDS) indicates that in 2018, alcohol either alone or used with a secondary substance was the primary reason for admission in 16.1% of all publicly funded treatment admissions in Delaware (Figure 115, this report).

Data in Action: Fetal Alcohol Spectrum Disorders

Fetal alcohol spectrum disorders (FASD) are a range of symptoms that may have lifelong implications for infants whose mothers consume alcohol while pregnant, including development delays, intellectual disabilities, executive functioning problems, and physical differences (Riley, Infante, and Warren, 2011; Jones and Smith, 1973). There is a wide variance in prevalence estimates by researchers. One study (May et al., 2018) of four communities in the United States from 2010 through 2016 found prevalence rates between 11.3 per 1,000 children to 50 per 1,000 children. In 2015, 8% of women in Delaware who provided data to the Pregnancy Risk Assessment Monitoring System (PRAMS) indicated that they had used alcohol within the last three months of pregnancy, which is the same as the national rate. Data from the 2016 BRFSS show that adult women of childbearing age (ages 18-44) in Delaware who reported any alcohol use also reported higher rates of binge drinking than in the majority of other states in the nation, at nearly 40% (CDC, n.d.). Binge drinking can be a sign of alcohol use disorder, which may create challenges to abstain from drinking in the event that a woman becomes pregnant.

Because of the known risk of harm to the fetus, pregnant women can be penalized and, in some cases their physicians held liable, for their drinking. Some states have enacted mandatory reporting laws for prenatal alcohol use where prosecutors may pursue charges of child abuse and neglect against pregnant women using substances (Drabble, Thomas, O'Connor, and Roberts, 2014; Flavin and Paltrow, 2010; Chasnoff, Landress, and Barrett, 1990). Studies have found that these types of policies often have the effect of discouraging pregnant women from seeking prenatal care and treatment for their substance use disorders out of fear of criminal justice involvement (Stone, 2015; Fentiman, 2009). Pregnant women may also have more limited treatment options than others due to their more specialized healthcare needs, which can lead to a disparity in access to treatment. A report issued by the American College of Obstetricians and Gynecologists found that as of 2010, only 19 states had substance use treatment programs specifically designed for pregnant women, and only nine states gave priority treatment access to pregnant women (American College of Obstetricians and Gynecologists [ACOG], 2011).

National Survey on Drug Use and Health
Alcohol Use in Delaware, by Age Group
Percentages, Annual Averages Based on 2016-2017^a

AGE GROUP					
Measure	Total 12 or Older				12-20 ^c
		12-17	18-25	26 or Older	
ALCOHOL					
Past-Month Alcohol Use	51.38	8.38	54.78	55.51	17.47
Past-Month Binge Alcohol Use ^b	22.51	4.30	37.87	22.19	10.75
Perceived Great Risk of Drinking 5 or More Drinks Once or Twice a Week	43.30	44.43	38.59	43.88	--

Figure 52: Alcohol use in Delaware by age group, 2016-2017

Notes:

-- Not available, estimates have not been released by NSDUH.

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b Binge Alcohol Use is defined as drinking five or more drinks (for males) or four or more drinks (for females) on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days. In 2015, the definition for females changed from five to four drinks

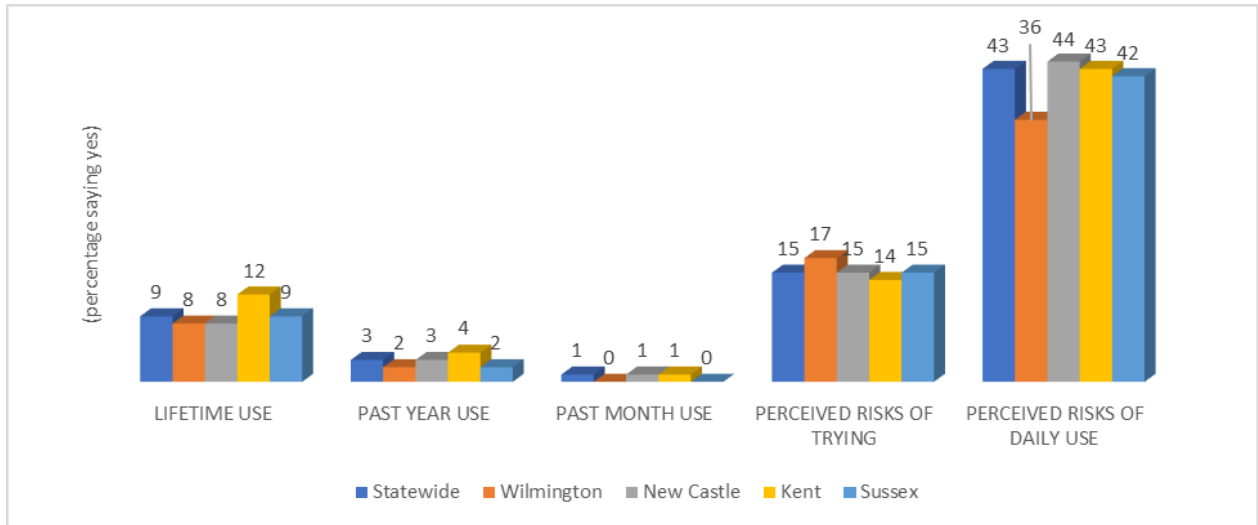
^c Underage drinking is defined for persons aged 12 to 20

Source: ["National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages." Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration](#)

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2018 Delaware School Survey

Alcohol Use among Delaware 5th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use	Perceived “A Lot of Risk” of Harm	
				TRYING	DAILY USE
Statewide	9	3	1	15	43
Males	10	3	1	15	42
Females	8	2	0	14	44
Wilmington	8	2	0	17	36
Males	11	4	0	18	34
Females	5	0	0	16	38
New Castle	8	3	1	15	44
Males	10	3	1	16	43
Females	7	2	1	14	45
Kent	12	4	1	14	43
Males	13	5	2	12	43
Females	12	4	0	15	44
Sussex	9	2	0	15	42
Males	10	2	1	15	42
Females	8	3	0	14	42

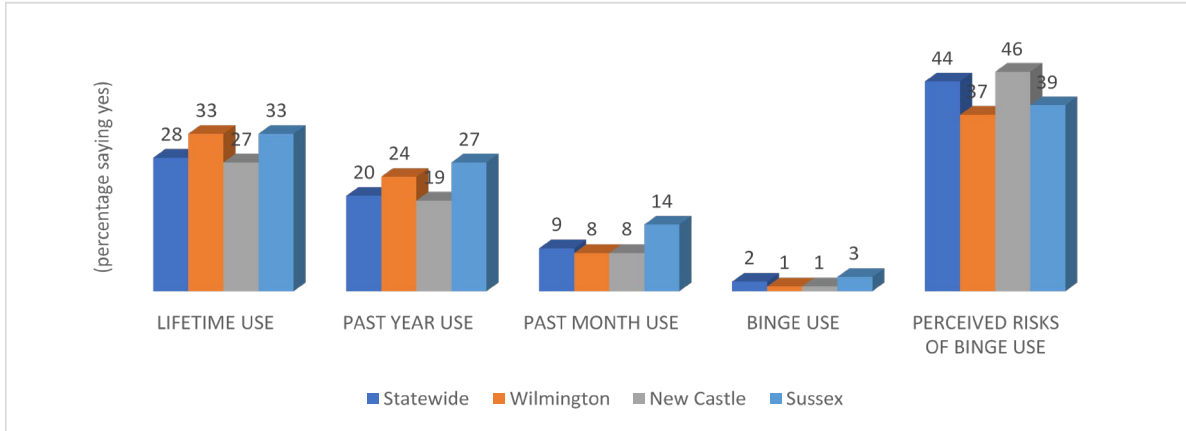
Figure 53: Alcohol use, 5th graders

Source: [“2018 Delaware School Survey.” Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

Alcohol Use among Delaware 8th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use	Binge Use ^a	Perceived Harm from Binge Use ^a
Statewide	28	20	9	2	44
Males	25	18	8	1	42
Females	31	23	11	2	46
Wilmington	33	24	8	1	37
Males	28	21	5	1	35
Females	37	27	10	1	40
New Castle	27	19	8	1	46
Males	24	16	6	1	45
Females	31	22	10	1	48
Kent	28	19	9	1	40
Males	26	17	7	1	36
Females	29	21	11	1	44
Sussex	33	27	14	3	39
Males	32	24	13	3	37
Females	34	29	15	4	40

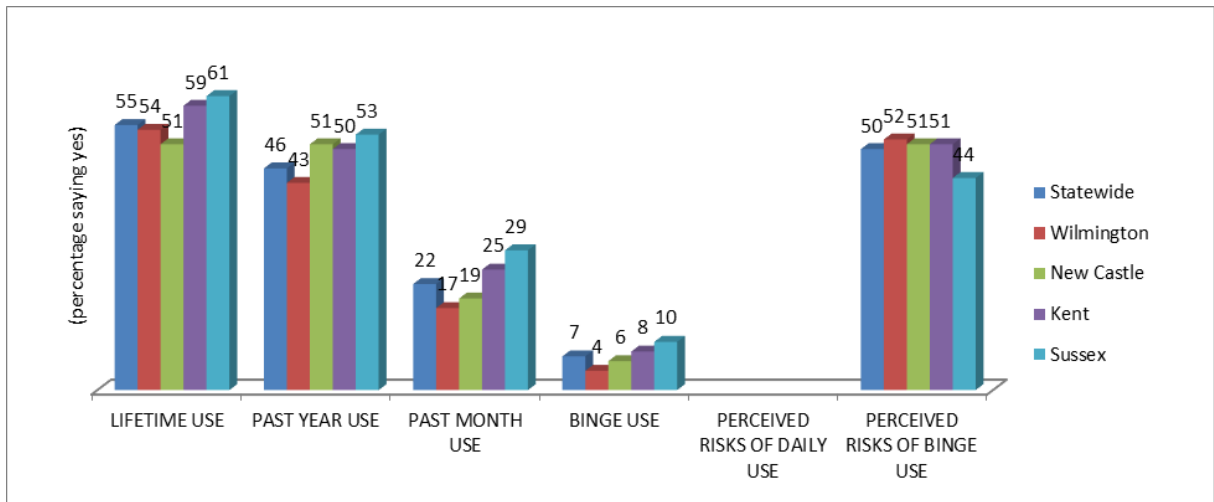
Figure 54: Alcohol use, 8th graders

^a "Binge Use" is defined as five alcoholic drinks at a time in the last two weeks; *Students were not asked about perceptions of harm associated with daily use in 2018.

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Alcohol Use among Delaware 11th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use	Binge Use ^A	Perceived Harm from Binge ^a Use
Statewide	55	46	22	7	50
Males	48	41	21	8	44
Females	60	51	22	6	56
Wilmington	54	43	17	4	52
Males	51	40	19	7	42
Females	56	46	16	2	60
New Castle	51	42	19	6	51
Males	44	36	18	7	47
Females	58	49	20	5	57
Kent	59	50	25	8	51
Males	56	49	23	8	43
Females	61	51	26	7	58
Sussex	61	53	29	10	44
Males	54	47	27	13	38
Females	68	59	30	8	49

Figure 55: Alcohol use, 11th graders

Note: "Binge Use" is defined as five drinks at a time in the last two weeks; *Students were not asked about perceptions of harm associated with daily use in 2018.

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey
High School Students Who Had at Least One
Drink of Alcohol on One or More of the Past 30 Days
(in percentages)

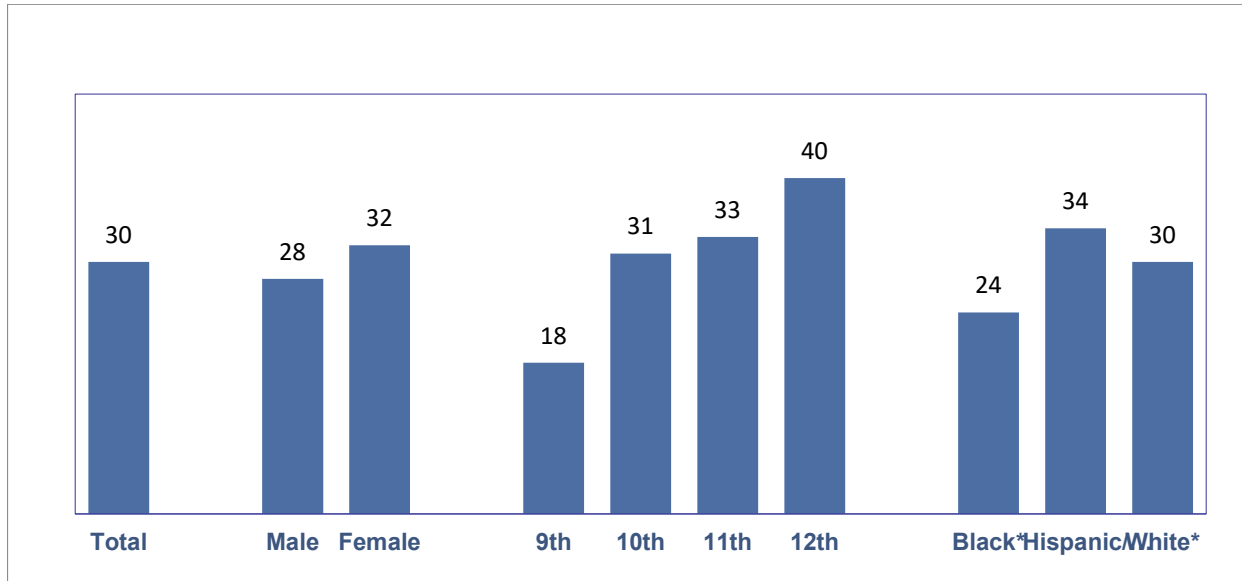


Figure 56: Alcohol use, at least 1 drink of alcohol on 1+ days in past 30 days, HS, 2017

Notes:

Weighted data

All Hispanic students are included in the Hispanic category. All other races are non-Hispanic.

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey
High School Students Who Reported Binge Drinking^a
on One or More of the Past 30 Days
(in percentages)

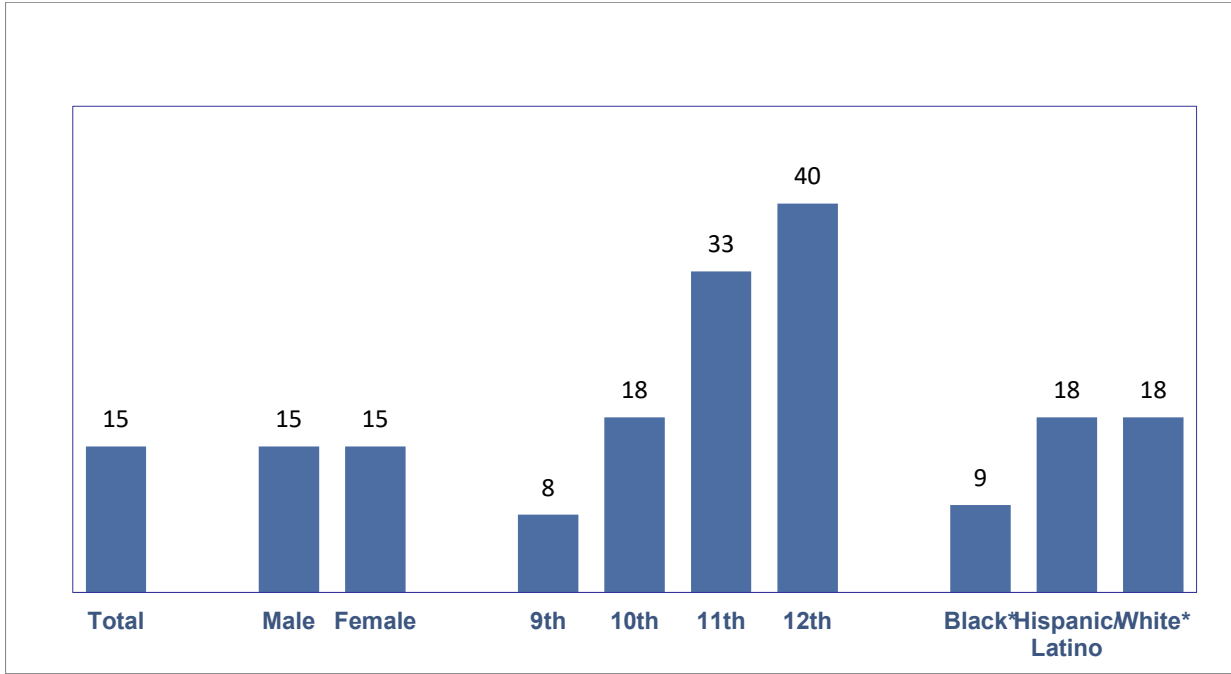


Figure 57: Alcohol use, binge drinking 1+ days in past 30 days, HS, 2017

Notes:

^a Binge drinking defined as four or more drinks of alcohol in a row for female students and five or more drinks of alcohol in a row for male students within a couple hours.

Weighted data.

All Hispanic students are included in the Hispanic category. All other races are non-Hispanic.

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Average Age of Onset for Alcohol Use

8 th Grade	11 th Grade
12.1 years	14.6 years

Figure 58: Average age of onset of alcohol use, 8th and 11th grades, 2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2017 Delaware Behavior Risk Factor Surveillance System

Binge Drinking for Delaware Adults

State and County Estimates

Binge Drinking [5+ (males) or 4+ (females) Drinks on One Occasion]			
Statewide	New Castle	Kent	Sussex
14.8%	15.6%	15.3%	12.4%

Figure 59: Estimates of binge drinking for adults, state and county, 2017

Note:

Binge drinking is defined in this survey as 4 or more drinks for a woman or 5 or more drinks for a man on an occasion during the past 30 days.

"--" Data not available for Wilmington.

Source: ["Adult Behavioral Risk Factor Prevalence, 2017: Statewide and by County." Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Surveillance System \(BRFSS\).](#)

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Delaware School Survey

Trends in Delaware Students' Self-Reported Past-Month Use of Alcohol Use by Grade, 1989-Present

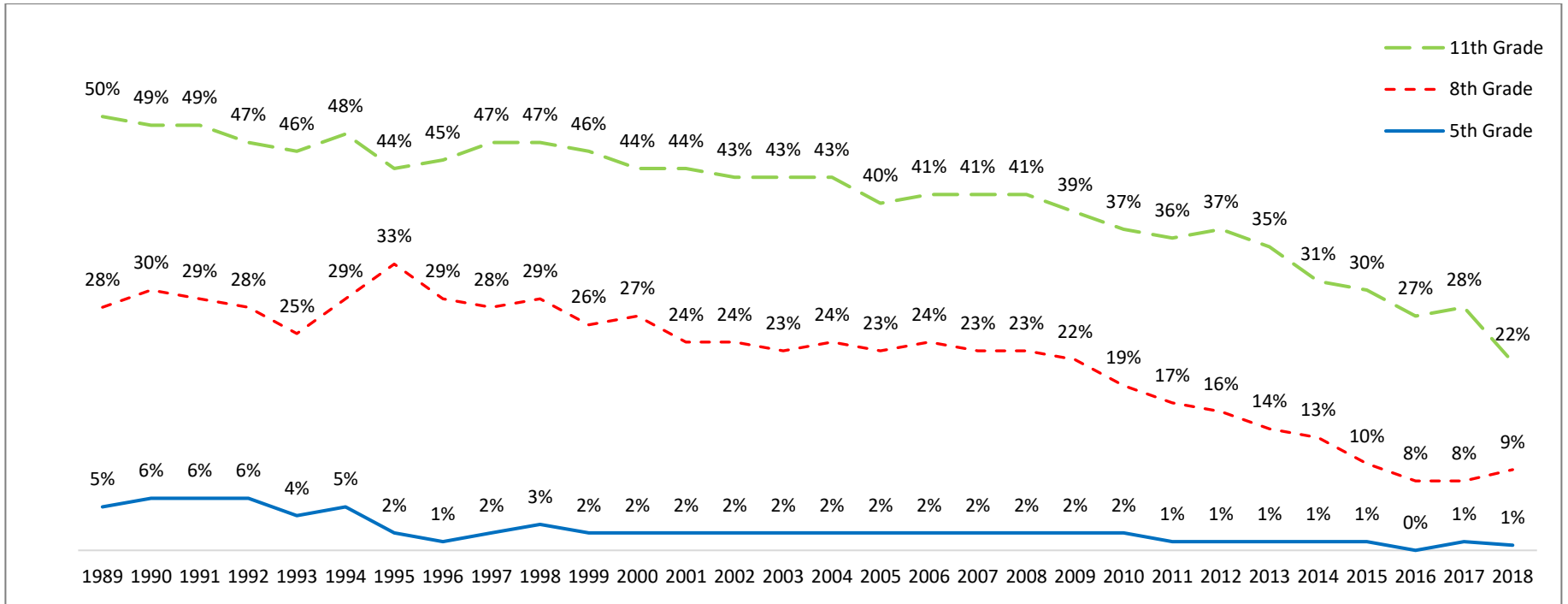


Figure 60: Trends in alcohol use by grade, past-month, 1989-present

Source: ["Delaware School Survey, 1989-2018." Center for Drug and Health Studies, University of Delaware.](#)

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Delaware School Survey

Trends in Students' Self-Reported Binge Drinking, 2002-2018

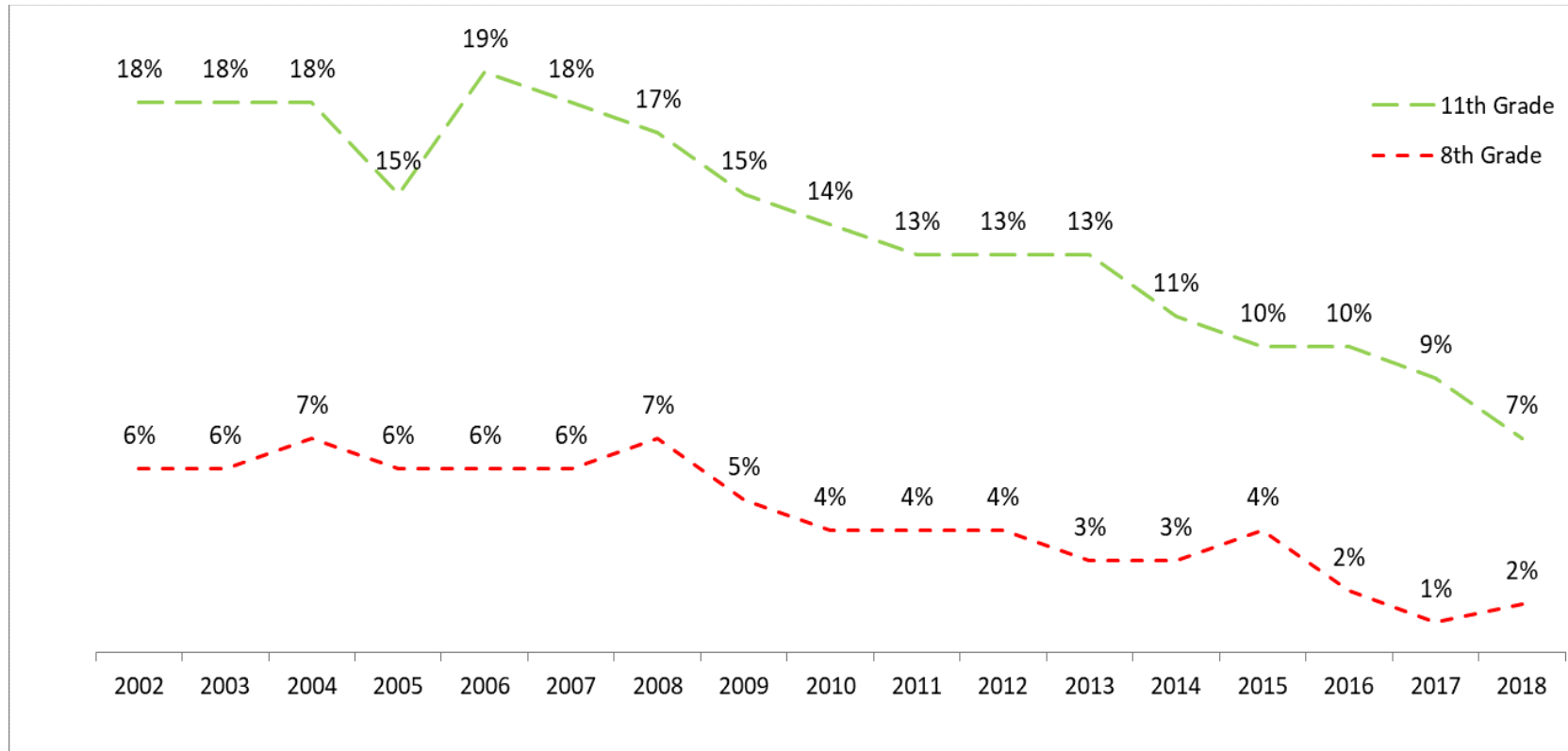


Figure 61: Trends in binge drinking, 8th and 11th graders, 2002-2018

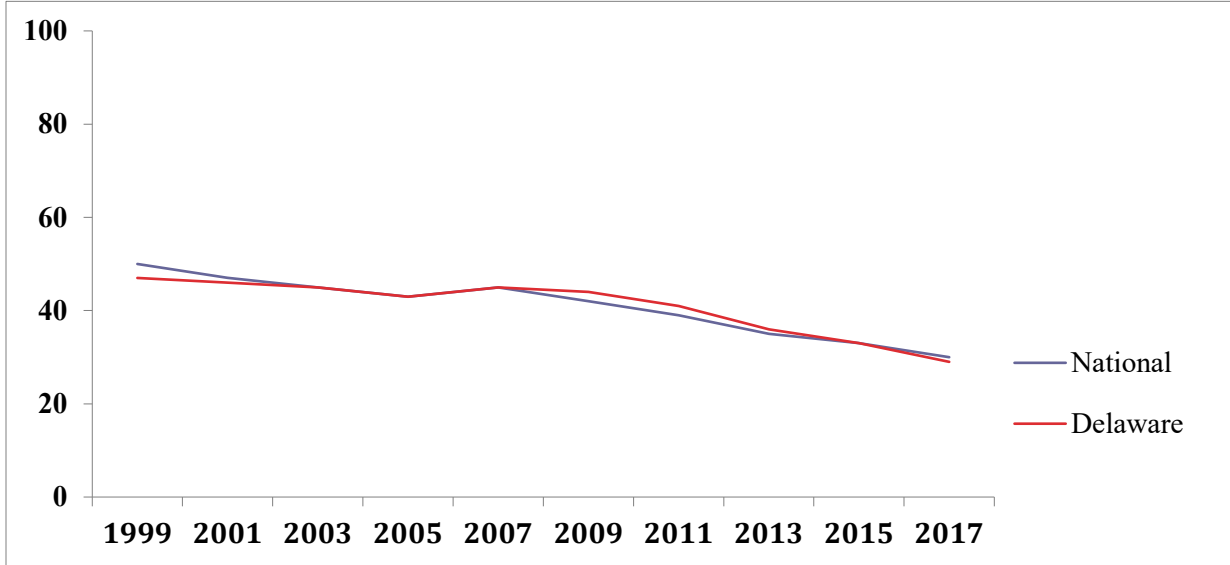
Note:

^a “Binge use” is defined by the Delaware School Survey as five or more drinks at a time in the past two weeks (Previously binge use was reported as 3 or more drinks)

Source: [“Delaware School Survey, 2002-2018.” Center for Drug and Health Studies, University of Delaware.](#)

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Youth Risk Behavior Survey National and Delaware High School Students' Past-Month Use of Alcohol (in percentages)



Year	National	Delaware
1999	50	47
2001	47	46
2003	45	45
2005	43	43
2007	45	45
2009	42	44
2011	39	41
2013	35	36
2015	33	33
2017	30	29

Figure 62: Trends in alcohol use, past-month, 1999-2017

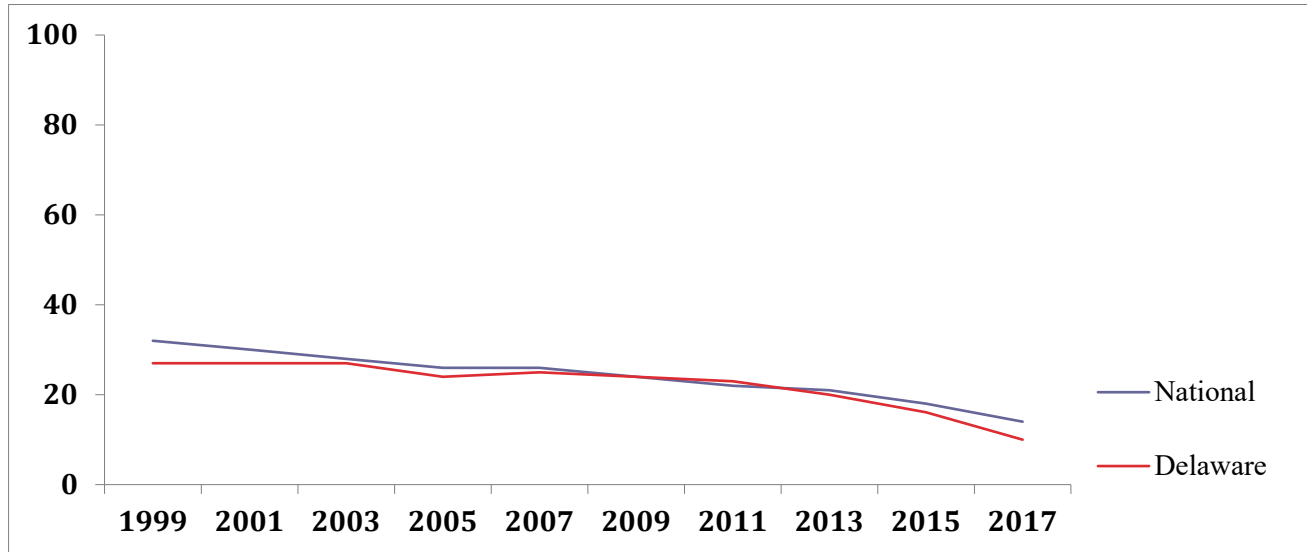
Weighted data

Sources: [“Delaware Youth Risk Behavior Survey \(YRBS\), 1999-2017.” Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

[“Trends in the Prevalence of Alcohol Use National YRBS: 1991-2017” Centers for Disease Control and Prevention.](#)

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**Youth Risk Behavior Survey
National and Delaware
Students' Past-Month Binge Drinking
(≥ 5 Drinks of Alcohol at One Time)
(in percentages)**



Year	National	Delaware
1999	32	27
2001	30	27
2003	28	27
2005	26	24
2007	26	25
2009	24	24
2011	22	23
2013	21	20
2015	18	16
2017	14	10

Figure 63: Alcohol use, binge drinking, nat'l and Del., past-month, 1999-2017

Note:

Weighted data

Sources: ["Delaware Youth Risk Behavior Survey \(YRBS\), 1999-2017." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)
[National Youth Risk Behavior Survey"](#)

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**National Survey on Drug Use and Health
Past-Month Alcohol Use by Age Group and State
2015-2016 and 2016-2017 (in percentages) ^a**

Age Group (Years)												
State	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b
	Total U.S.	51.21	51.21	.994	9.40	9.54	.530	57.75	56.74	.012	55.10	55.22
Northeast	56.02	56.44	.310	10.95	10.64	.424	63.92	63.24	.392	59.67	60.30	.211
Delaware	52.04	51.38	.567	9.05	8.38	.424	57.10	54.78	.216	55.96	55.51	.752
Maryland	55.88	53.30	.023	9.73	9.48	.780	62.32	59.08	.055	60.18	57.41	.047
New Jersey	53.56	53.13	.664	10.55	10.87	.720	61.28	59.91	.396	57.40	56.99	.730
Pennsylvania	55.78	56.42	.408	10.02	10.06	.959	62.27	60.30	.127	59.72	60.79	.259

Figure 64: Alcohol use, past-month, by age group and state

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b p value: Bayes significance levels for the null hypothesis of no change between the 2015-2016 and 2016-2017 population percentages. The “Total U.S.” estimates, along with the p values, are based on design-based (direct) estimation methods.

Source: [“National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration](#)

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National Survey on Drug Use and Health
Past-Month Binge Alcohol Use^a by Age Group and State
2015-2016 and 2016-2017 (in percentages)^b

State	AGE GROUP (Years)											
	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^c
Total U.S.	24.58	24.37	.267	5.33	5.06	.097	38.69	37.62	.006	24.52	24.49	.860
Northeast	26.28	26.45	.634	6.16	5.83	.235	44.03	43.73	.671	25.61	25.92	.468
Delaware	22.63	22.51	.888	4.61	4.30	.595	38.98	37.87	.543	22.09	22.19	.919
Maryland	25.75	23.77	.013	5.36	4.63	.207	43.03	39.58	.036	25.38	23.53	.062
New Jersey	23.28	24.21	.235	5.65	5.48	.778	40.29	40.32	.983	22.78	23.97	.217
Pennsylvania	27.80	26.81	.160	5.51	5.54	.962	44.66	42.51	.090	27.56	25.66	.296

Figure 65: Alcohol use, binge drinking, past-month, by age group and state

Notes:

^a Binge drinking is defined as drinking five or more drinks for males/four or more drinks for females on an occasion during the past 30 days.

^b Estimates are based on a survey-weighted hierarchical Bayes estimation approach

^c p value: Bayes posterior probability of no change.

“-” indicates that p value was not available for this data.

Source: [“National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration](#)

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National Survey on Drug Use and Health
Past-Month Alcohol Use and Binge Alcohol Use^a
among Persons Ages 12 to 20, by State
2015-2016 and 2016-2017
(in percentages)^b

State	Alcohol Use in Past Month			Binge Alcohol Use in Past Month		
	2015-2016	2016-2017	<i>p</i> value ^c	2015-2016	2016-2017	<i>p</i> value ^c
Total U.S.	19.83	19.50	.287	12.71	12.00	.007
Northeast	23.98	22.91	.015	15.62	14.94	.091
Delaware	21.03	17.47	.000	13.28	10.75	.000
Maryland	21.61	19.12	.006	13.32	10.72	.000
New Jersey	21.18	20.97	.840	13.08	12.35	.333
Pennsylvania	22.43	20.92	.051	15.25	13.85	.043

Figure 66: Alcohol use, binge drinking, past-month, ages 12-20 by state

Notes:

^a “Binge Alcohol Use” is defined as drinking five or more drinks on the same occasion for males and four or more drinks for females (i.e., at the same time or within a couple hours of each other) on at least 1 day in the past 30 days.

^b Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^c *p* value: Bayes posterior probability of no change.

“-” data not available for this group

Source: [“National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.](#)

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**Delaware School Survey, Youth Risk Behavior Survey,
and Monitoring the Future Survey
National and Delaware
High School Students' Alcohol Use
Comparison of Recent Estimates
(in percentages)**

	Past-Year	Past-Month
2018 11 th Grade Delaware	46	22
2017 11 th Grade Delaware	51	28
2016 11 th Grade Delaware	54	27
2017 9 th – 12 th Grade YRBS Delaware*	--	29
2015 9 th – 12 th Grade YRBS Delaware	--	33
2017 12 th Grade MTF	56	33
2016 12 th Grade MTF	56	33

Figure 67: Alcohol use estimates, national and Del., HS, 2016-2018

Notes:

Weighted Data

-- Not Available

Sources: ["Delaware School Survey, 2016-2018."](#) Center for Drug and Health Studies, University of Delaware.

["Delaware Youth Risk Behavior Survey \(YRBS\), 2015-2017."](#) Centers for Disease Control and Prevention (Administered by the Center for Drug and Health Studies, University of Delaware).

["National Survey Results on Drug Use, 1975-2018."](#) Monitoring the Future (MTF). University of Michigan.

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2017 Delaware School Survey

Students' Perception of a "Great Risk" in Drinking Daily, 8th and 11th Grade (in percentages)

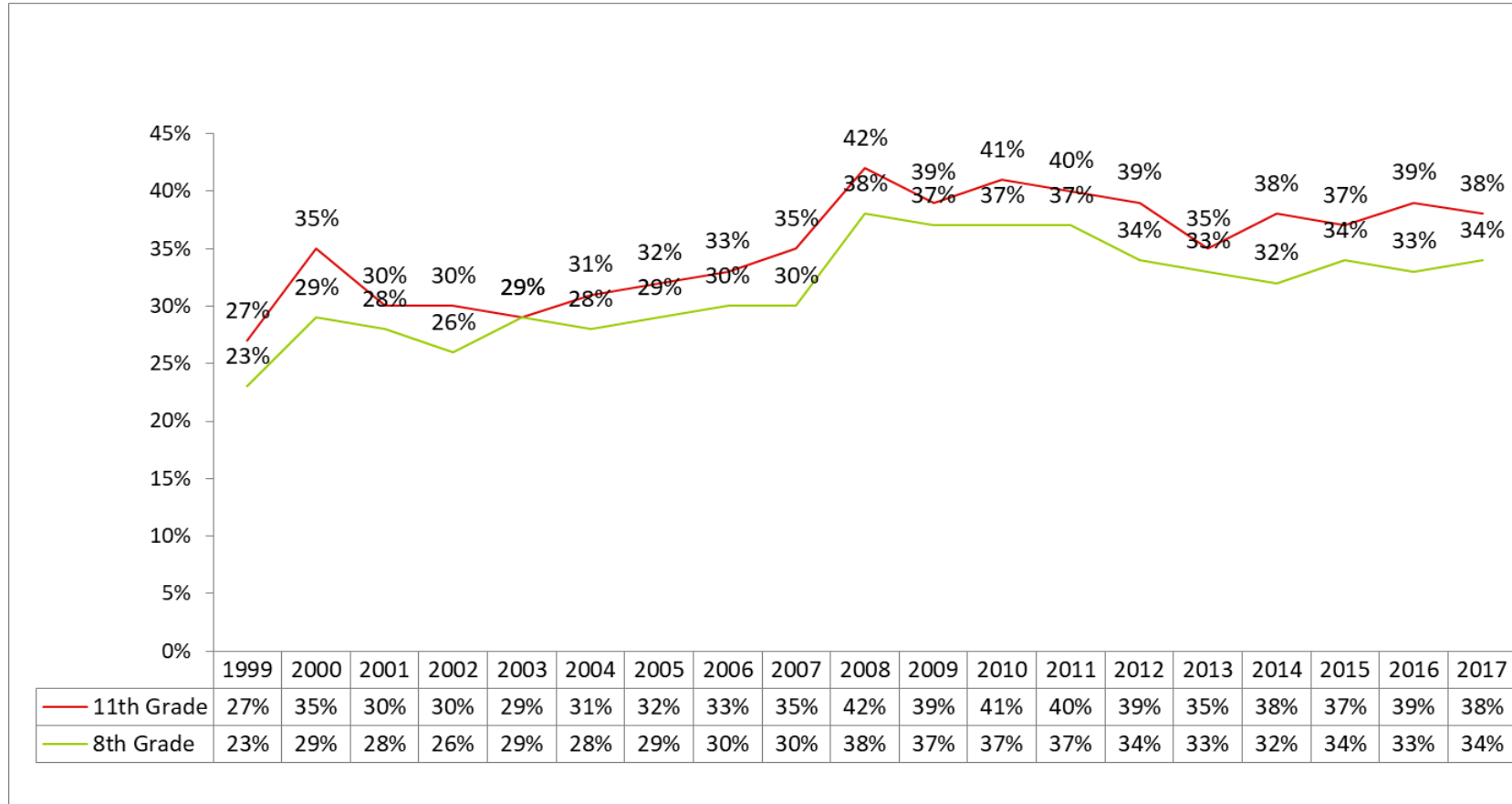


Figure 68: Trends in perception of "great risk" drinking daily, 8th & 11th graders, 1999-2017

Note: This question was removed from the survey in 2018.

Source: ["Delaware School Survey, 1999-2017." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

Students' Perception of a "Lot of Risk" in Drinking Daily, 5th Grade (in percentages)

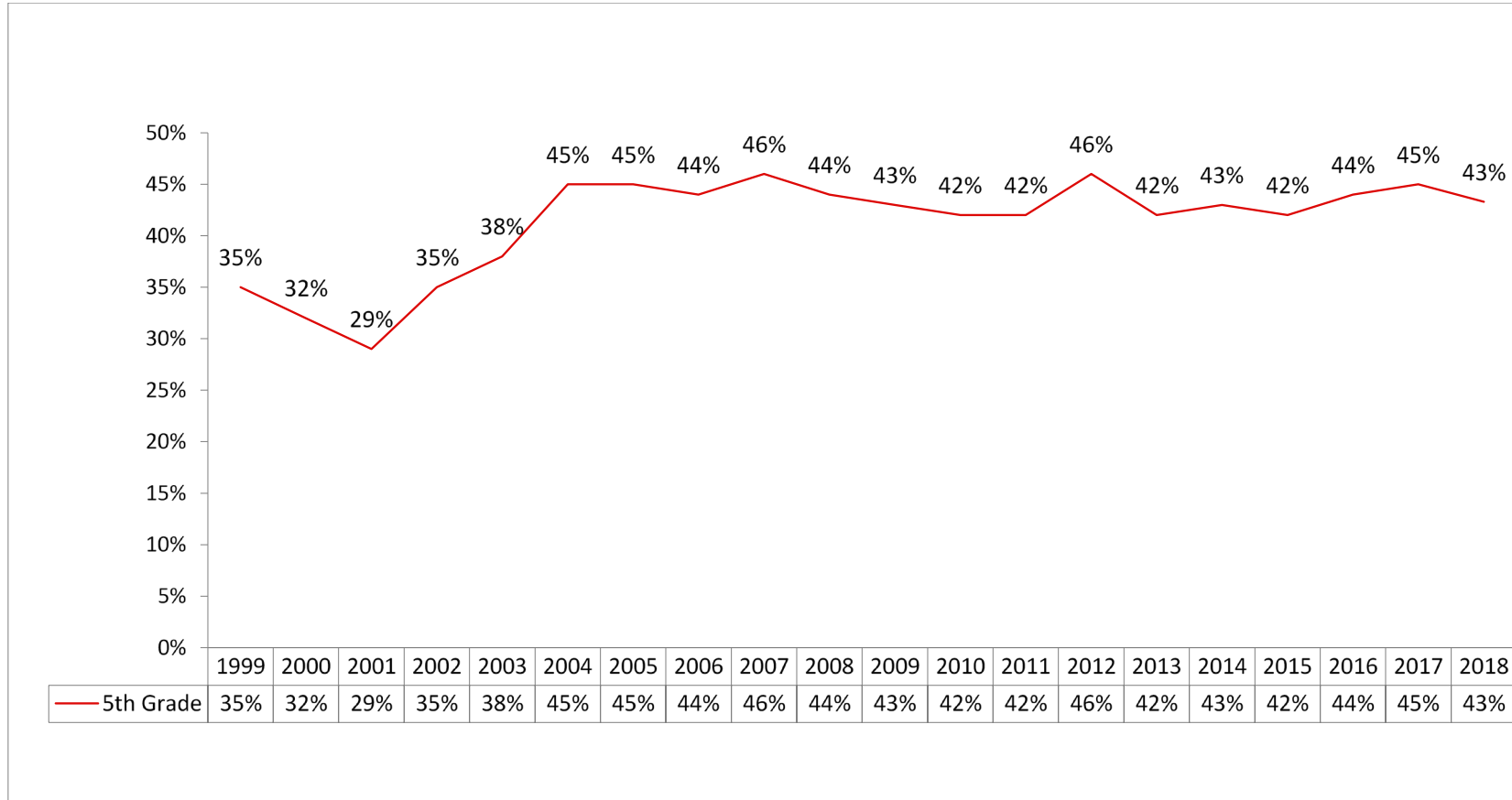


Figure 69: Trends in perception of a "lot of risk" in drinking daily, 5th graders, 1999-2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

Students' Perception of a "Great Risk" in Binge Drinking^a

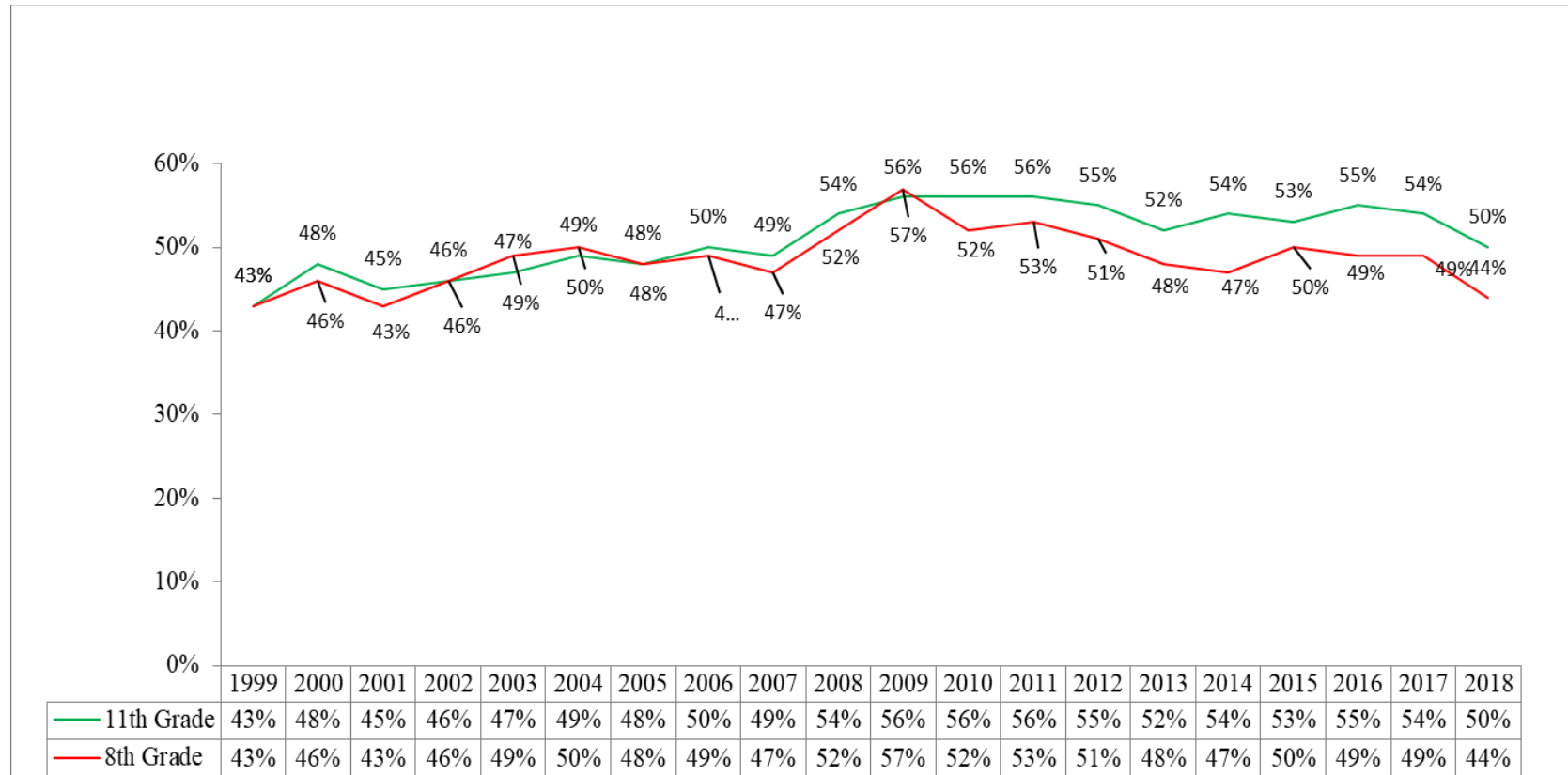


Figure 70: Trends in perception, "great risk" in binge drinking, 8th & 11th graders, 1999-2018

Note: ^a "Binge drinking" is defined in the survey as five drinks at a time once or twice a week

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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**National Survey of Drug Use and Health
Perception of a “Great Risk” in Binge Drinking^a
by Age Group and State
2015-2016 and 2016-2017
(in percentages)^b**

State	12 or Older			AGE GROUP (Years)								
				12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^c	2015-2016	2016-2017	p value ^c	2015-2016	2016-2017	p value ^c	2015-2016	2016-2017	p value ^c
Total U.S.	44.30	44.50	.346	43.30	43.83	.150	36.91	37.53	.090	45.66	45.72	.809
Northeast	43.01	43.05	.920	42.95	43.83	.176	34.19	34.58	.514	44.45	44.32	.791
Delaware	43.71	43.3	.698	44.38	44.43	.975	38.74	38.59	.929	44.40	43.88	.685
Maryland	45.97	46.20	.835	46.90	45.50	.407	37.32	39.93	.093	47.22	47.23	.992
New Jersey	47.81	46.84	.332	45.93	45.62	.843	35.69	36.72	.489	49.85	48.49	.266
Pennsylvania	39.32	40.00	.370	42.49	41.23	.304	31.71	33.11	.227	40.17	40.93	.413

Figure 71: Perception of a “great risk” in binge drinking, age group and state

Notes:

^a “Binge drinking” is defined as five or more drinks of alcohol in a row for males/four or more drinks for females.

^b Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

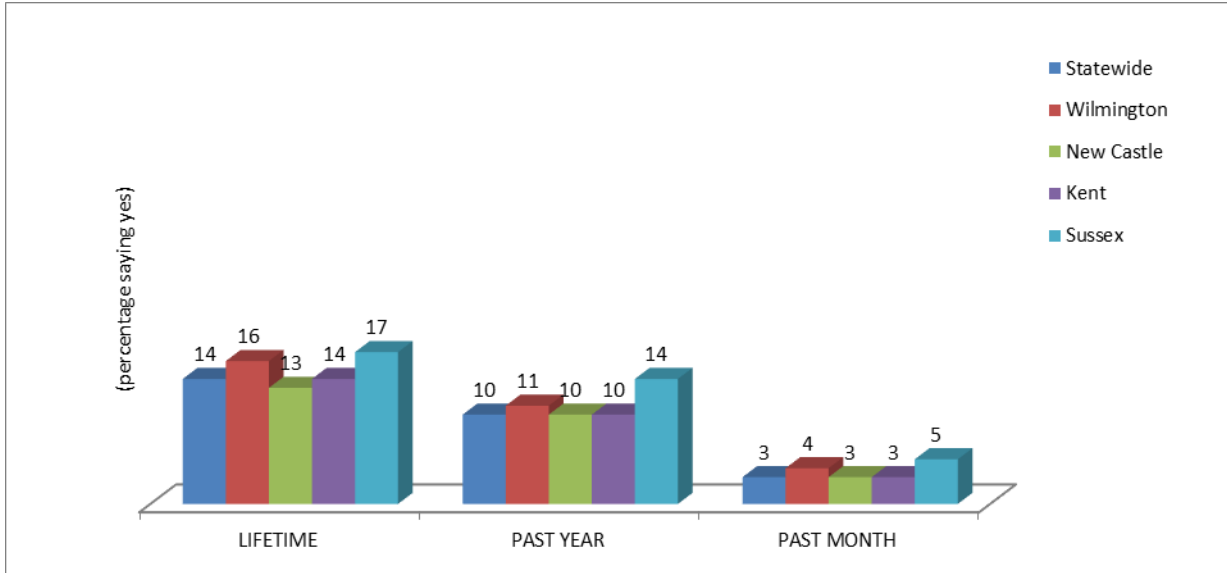
^c p value: Bayes posterior probability of no change.

Source:

["National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages." Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.](#)

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2018 Delaware School Survey Students' Reported Drinking and Driving among Delaware 11th Graders (in percentages)



	Lifetime	Past-Year	Past-Month
Statewide	14	10	3
Males	15	11	4
Females	14	10	3
Wilmington	16	11	4
Males	19	12	5
Females	14	11	3
New Castle	13	10	3
Males	14	10	4
Females	12	9	2
Kent	14	10	3
Males	15	10	3
Females	13	10	3
Sussex	17	14	5
Males	17	12	4
Females	18	15	6

Figure 72: Drinking and driving, 11th graders, 2018

Source: ["Delaware School Survey, 2018." Center for Drug and Health Studies, University of Delaware.](#)

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Delaware School Survey

Trends in Delaware

Students' Past-Month Reports of Drinking and Driving among Delaware 11th Graders, 1999-2018

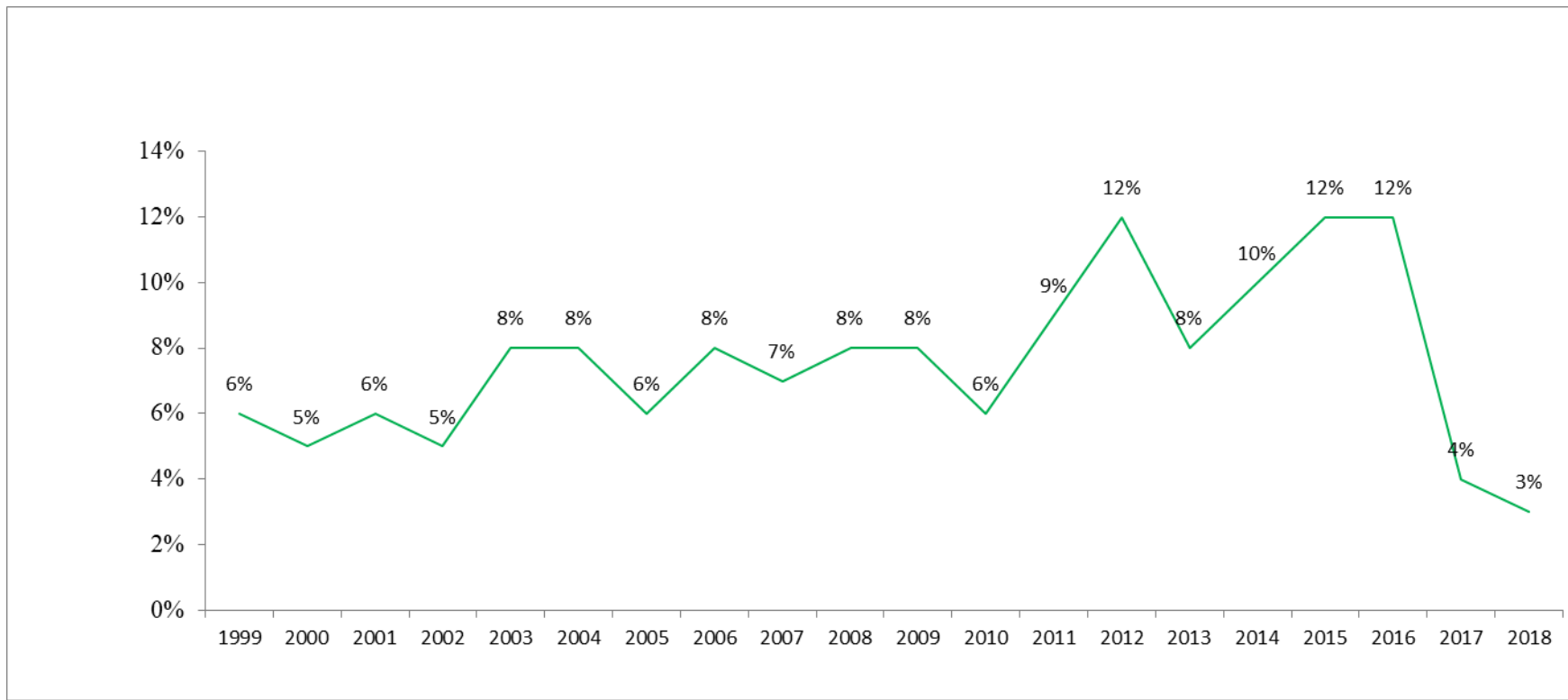


Figure 73: Trends in reported drinking and driving in past month, 11th graders, 1999-2018

Source: ["Delaware School Survey, 1999-2018." Center for Drug and Health Studies, University of Delaware.](#)

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Delaware Criminal Justice Information System Driving Under the Influence Arrests, 2016

Age Range	DUI Alcohol	DUI Alcohol and Drugs	DUI Drugs
15 and under	0	0	0
16 - 20	113	10	66
21 -24	448	26	80
25 -34	1031	72	182
35 - 44	654	42	105
45 - 54	514	35	81
55 - 64	292	29	44
65 -79	85	1	6
80 and over	4	0	0
Kent	640	49	165
New Castle	1220	86	195
Sussex	1264	77	198
Wilmington	17	3	6
Total	3141	215	564

Figure 74: Delaware DUI arrests by age and county, 2016

Source: [Delaware Criminal Justice Information System \(DELJIS\)](#)

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National Highway Traffic Safety Administration
Trends in Delaware
Traffic Fatalities and Alcohol Use
by Delaware County, 2007-2017
(in percentages)

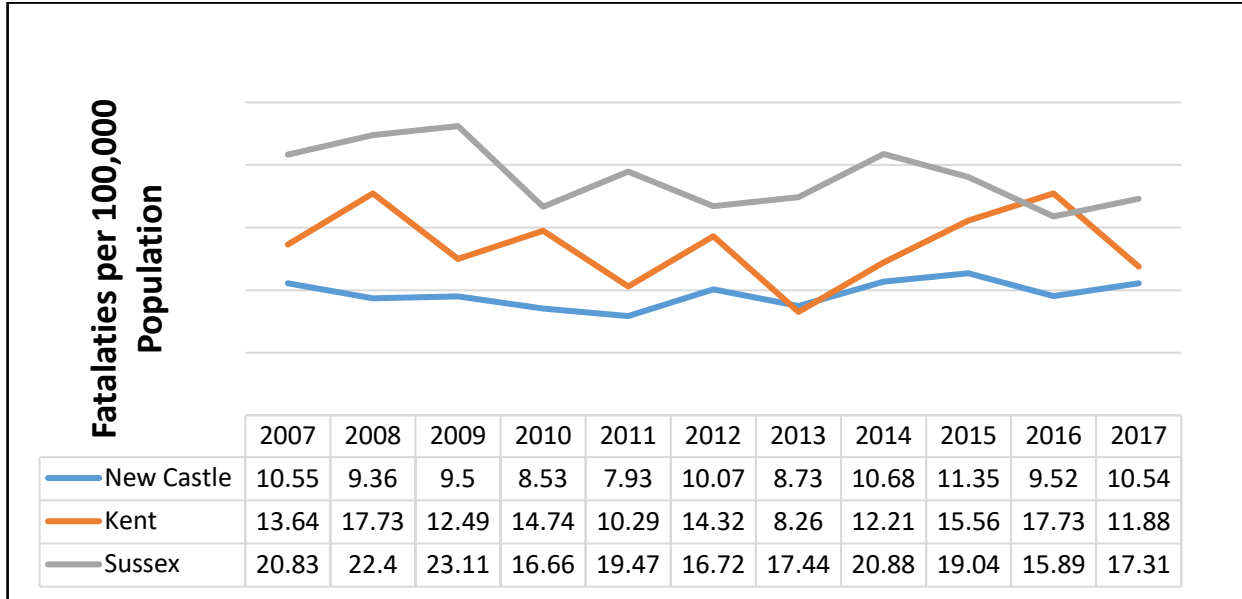


Figure 75: Trends in Delaware traffic fatalities/alcohol use by county, 2007-2017

Note: Fatalities per 100,000 population

Source: [National Highway Traffic Safety Administration. Performance Measures, Delaware.](#)

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National Highway Traffic Safety Administration Alcohol-Impaired (BAC=.08+) Drivers by County 2010-2017

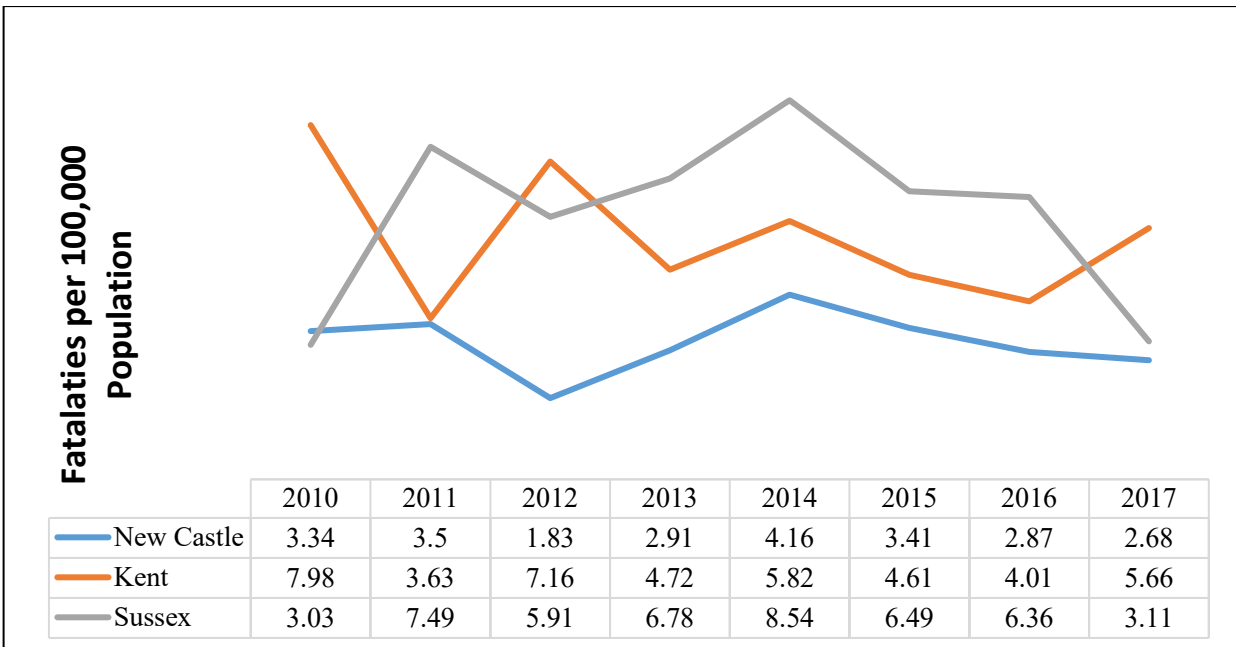


Figure 76: Trends in traffic fatalities, alcohol-impaired drivers, by county, 2010-2017

Source: [National Highway Traffic Safety Administration. Performance Measures, Delaware.](#)

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Chapter 4 Marijuana

National Overview

Over the past two decades, the majority of states have enacted laws that change the status of marijuana. As of March 2019, 34 states, the District of Columbia, Guam, Puerto Rico, and the United States Virgin Islands have enacted comprehensive medical marijuana programs. Additionally, 12 states allow for the use of low-tetrahydrocannabinol (THC), high-cannabidiol (CBD) products in limited situations. Now, 22 states have decriminalized the personal use of marijuana, and 10 states and the District of Columbia allow adult recreational use of marijuana (National Conference of State Legislatures, 2019). These changes to policy at the state level are at odds with federal law, which classifies marijuana as a Schedule I drug (Drug Enforcement Administration, n.d.). Drugs in this category are regarded as dangerous, likely to be abused, and have no medical value. A recent report by the National Academies of Sciences, Engineering, and Medicine (NASEM, or the Academies) reviewed more than 10,700 studies on the health impacts of marijuana. This report shows there is strong evidence for various medical uses of marijuana, but it also notes that there are health concerns linked to use, including: the risk of driving while intoxicated, respiratory symptoms associated with smoking, and evidence that links frequent and/or heavy use of marijuana to schizophrenia or other psychotic disorders in people who are predisposed (National Academies of Sciences, Engineering, and Medicine [NASEM], 2017).

As the laws have changed around the use of marijuana, so have public perceptions of risk. This is particularly problematic because marijuana potency has increased dramatically over the past decades. Since 1995, the amount of THC, the main psychoactive component of marijuana, increased nearly 200% in marijuana confiscated by the Drug Enforcement Agency (EISOHly et al., 2016; NASEM, 2-7).

When young people use marijuana, they are doing so at a critical period of brain development. Neuroscientists have found that brain development continues through the mid-20s. The last part of the brain to develop is the prefrontal cortex, which is associated with decision-making, impulse control, risk-taking, and other executive functioning tasks (Weir, 2015). Research using brain imaging of youth show significant differences in brain development between youth who frequently use marijuana and those who abstain, even after comparing for demographic, behavioral, and other key variables (Lisdahl et al., 2013). Comparisons of cognitive functioning (IQ, memory, processing, impulse control, etc.) also reveal significant differences between youth who use marijuana and those who do not (Lisdahl et al., 2013). Early use of marijuana (before the age of 16) has been linked to more frequent and heavier use of marijuana over time than users who began smoking later in life (Gruber et al., 2017). Several studies have also tied early marijuana use to a greater risk of becoming dependent on other substances later in life (NASEM, 2017).

Delaware Overview

Delaware School Survey (DSS) data show that the perception of risk involved with the use of marijuana has declined among students over the past 10 years. The majority of all 8th and 11th graders surveyed in 2018 reported that they did not perceive “great risk” in smoking marijuana regularly. Trends in past-month self-reported marijuana use among Delaware students have remained relatively stable in recent years. DSS data from 2018 indicates that 22% of 11th grade students and 8% of 8th grade students reported smoking marijuana in the past month. The average age of first use of marijuana was reported as 12.6 years old among 8th grade students and 14.7 years old among 11th graders. A comparison of the latest available National Youth Risk Behavior (NYRBS) data and the Delaware Youth Risk Behavior (DYRBS) data of the same year indicate that in 2017, Delaware high school youth smoked marijuana at a slightly higher rate (26%) than the national average (20%) (Centers for Disease Control and Prevention [CDC], 2017).

Increasingly, youth are finding alternate ways to ingest marijuana other than smoking, including consuming edibles and concentrates and vaporizing. While the majority of students still smoke marijuana, according to the 2018 DSS, among 11th graders who report past-month marijuana use, 21% report eating it and 18% report vaping. Because vaping eliminates much of the strong odor associated with the use of marijuana, and vape devices (such as JUULs) are small and easy to hide, there may now be a greater potential for abuse in schools and other settings where smoking marijuana would historically have been harder to conceal. The same concerns are also relevant for marijuana edibles.

Youth who drive while under the influence of marijuana put themselves, and others, in danger. Nearly one-third of all 11th graders surveyed by the DSS reported that, at some point in their lives, they had ridden in a car after the driver smoked marijuana, and 13% reported that they had driven a car after smoking marijuana.

According to the National Survey of Drug Use and Health (NSDUH), young adults (age 18-25) in Delaware use marijuana at slightly higher rates than the national average, but rates for adults 18 and older are comparable to national figures (Substance Abuse and Mental Health Services Administration [SAMHSA], n.d.). Treatment admission data from the Treatment Episode Data Set (TEDS) tracking system indicate that 5.9% of all publicly funded treatment admissions in Delaware in 2018 listed marijuana as the primary substance of use; among treatment admissions primarily for marijuana, 42% were people ages 21 to 30 (see Figure 115, this report).

Delaware allows medical marijuana for specific conditions. The State also decriminalized the possession of small amounts of marijuana in 2015. Now, if an adult has less than an ounce of marijuana, he/she will pay a \$100 fine rather than face arrest and prosecution (Delaware Code, n.d.). Proposed legislation in the Delaware Legislature, House Bill 110, would have legalized adult recreational use of marijuana in Delaware. This bill failed to pass in 2018 and was

reintroduced in May 2019 with some revisions (Bittle, 2019). In June 2019, it was assigned to the House Appropriations Committee in the State House.

Data in Action: Understanding Cannabidiol

Cannabidiol (CBD) is one of more than 100 cannabinoids identified among cannabis plants (NASEM, 2017). Unlike the most well-known of these cannabinoids, THC, CBD does not have any psychoactive properties. CBD is widely touted as having a variety of medical uses, and while many of these claims show promise through preliminary research, many others are unfounded. One Food and Drug Administration (FDA)-approved CBD medication is currently available for the treatment of certain seizure disorders. The Agriculture Improvement Act of 2018 (the 2018 Farm Act) legalized hemp in the United States. Hemp is a variety of the cannabis plant considered distinct from marijuana because of its very low levels of THC (less than 0.3 percent). While hemp is grown for a number of purposes, including its fibers, oils, and edible seeds, it is also increasingly a source of CBD. The FDA has oversight authority over hemp and hemp-derived products and is currently working toward developing clear policy positions on purity, labeling, manufacturing guidelines, and dosage for CBD. Until the FDA finalizes policies regarding regulation, CBD products are operating in a legal grey area. Current federal law suggests that products that market CBD as a food, supplement, or a medicine are prohibited; however, the FDA has made it clear that their largest enforcement concerns are manufacturers that make unfounded medical claims that may put consumers at risk of using CBD products instead of evidence-based treatments or medicines (FDA, n.d.). The World Health Organization (WHO) reports, “To date, there is no evidence of recreational use of CBD or any public health-related problems associated with the use of pure CBD” (World Health Organization [WHO], 2017). However, analysis of CBD samples available for purchase online or in stores by researchers and journalists have found varying levels of CBD in marketed products, as well as troubling by-products, including THC, heavy metals, pesticides, and other compounds (Bonn-Miller, Loflin, Thomas, Marcu, Hyke & Vandrey, 2017; FDA, 2016; Fleischer, Yarborough, & Jones, 2019; Gill, 2018). CBD products are widely available, and without oversight and regulation, products may vary widely in dosage, purity, and additional ingredients that may or may not be beneficial to consumers.

National Survey on Drug Use and Health
First Use of Marijuana in Delaware
Past-Year, Past-Month, Perception of Great Risk,
Average Annual Rate, by Age Group
2016-2017 ^a
(in percentages)^b

Measure	Total 12 or Older	AGE GROUP		
		12-17	18-25	26 or Older
Past Year Marijuana Use	14.80	13.48	37.20	11.60
Past Month Marijuana Use	9.95	7.45	23.73	8.17
Perceived of Great Risk of Smoking Marijuana Once a Month	24.32	23.69	12.21	26.21
Average Annual Rate of First Use of Marijuana ^b	2.05	5.66	8.22	.490

Figure 77: Marijuana use, first use, by age group, 2016-2017

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

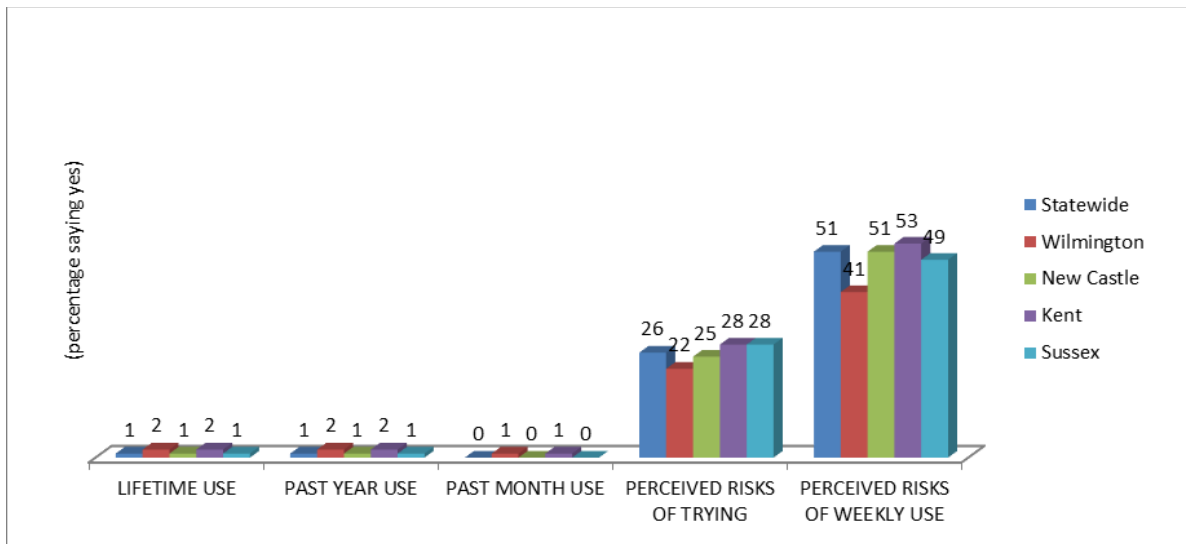
^b Average annual rate = $100 * \{ [X_1 \div (0.5 * X_1 + X_2)] \div 2 \}$, where X_1 is the number of marijuana initiates in past 24 months and X_2 is the number of persons who never used marijuana. Both of the computation components, X_1 and X_2 , are based on a survey-weighted hierarchical Bayes estimation approach. Note that the age group is based on a respondent's age at the time of the interview, not his or her age at first use.

Source: ["National Survey of Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Prevalence Estimates." Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.](#)

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2018 Delaware School Survey

Marijuana Use among Delaware 5th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use	Perceived Risk of Harm	
				TRYING	WEEKLY USE
Statewide	1	1	0	26	51
Males	2	1	0	28	50
Females	1	1	0	25	51
Wilmington	2	2	1	22	41
Males	5	3	2	21	41
Females	0	0	0	22	41
New Castle	1	1	0	25	51
Males	2	1	0	27	51
Females	1	0	0	23	51
Kent	2	2	1	28	53
Males	2	2	1	30	52
Females	2	2	1	26	53
Sussex	1	1	0	28	49
Males	2	1	0	29	48
Females	1	0	0	28	51

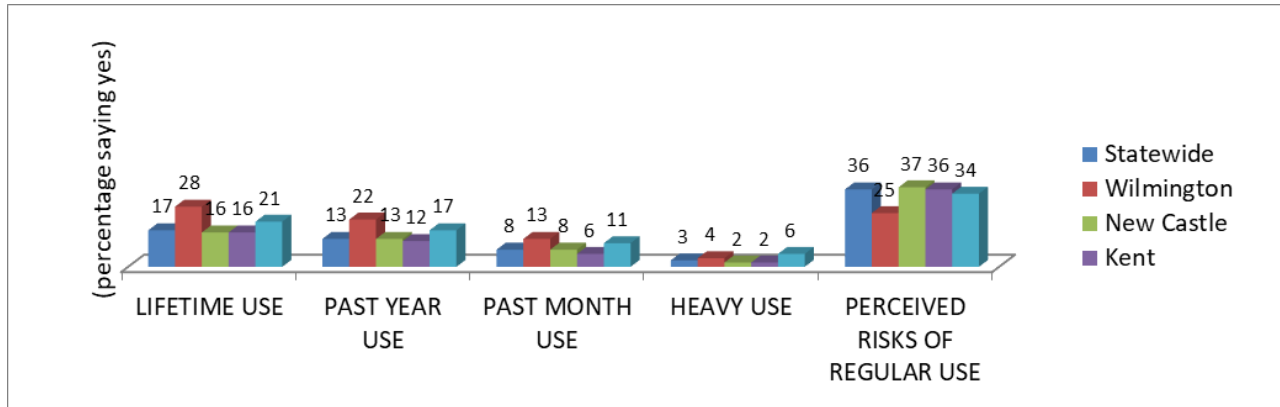
Figure 78: Marijuana use, 5th graders

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

Marijuana Use among Delaware 8th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use	Heavy Use ^a	Perceived Harm from Regular ^b Use
Statewide	17	13	8	3	36
Males	16	13	8	3	34
Females	17	14	8	2	39
Wilmington	28	22	13	4	25
Males	27	22	11	4	23
Females	29	22	14	3	26
New Castle	16	13	8	2	37
Males	15	12	7	2	34
Females	17	13	8	2	40
Kent	16	12	6	2	36
Males	17	14	6	4	33
Females	15	11	6	1	39
Sussex	21	17	11	6	34
Males	21	17	10	5	33
Females	21	18	11	7	35

Figure 79: Marijuana use, 8th graders

Notes:

^a "Heavy Use" indicates more than six times in the past month.

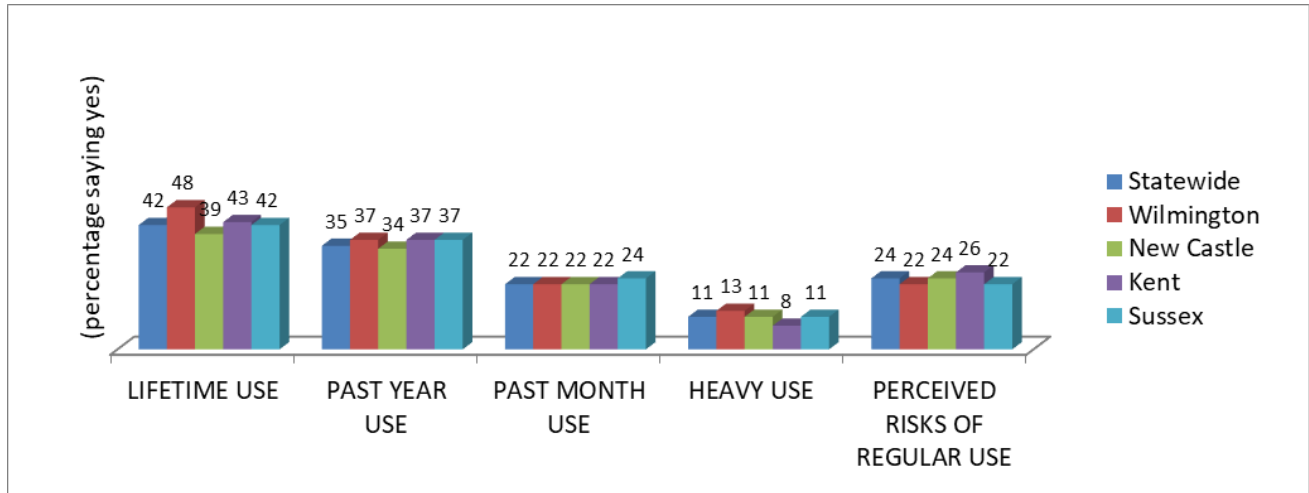
^b "Regular use" is self-defined in the survey

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

Marijuana Use among Delaware 11th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use	Heavy Use ^a	Perceived Harm from Regular ^b Use
Statewide	42	35	22	11	24
Males	44	33	22	12	20
Females	39	37	23	10	28
Wilmington	48	37	22	13	22
Males	49	41	25	17	18
Females	47	34	20	10	26
New Castle	39	34	22	11	24
Males	36	30	21	12	21
Females	44	37	23	11	28
Kent	43	37	22	8	26
Males	44	36	23	10	20
Females	42	38	21	7	31
Sussex	42	37	24	11	22
Males	41	35	21	10	16
Females	43	36	27	11	27

Figure 80: Marijuana use, 11th graders

Note:

^a "Heavy Use" indicates more than six times in the past month.

^b "Regular use" is self-defined in the survey

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey

High School Students Who Have Used Marijuana One or More Times During Their Lifetime

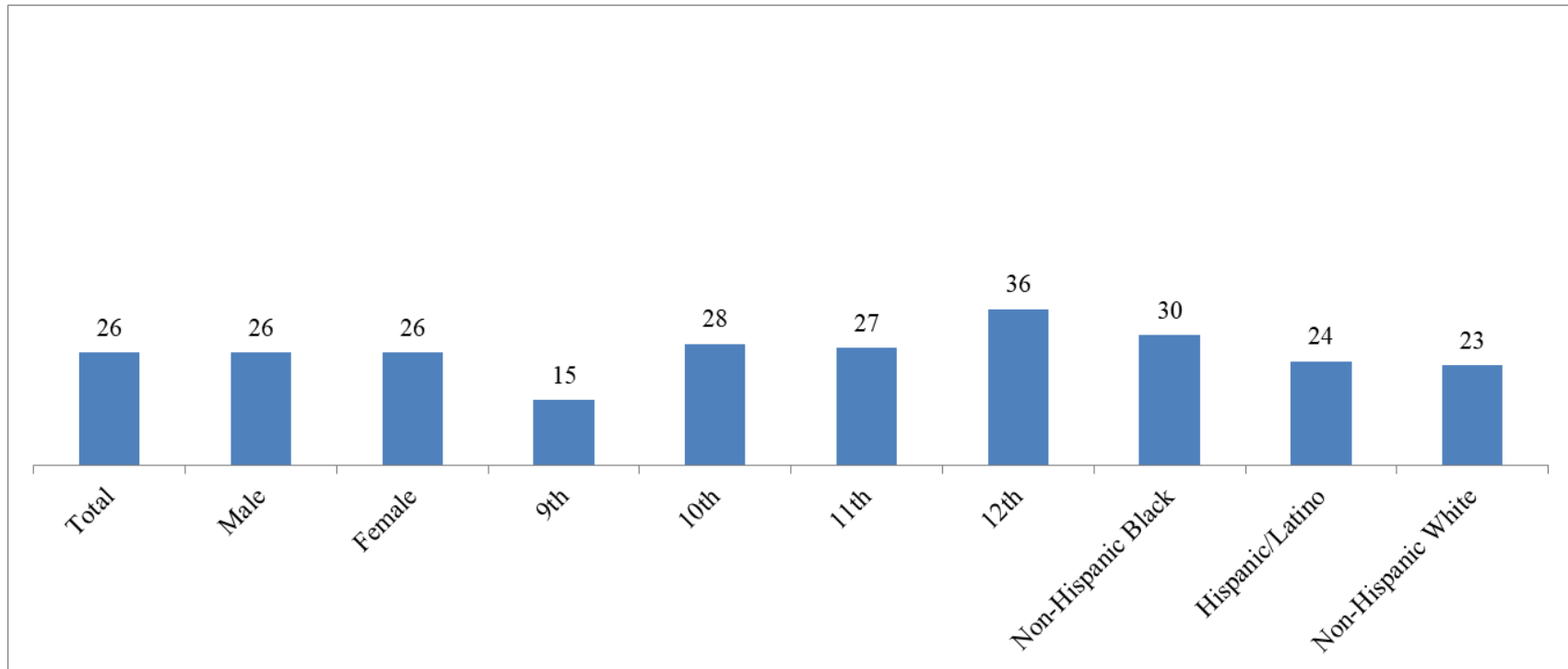


Figure 81: Marijuana use, one or more times in lifetime, HS, 2017

Note:

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey

High School Students Who Used Marijuana One or More Times During the Past 30 Days

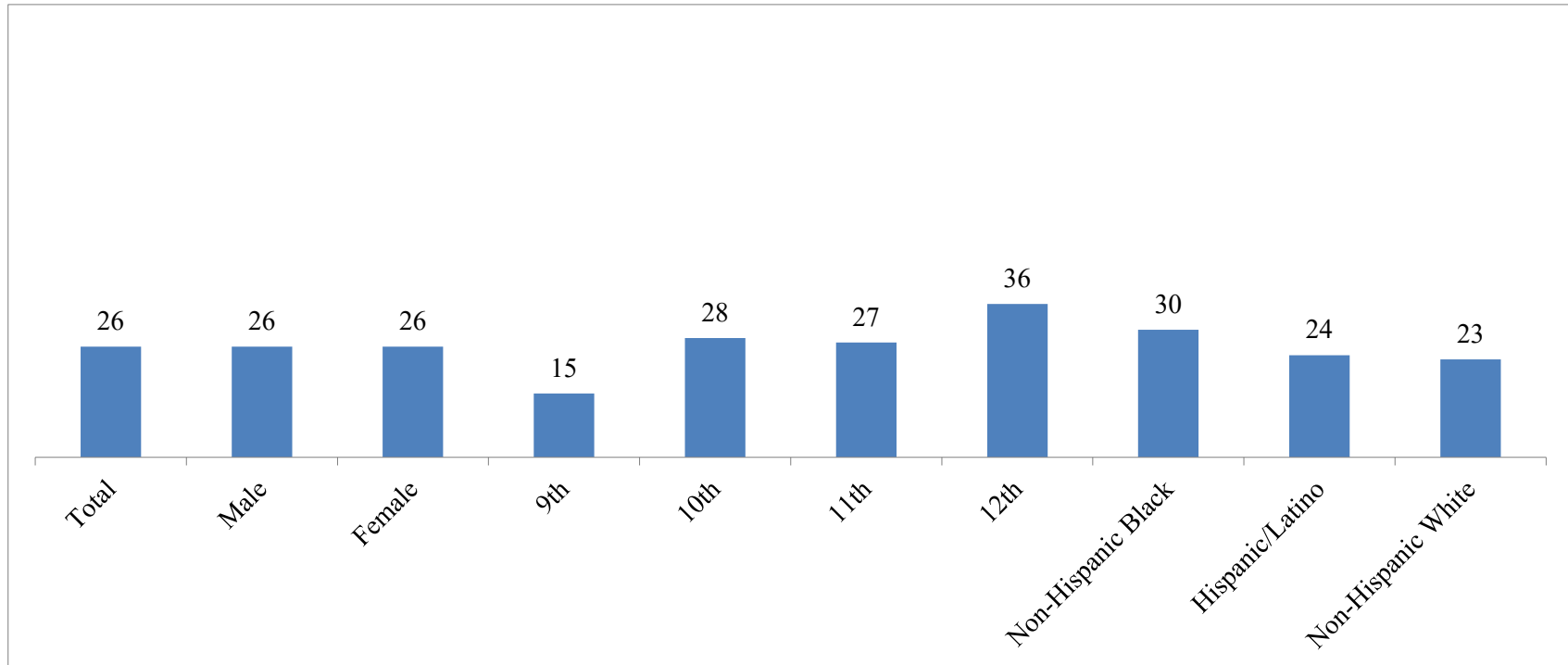


Figure 82: Marijuana use in the past 30 days, HS, 2017

Note:

Weighted data

Source: "2017 Delaware Youth Risk Behavior Survey (YRBS)." Centers for Disease Control and Prevention (Administered by the Center for Drug and Health Studies, University of Delaware).

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2017 Youth Risk Behavior Survey

High School Students Who Used Synthetic Marijuana One or More Times During Their Lifetime

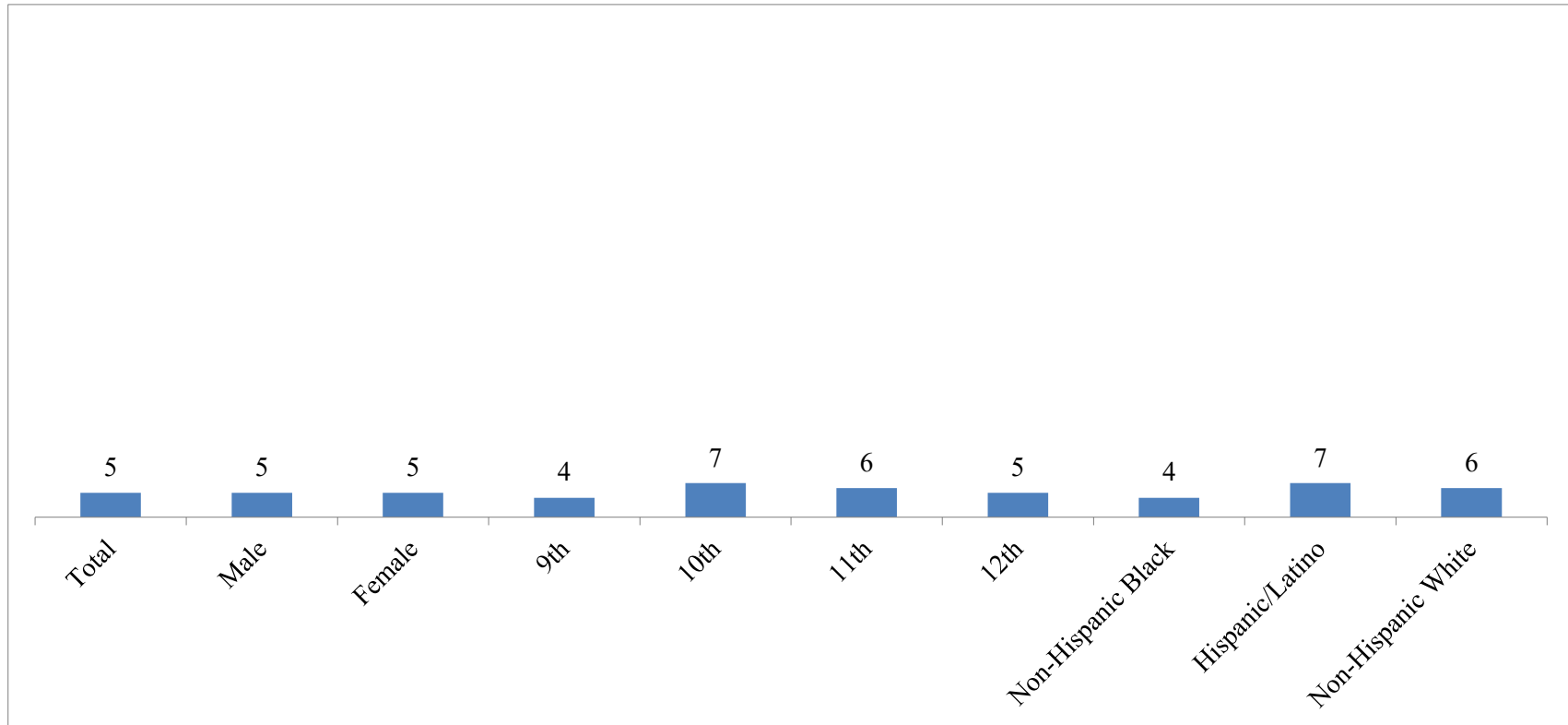


Figure 83: Synthetic marijuana use, one or more times in lifetime, HS, 2017

Note:

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2018 Delaware School Survey
Students' Average Age of Onset for Marijuana Use

8 TH Grade	11 TH Grade
12.6 years	14.7 years

Figure 84: Average age of onset for marijuana use, 8th and 11th grades, 2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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Delaware School Survey

Trends in Delaware Students' Past-Month Marijuana Use by Grade, 1989-Present

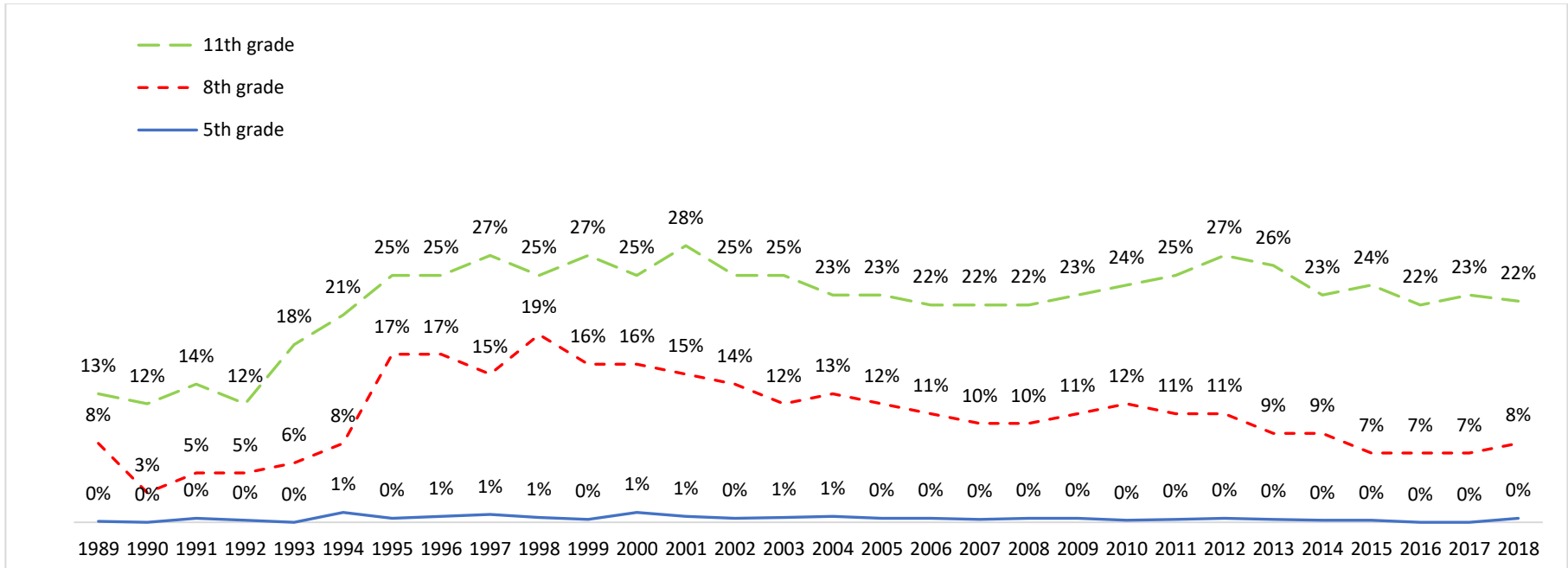


Figure 85: Trends in marijuana use, past-month, by grade, 1989-present

Note:

These statistics contribute to the National Outcome Measures (NOMs)

Source: Data Base/DiagnosticsPlus (1989-1993); Department of Public Instruction (1994)

["Delaware School Survey." Center for Drug and Health Studies, University of Delaware. \(1995-Present\)](#)

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Youth Risk Behavior Survey

Trends in Delaware High School Students' Marijuana Use in Past Month and Lifetime, 1999-2017

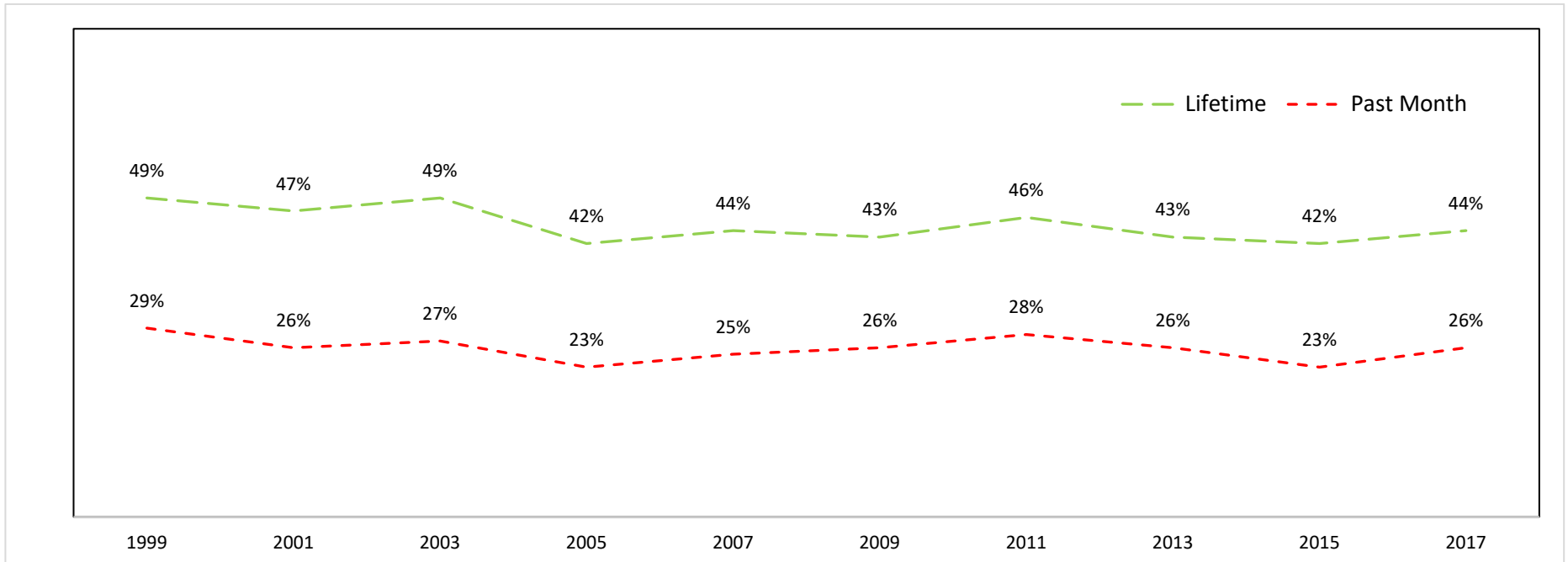


Figure 86: Trends in marijuana use, past-month & lifetime, 1999-2017

Note:

Weighted Data

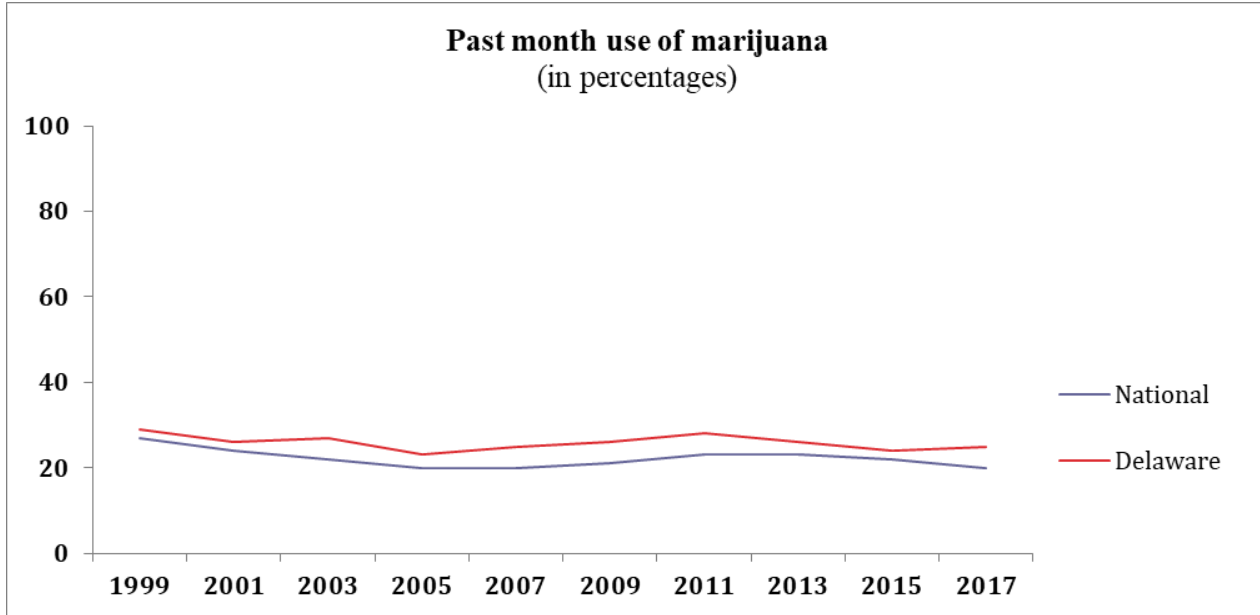
Source: ["Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\). 1999-2017](#)

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Youth Risk Behavior Survey

National and Delaware

Students' Past-Month Use of Marijuana (in percentages)



Year	National	Delaware
1999	27	29
2001	24	26
2003	22	27
2005	20	23
2007	20	25
2009	21	26
2011	23	28
2013	23	26
2015	22	24
2017	20	25

Figure 87: Trends in marijuana use, past-month, nat'l & Del., 1999-2017

Notes:

Weighted data

Sources: ["Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\). 1999-2017](#)

["Trends in the Prevalence of Marijuana, Cocaine, and Other Illegal Drug Use National YRBS: 1991-2017" Centers for Disease Control and Prevention.](#)

["National Youth Risk Behavior Survey." Centers for Disease Control and Prevention, 2017.](#)

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**National Survey on Drug Use and Health
Past-Year Marijuana Use by Age Group and State
2015-2016 and 2016-2017 NSDUH
(in percentages)^a**

AGE GROUP (Years)												
State	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b
Total U.S.	13.71	14.50	.000	12.29	12.19	.676	32.60	33.91	.000	10.73	11.61	.000
Northeast	14.84	15.10	.341	12.39	12.29	.807	37.45	37.92	.501	11.45	11.77	.327
Delaware	13.18	14.80	.011	14.37	13.48	.391	35.82	37.20	.477	9.57	11.60	.007
Maryland	15.50	15.48	.972	13.85	13.76	.936	41.94	39.47	.176	11.56	12.00	.559
New Jersey	12.01	12.04	.965	10.80	10.28	.544	35.35	35.36	.998	8.66	8.77	.842
Pennsylvania	13.05	13.21	.723	10.93	10.36	.444	32.45	33.74	.289	10.24	10.34	.844

Figure 88: Marijuana use, past year, by age group & state

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b p value: Bayes significance levels for the null hypothesis of no change between the 2015-2016 and 2016-2017 population percentages.

Source: [“National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration](#)

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**National Survey on Drug Use and Health
Past-Month Marijuana Use by Age Group and State
2015-2016 and 2016-2017
(in percentages)^a**

AGE GROUP (Years)												
State	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b
	Total U.S.	8.60	9.23	.000	6.75	6.46	.099	20.30	21.45	.000	6.88	7.56
Northeast	9.50	9.83	.118	7.15	6.76	.192	23.64	24.86	.042	7.46	7.77	.210
Delaware	8.88	9.95	.034	7.35	7.45	.891	23.29	23.73	.780	6.83	8.17	.021
Maryland	10.22	10.68	.350	7.78	7.13	.385	27.34	26.24	.496	7.83	8.71	.117
New Jersey	6.77	7.15	.308	5.72	5.16	.325	20.55	22.34	.216	4.83	5.12	.475
Pennsylvania	8.20	8.23	.935	6.25	5.59	.165	20.04	21.38	.192	6.55	6.48	.842

Figure 89: Marijuana use, past-month, by age group & state

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b p value: Bayes significance levels for the null hypothesis of no change between the 2015-2016 and 2016-2017 population percentages.

Source: ["National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages." Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration](#)

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National Survey on Drug Use and Health
Average Annual Initiation Estimates
First Use of Marijuana by Age Group and State
2015-2016 and 2016-2017
(expressed as percentages of the at-risk population) ^a

Age Group (Years)												
State	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b
Total U.S.	1.96	2.03	.059	5.25	5.22	.827	7.74	7.98	.239	.390	.450	.020
Northeast	2.07	2.17	.069	5.34	5.34	.999	8.85	9.06	.497	.440	.530	.036
Delaware	^{1.93}	2.05	.298	5.88	5.66	.578	7.76	8.22	.523	.370	.490	.086
Maryland	2.24	2.15	.493	5.93	5.88	.912	10.13	8.99	.192	.460	.510	.484
New Jersey	1.72	1.78	.537	4.50	4.23	.398	8.18	8.54	.590	.350	.390	.464
Pennsylvania	1.80	1.83	.731	4.56	4.39	.523	8.08	7.99	.862	.350	.410	.190

Figure 90: Marijuana use, first use, by age group & state

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b p value: Bayes significance levels for the null hypothesis of no change between the 2015-2016 and 2016-2017 population percentages.

Source: [“National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration](#)

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**Delaware School Survey, Youth Risk Behavior Survey,
and Monitoring the Future**
**Comparison of Recent National and Delaware Estimates
of Marijuana Use among High School Students**
(in percentages)

	Marijuana	
	Past Year	Past Month
2018 11 th Grade Delaware School Survey	35	22
2017 11 th Grade Delaware School Survey	32	23
2016 11 th Grade Delaware School Survey	35	22
2017 9 th – 12 th Grade YRBS Delaware*	--	25
2015 9 th – 12 th Grade YRBS Delaware	--	22
2018 12 th Grade MTF	36	22
2017 12 th Grade MTF	37	23

Figure 91: Marijuana use estimates, nat'l and Del., HS, 2017-2018

Notes:

"--" Not Available

*Weighted data

Sources: ["Delaware School Survey." Center for Drug and Health Studies, University of Delaware. \(2016-2018\)](#)

["Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\). 2015-2017.](#)

["National Survey Results on Drug Use, 1975-2018." Monitoring the Future Study \(MTF\), University of Michigan.](#)

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**2017 Youth Risk Behavior Survey
High School Students Who Think People
Moderately or Greatly Risk Harming Themselves Physically or in Other Ways
When They Smoke Marijuana Once or Twice a Week**

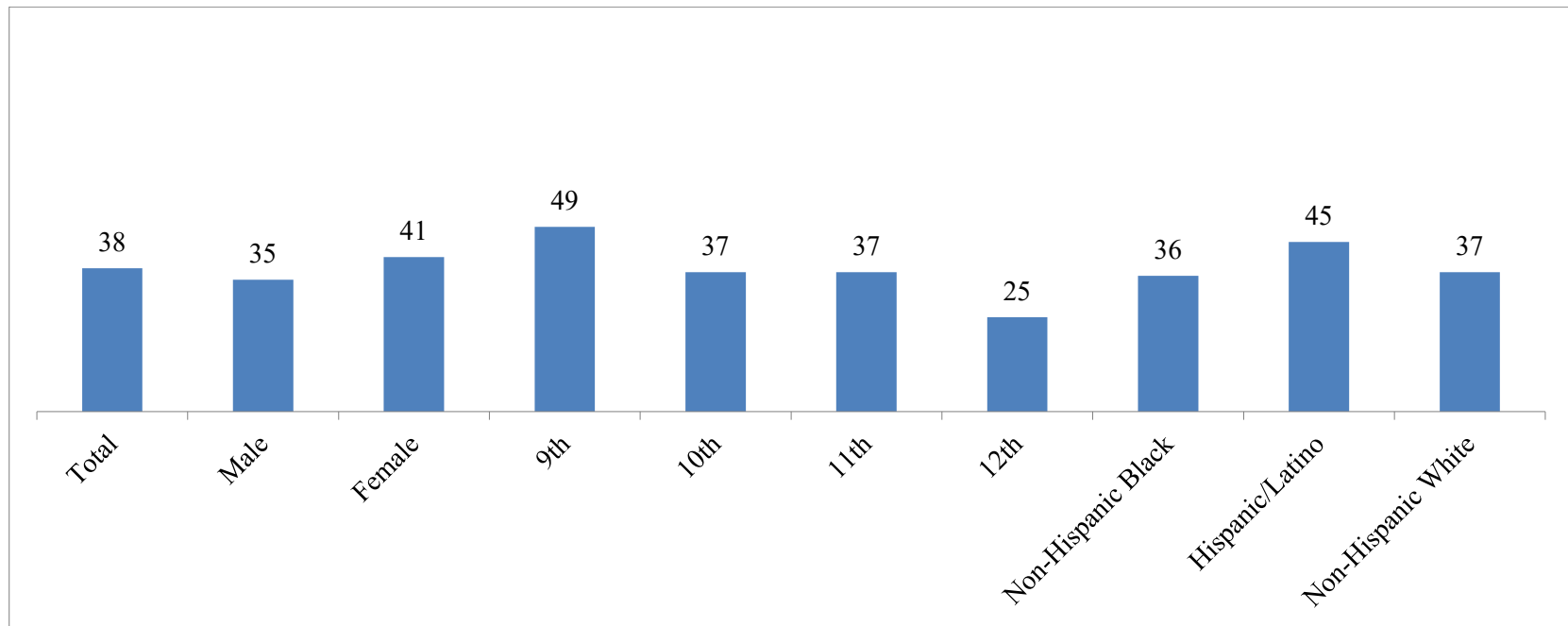


Figure 92: Perception of risk from once- or twice-a-week marijuana use, 2017

Note:

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2018 Delaware School Survey

5th Graders' Perception of "a Lot of Risk" in Using Marijuana Weekly

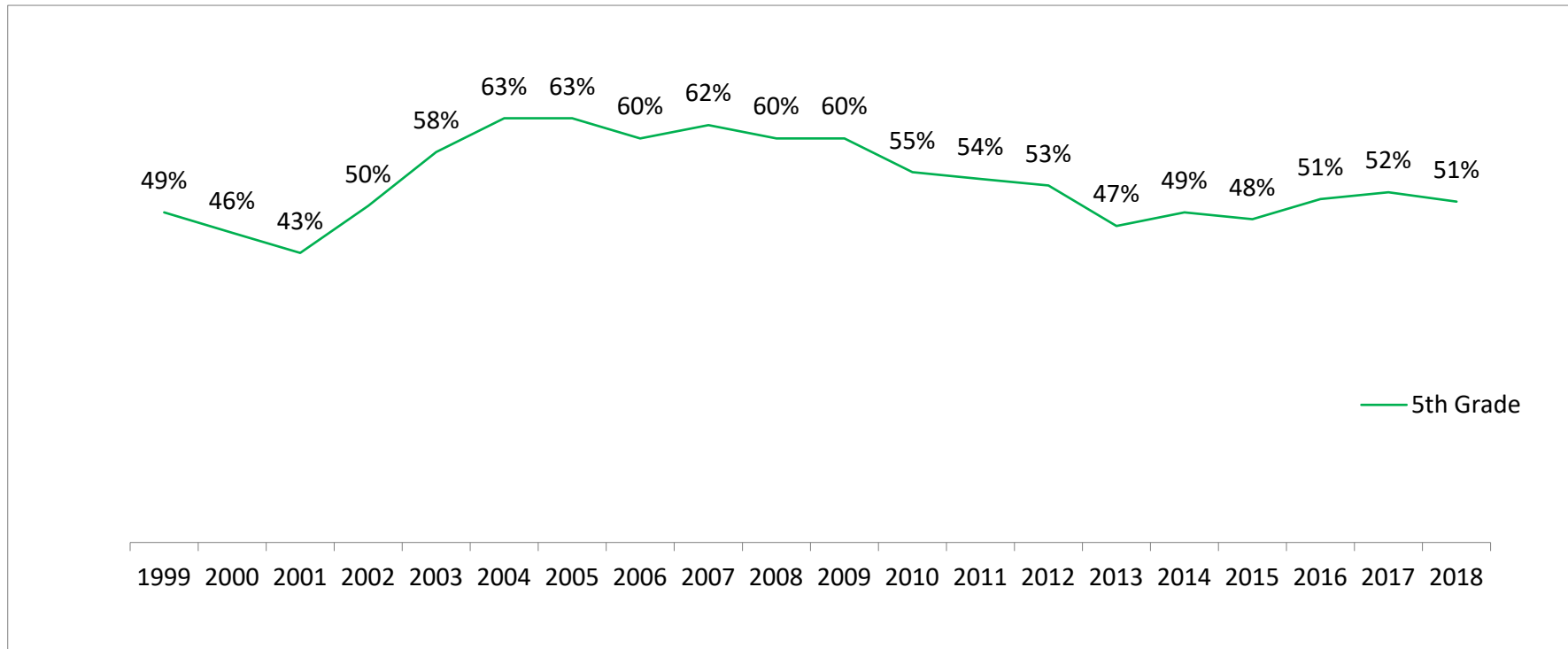


Figure 93: Trends in perception, "lot of risk" using marijuana weekly, 1999-2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

8th and 11th Graders' Perceptions of a "Great Risk" in Using Marijuana Regularly ^a

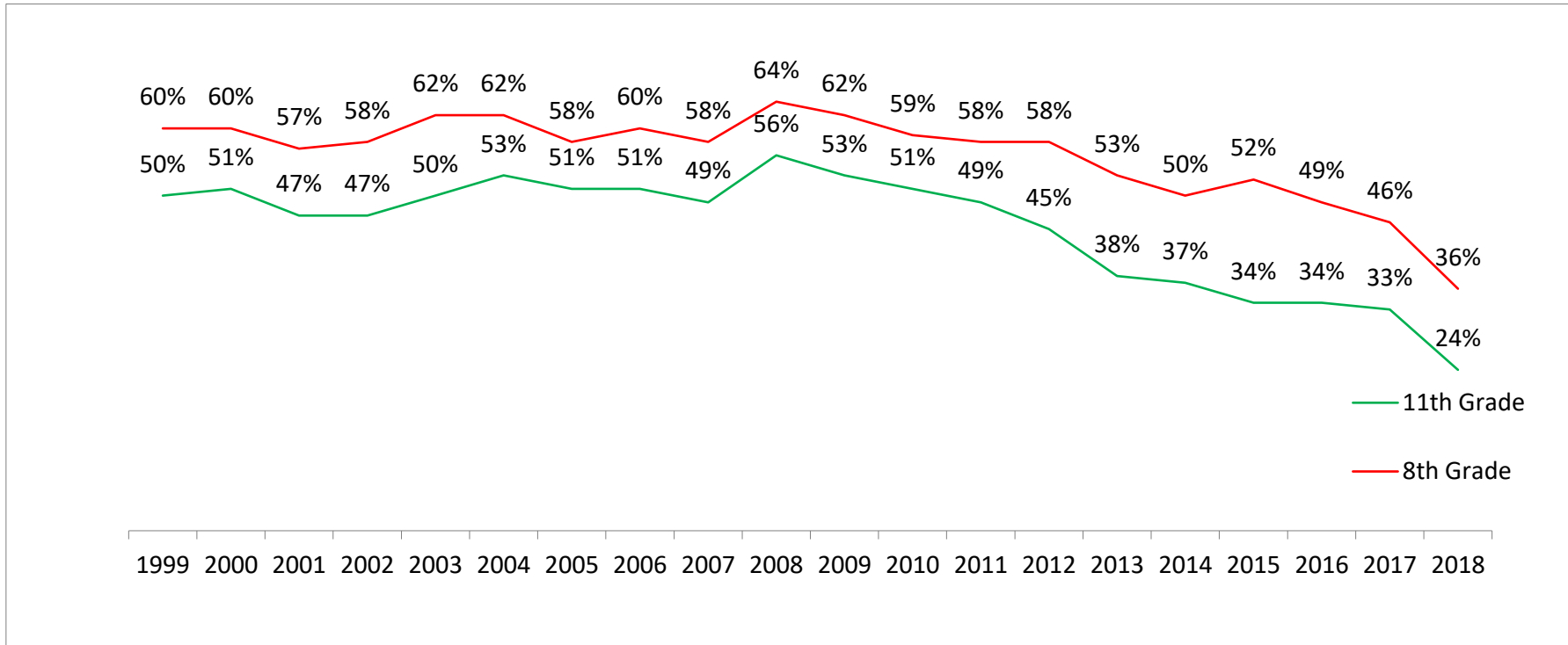


Figure 94: Trends in perception, "great risk" using marijuana regularly, 1999-2018

Note: ^a "Regularly" is self-defined in the survey

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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National Survey on Drug Use and Health
Perceptions of a “Great Risk” in Smoking Marijuana Once a Month
by Age Group and State
2015-2016 and 2016-2017
(in percentages)^a

State	Age Group (Years)											
	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b
Total U.S.	28.41	26.91	.000	27.17	25.75	.000	14.32	12.89	.000	30.92	29.35	.000
Northeast	26.44	25.33	.008	26.85	25.34	.006	12.56	11.80	.083	28.67	27.51	.025
Delaware	26.54	24.32	.041	21.10	23.69	.768	12.77	12.21	.601	28.94	26.21	.046
Maryland	25.89	25.11	.480	26.24	26.24	.999	11.60	12.66	.322	28.11	26.90	.379
New Jersey	32.12	32.09	.972	30.66	29.71	.487	14.16	13.18	.334	35.00	35.18	.891
Pennsylvania	24.78	24.10	.356	26.68	25.24	.163	10.88	11.67	.309	26.78	25.92	.346

Figure 95: Perception of a “great risk” of using marijuana once/month

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b p value: Bayes posterior probability of no change.

“--” Data not available

Source: [“National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration](#)

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2018 Delaware School Survey

11th Graders Who Reported Smoking Marijuana and Driving (in percentages)

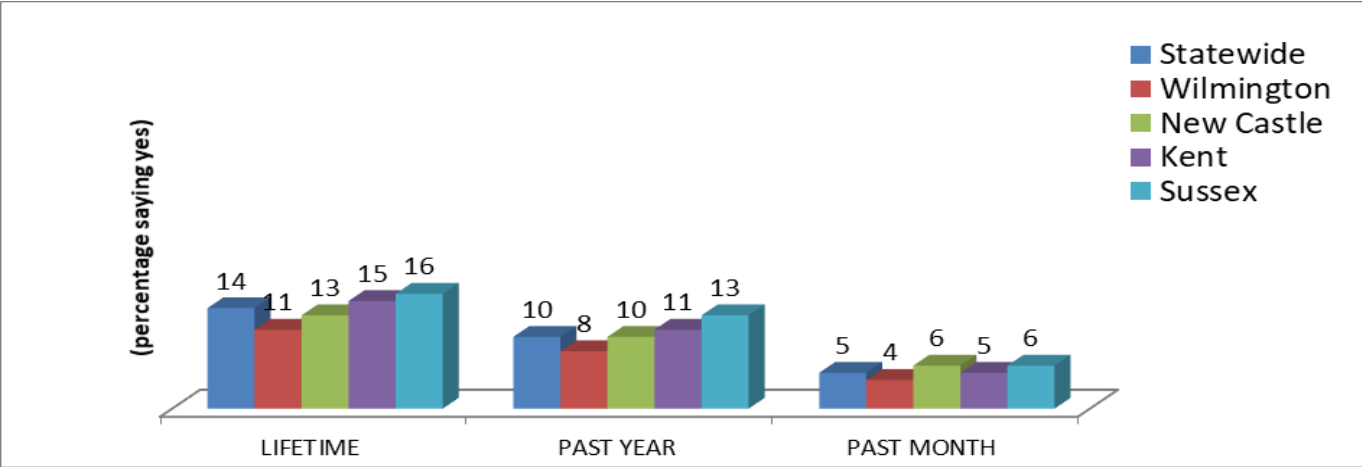


Figure 96: Marijuana use and driving, 11th graders, 2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey
Trends in Delaware
11th Graders Who Reported Smoking
Marijuana and Driving in the Past Month, 1990-2018

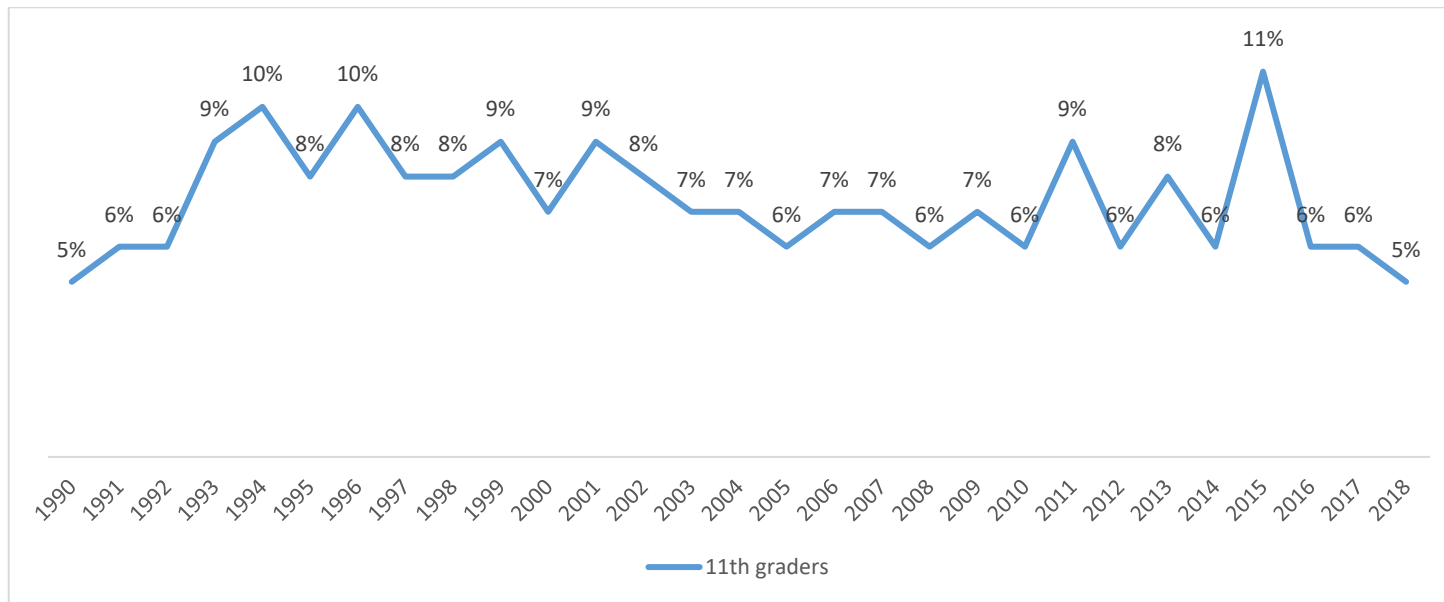


Figure 97: Trends, smoking marijuana & driving, 11th graders, 1990-2018

Source: ["Delaware School Survey." Center for Drug and Health Studies, University of Delaware. \(1990-2018\).](#)

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Chapter 5 Opioid Use and Other Trends

National Overview

The opioid class of drugs includes prescription painkillers such as morphine, hydrocodone, and oxycodone, as well as heroin. Opioids can be highly addictive and potent; their use often leads to tragic outcomes, including drug overdose deaths, infants born with neonatal abstinence syndrome, criminal behavior, and countless hours of lost time that could otherwise be devoted to productive work, family relationships, or skill-building. Starting in the late 1990s, changes in opioid prescribing practices helped contribute to increased accessibility and misuse of these drugs; the resulting rise in opioid dependency has led to alarming increases in overdose death rates across the county in what is now known as the opioid epidemic (Jones et al., 2018). This public health crisis impacts people across all age groups and all communities and comes with high social and public costs: the United States Department of Health and Social Services reports more than \$75 billion in costs related to opioid dependency and misuse in a single year (Department of Health and Social Services [DHSS], 2016). According to data from the National Survey of Drug Use and Health (NSDUH), the use of prescription painkillers without a prescription was the second most abused category of drugs in the United States, after marijuana, with an estimated 10 million adults reporting misuse of these drugs in the past year (Substance Abuse and Mental Health Services Administration [SAMHSA], 2018).

Deaths due to drug overdoses have consistently increased across the United States: the number of overdose deaths involving opioids in 2017 was six times higher than in 1999 (Centers for Disease Control and Prevention [CDC], n.d.). Approximately two-thirds of all overdose deaths in 2017 involved an opioid, and the CDC estimates that 130 people die each day in the United States as the result of an opioid overdose. Heroin makes up an increasing proportion of all drug overdose deaths that occur nationally; in 2010, 8% of drug overdose deaths were attributable to heroin, and by 2015, nearly a quarter of drug overdose deaths were due to heroin. Between 2010 and 2015, heroin overdoses tripled (Hedegaard, Warner, & Minio, 2017), though misidentification of fentanyl (another potent synthetic opioid) and heroin-fentanyl mixes account for some of this increase.

The risk of overdose increases when opioids are used at the same time with benzodiazepine medications such as Valium or Xanax. Methadone, oxycodone, and hydrocodone are the drugs most often attributed to overdose in this category. In addition, the CDC reports that more than 1,000 people visit an emergency room each day as a result of misusing prescription opioids (CDC, n.d.). According to the National Safety Council, 1.9 million people in the United States are addicted to prescription opioids, 4.3 million use these drugs for nonmedical purposes, and four out of five current heroin users report that they transitioned to heroin after using prescription opioids (National Safety Council [NSC], 2016). Significantly rethinking prescribing practice and policy should have an effect on the number of people who misuse and overdose on prescription opioids, as well as reduce the number of people transitioning to dangerous, illicit opioid use.

Fentanyl, a powerful, synthetic opioid often prescribed to patients during end-of-life care or with advanced cancer, is increasingly accessible to users. The CDC estimates that about a third of the deaths attributed to opioids are a result of fentanyl; in recent years, the prevalence of fentanyl has increased dramatically. Much of the fentanyl on the street has been illegally imported from China or illegally manufactured in China, the U.S., and Mexico, and is not derived from pharmaceutical supplies. The CDC reports that fentanyl is 50 times more potent than heroin and is often found mixed with heroin or cocaine, often with deadly results. In just one year, 2014-2015, the death rate associated with people who overdosed on synthetic opioids, which includes fentanyl, increased more than 70% (CDC, n.d.). The Drug Enforcement Administration reports a troubling trend of illegally manufactured pills inscribed with prescription brand names that are, in fact, primarily made with fentanyl that can result in overdose (Drug Enforcement Administration [DEA], 2016).

Additional health complications can arise from the misuse of opioids. People who inject drugs and share or reuse needles risk spreading infectious diseases such as human immunodeficiency virus (HIV) and hepatitis C, in addition to other health complications. In response, many communities and states have enacted needle-exchange programs that allow drug users to drop off used needles and receive either free or reduced-cost needles. In addition, many of these programs provide resources about substance use disorder treatment, infectious disease control, and other health information.

Neonatal abstinence syndrome (NAS) is another public health concern linked to the use of opioids. Between 1999 and 2013, a study of 28 states found more than a 300% increase in the number of babies born with NAS (Ko et al., 2016). Babies born with this condition experience symptoms of withdrawal that complicate regular, healthy development and often lead to additional time spent in the hospital after delivery. Infants born to mothers who use opioids are at higher risk of smaller birth weight, birth defects, difficulty feeding, developmental delays, future behavioral problems, and sudden infant death syndrome (DHSS, 2016). In 2017, there were 450 cases of substance-exposed infants (SEI) reported to the Delaware Division of Family Services (Donahue, 2018), many of whom were exposed to opioids (see Chapter 7 in this report). For pregnant women with opioid dependency, medication-assisted treatment remains the recommended therapy to improve health outcomes for both the mother and child (American College of Obstetricians and Gynecologists [ACOG], 2017).

Delaware Overview

Delaware has been hit hard by the opioid epidemic. In 2014, Delaware had the 8th highest heroin fatality rate in the U.S. (NSC, 2016). This rate has not substantially improved relative to other states; in 2016, Delaware had the 9th highest drug overdose death rate of the 50 states and District of Columbia (Hedegaard, Warner, & Minio, 2017). The most recently available data from the CDC estimate Delaware's overdose mortality rate as 37 deaths per 100,000 residents, which is substantially higher than the national rate (21.7 deaths per 100,000). Per these estimates, Delaware now has the 5th highest overdose death rate in the country (CDC, 2019).

Delaware's drug overdose rate across all categories of drugs has increased in the past few years. In 2017, 61% of overdose deaths involved fentanyl, 39% involved heroin, and 29% involved other opioids, often in combination with other opioids or other substances (Delaware Division of Forensic Science [DFS], 2018). Fentanyl-related overdoses are a major public health concern: fentanyl was identified in 210 deaths in 2017, up from 32 in 2015 (Delaware DFS, 2018). Emergency responders in Delaware have responded to the increase in opioid-related overdoses by carrying the opioid antagonist, naloxone, which can reverse the effects of an opioid overdose and potentially save the life of a person suffering an overdose. Emergency responders used naloxone on 2,714 occasions in 2017 (DHSS, 2018). Yet, even with increased access to potentially life-saving medication, fatal overdoses still occur frequently in Delaware. An estimated 338 people died in Delaware due to drug overdose in 2017 (CDC, 2019).

In 2018, approximately 48% of individuals admitted to publicly funded treatment programs in Delaware listed heroin as their primary drug. An additional 6% in treatment admissions reported primarily using other opiates (Treatment Episode Data Set [TEDS], 2018). A strengths, weaknesses, opportunities, and threats (SWOT) analysis by the Opiate and Heroin Dependency Committee, prepared for New Castle County Executive Matt Meyer, showed a significant gap between treatment need and access to services, partly due to lack of public knowledge about already existing resources, but also due to limitations in available services (Anderson et al., 2016). National research has shown that women with children often resist accessing treatment services out of fear that their children may be taken into state custody. Treatment programs that accommodate mothers with children have higher success rates with women with children than those that do not. Nationally, up to 70% of women who enter treatment do have children (DHSS, 2016). Expanding treatment options that are responsive to the needs of caregivers may help improve treatment outcomes across the state.

Prescription drug overdoses account for a larger portion of drug overdose deaths in Delaware than heroin (Prescription Behavior Surveillance System [PBSS], 2016). Prescription monitoring programs have been established in many states, including Delaware, to provide data on prescribing patterns, as well as patient use. These data can help to identify "pill mills" (doctors who prescribe disproportionate amounts of opioids to patients), as well as "doctor shoppers" (individuals who change doctors frequently to obtain prescribed opioids). These data can also help doctors identify whether patients are already taking prescriptions that may interfere with opioids, such as benzodiazepines. A recent analysis of the Prescription Drug Monitoring Program (PDMP) conducted by University of Delaware researchers found that only 1% of doctors wrote a quarter of opioid prescriptions in the state (Anderson, Martin, Fang, & Li, 2016). Additional analyses of the data by UD researchers were used to create hotspot maps that identified areas of the state with higher rates of opioid prescriptions (Center for Drug and Health Studies [CDHS], 2017). Identifying potential points of access should help reduce the flow of pills to recreational users. Delaware has already made some progress in targeting pill mills; early in 2017, three doctors in Delaware were sanctioned as a result of over-prescribing (Goss, 2017).

Changes in prescribing policy and public education strategies that were put in place over the past several years may also be having an effect. Delaware data from the PBSS at Brandeis University's Center of Excellence, which reports to the CDC, show a 26% decline between 2012-2015 in opioid prescriptions with high dosages (more than 100 morphine milligram equivalents, or MMEs), which have been associated with greater risk of overdose and death. During the same period, there was a decline of more than 50% in the rate of multiple provider episodes, which corresponds with "doctor shopping." Despite these significant improvements, Delaware still has the highest rate of patients with prescriptions of more than 100 MMEs, compared to other states also analyzed by the PBSS, which suggests that there is still much room for improvement in this area and that successful intervention should include prescribers (PBSS, 2016).

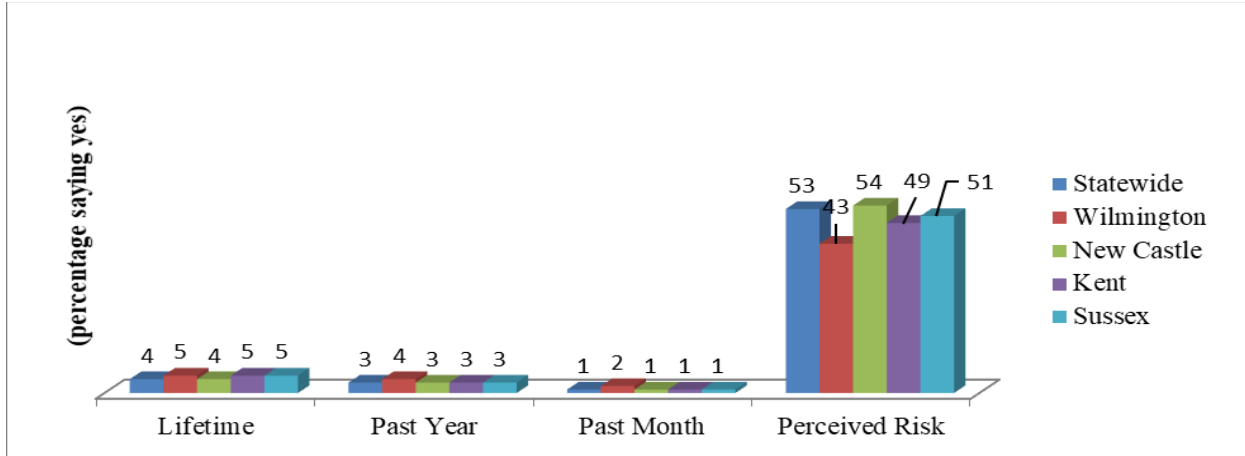
Data from the 2018 Delaware School Survey show that less than 1% of 8th and 11th grade students in school reported using heroin, while 3% of 8th graders and 4% of 11th grade students reported misusing prescription painkillers in the past year. Data from the 2016-2017 NSDUH estimate that around 7% of Delaware adults aged 18-25 have misused prescription pain relievers in the past year, a figure that is comparable to national averages. The 2017 Youth Risk Behavior Survey (YRBS) indicates that while rates of heroin use among high school students has declined to 1.6% over the past 20 years, nearly one in 10 students report using prescription pain medications that they were not prescribed or in ways that were not prescribed at least once in their lifetime, and 5.8% report such misuse in the previous month.

Data in Action: Post-Overdose Response Teams

To address the high rate of overdose deaths, many communities across the country are implementing post-overdose response teams (PORT), sometimes referred to as rapid response teams or quick response teams. The goal of these programs is to ensure that after being treated for an overdose, individuals are given access to resources that may help prevent future overdose death and link them to treatment and other medical care where appropriate. Typically, after first responders are called to the scene of an overdose, that patient's contact information is then passed on to the response team coordinator. These coordinators are often people with social work degrees or lived experience with substance use disorders (so they function as peers to the patient); they may call on or even visit the homes of patients within a couple of days of their overdose. Many PORT programs are modeled after the Quick Response Team implemented in 2014 in Colerain Township, Ohio, which has since won statewide awards and been credited with a substantial reduction in overdose death (WCPO, 2018).

In Delaware, the HERO Help Program, a collaboration of the Division of Police, the Delaware Department of Justice, and the State Division of Substance Abuse and Mental Health, provides outreach and engagement services to individuals who have overdosed. Following the hiring of a full-time coordinator on March 1, 2018, the team provided outreach services and formally enrolled 64 people into the program and trained 123 individuals to use naloxone to reverse overdose. In this program, eligible adults may be connected with substance abuse treatment in lieu of incarceration or other criminal arrests (New Castle County Police Department, n.d.).

2018 Delaware School Survey Reported Prescription Painkiller Use among Delaware 8th Graders (in percentages)



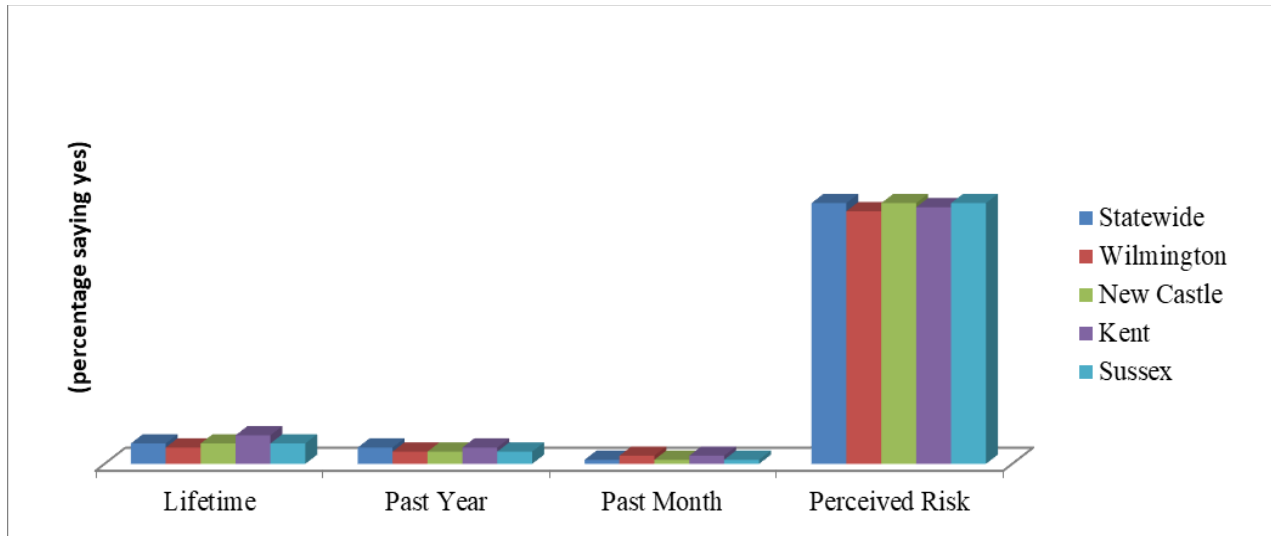
	Lifetime	Past-Year	Past-Month	Perceived Risk of Using Prescription Drugs without a Prescription
STATEWIDE	4	3	1	53
Males	4	2	1	52
Females	5	3	1	54
Wilmington	5	4	2	43
Males	6	5	2	39
Females	4	3	2	46
New Castle	4	3	1	54
Males	4	2	1	52
Females	4	3	1	56
Kent	5	3	1	49
Males	3	2	0	47
Females	6	4	2	50
Sussex	5	3	1	51
Males	4	2	1	53
Females	5	3	1	49

Figure 98: Prescription painkiller use, 8th graders, 2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey Reported Prescription Painkiller Use among Delaware 11th Graders (in percentages)



	Lifetime	Past-Year	Past-Month	Perceived Risk of Using Prescription Drugs without a Prescription
Statewide	5	4	1	64
Males	6	4	1	61
Females	5	4	2	67
Wilmington	4	3	2	62
Males	3	3	2	55
Females	4	3	2	68
New Castle	5	3	1	64
Males	7	4	1	61
Females	4	3	1	67
Kent	7	4	2	63
Males	6	3	1	61
Females	7	5	3	65
Sussex	5	3	1	64
Males	7	3	1	60
Females	4	4	2	68

Figure 99: Prescription painkiller use, 11th graders, 2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

Trends in Monthly Use of Prescription Painkillers among Delaware 8th and 11th Graders, 2002-2018 (in percentages)

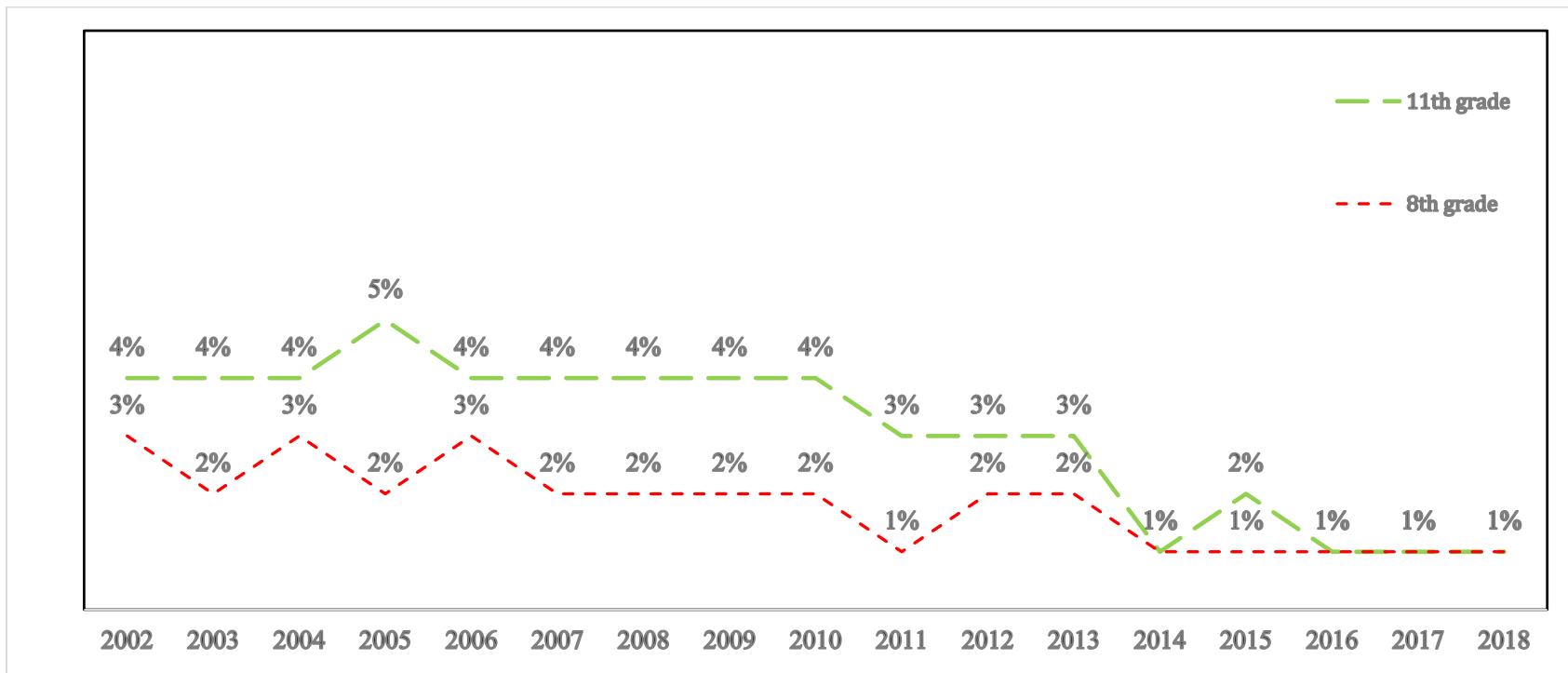


Figure 100: Trends in prescription painkillers, 8th and 11th graders, 2002-2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey
High School Students Who Took a Prescription Painkiller
Without a Doctor's Prescription or Differently than Prescribed in their Lifetime
(in percentages)

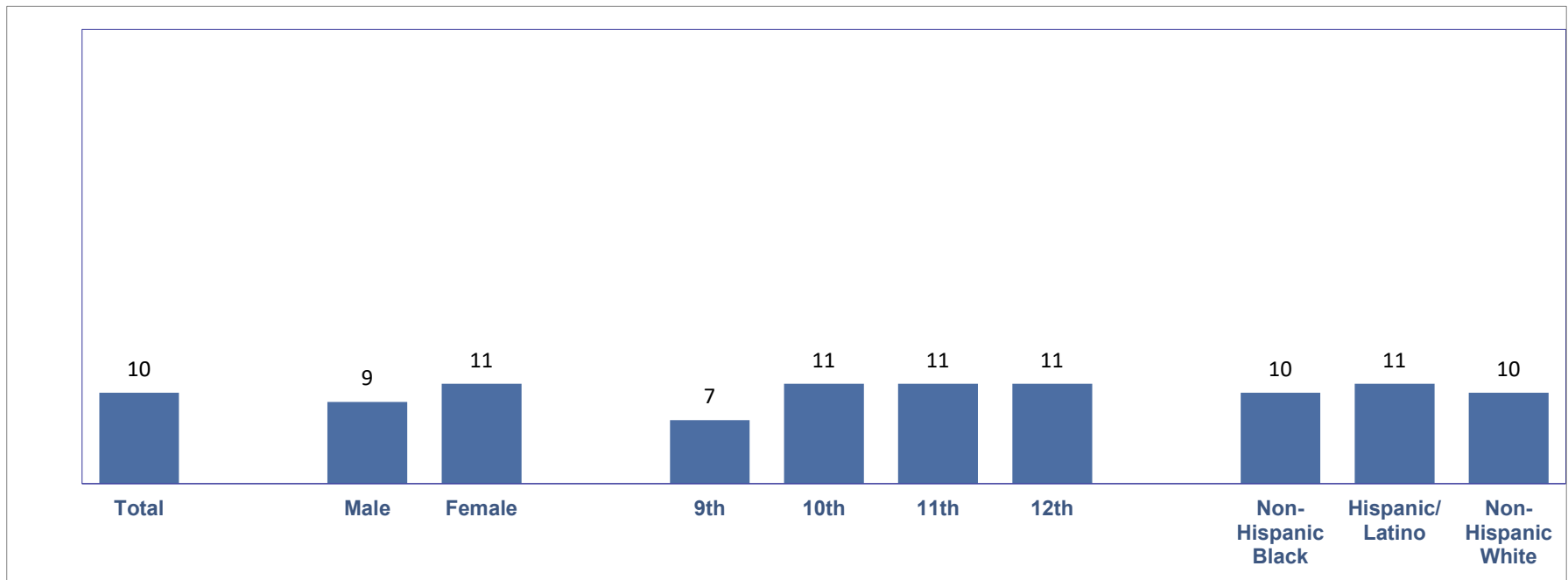


Figure 101: Prescription painkiller w/o prescription or differently than prescribed, lifetime

Note: Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey
High School Students Who Took a Prescription Painkiller
Without a Doctor's Prescription or Differently than Prescribed in the Past Month
(in percentages)

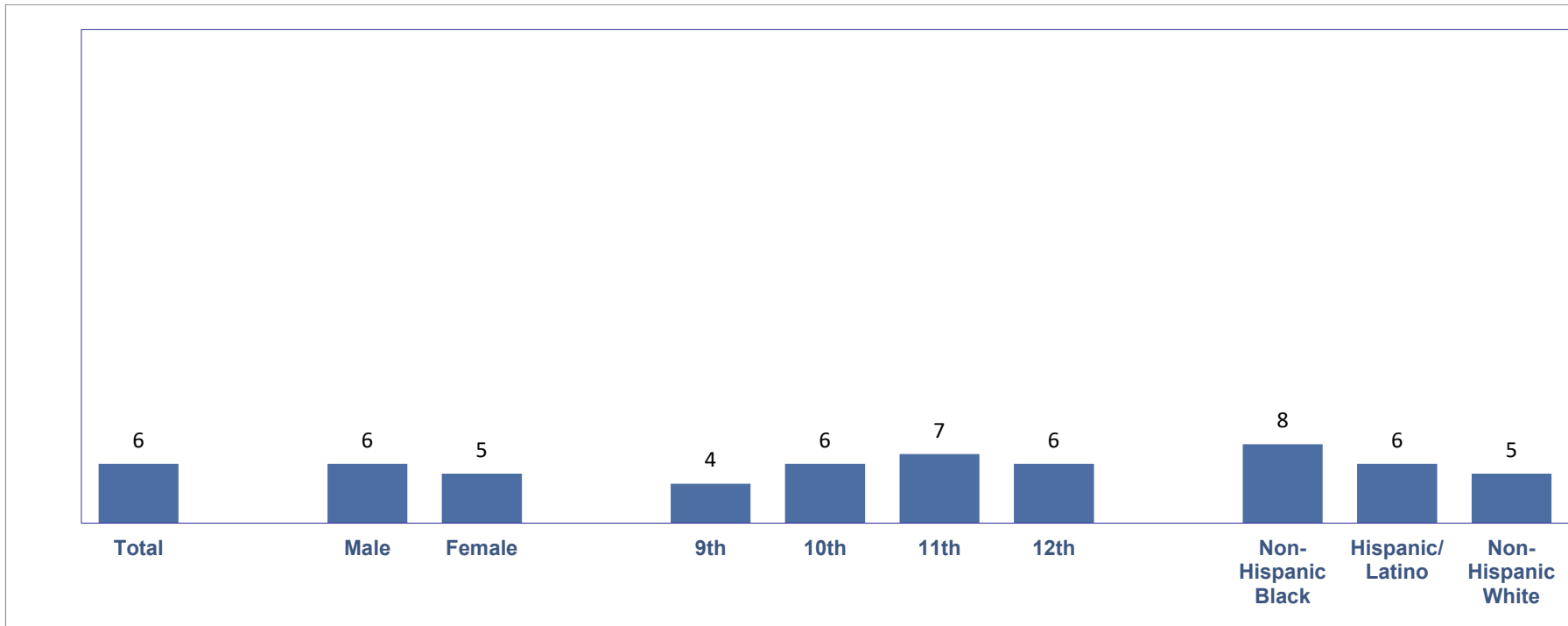


Figure 102: Prescription painkiller w/o prescription, differently than prescribed, past-month

Note: Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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National Survey of Drug Use and Health
Pain Reliever Misuse in Past Year, by Age Group and State
2015-2016 and 2016-2017
(in percentages)^a

State	AGE GROUP (Years)											
	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b
Total U.S.	4.46	4.17	.000	3.72	3.31	.002	7.82	7.13	.000	4.00	3.79	.025
Northeast	4.05	3.77	.030	2.82	2.63	.269	7.19	6.62	.071	3.68	3.44	.117
Delaware	4.45	4.23	.456	3.07	2.89	.608	7.34	6.90	.592	4.16	3.98	.608
Maryland	4.15	3.90	.377	3.40	3.05	.355	7.82	7.32	.517	3.66	3.47	.576
New Jersey	3.75	3.57	.461	2.57	2.46	.716	7.06	6.52	.395	3.39	3.26	.649
Pennsylvania	4.38	4.24	.588	2.91	2.73	.516	7.65	7.18	.454	4.03	3.95	.805

Figure 103: Pain reliever misuse, past year, by age group and state

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b p value: Bayes posterior probability of no change.

“--” Data not available

Source: [“National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration](#)

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Rate of Opioid Prescriptions by Delaware Census Tracts

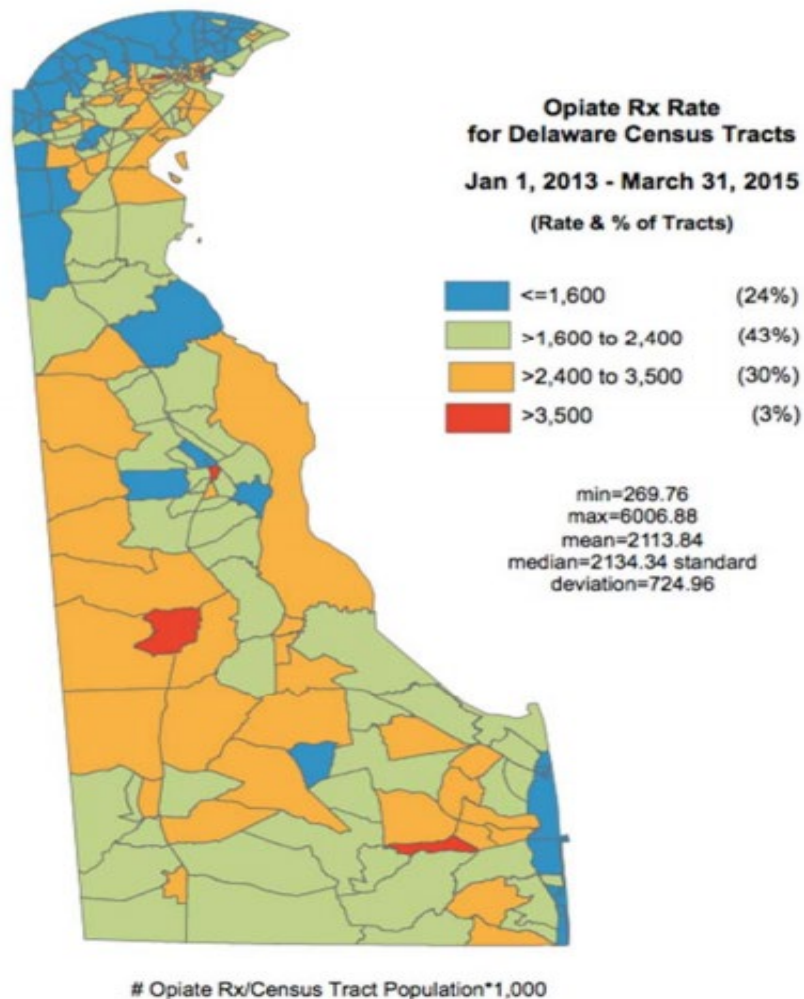


Figure 104: Map of rate of opioid Rx, Delaware Census Tracts, 2013-2015

Notes: Map was designed and created by the Delaware Prescription Monitoring Program (PMP). Delaware's PMP is a system that collects daily information on all controlled substance (schedules II-V) prescriptions within the State. All practitioners who hold an active Delaware Controlled Substance Registration (with the exception of veterinarians) are required, by Delaware law, to register with the PMP.

The map highlights the differences in opioid prescription rates by census tract.

Between 2013 and the 1st quarter of 2015, Delaware neighborhoods averaged 2,113.8 opiate prescriptions per 1,000 residents. The map shows 3% of the neighborhoods—shaded red—where opiate prescription rates were 50% to 300% larger than the state average.

Source: Office of Controlled Substances, Division of Professional Regulation DE. Funding for this project has been provided by the Department for Health and Social Services, Division of Substance Abuse and Mental Health - State of Delaware through a grant from the Substance Abuse and Mental Health Services Administration (SAMHSA, SP020704).

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Chapter 6 Other Illegal Drugs

National Overview

The bulk of this report has primarily focused on the four most pressing substance use issues facing the State of Delaware (tobacco, alcohol, marijuana, and opioids) with attention to several groups of youth at disproportionate risk in subsequent chapters. However, many other illicit and prescription drugs are misused in addition to these four. These other drugs fall into four broad categories, which can include both prescription and street drugs. This list of examples is not exhaustive:

- Depressants: barbiturates, benzodiazepines, gamma hydroxybutyrate (GHB), Rohypnol
- Stimulants: cocaine, methamphetamine, Adderall, Ritalin
- Hallucinogens: lysergic acid diethylamide (LSD), mescaline, salvia, “mushrooms”
- Other drugs: ecstasy, ketamine, bath salts, dextromethorphan (DXM), steroids, inhalants

These substances have less public health implications than tobacco, alcohol, marijuana, and opioids, not because they are less dangerous, but because they impact a smaller population of people. Misuse of these substances comes with steep risks, including risk of overdose, serious addiction, potential for the drug to be mixed with other dangerous products (such as fentanyl in cocaine), and serious mental impairment that can put a person at risk of victimization and/or increase the likelihood of dangerous accidents, physical alterations, and criminal behavior.

Delaware Overview

According to the National Survey on Drug Use and Health (NSDUH) 2016-2017 estimates, in Delaware, nearly 3.4% of all people over the age of 12 used an illicit drug other than marijuana in the past month. Broken down by age, 2.3% of Delaware youth between ages 12 to 17, 6.6% of adults ages 18 to 25, and 3% of adults over the age of 26 reported illicit drug use in the past month, excluding marijuana. Illicit drugs, excluding marijuana, consist of cocaine (including crack), heroin, methamphetamine, hallucinogens, inhalants, or other prescription medications used other than prescribed. Data from the 2018 Delaware School Survey (DSS) show that 2% of 5th grade students, 2% of 8th grade students, and 4% of 11th grade students report use of illicit drugs, other than marijuana, in the past month. By far, the largest category of these drugs misused by Delaware students is prescription drugs.

Crack/Cocaine: Crack/cocaine has particularly troubling health implications. Cocaine is very addictive, leads to various long-term health concerns, and can lead to overdose. Although overdose deaths involving cocaine decreased from 2006 to 2012, they have since begun to increase again. By 2017, roughly one in five overdose deaths involved cocaine (Centers for Disease Control and Prevention [CDC], n.d.) Fentanyl has also been found mixed with cocaine, which increases the risk of overdose and death. The NSDUH estimates that approximately 2% of

the total United States population 12 and older have used cocaine in the past year. In Delaware, 6% of adults between the ages of 18-25 reported using cocaine in the past year during the 2016-2017 time period; 1.5% of adults over the age of 26, and 0.4% of youth between the ages of 12-17 reported using cocaine in the past year during that same period (Substance Abuse and Mental Health Services Administration [SAMHSA], 2019). Nearly 5% of all drug treatment admissions in the state were primarily due to cocaine use (Treatment Episode Data Set [TEDS], 2019). Among 11th grade students in Delaware who responded to the 2018 DSS, approximately 1% reported using cocaine or crack cocaine in the past year.

Prescription Drugs: Of the 27.1 million people in the United States who are current users of illicit drugs, an estimated 7.8 million, or 29%, are misusing prescription drugs (Center for Behavioral Health Statistics and Quality [CBHSQ], 2016). These data demonstrate the value of increased understanding and analysis of prescribing practices and use patterns through prescription monitoring programs.

While it is easy to assume that all students who misuse prescription drugs are doing so simply to get high, data from the DSS suggest that students also use for self-medicating purposes, such as relieving pain, depression, and anxiety or increasing concentration (Center for Drug and Health Studies [CDHS], 2016). Crafting public education messages about the risks involved with self-medicating and helping improve youth access to healthcare may help reduce some of the misuse of prescription drugs among this population.

The Prescription Monitoring Program (PMP) in Delaware records information on all prescriptions for controlled substances, with the goal of reducing the misuse of prescription drugs and improving patient care. Researchers from the University of Delaware's Center for Drug and Health Studies use data from the PMP to help evaluate the Strategic Prevention Framework for Prescription Drugs, a prevention initiative funded by SAMHSA with the goal of raising awareness of the risks associated with the non-medical use of prescription drugs and promoting collaboration between state agencies and community stakeholders on this issue. Analysis of PMP data over a four-year evaluation period has shown promising results so far; from 2014 to 2017, there was a 9% decrease in the total number of unique residents who were prescribed opioid analgesics and a 10% decrease in the total number of opioid analgesics. High-dose opioid prescriptions also decreased by 37%, and the percentage of patient prescription days with overlapping opioid and benzodiazepine prescriptions also decreased by 24%. Even more substantially, during this time period, the number of multiple provider episodes, in which individual patients filled prescriptions from five or more prescribers at five or more pharmacies, decreased by more than 50%.

**National Survey on Drug Use and Health
Selected Drug Use in Delaware, by Age Group
Percentages, Annual Averages Based on 2016-2017
(in percentages) ^a**

Measure	Total 12 or Older	AGE GROUP		
		12-17	18-25	26 or Older
ILLCIT DRUGS				
Past Month Illicit Drug Use^b	11.71	9.71	26.00	9.80
Past Month Use of Illicit Drugs Other Than Marijuana^c	3.41	2.31	6.61	3.05
Past Year Cocaine Use	2.02	0.37	6.20	1.58
Past Year Pain Reliever Misuse	4.23	2.89	6.90	3.98

Figure 105: Selected drug use, Delaware, by age group

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

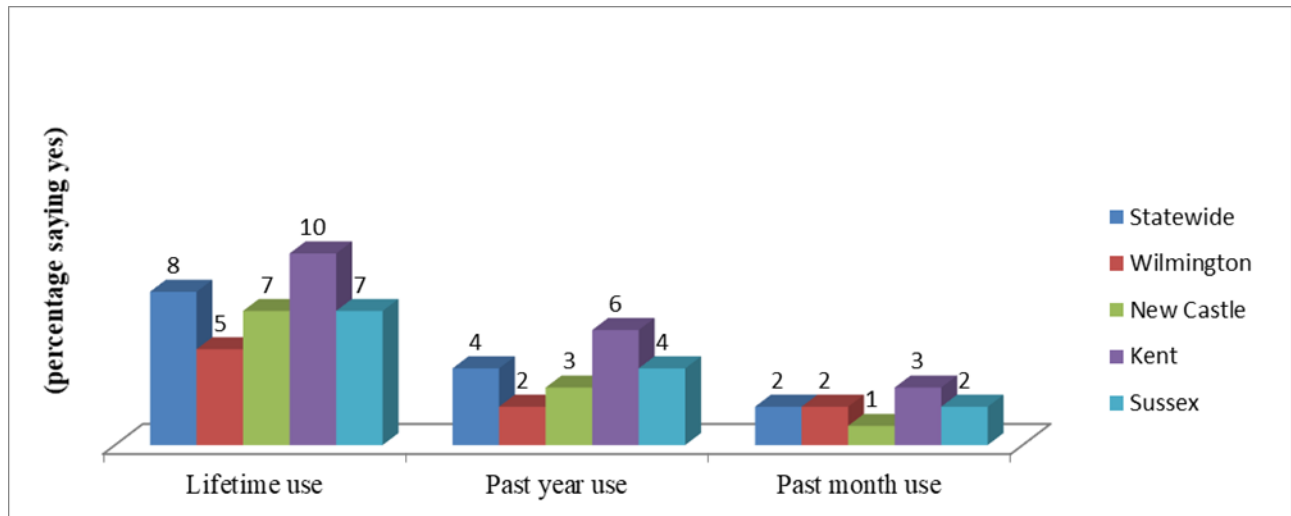
^b Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit drugs other than marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

^c *Average annual rate* = $100 * \{ [X_1 \div (0.5 * X_1 + X_2)] \div 2 \}$, where X_1 is the number of marijuana initiates in past 24 months and X_2 is the number of persons who never used marijuana. Both of the computation components, X_1 and X_2 , are based on a survey-weighted hierarchical Bayes estimation approach. The age group is based on a respondent's age at the time of the interview, not his or her age at first use.

Source: ["National Survey on Drug Use and Health: Comparison 2015-2016 and 2016-2017 Population Percentages." Substance Abuse and Mental Health Services Administration Center for Behavioral Health Statistics and Quality](#)

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2018 Delaware School Survey Inhalant Use among Delaware 5th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use
Statewide	8	4	2
Males	7	3	2
Females	8	4	2
Wilmington	5	2	2
Males	6	2	2
Females	4	2	1
New Castle	7	3	1
Males	7	3	2
Females	8	3	1
Kent	10	6	3
Males	9	6	3
Females	11	7	3
Sussex	7	4	2
Males	6	3	1
Females	10	5	3

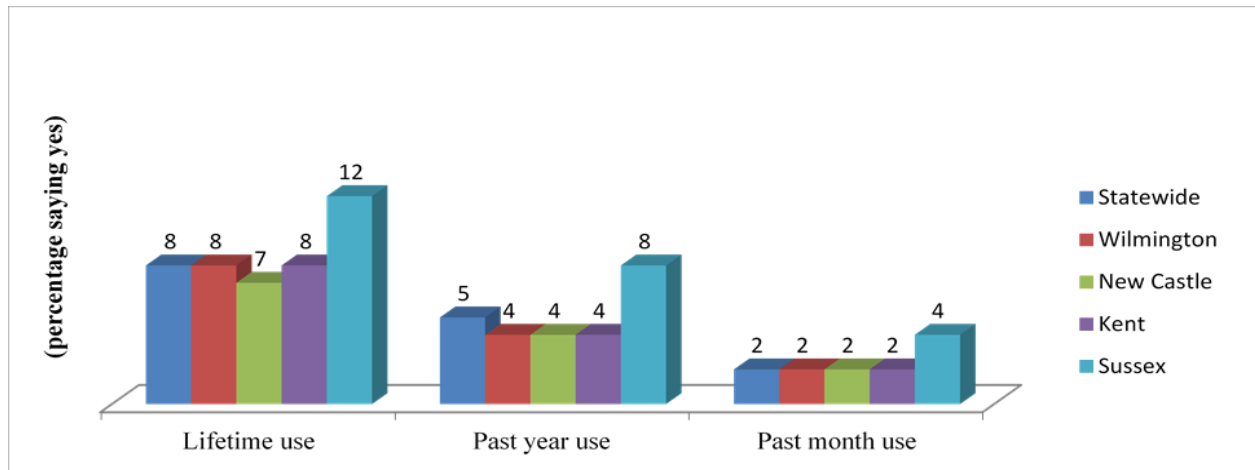
Figure 106: Inhalant use, 5th graders, 2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

Other Illegal Drug^a Use among Delaware 8th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use
Statewide	8	5	2
Males	8	5	3
Females	8	5	2
Wilmington	8	4	2
Males	8	5	2
Females	8	3	2
New Castle	7	4	2
Males	7	5	2
Females	8	4	2
Kent	8	4	2
Males	8	4	2
Females	8	4	1
Sussex	12	8	4
Males	13	8	5
Females	11	8	3

Figure 107: Other illegal drug use, 8th graders, 2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

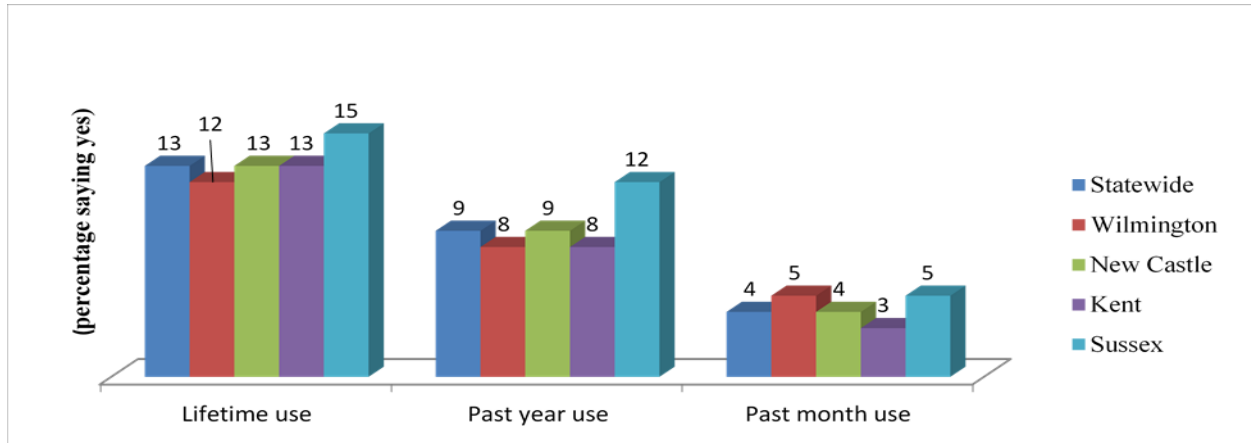
^a "Other illegal drugs" includes ecstasy, hallucinogens, street uppers, inhalants, cocaine, crack, heroin and synthetic marijuana used to get high.

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

Other Illegal Drug ^a Use among Delaware 11th Graders (in percentages)



	Lifetime Use	Past-Year Use	Past-Month Use
Statewide	13	9	4
Males	14	9	4
Females	13	10	4
Wilmington	12	8	5
Males	15	10	7
Females	9	5	3
New Castle	13	9	4
Males	13	8	4
Females	14	10	5
Kent	13	8	3
Males	14	7	4
Females	12	9	2
Sussex	15	12	5
Males	16	11	5
Females	14	12	5

Figure 108: Other illegal drug use, 11th graders, 2018

Note: ^a

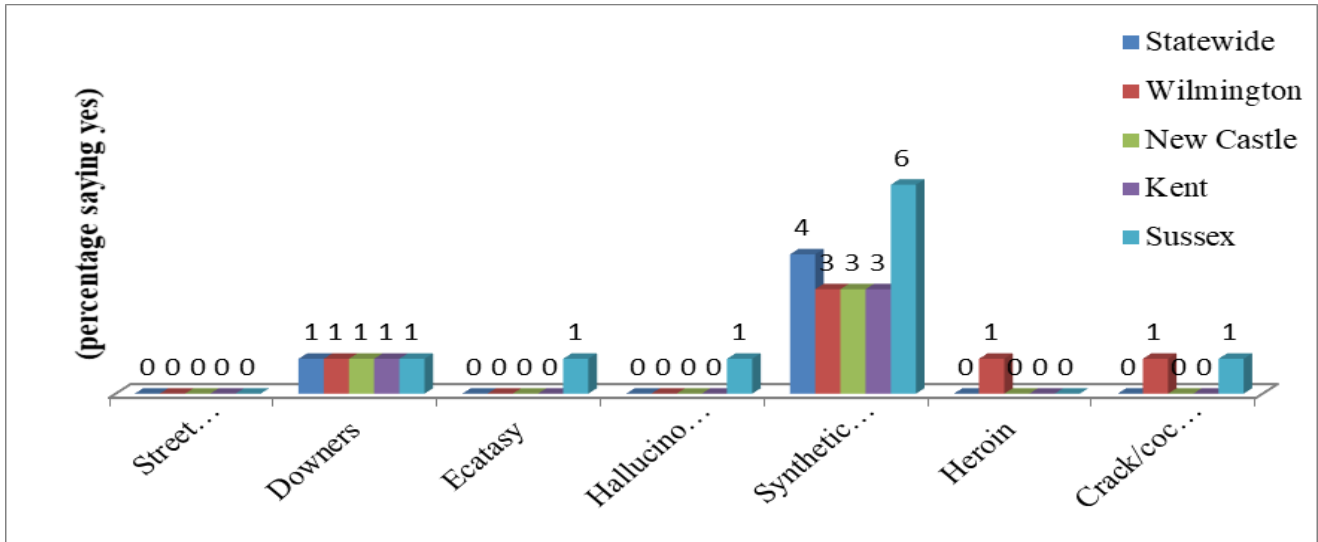
“Other illegal drugs” includes ecstasy, hallucinogens, street uppers, inhalants, cocaine, crack, heroin, and synthetic marijuana used to get high.

Source: [“2018 Delaware School Survey.” Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey

Past-Year Use of Other Illegal Drugs among Delaware 8th Graders (in percentages)



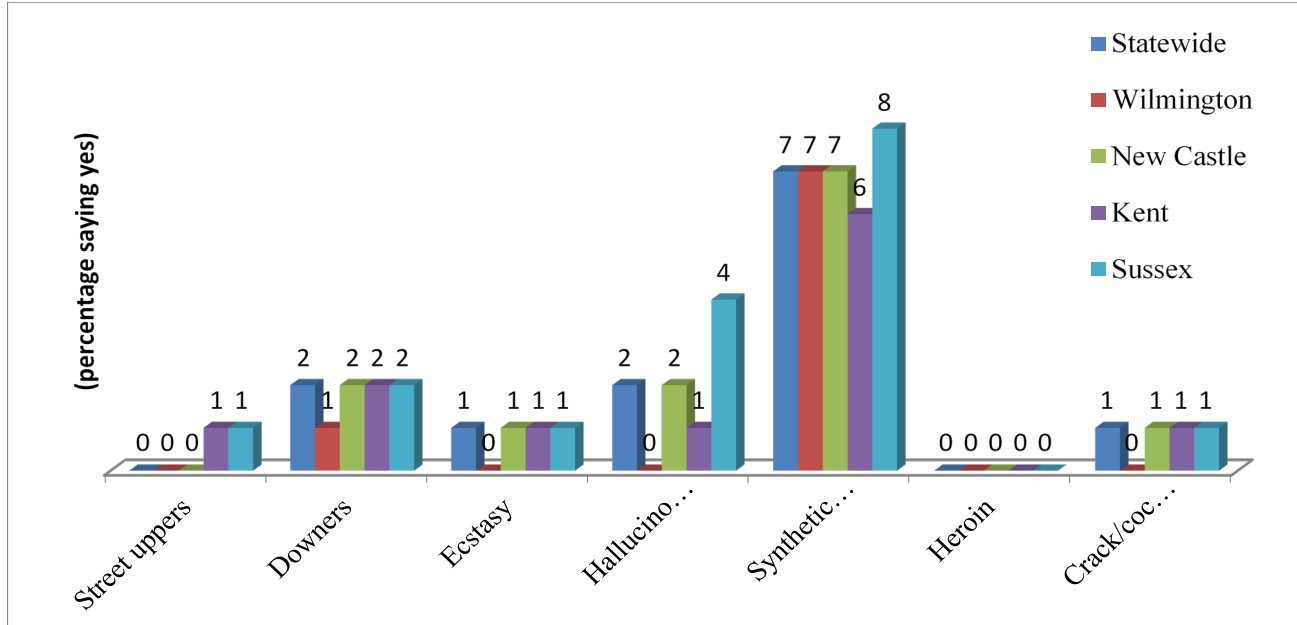
	Street Uppers	Downers	Ecstasy	Hallucinogen	Synthetic Marijuana	Heroin	Crack/Cocaine
Statewide	0	1	0	0	4	0	0
Males	0	1	0	1	4	0	0
Females	0	1	0	0	3	0	0
Wilmington	0	1	0	0	3	1	1
Males	1	2	1	1	5	2	2
Females	0	0	0	0	2	0	0
New Castle	0	1	0	0	3	0	0
Males	0	1	0	0	3	0	0
Females	0	0	0	0	3	0	0
Kent	0	1	0	0	3	0	0
Males	0	0	0	0	3	0	0
Females	0	1	0	0	3	0	0
Sussex	0	1	1	1	6	0	1
Males	0	1	0	1	7	0	1
Females	0	2	1	1	5	0	1

Figure 109: Other illegal drugs, past year, 8th graders, 2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey
Past-Year Use of Other Illegal Substances
among Delaware 11th Graders
(in percentages)



	Street Uppers	Downers	Ecstasy	Hallucinogen	Synthetic marijuana	Heroin	Crack/Cocaine
Statewide	0	2	1	2	7	0	1
Males	1	2	1	2	6	0	1
Females	0	1	1	2	7	0	1
Wilmington	0	1	0	0	7	0	0
Males	0	1	1	1	9	0	0
Females	0	1	0	0	5	1	1
New Castle	0	2	1	2	7	0	1
Males	0	2	1	2	6	0	2
Females	0	1	1	2	8	0	1
Kent	1	2	1	1	6	0	1
Males	1	3	1	1	6	0	1
Females	0	1	1	1	7	0	0
Sussex	1	2	1	4	8	0	1
Males	1	2	1	4	7	0	1
Females	0	1	0	3	8	0	1

Figure 110: Other illegal substances, past year, 11th graders, 2018

Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey
Trends in Monthly Use of Other Illegal Drugs
among Delaware 8th Graders, 1989-2018
(in percentages)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Inhalants^a	2	2	2	1	2	2	9	6	9	8	5	6	5	5	6	6	2	2	2	2	1	2	1	1	1	1	1	0	1	0
Hallucinogens	1	0	1	1	1	1	2	2	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diet Pills	4	2	2	2	2	2	2	1	2	2	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Cocaine	1	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heroin	na	na	na	na	na	na	na	na	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Designer Drugs /Ecstasy^b	na	na	na	na	na	na	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 111: Other illegal drugs, monthly use, 8th graders, 1989-2018

Notes:

'na' indicates question was not asked that year.

^a Inhalant question altered in 2005 and 2006.

^b From 1989-1999, the question asked about "designer drugs (XTC, Special K & Roche)"; from 2000 on the question asked explicitly about ecstasy.

Source: Data Base/DiagnosticsPlus (1989-1993); Department of Public Instruction (1994);

["Delaware School Survey, 1995-present." Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey
Trends in Monthly Use of Other Illegal Drugs
among Delaware 11th Graders, 1989-Present
(in percentages)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Inhalants^a	3	2	1	2	1	4	2	3	3	2	3	3	3	2	2	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0
Hallucino- gens	2	1	3	2	3	4	3	3	3	3	2	2	2	1	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	0
Diet Pills	3	2	3	3	3	4	2	2	4	3	2	3	2	1	2	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0
Cocaine	3	2	1	1	0	1	1	2	2	2	1	1	1	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Heroin	1	0	1	0	0	na	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Designer Drugs/ Ecstasy^b	na	na	na	na	na	na	0	1	1	1	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 112: Other illegal drugs, monthly use, 11th graders, 1989-2018

Notes:

^a Inhalant question altered in 2005 and 2006.

^b Through 1999, the question asked about “designer drugs (XTC, Special K & Roche)”; from 2000 on the question asked explicitly about ecstasy.

‘na’ indicates question was not asked that year.

Source: Data Base/DiagnosticsPlus (1989-1993); Department of Public Instruction (1994)

[“Delaware School Survey, 1995-present.” Center for Drug and Health Studies, University of Delaware.](#)

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National Survey of Drug Use and Health
Illicit Drug Use Other than Marijuana in Past Month, by Age Group and State
2015-2016 and 2016-2017
(in percentages)^a

State	12 or Older			AGE GROUP (Years)								
	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b
Total U.S.	3.42	3.38	.478	2.71	2.43	.012	7.32	7.07	.228	2.86	2.88	.776
Northeast	3.46	3.41	.666	2.25	2.05	.200	7.73	7.74	.978	2.90	2.86	.792
Delaware	3.47	3.41	.848	2.48	2.31	.671	7.22	6.61	.432	3.00	3.05	.869
Maryland	3.31	3.35	.876	2.92	2.54	.286	7.22	8.06	.279	2.75	2.72	.939
New Jersey	2.91	2.74	.394	2.14	1.92	.487	7.48	6.68	.242	2.32	2.25	.763
Pennsylvania	3.59	3.36	.259	2.20	2.02	.489	7.61	7.79	.768	3.11	2.81	.224

Figure 113: Illicit drug use other than marijuana, past month, by age group and state

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b p value: Bayes posterior probability of no change.

“-” p value not available for this data

Source: [“National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.](#)

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National Survey of Drug Use and Health
Illicit Drug Use in Past Month, by Age Group and State:
2015-2016 and 2016-2017
(in percentages)^a

State	AGE GROUP (Years)											
	12 or Older			12-17			18-25			26 or Older		
	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b	2015-2016	2016-2017	p value ^b
Total U.S.	10.36	10.90	.000	8.34	7.88	.014	22.75	23.69	.003	8.54	9.18	.000
Northeast	11.20	11.55	.140	8.45	8.06	.280	25.93	27.12	.061	9.11	9.45	.252
Delaware	10.25	11.71	.011	9.50	9.71	.808	25.33	26.00	.677	8.01	9.80	.007
Maryland	11.52	11.88	.519	9.54	9.05	.587	29.44	28.26	.472	8.95	9.70	.255
New Jersey	8.13	8.45	.451	6.90	6.37	.442	23.31	25.09	.203	6.01	6.22	.661
Pennsylvania	10.51	10.15	.402	7.60	6.73	.112	22.97	23.74	.470	8.87	8.42	.381

Figure 114: Illicit drug use, past month, by age and state

Notes:

^a Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

^b p value: Bayes posterior probability of no change.

“ - ” p value not available for this data

Source: [“National Survey on Drug Use and Health: Comparison of 2015-2016 and 2016-2017 Population Percentages.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.](#)

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Delaware TEDS Admissions, 2018

	All	Alcohol with secondary	Alcohol with drug	Heroin	opiates (smoked)	route	Marijuana	Amphetamines	stimulants	Tranquilizers	Sedatives	Hallucinogens	PCP	Inhalants	Other/Unknown	
DELAWARE substances	only															
Total (Number)	17,387	1,578	1,223	8,365	1,066	541	305	1,030	93	12	79	10	43	40	5	2,997
Total	100.0	9.1	7.0	48.1	6.1	3.1	1.8	5.9	0.5	0.1	0.5	0.1	0.2	0.2	0.0	17.2
GENDER substances	only															
Male	64.8	73.4	73.9	62.1	53.9	53.2	61.0	76.7	67.7	83.3	45.6	60.0	69.8	55.0	60.0	66.9
Female	35.1	26.6	26.0	37.8	46.1	46.8	39.0	23.3	32.3	16.7	54.4	40.0	30.2	45.0	40.0	33.0
Unknown	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
AGE substances	only															
12-17 years	0.9	0.1	0.3	0.0	0.0	0.0	0.0	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
18-20 years	2.8	0.1	1.9	1.4	0.9	2.2	1.3	12.3	0.0	0.0	3.8	0.0	4.7	0.0	0.0	6.3
21-25 years	12.5	3.7	6.3	13.6	10.4	4.1	10.5	22.4	8.6	0.0	13.9	30.0	11.6	5.0	0.0	15.9
26-30 years	22.3	8.7	13.3	27.5	22.3	12.9	19.7	19.1	16.1	58.3	19.0	50.0	34.9	40.0	20.0	21.1
31-35 years	17.0	12.1	15.4	20.0	18.8	11.1	18.0	11.7	25.8	8.3	15.2	0.0	14.0	30.0	60.0	13.5
36-40 years	13.7	14.0	12.0	14.7	14.6	12.9	14.8	10.1	16.1	8.3	32.9	10.0	16.3	15.0	0.0	11.7
41-45 years	8.9	11.7	12.7	8.1	10.5	10.5	8.9	5.2	12.9	8.3	2.5	0.0	11.6	5.0	0.0	8.3
46-50 years	8.3	13.3	14.3	7.1	7.2	16.3	13.1	3.0	11.8	0.0	7.6	0.0	4.7	0.0	0.0	7.2
51-55 years	6.7	14.7	15.0	3.9	7.2	17.0	8.2	3.2	0.0	0.0	2.5	10.0	2.3	0.0	0.0	6.5
56-60 years	4.1	13.3	5.6	2.1	3.9	8.1	4.3	1.0	7.5	16.7	0.0	0.0	0.0	0.0	20.0	4.5
61-65 years	2.0	6.0	2.3	1.1	2.4	3.9	1.3	0.5	0.0	0.0	1.3	0.0	0.0	2.5	0.0	2.5
66 years and over	0.8	2.2	0.9	0.6	1.6	0.6	0.0	0.0	1.1	0.0	1.3	0.0	0.0	0.0	0.0	1.0
Unknown	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
RACE substances	only															
White	69.2	74.7	61.5	81.6	72.4	43.6	54.4	34.9	89.2	91.7	83.5	50.0	60.5	10.0	100.0	51.2
Black or African-American	25.5	20.3	31.9	14.7	22.7	52.1	34.1	54.2	6.5	8.3	8.9	50.0	37.2	82.5	0.0	41.3
American Indian or Alaska Native	0.7	0.3	1.1	0.6	0.5	0.7	1.6	1.5	1.1	0.0	1.3	0.0	0.0	2.5	0.0	0.7
Asian or Native Hawaiian or Other Pacific Islander	1.8	2.0	1.5	1.8	1.4	1.1	2.0	2.6	1.1	0.0	2.5	0.0	0.0	2.5	0.0	1.6
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown	2.9	2.7	4.1	1.3	3.0	2.4	7.9	6.9	2.2	0.0	3.8	0.0	2.3	2.5	0.0	5.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ETHNICITY substances	only															
Hispanic or Latino	5.2	5.3	4.7	4.9	3.8	3.3	4.6	10.5	1.1	0.0	8.9	0.0	4.7	5.0	40.0	4.9
Not Hispanic or Latino	93.3	94.0	93.9	94.5	95.1	95.0	93.1	87.9	96.8	100.0	91.1	90.0	90.7	92.5	60.0	90.7
Unknown	1.5	0.8	1.5	0.6	1.1	1.7	2.3	1.7	2.2	0.0	0.0	10.0	4.7	2.5	0.0	4.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Based on administrative data reported by states to TEDS through July 1, 2019.

Figure 115: DE TEDS by primary substance use, gender, age, race, ethnicity, 2018

Source: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Based on administrative data reported by states to TEDS through July 1, 2019.



Delaware Health and Social Services - Division of Substance Abuse and Mental Health
Division funded adult admissions by fiscal year and client demographics - State Fiscal Years 2003 - 2016

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Primary Drug at Admission														
Alcohol	2,706	2,685	2,336	2,142	2,267	2,107	2,127	1,924	1,729	1,579	1,513	1,105	1,093	729
Heroin	2,124	2,390	2,234	2,113	2,080	2,120	1,965	1,529	1,263	1,845	2,750	3,182	3,723	3,016
Cocaine	510	527	533	481	643	548	429	301	247	262	180	146	107	102
Crack Cocaine	1,000	1,017	943	908	831	680	457	284	183	177	126	125	143	71
Marijuana/Hashish	1,631	1,666	1,801	1,875	1,933	1,613	1,806	1,539	1,348	1,161	1,055	705	873	470
Amphetamine	20	21	18	43	27	28	12	13	10	20	12	22	30	8
Other Opiates & Synthetics	168	252	286	433	736	927	1,400	1,359	1,643	1,793	1,261	766	643	476
Other/Missing/Unknown/None	164	324	329	463	319	396	394	426	439	659	693	1,179	3,265	4,526
Age														
16 - 17	6	0	0	13	0	0	0	178	184					
18 - 20	680	722	952	858	1,075	673	985	1,021	1,086	720	602	561	664	435
21 - 24	1,266	1,375	1,342	1,340	1,523	1,329	1,405	1,172	1,180	1,282	1,332	1,302	1,586	1,424
25 - 34	2,431	2,663	2,528	2,560	2,564	2,693	2,756	2,269	2,076	2,749	2,934	2,718	4,097	3,940
35 - 44	2,632	2,685	2,370	2,227	2,215	2,056	1,849	1,467	1,219	1,328	1,400	1,411	1,871	1,958
45 - 54	1,064	1,127	1,034	1,196	1,003	1,362	1,229	995	859	1,042	937	874	1,200	1,138
55 - 64	196	245	193	231	191	253	305	234	213	299	319	296	384	426
65+	35	45	38	33	31	49	43	32	39	54	65	62	56	69
Missing/Unknown	13	20	23	0	234	4	18	7	6	22	1	6	19	8
Gender														
Male	6,425	6,822	6,584	6,237	6,580	6,129	6,227	5,235	4,790	5,161	5,131	4,875	6,933	6,545
Female	1,896	2,055	1,892	2,214	2,255	2,290	2,363	2,139	2,069	2,322	2,450	2,317	2,927	2,840
Missing/Unknown	2	5	4	7	1			1	3	13	9	38	17	13
Race														
White, not of Hispanic Origin	5,071	5,453	5,314	5,420	5,987	5,743	5,967	5,178	4,940	5,453	5,785	5,621	7,016	6,397
Black, not of Hispanic Origin	3,028	3,057	2,736	2,628	2,516	2,390	2,328	1,978	1,677	1,671	1,473	1,286	2,404	2,457
Asian or Pacific Islander	86	29	24	25	22	15	15	19	31	30	39	21	33	33
Native American	46	66	174	204	94	38	62	33	30	74	69	57	103	157
American Indian/Alaskan Nat.	-	0	52	50	48	53	70	38	40	85	65	79	67	63
Other/Multi-racial, unspecified	43	242	58	88	134	141	110	102	89	73	85	52	79	92
Missing/Unknown	49	35	122	43	35	39	38	27	55	110	74	114	175	199
Hispanic														
Of Hispanic Descent	392	448	437	384	476	417	464	343	294	354	367	321	525	447
Not of Hispanic Descent	7,894	8,393	8,005	8,035	8,329	7,982	8,093	6,997	6,464	6,986	7,110	6,708	8,860	8,299
Missing/Unknown	37	41	38	39	31	20	33	35	104	156	113	201	492	652
Total	8,323	8,882	8,480	8,458	8,836	8,419	8,590	7,375	6,862	7,496	7,590	7,230	9,877	9,398

Footnotes:

1) The total for amphetamine includes methamphetamine.

Figure 116: Adult treatment admissions by fiscal year and client demographics, 2003-2016

Source: Delaware Department of Health and Social Services

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National Poison Data System

Number of Alcohol and Prescription Drug Suspected Poisoning Calls in Delaware

Ages 12-24, 2012-2017

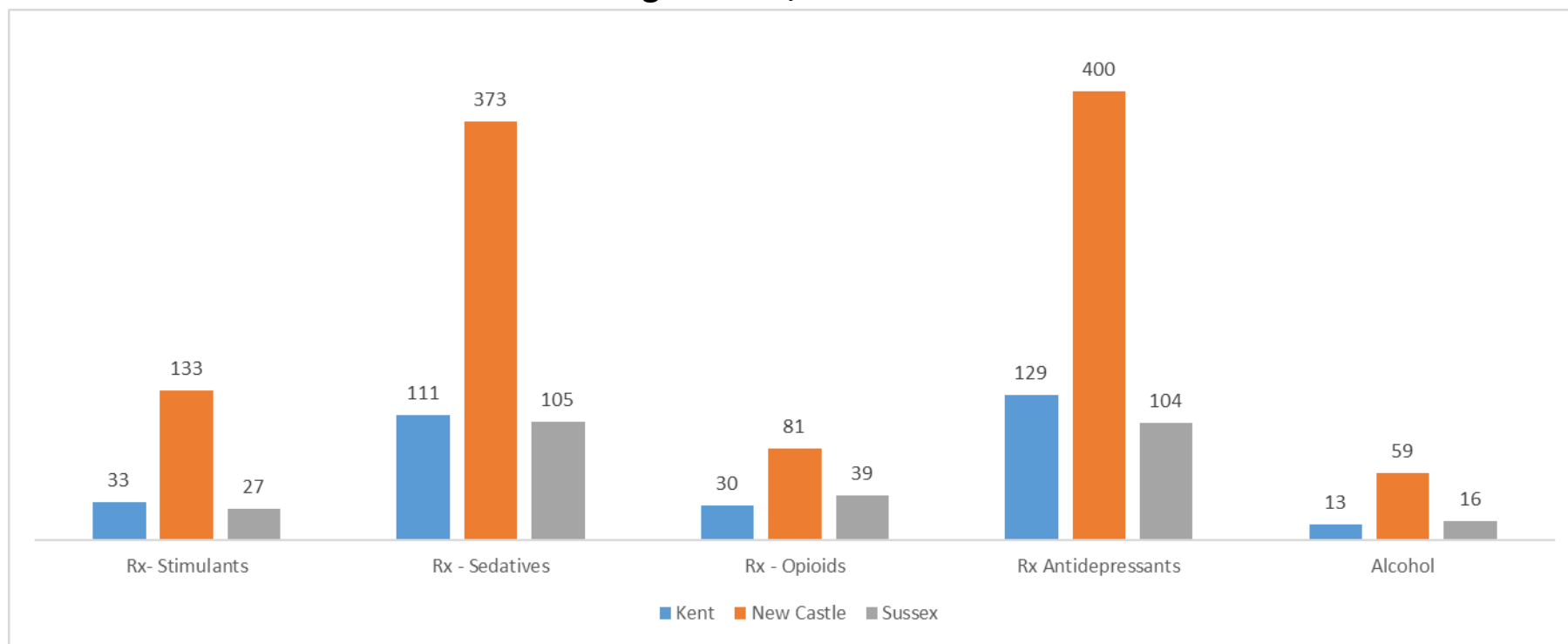


Figure 117: Number of suspected alcohol/Rx drug poisoning calls, 12-24, 2012-2017
Source: National Poison Data System

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Drug Overdose Deaths in Delaware for 2014-2018 by Selected Demographic Characteristics

	2014 N=225	2015 N=234	2016 N=306	2017 N=345	2018 N=400
LOCATION:					
NEW CASTLE	56%	59%	44%	59%	55%
KENT	18%	16%	18%	11%	13%
SUSSEX	18%	13%	19%	15%	17%
OTHER^A	8%	7%	18%	15%	15%
GENDER:					
MALE	64%	61%	69%	69%	71%
FEMALE	36%	39%	31%	31%	29%
RACE:					
WHITE	85%	83%	84%	75%	81%
BLACK	12%	13%	14%	19%	15%
HISPANIC	3%	3%	2%	5%	4%
OTHER	-	-	-	1%	-
AGE:					
39 OR YOUNGER	45%	48%	44%	50%	48%
40-50	28%	21%	24%	23%	25%
51 AND OLDER	27%	30%	32%	27%	27%

Figure 118: Drug overdose deaths in Del. by demographic, 2014-2018

Notes:

^a County determined by decedents' home address at time of death. "Other" are those with addresses outside of Delaware

"-" means less than 1%

Source: Office of the Chief Medical Examiner, Division of Forensic Medicine, Department of Safety and Homeland Security, State of Delaware

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Overdose Death Rate in 2016 by Census Tract in Delaware

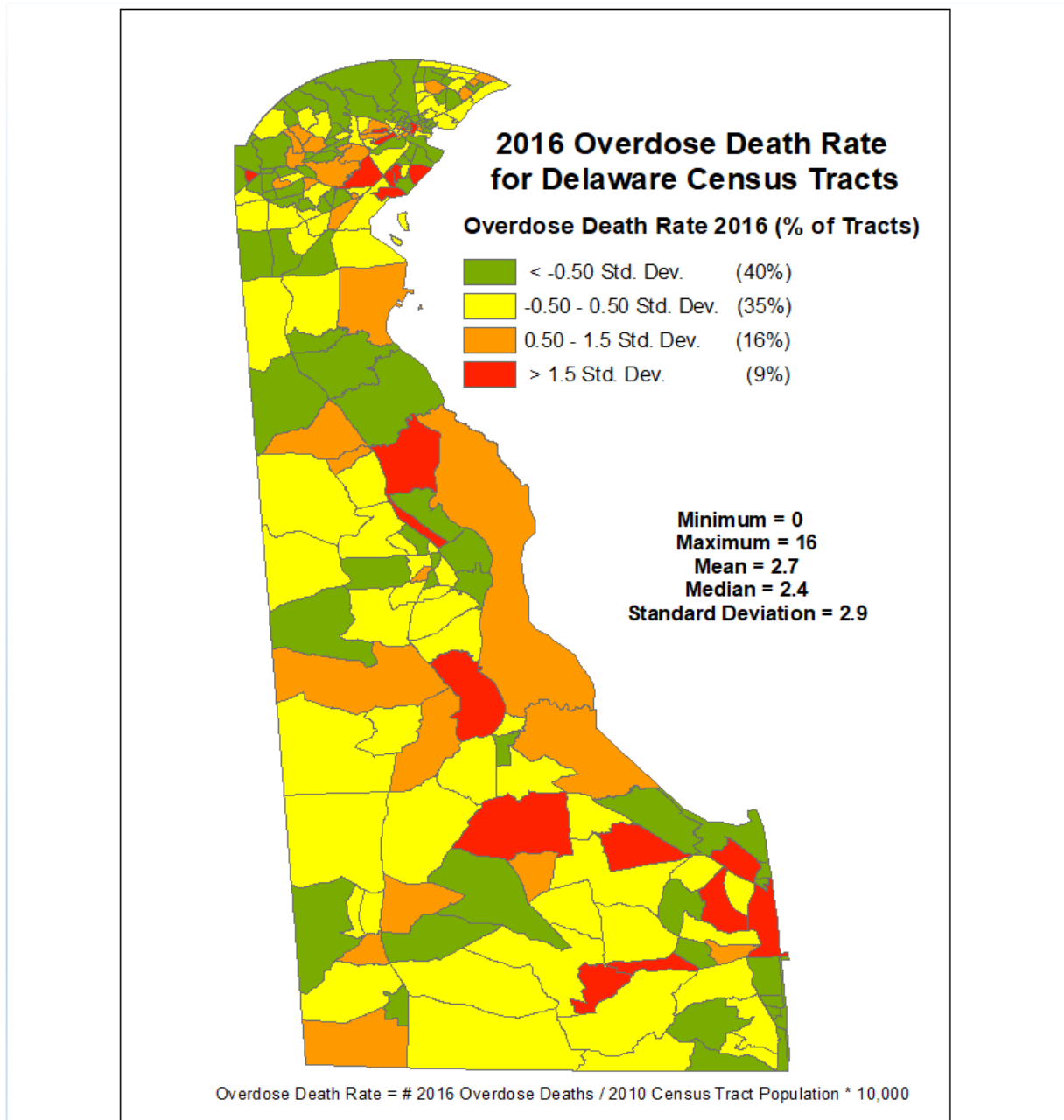


Figure 119: Map of drug overdose deaths in Del. by census tracts, 2016

Note: A map with post-2016 data is unavailable at this time.

Source: Office of the Chief Medical Examiner, Division of Forensic Medicine, Department of Safety and Homeland Security, State of Delaware Office of Controlled Substances, Division of Professional Regulation DE.

Funding for this project has been provided by the Department for Health and Social Services, Division of Substance Abuse and Mental Health - State of Delaware through a grant from the Substance Abuse and Mental Health Services Administration (SAMHSA, SP020704).

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Prescription Monitoring Program Outcome Data Trends in Opioid Prescriptions among Delaware Residents

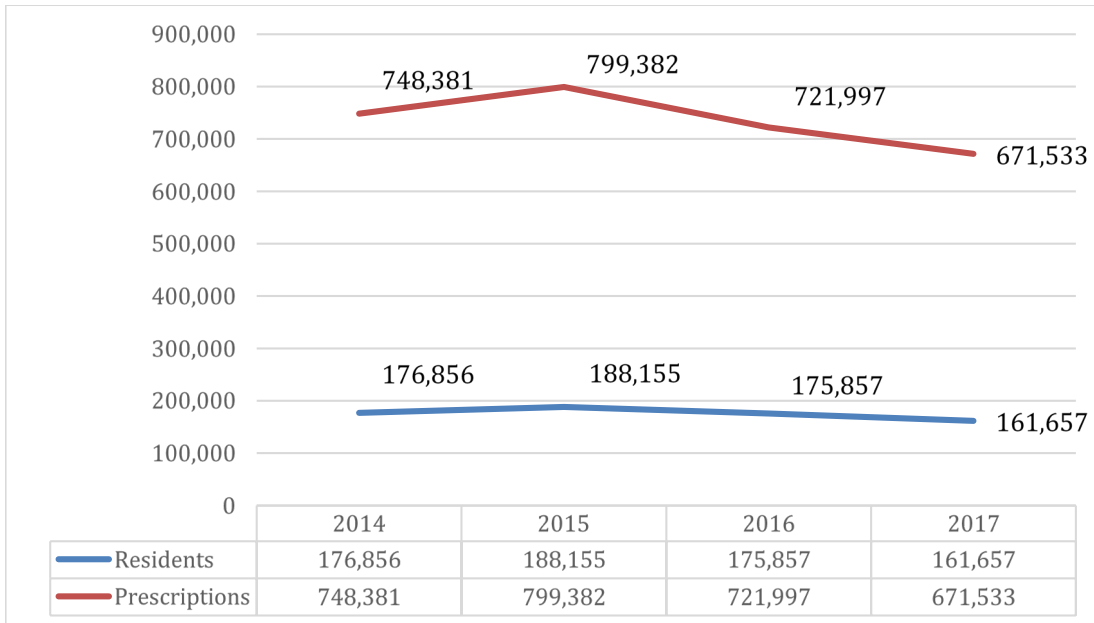


Figure 120: Trends in unique residents with opioid Rx vs. overall # of opioid Rx, 2014-2017

Number of Multiple Provider Episodes

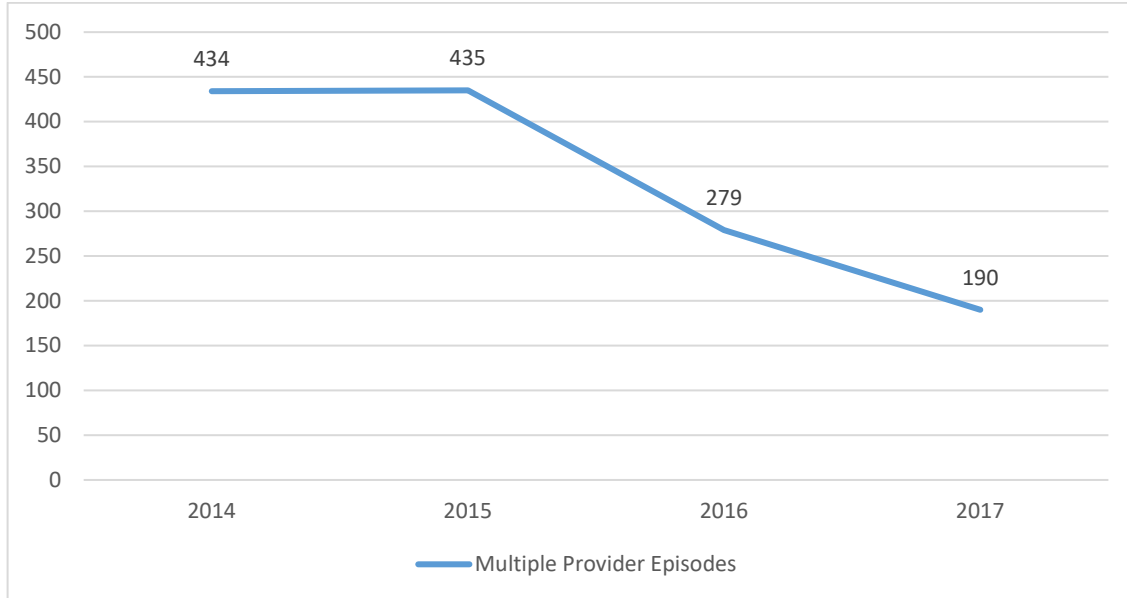


Figure 121: Trends in multiple provider episodes*, 2014-2017

Note: "Multiple provider episode" denotes unique patients who have filled prescriptions at 5 or more pharmacies and/or from 5 or more prescribers in a 6-month period.

Source: Prescription Drug Monitoring Program (Years 2014-2017). Delaware Division of Public Health.

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Prescription Monitoring Program Outcomes Data Rate of Prescribers Registered with PMP by County

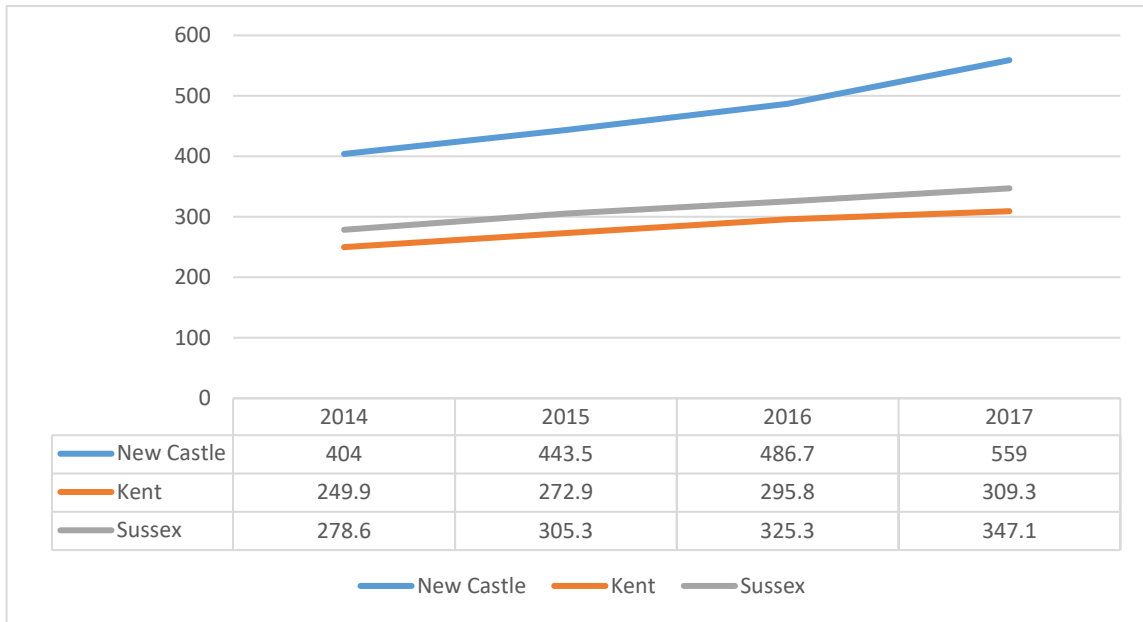


Figure 122: Trends in rate of prescribers registered with PMP by county, 2014-2017

Note: ^a The rate of prescribers per county calculates how many prescribers are registered with the PMP per 100,000 residents.

Source: Prescription Drug Monitoring Program (Years 2014-2017). Delaware Division of Public Health.

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Chapter 7 Substance-Exposed Infants

National Overview

Infants who are born exposed to opioids and other illicit substances (substance-exposed infants, or SEI) are at increased risk for a host of challenges to healthy development. In addition to physical health risks related to direct substance exposure, continued substance use by the parent or caregiver may likely contribute to an unstable home life for the infant. Substance use is often identified among child abuse and neglect cases within child welfare systems (Child Welfare Information Gateway, 2014). Such traumas, in turn, are associated with increases in risk behaviors and negative health outcomes throughout the child's lifespan.

Delaware Overview

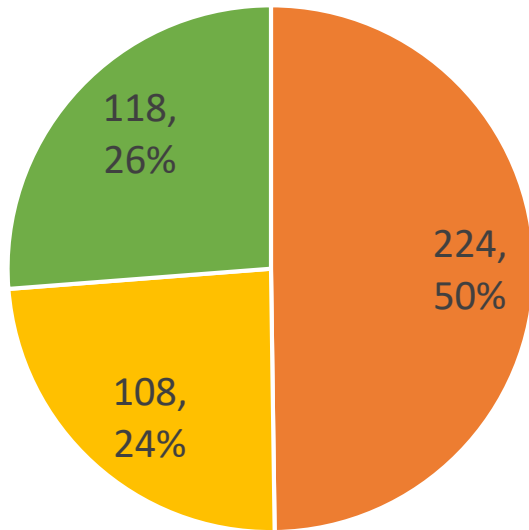
Just as the rates of SEI births are increasing throughout the United States, more cases are coming to light in Delaware. In 2017, 450 notifications of prenatally exposed infants were reported to the Delaware Division of Family Services (Delaware Office of the Child Advocate, 2018). The number of SEI notifications increased in 2018 to 612 ([State of Delaware Child Death Review Commission](#) [CDRC], 2019). While marijuana is the most common substance among infants who have been exposed to a single substance, opioids are the most common identified substance among cases where the infant is exposed to two or more substances.

The Office of the Child Advocate has been tracking notifications of SEI and examining the characteristics associated with these births. Among the more dramatic findings is that 40% of the mothers who gave birth to prenatally exposed infants reported a history of involvement with the Delaware Division of Family Services as youths themselves. Early intervention and family support are critical to ameliorating negative impacts.

Recent developments at the state level hold promise for more effectively dealing with this issue. In October 2016, Delaware received a Substance-Exposed Infants In-Depth Technical Assistance (SEI-IDTA) grant from the National Center on Substance Abuse and Child Welfare. Governor Carney's "Action Plan for Delaware," published in January 2017, included the reduction in number of children born exposed to substances as one of his administration's primary policy objectives (Transition Team Report, 2017). In Spring 2018, the Delaware General Assembly passed "Aiden's Law," which requires healthcare professionals to notify the Division of Family Services of substance-exposed births and to provide for a collaborative, coordinated, and multidisciplinary plan of safe care (POSC) for the infant and their affected family or caregivers. As of August 2018, all six Delaware birthing hospitals had implemented POSCs (CDRC, 2019).

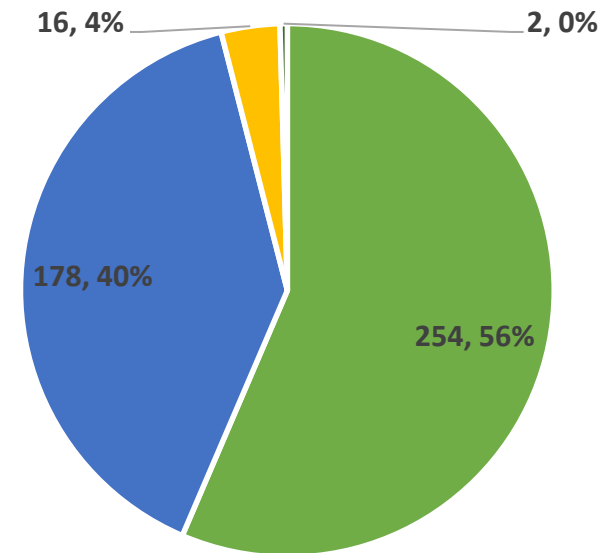
2017 Substance-Exposed Infants Notifications to Division of Family Services = 450

Notifications by County



■ NCC ■ KC ■ SC

Maternal Race/Ethnicity



■ White ■ Black ■ Hispanic ■ Unknown

Figure 123: Substance-exposed infants by county and by maternal race/ethnicity, 2017

Source: [Delaware, Investigation Coordinator Data, 2017](#)

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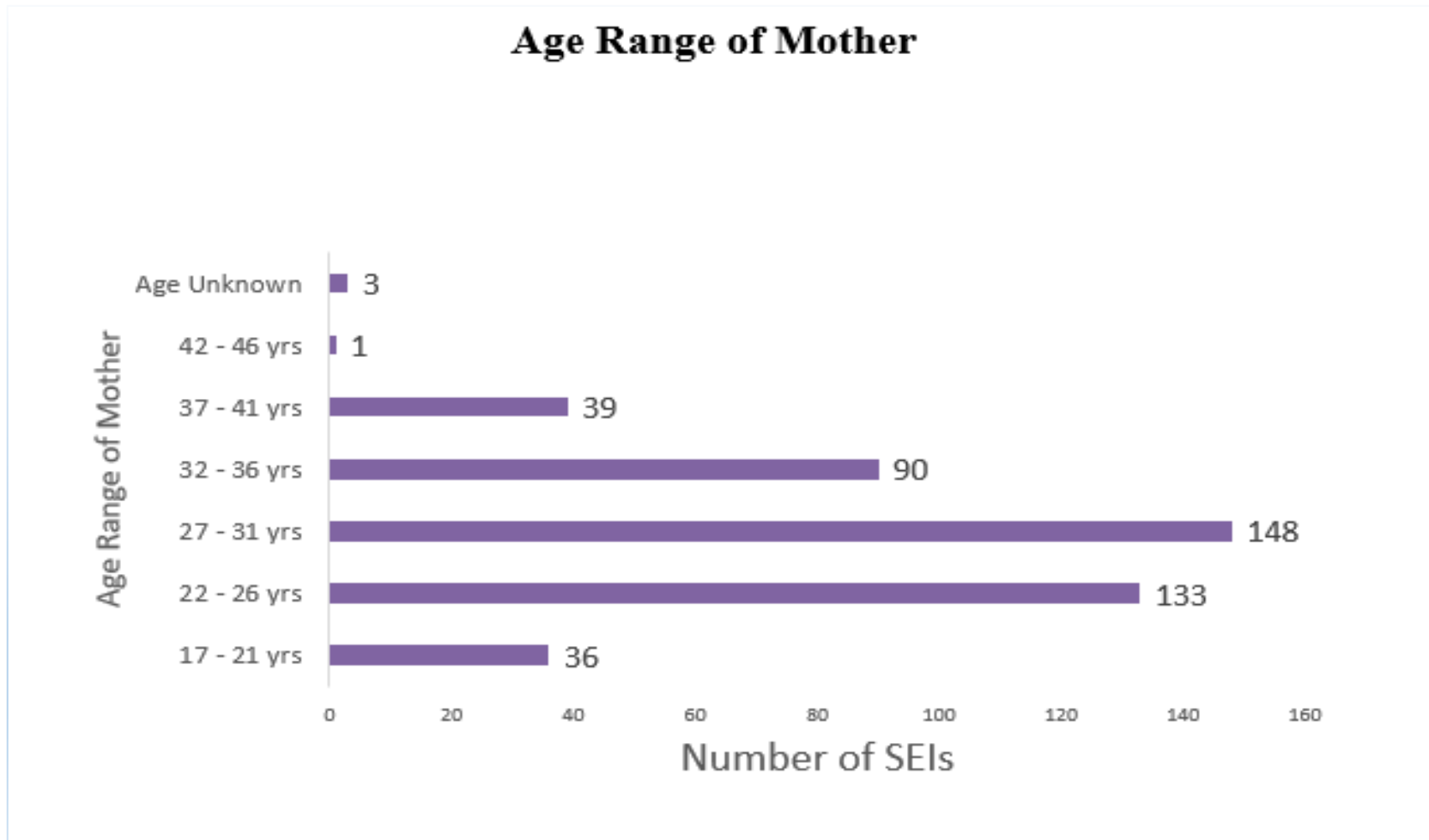
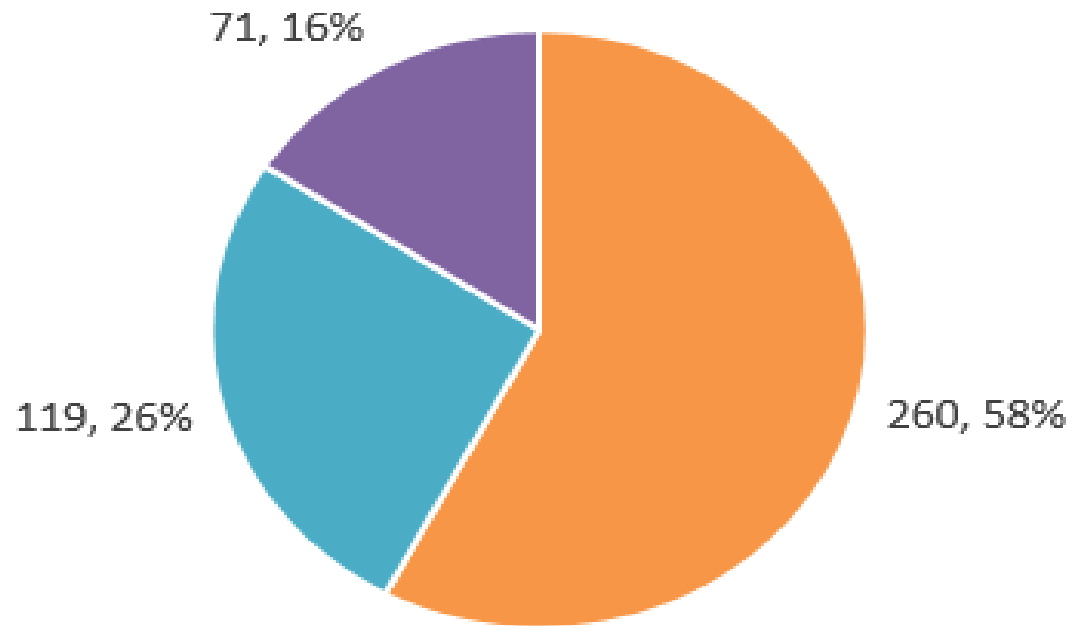


Figure 124: Substance-exposed infants by maternal age, 2017

Source: [Delaware, Investigation Coordinator Data, 2017](#)

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Extent of Substance Exposure



■ 1 Substance ■ 2 Substances ■ 3 or More

Figure 125: Substance exposure extent among substance-exposed infants

Source: [Delaware, Investigation Coordinator Data, 2017](#)

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Most Prevalent Substance in Single Substance Exposure (260 cases)

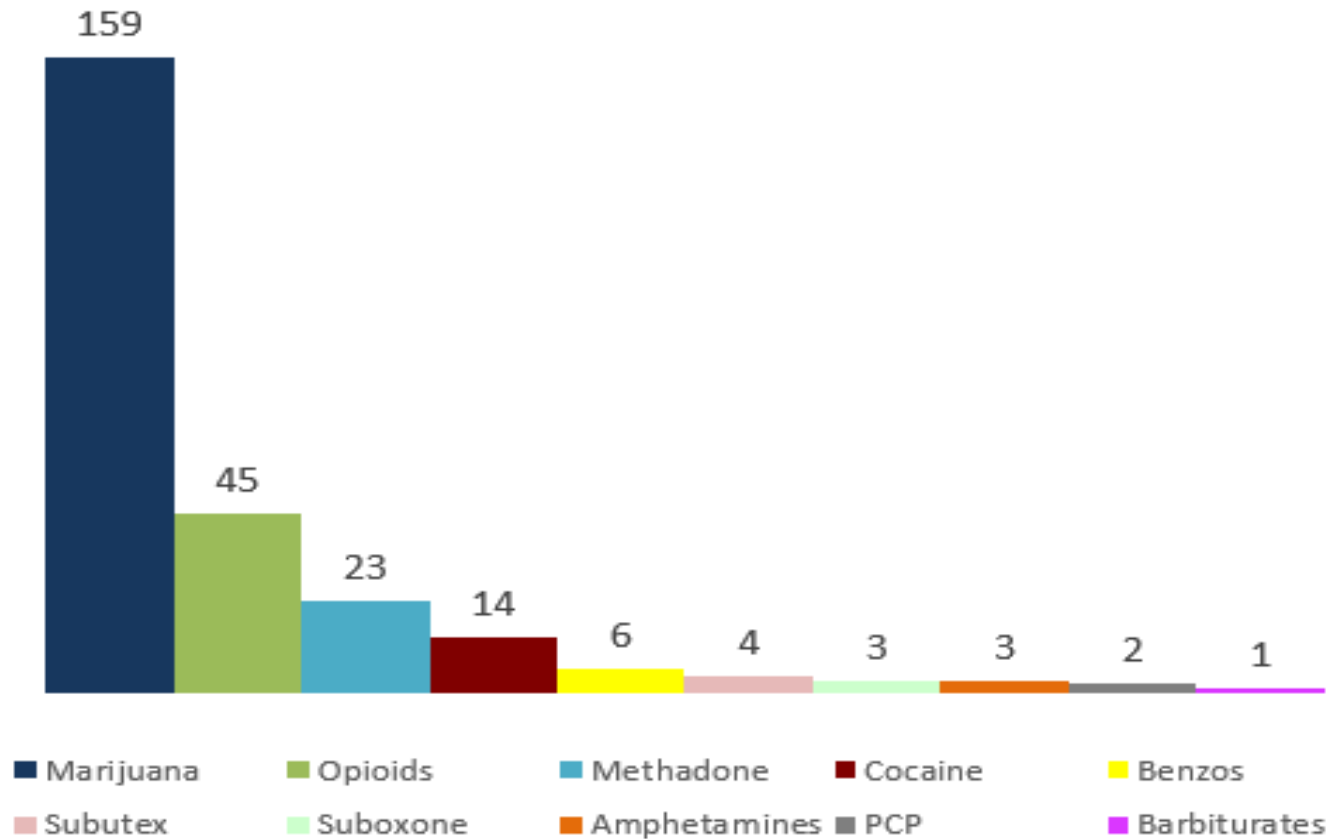


Figure 126: Most prevalent substance in infants exposed to 1 substance

Source: [Delaware, Investigation Coordinator Data, 2017](#)

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Most Prevalent Substances in Two Substance Exposure (119 cases)

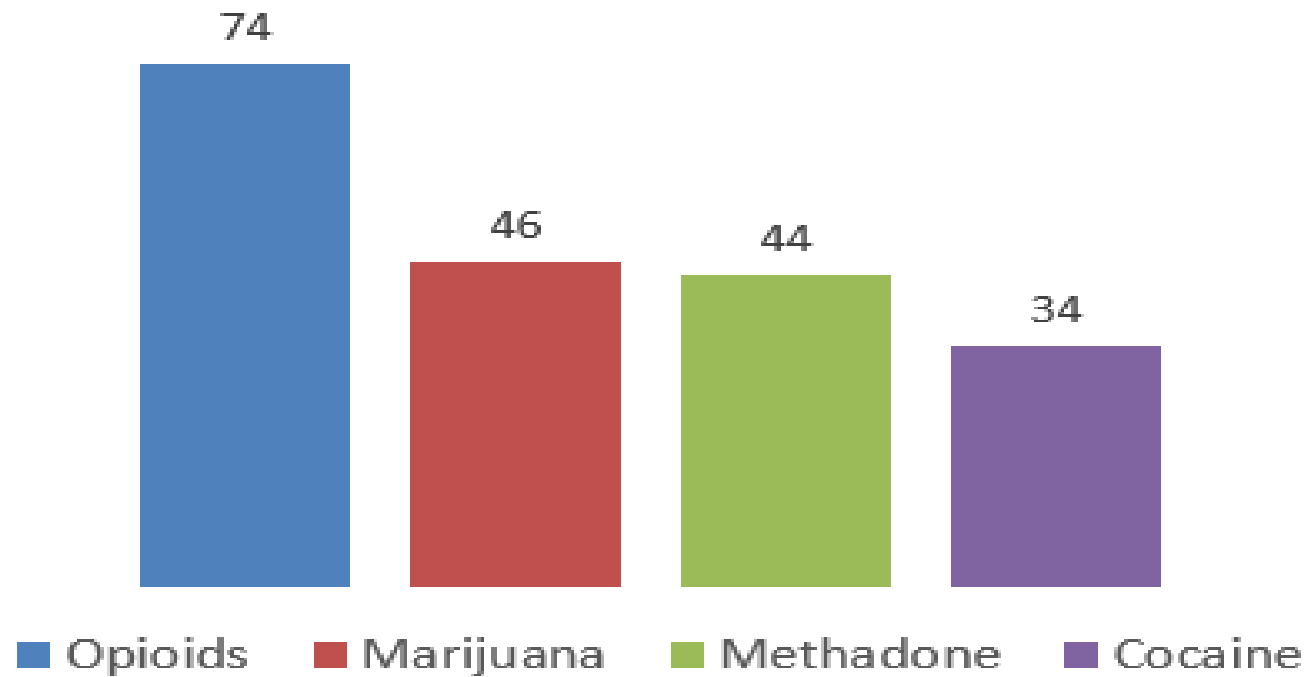


Figure 127: Most prevalent substances in infants exposed to 2 substances

Source: [Delaware, Investigation Coordinator Data, 2017](#)

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Most Prevalent Substances in Poly (3 or More) Substance Exposure (71 cases)

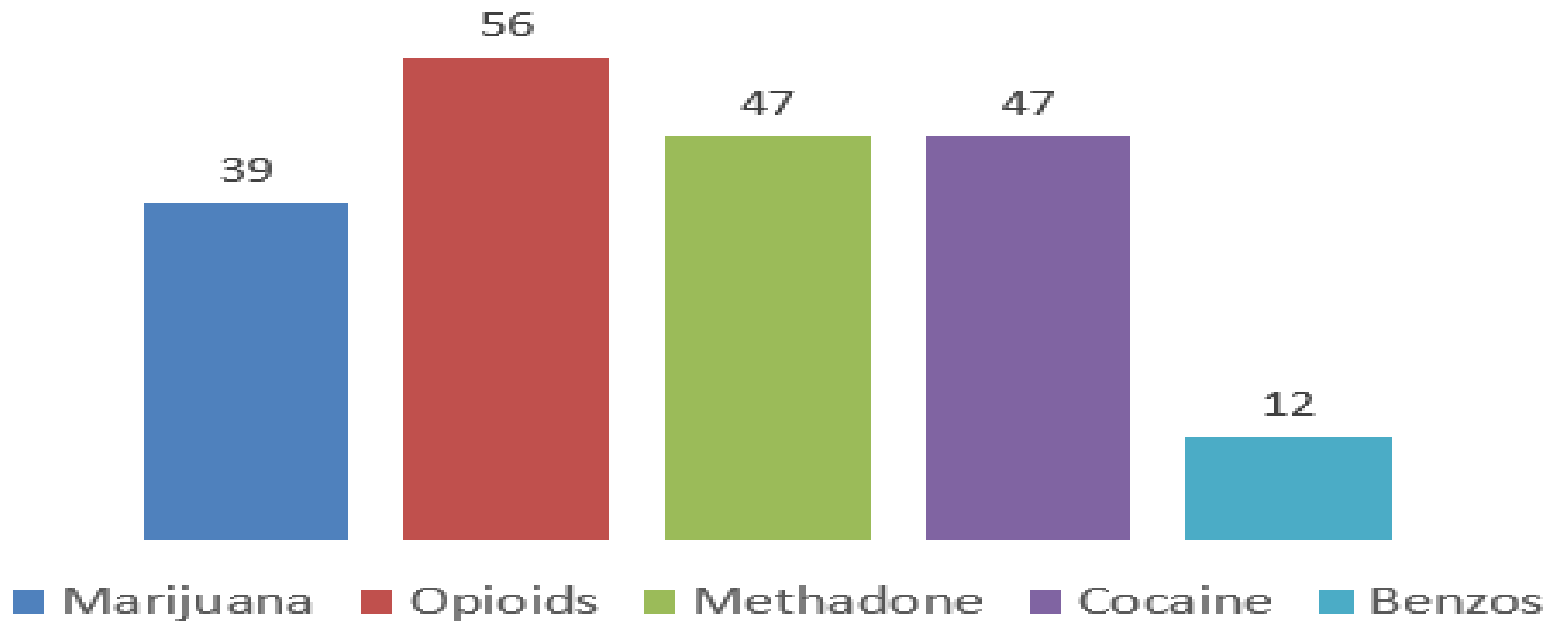


Figure 128: Most prevalent substances in infants exposed to 3+ substances

Source: [Delaware, Investigation Coordinator Data, 2017](#)

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Chapter 8 Gambling

National Overview

Gambling is defined as risking money, or something else of value, on the outcome of an event that is at least partially determined by chance (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). While gambling can provide entertainment and function as a pleasurable pastime for many individuals, problem gambling and gambling disorders can present numerous challenges and negative consequences for others. A gambling disorder requires at least four of the following nine criteria: preoccupation with gambling; inability to cut back or control gambling; irritability or restlessness when attempting to cut back or control gambling; risking more money to achieve the desired level of excitement; gambling to cope with emotional problems; “chasing one’s losses” by gambling even more after losing; lying about gambling; jeopardizing relationships or employment due to gambling; and relying on others to solve financial issues caused by gambling (American Psychiatric Association, 2013).

Gambling disorders also correlate with other demographic and behavioral health factors, suggesting that certain populations are more at risk for developing gambling problems. According to a meta-analysis of gambling studies in the United States and Canada, researchers from Harvard reported that disordered gambling was most prevalent among young people rather than the general adult population, males rather than females, and among those with concurrent psychiatric disorders (Shaffer, Hall, & Built, 1997). An analysis of data from the National Epidemiologic Survey on Alcohol and Related Conditions found that among individuals who met the criteria for gambling disorder, roughly three-quarters had a co-occurring alcohol use disorder, nearly 40% had another substance use disorder, and the majority also had nicotine dependence. In this same sample, the majority of disordered gamblers also had a mood disorder, anxiety disorder, and/or a personality disorder (Petry, Stinson, & Grant, 2005).

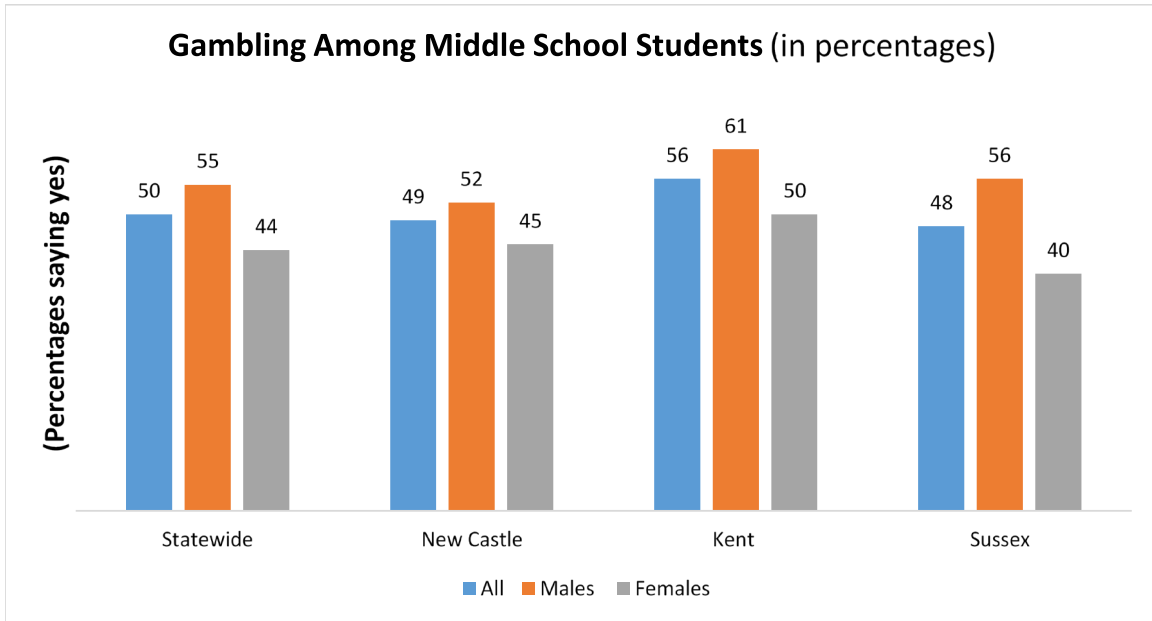
Gambling and problem gambling have been associated with heightened substance use and mental health disorders among younger populations. Studies focusing on the co-occurrence of substance use disorders, mental health disorders, and disordered or problem gambling in college student populations found that among the roughly 5% of students who met the criteria for problem gambling, there were much higher rates of problem drinking, anxiety, and depression compared to the general population of college students (Martin, Usdan, Cremeens, & Vail-Smith, 2014; Martens, Rocha, Cimini, Diaz-Myers, Rivero, & Wulfert, 2009).

Delaware Overview

In the United States, gambling regulations can vary from state to state; in the state of Delaware, most forms of gambling are allowed and there are multiple casinos. However, there are different age restrictions for certain gambling behaviors. Delaware residents must be 18 or older to play charity bingo, purchase lottery tickets or scratch-offs, or make a bet on horses. Individuals must be 21 or older to gamble in casinos or slot machines or on the internet (Delaware Council on Gambling Problems, 2018). In June 2018, Delaware became the second state to legalize all other sports gambling, following the May Supreme Court decision, *Murphy v. National Collegiate Athletic Association* (Domonoske, 2018). Previously, the only other state to allow sports gambling was Nevada, which had legalized the practice in the early 1990s.

Among youth surveyed in Delaware, half of all middle school students and approximately 40% of high school students reported that they gambled at least once in the past year. The Youth Risk Behavior Survey considers gambling to include gambling on a sports team; playing cards or playing a dice game; playing the lottery or scratch-off tickets; gambling on the internet; or betting on a game of personal skill such as pool or a video game. Students who report gambling in the past year also tend to report higher rates of substance use than their non-gambling peers at both the middle and high school levels.

2017 Youth Risk Behavior Survey Gambling among Middle School Students (in percentages)^a



	Gambled One or More Times in The Past Year^b
Statewide	50
Males	55
Females	44
New Castle	49
Males	52
Females	45
Kent	56
Males	61
Females	50
Sussex	48
Males	56
Females	40

Figure 129: Gambling, 1+ times in past year, by county, MS, 2017

Notes:

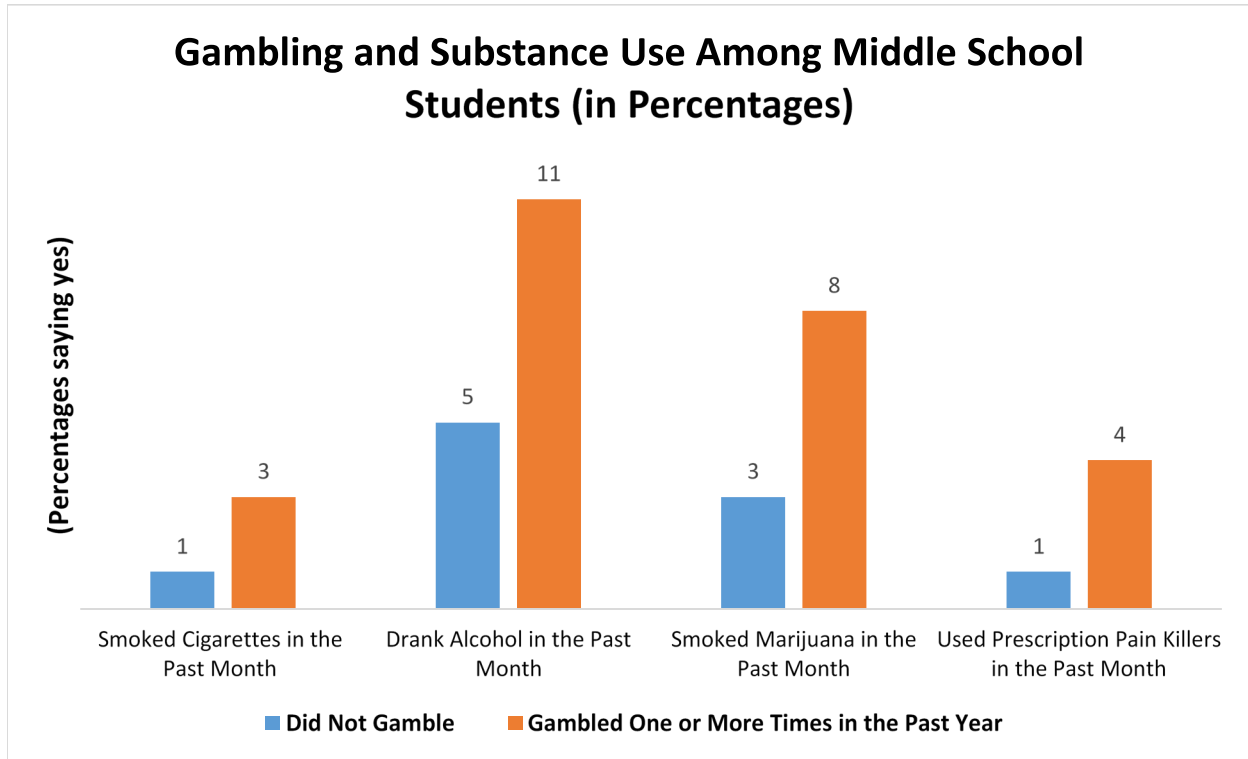
^a Percentages are from unweighted data from 2017 Middle School YRBS.

^b Gambling refers to one or more of the following activities: Gambling on a sports team; playing cards or playing a dice game; playing the lottery or scratch off tickets; gambling on the internet; betting on a game of personal skill such as pool or a video game.

Source: ["2017 Delaware Youth Risk Behavior Survey." Center for Drug and Health studies, University of Delaware.](#)

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2017 Delaware Youth Risk Behavior Survey Gambling and Substance Use among Middle School Students (in percentages^a)



	Did Not Gamble ^b	Gambled One or More Times in the Past Year
Smoked Cigarettes in the Past Month	1	3
Drank Alcohol in the Past Month	5	11
Smoked Marijuana in the Past Month	3	8
Used Prescription Pain Killers in the Past Month	1	4

Figure 130: Gambling and substance use, 1+ times in past year, MS, 2017

Notes:

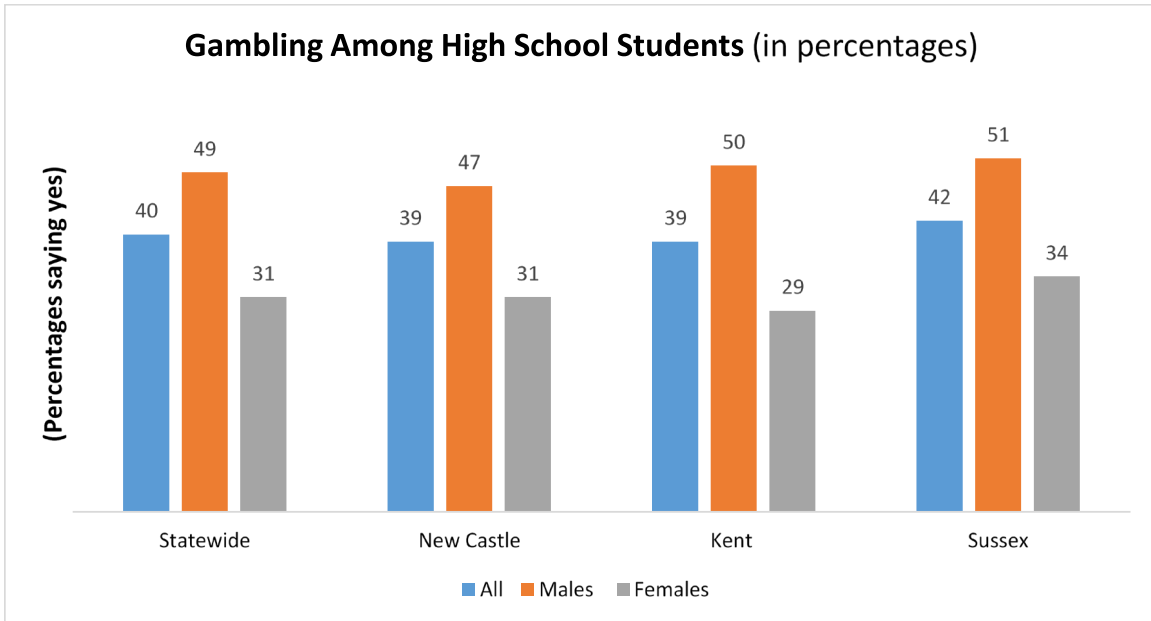
^a Percentages are from unweighted data from 2017 Middle School YRBS.

^b Gambling refers to one or more of the following activities: Gambling on a sports team; playing cards or playing a dice game; playing the lottery or scratch off tickets; gambling on the internet; betting on a game of personal skill such as pool or a video game.

Source: ["2017 Delaware Youth Risk Behavior Survey." Center for Drug and Health studies, University of Delaware.](#)

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2017 Delaware Youth Risk Behavior Survey Gambling among High School Students (in percentages^a)



	Gambled One or More Times in The Past Year^b
Statewide	40
Males	49
Females	31
New Castle	39
Males	47
Females	31
Kent	39
Males	50
Females	29
Sussex	42
Males	51
Females	34

Figure 131: Gambling, 1+ times in past year, by county and sex, HS, 2017

Notes:

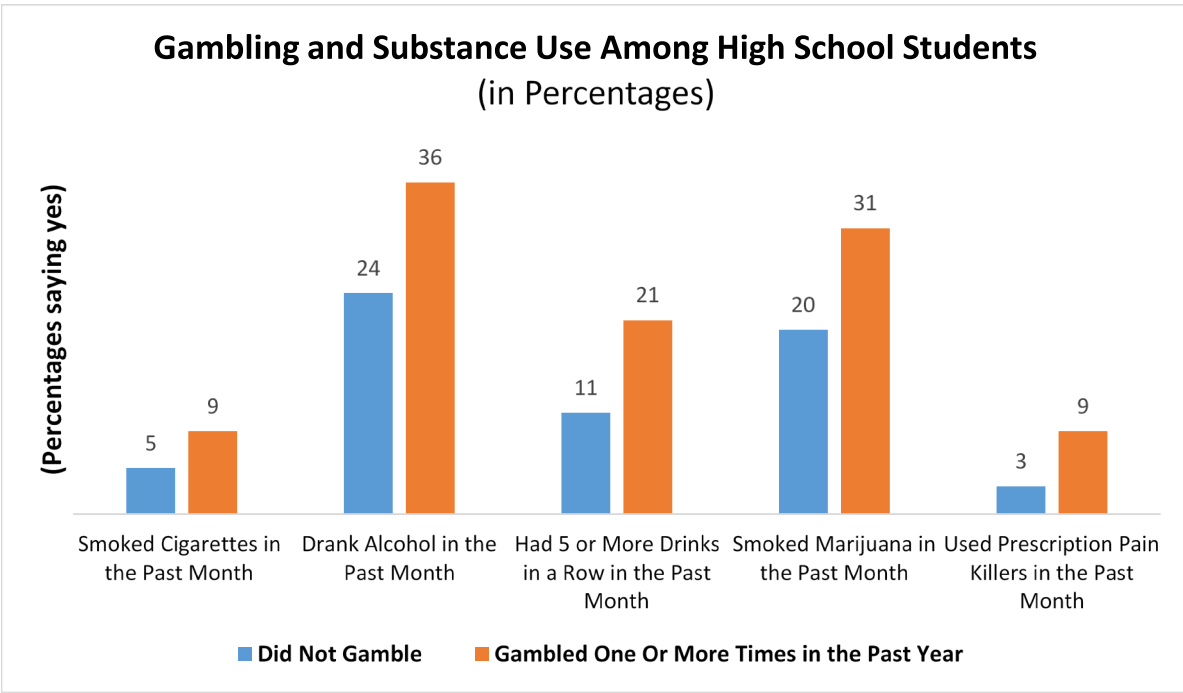
^a Percentages are from unweighted data from 2017 High School YRBS.

^b Gambling refers to one or more of the following activities: Gambling on a sports team; playing cards or playing a dice game; playing the lottery or scratch off tickets; gambling on the internet; betting on a game of personal skill such as pool or a video game.

Source: ["2017 Delaware Youth Risk Behavior Survey." Center for Drug and Health studies, University of Delaware.](#)

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2017 Delaware Youth Risk Behavior Survey Gambling and Substance Use among High School Students (in percentages^a)



	Did Not Gamble ^b	Gambled One or More Times in the Past Year
Smoked Cigarettes in the Past Month	5	9
Drank Alcohol in the Past Month	24	36
Binge Drank in the Past Month	11	21
Smoked Marijuana in the Past Month	20	31
Used Prescription Pain Killers in the Past Month	3	9

Figure 132: Gambling and substance use, 1+ times in past year, HS, 2017

Notes:

^a Percentages are from unweighted data from 2017 High School YRBS.

^b Gambling refers to one or more of the following activities: Gambling on a sports team; playing cards or playing a dice game; playing the lottery or scratch off tickets; gambling on the internet; betting on a game of personal skill such as pool or a video game.

Source: ["2017 Delaware Youth Risk Behavior Survey." Center for Drug and Health studies, University of Delaware.](#)

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Chapter 9 Mental Health

Delaware Overview

There are high public and social costs associated with mental illness and poor mental health. People with poor mental health and/or serious mental illness may find it challenging to navigate social and economic systems and follow daily routines. In 2016-2017, approximately 7% of Delaware adults reported experiencing a depressive episode in the past year, and nearly 16% reported receiving mental health services. Approximately 4% of adults over the age of 18 reported seriously contemplating suicide in the past year (Substance Abuse and Mental Health Services Administration [SAMHSA], n.d.). Untreated mental illness can have fatal results. Annual averages from 2016-2017 indicated that 4% of all adults in Delaware had serious thoughts of suicide in the past year. In 2018, the suicide rate in Delaware was 12.2 deaths per 100,000, which was slightly lower than the national suicide rate of 13.9 during the same time period (United Health Foundation [UHF], n.d.).

In 2018, according to data collected by the Behavioral Risk Factor Surveillance System, Delaware adults reported, on average, 4.1 poor mental health days in the last 30. Disparities in reporting the number of poor mental health days varied by location, income level, high school attainment, race, and gender. The largest disparities were related to income, educational attainment, and age. Those who reported making \$25,000 dollars or less had more than twice the number of days in a month in which their mental health was not as good as those who made \$75,000 or more. Similarly, people who had less than a high school diploma had 75% more poor mental health days as college graduates. Statewide, suburban residents reported a slightly greater number of poor mental health days than other residents. Adults over the age of 65 reported fewer days when their mental health was not good, as compared to other age groups (UHF, n.d.). In 2018, Delaware had 249.6 mental health providers per 100,000 people, a slight increase from previous years (UHF, n.d.). Since 2013, the Department of Services for Children, Youth and their Families has also deployed behavioral health consultants in most middle schools throughout the state to provide screening and other preventive services on-site. Nonetheless, the needs remain great, particularly for specialized services and for southern Delaware; according to the Health Resources and Services Administration (HRSA), Sussex County has a shortage of mental health facilities and received a Health Professional Shortage Area score of 18 or above, which qualifies as a high-priority area (Health Resources and Services Administration [HRSA], 2017).

Data from the 2017 High School Delaware Youth Risk Behavior Survey indicate that approximately 27% of Delaware students report they had felt sad or hopeless for two weeks or more in the past year. Additionally, nearly 14% of high school students in Delaware reported that they had purposely hurt or cut themselves during the past year. An even greater percent of students (16%) reported they had seriously considered attempting suicide during the past year, while 12% of students reported having a plan for suicide, and 7% reported that they had

actually attempted suicide in the past year. Among middle school students, more than one in 10 report having made a plan to attempt suicide, and almost 7% indicate they have attempted suicide. These numbers illustrate that there is a profound need for mental health services for youth, as well as adults, in Delaware. On a positive note, in 2018, Delaware received several new federal grants to promote enhanced mental health among Delaware youth, including [Project DeLAWARE](#) and the [Delaware Child Psychiatry Access Program](#).

2017 Youth Risk Behavior Survey
High School Students Who Felt Sad or Hopeless Almost Every Day
for Two Weeks or More in the Past Year

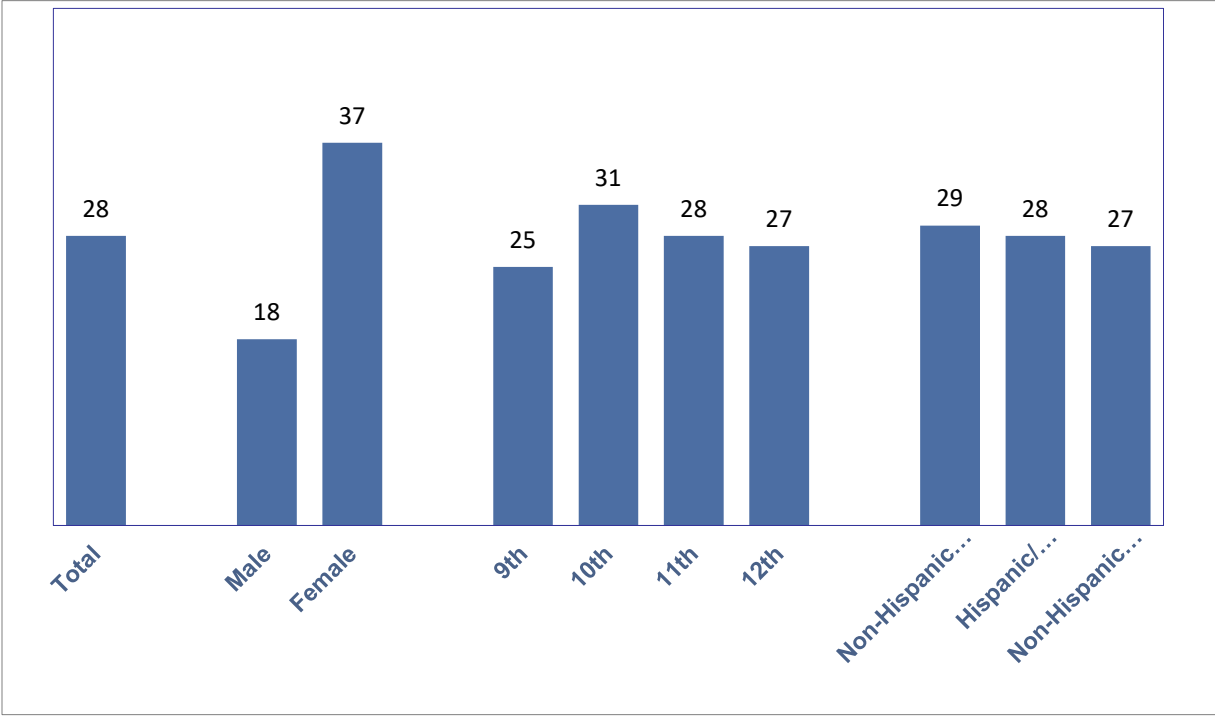


Figure 133: Feeling sad/hopeless for 2+ weeks, past year, HS, 2017

Note:

Weighted data

Source: [“2017 Delaware Youth Risk Behavior Survey \(YRBS\).” Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey Trends in Feelings of Sadness or Hopelessness among High School Students in Delaware

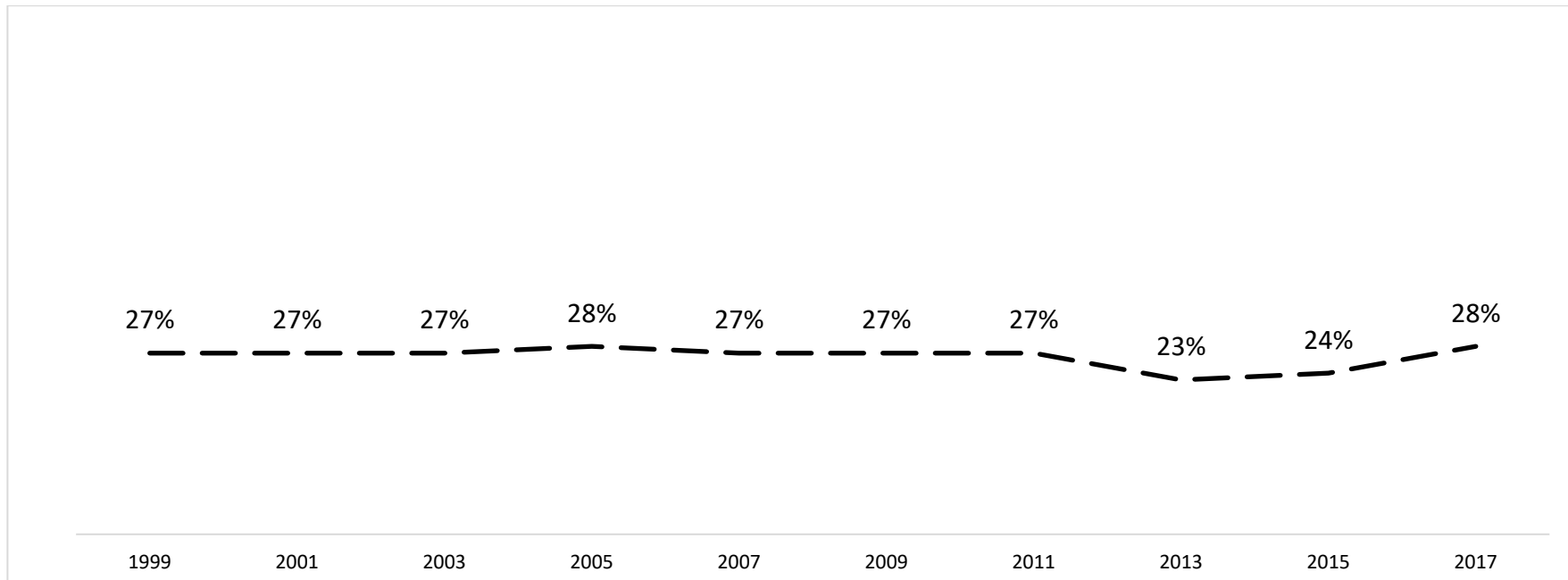


Figure 134: Trends in feeling sad/hopeless for 2+ weeks, HS, 1999-2017

Note:

Weighted Data

Source: ["Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\). 1999-2017.](#)

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2017 Youth Risk Behavior Survey High School Students Who Seriously Considered Attempting Suicide in the Past Year

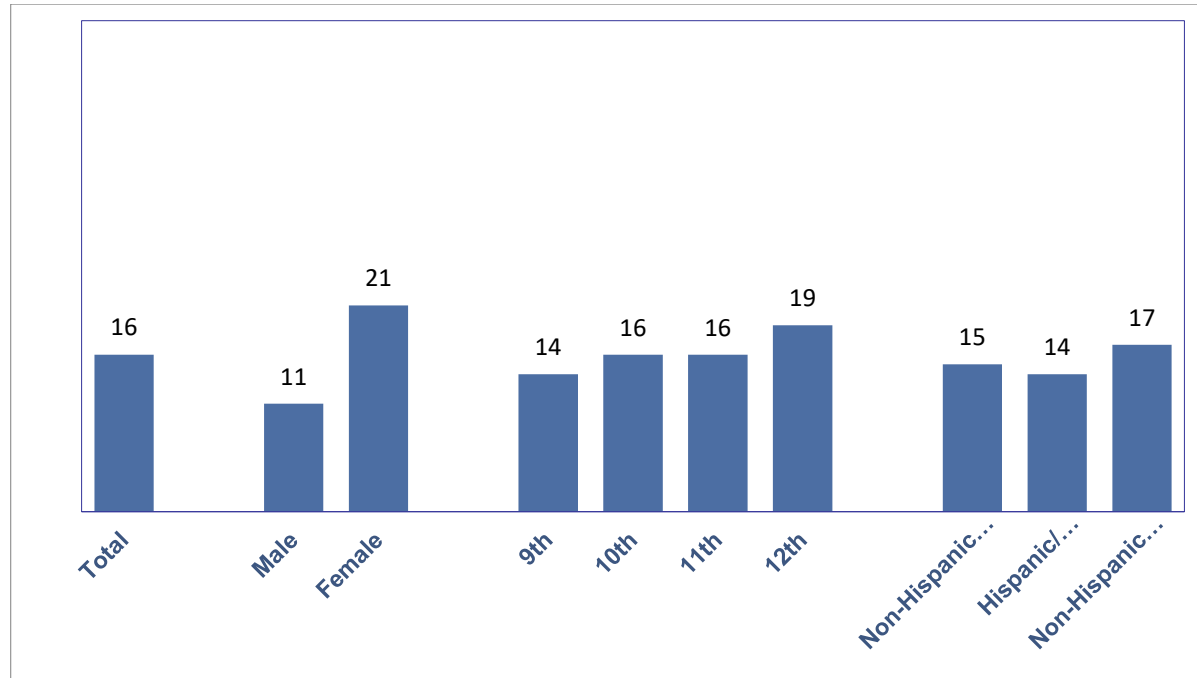


Figure 135: Seriously considered attempting suicide, past year, HS, 2017

Note:

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)."](#) Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.

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2017 Youth Risk Behavior Survey Middle School Students Who Made a Plan to Attempt Suicide in their Lifetime

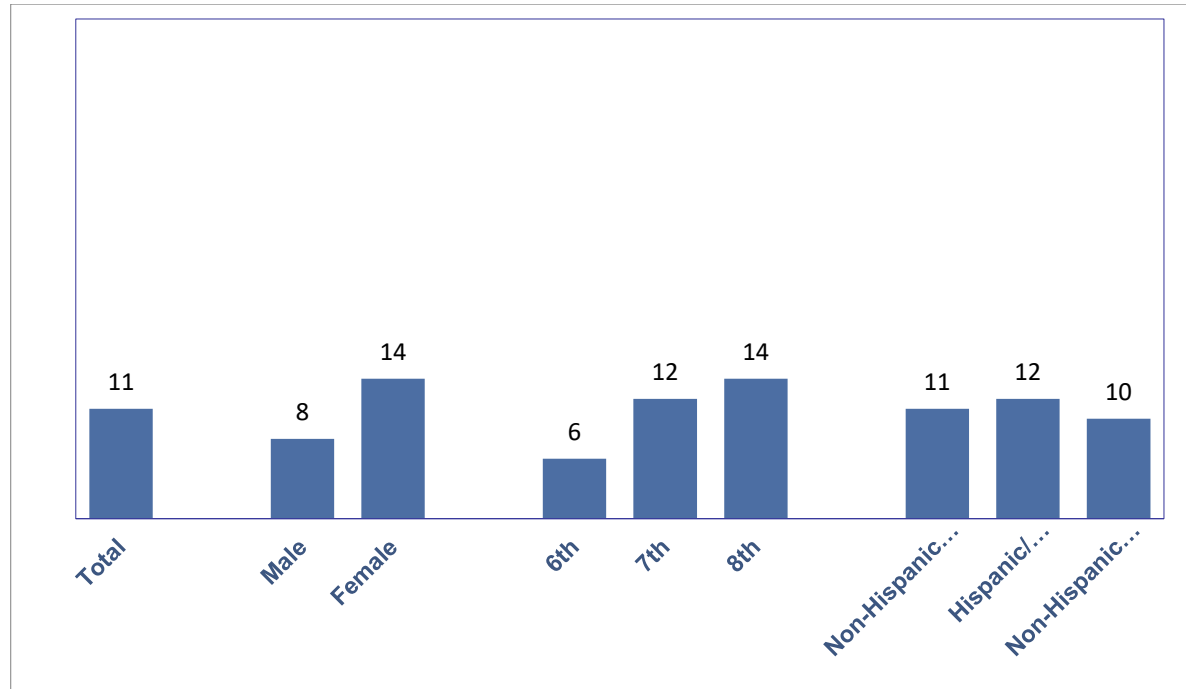


Figure 136: Made plan to attempt suicide in lifetime, MS, 2017

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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**2017 Youth Risk Behavior Survey
High School Students Who Made a Plan
to Attempt Suicide in the Past Year
(in percentages)**

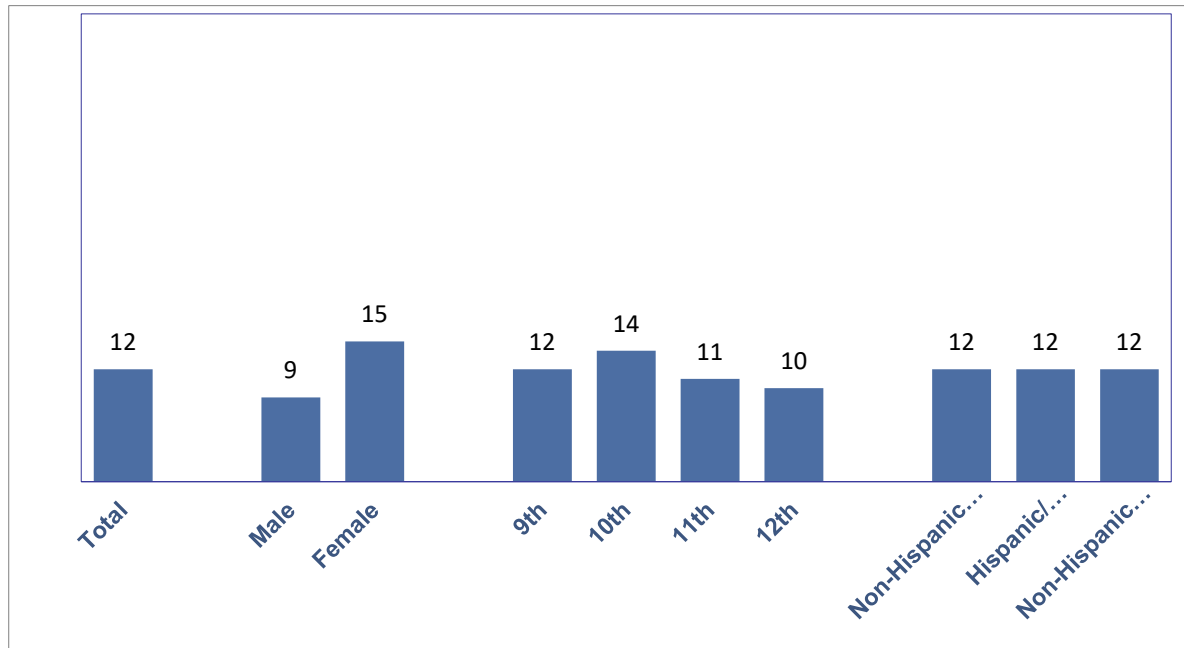


Figure 137: Made plan to attempt suicide, past year, HS, 2017

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey Trends in High School Students Who Made a Plan to Attempt Suicide in the Past Year

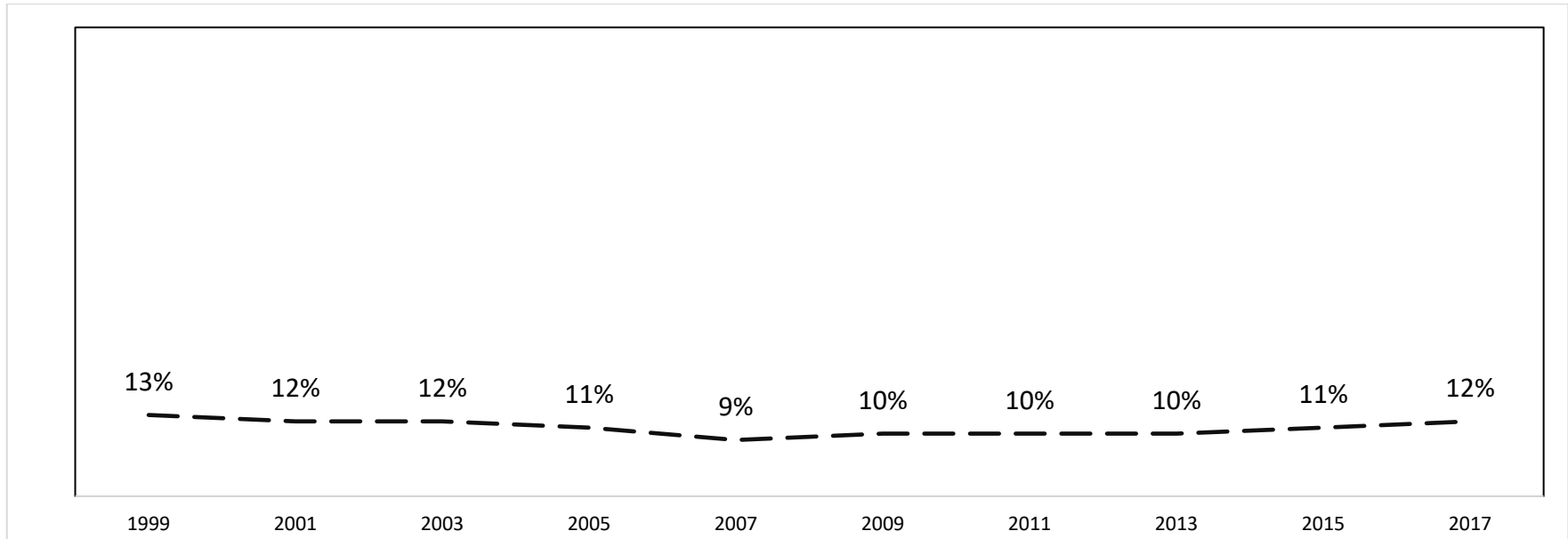


Figure 138: Trends in having made plan to attempt suicide in past year, HS, 1999-2017

Note:

Weighted Data

[Source: "Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\). 1999-2017.](#)

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2017 Youth Risk Behavior Survey

Middle School Students Who Report Attempting Suicide in their Lifetime (in percentages)

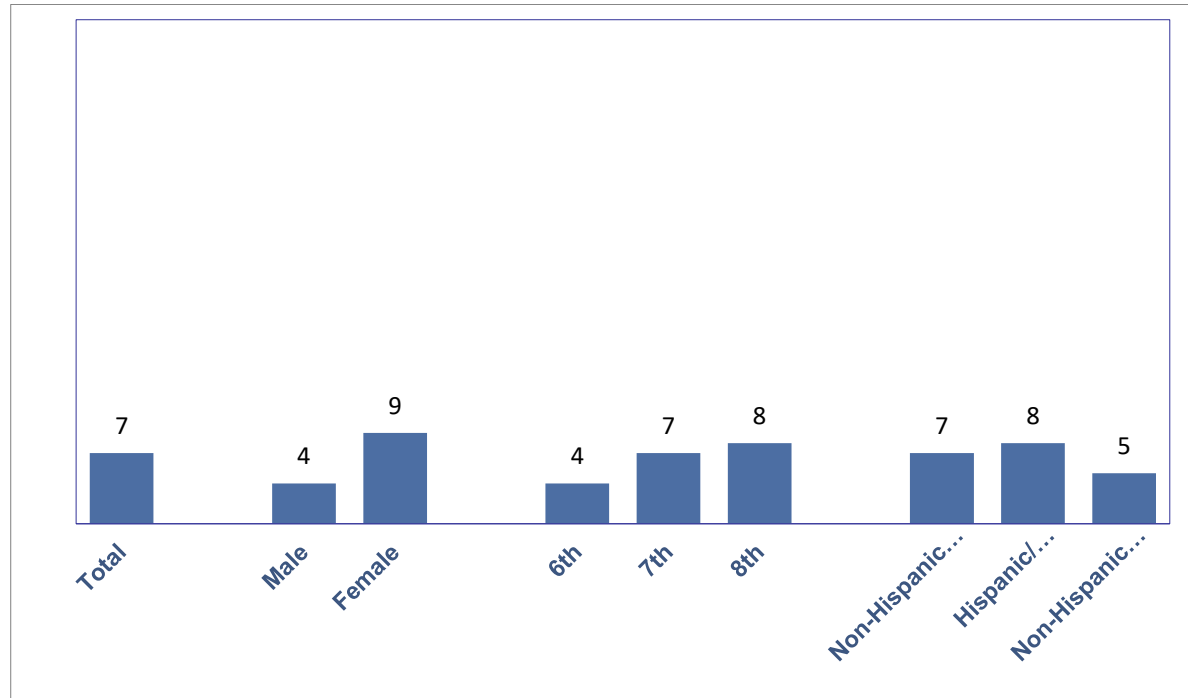


Figure 139: Attempted suicide in lifetime, MS, 2017

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)."](#) Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.

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2017 Youth Risk Behavior Survey

High School Students Who Report Attempting Suicide in the Past Year (in percentages)

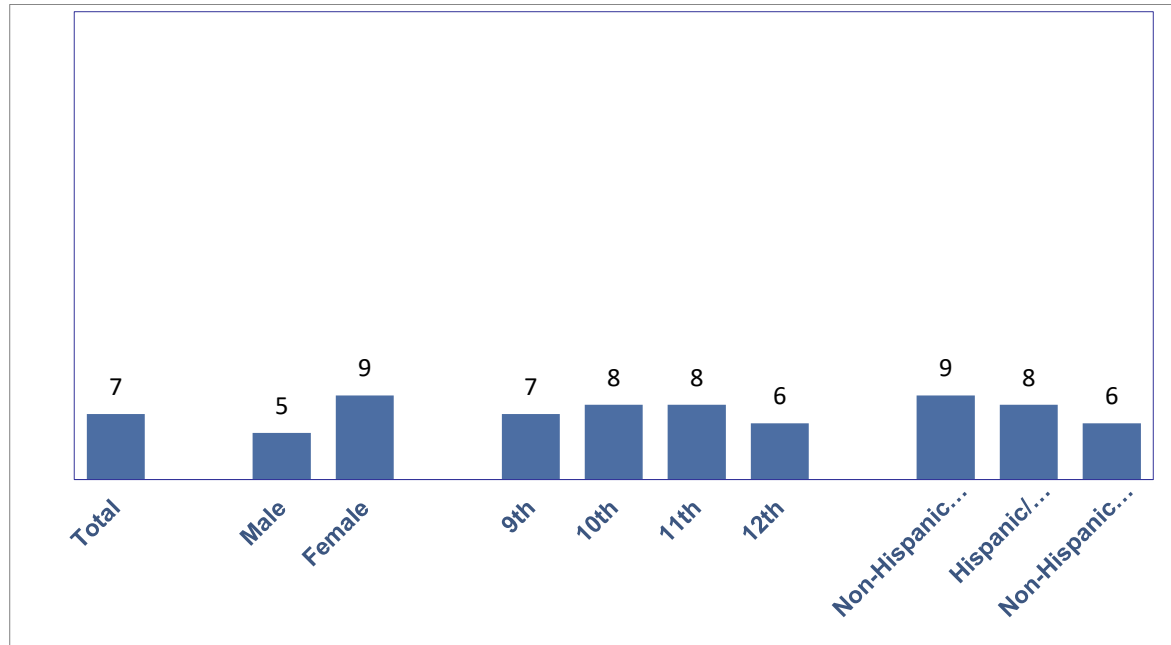


Figure 140: Attempted suicide in past year, HS, 2017

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)."](#) Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.

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2017 Youth Risk Behavior Survey

Trends in High School Students Who Report Attempting Suicide in the Past Year

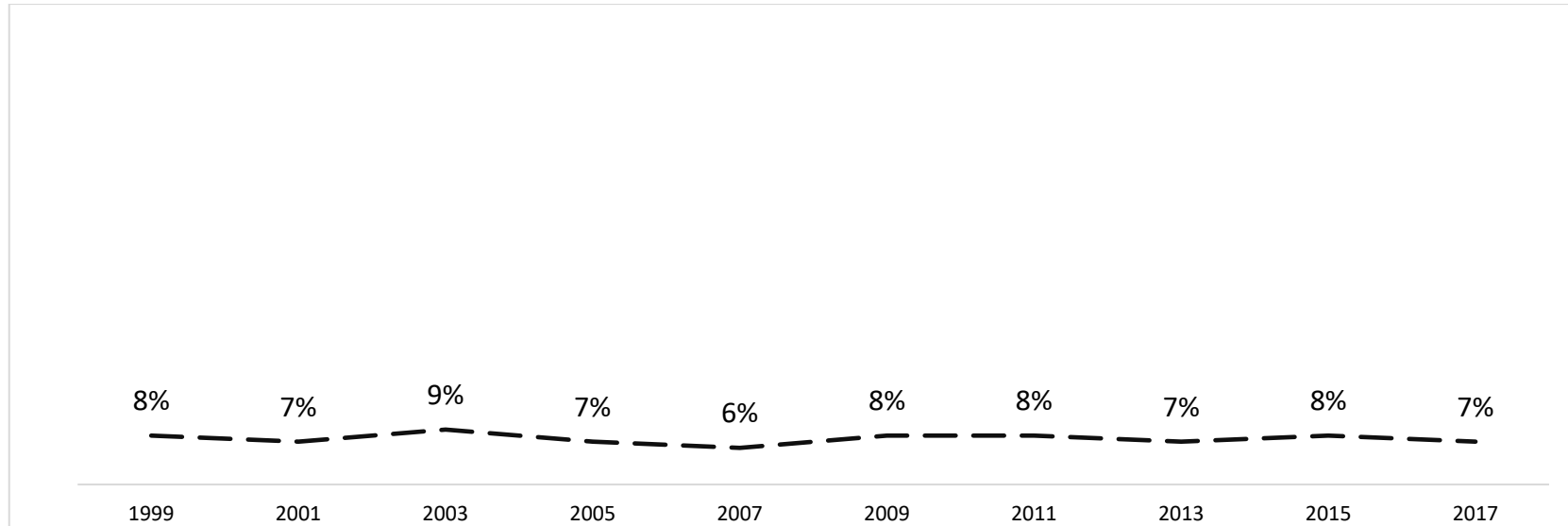


Figure 141: Trends in having attempted suicide in past year, HS, 1999-2017

Note:

Weighted Data

Source: ["Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\). 1999-2017.](#)

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Promising Practices: The Crisis Text Line

Crisis texting services are considered promising practices in suicide prevention. The United States Substance Abuse and Mental Health Services Administration (SAMHSA) sponsors the Garrett Lee Smith Suicide Prevention initiative, which supports the Department of Services for Children, Youth and their Families (DSCYF) “Project SAFETY” in Delaware. The agency has partnered with Crisis Text Line (CTL), a nonprofit organization that provides crisis texting services staffed by trained volunteers who respond to the texters, providing support and information, and, whenever necessary, triggering an active rescue. Staffers code the conversations according to keywords. When a texter uses the DE hashtag, data becomes available to highlight aggregate characteristics of the conversations.

The first chart below (Figure 142) provides the frequency of CTL conversations. As of April 2019, CTL had registered 1,147 conversations under Delaware’s classification. There have been five active rescues, one of which occurred in March 2019, and four events in 2018. The second chart (Figure 143) illustrates the topics of conversations by those using CTL as coded by the trained volunteers. Relationships, anxiety and stress, and depression and sadness are the top-three topics identified, followed by suicide, which was identified in 17% of conversations.

Monthly Frequency of Crisis Text Line Conversations

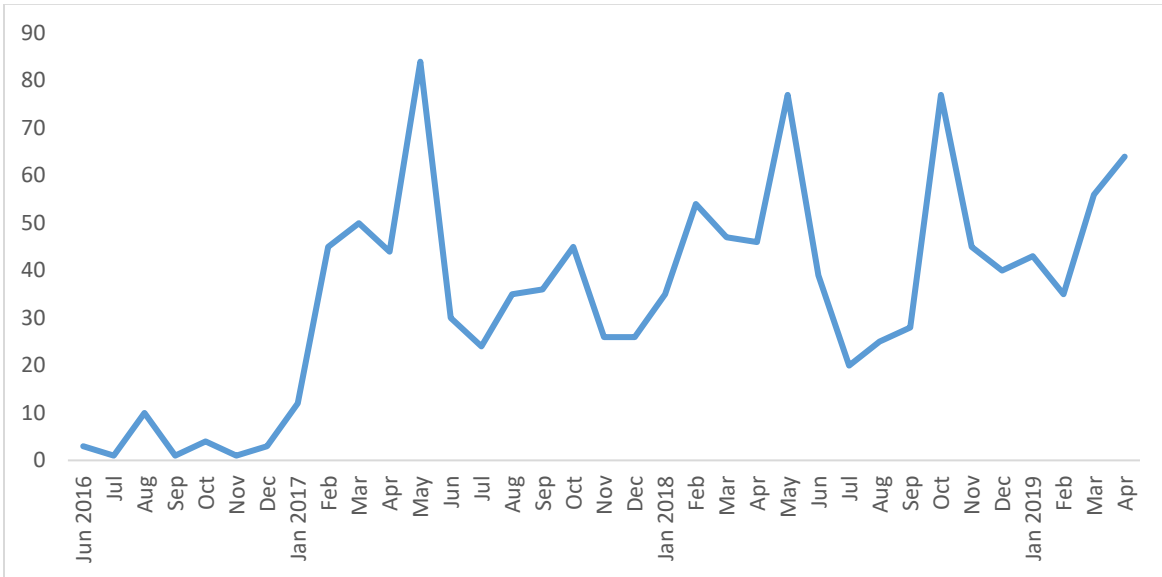


Figure 142: Crisis text line conversations, monthly, 2016-2019

Topics of Crisis Text Line Conversations (non-exclusive, will total to more than 100%)

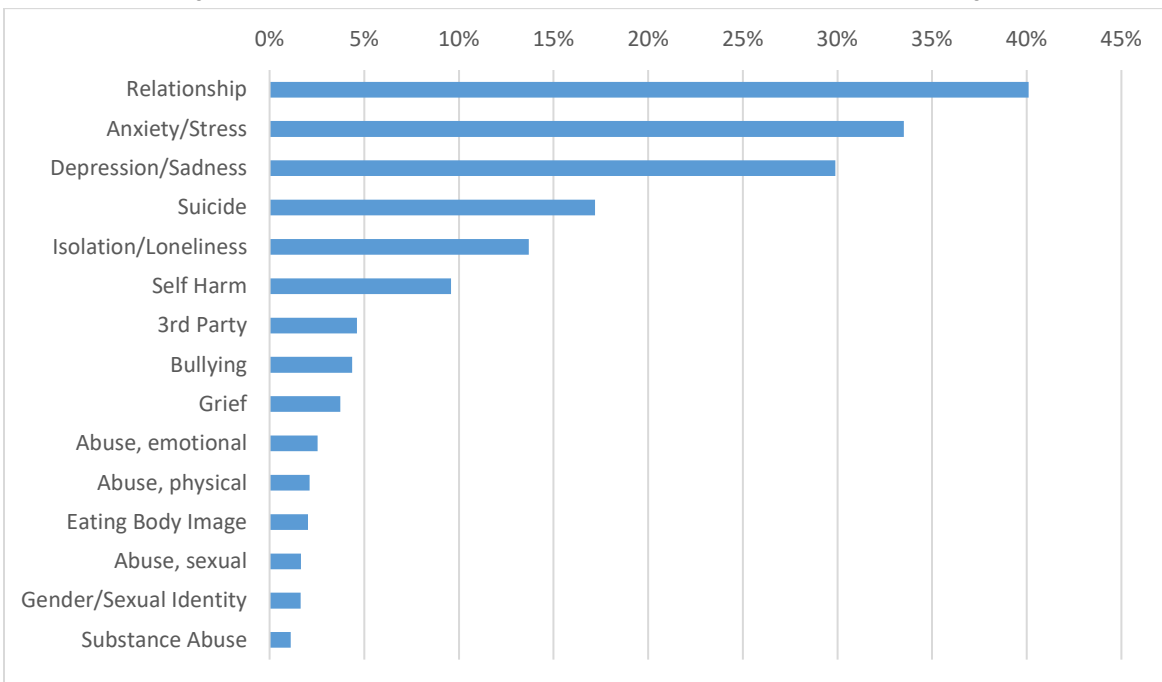


Figure 143: Crisis text line conversation topics

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Chapter 10 Persons with Disabilities

National Overview

People with disabilities make up a substantial portion of the general population. Due to variations in defining disability across diverse populations and in measuring prevalence, epidemiological studies of behavioral health outcomes for this population are limited. For example, the different ways of defining and measuring disability can lead to differences in estimates within the population. There are three standard approaches to measuring disability: a medical approach that measures prevalence by diagnostic codes; a functional approach that measures disability by difficulties in tasks of daily living; and sociological approaches, which consider the accommodations needed for inclusion, accessibility, and daily functioning (McDermott and Turk, 2011). The United States Department of Health and Human Services established [data collection standards](#) for the identification of disability status, which includes the use of a series of six questions on population-based surveys, each of which asks a question related to difficulty in functioning. These six categories include hearing, visual, cognitive, ambulatory, self-care, and independent living disabilities.

A recent analysis of data from the Behavioral Risk Factor Surveillance System (BRFSS) by researchers from the Centers for Disease Control and Prevention (CDC) found that in 2016, approximately one in four noninstitutionalized adults in the United States reported that they have a disability. This study found that people with disabilities often face significant health disparities in comparison to the general population, including disparate health outcomes and reduced healthcare access (Okoro, Hollis, Cyrus, & Griffin-Blake, 2018). Researchers have also found disparate health outcomes for people with disabilities related to substance use, particularly increased use of tobacco and opioids. One such analysis of data from the National Survey on Drug Use and Health (NSDUH) found that people who report having a work-related disability or receiving Medicare under the age of 65 (which, in most cases, indicates that the person has a disability) report higher rates of substance use, particularly heroin or oxycodone, than other populations (Glazier & Kling, 2013). Additional studies have also found higher rates of opioid prescribing for people with disabilities (Hong, Geraci, Turk, Love, McDermott, 2019), as well as adverse outcomes from use, such as opioid and other prescription drug misuse (Ford, Hinojosa, Nicholson, 2018), opioid use disorders (Lauer, Henly, & Brucker, 2019), and fatal overdoses (Song, 2017).

In addition to the six types of disability captured by national surveys (functional difficulties related to vision, hearing, cognition, mobility, self-care, and independent living), people with behavioral health challenges such as attention deficit/hyperactivity disorder (ADHD), anxiety, depression, or other mental health disorder may experience similar difficulty in daily functioning and experience adverse health outcomes. Data drawn from the Delaware Youth Risk Behavior Survey, for example, shows disparities in mental health outcomes and substance

use for students who report a diagnosis of ADHD, anxiety, and depression (see Figures 157-159 below).

Delaware Overview

Depending on the source of data, prevalence estimates suggest that somewhere between one in eight (American Community Survey [ACS], 2013-2017) to nearly one in three (BRFSS, 2017) of Delaware's residents have a disability. This wide variance in estimates may be due to different surveying approaches, the ages of those surveyed, and changes over time. Surveys differ in the questions that they ask for different age groups. According to data drawn from the ACS, an estimated 12% of the Delaware state population has a disability. Furthermore, disability prevalence increases as people age; two out of three people who report having a disability are over the age of 65. The ACS includes respondents of all ages in its measures of hearing and vision disabilities, but its questions about cognitive, ambulatory, and self-care difficulties only apply to individuals over the age of five, and its independent living measure only applies to residents 16 or older (Erickson, Lee & von Schrader, 2019). This distinction reflects developmentally appropriate expectations of abilities by different ages but could potentially lead to differing prevalence estimates when compared with data that is only collected from an adult population. The CDC's BRFSS uses the same six core disability questions as the ACS but surveys only an adult population. The BRFSS estimated that in 2017, 30.3% of Delaware's adult population reported having some sort of disability (CDC, [Disability and Health Data System](#), n.d.). Of these respondents reporting disability, 44% of that population was over the age of 65.

The [National Survey of Children's Health](#) provides additional context for children in Delaware. In 2017, one in four children surveyed was identified as having at least one functional difficulty¹; broken down, 14.8% reported one functional difficulty and 13% reported two or more difficulties. Similarly, 23.2% of children were identified with special healthcare needs. One in ten children currently has ADHD or has been diagnosed with the condition in the past. Nearly 14% of children ages 3-17 received mental health treatment in the past year, with an additional 4% of children identified by their parents as needing to see a mental health professional. Approximately 5% of children ages 3-17 were identified as having autism spectrum disorder.

The Delaware Department of Education (DOE) reports that 16.15% of students currently enrolled in public schools have a disability. As required by the Individuals with Disabilities Education Act, the DOE provides additional data related to this population. During the 2017-

¹ Functional difficulty, as defined by the National Survey of Children's Health, requires one of 12 of the following conditions: frequent or chronic respiratory problems (past year); difficulty eating or swallowing (past year); stomach/intestinal problems (past year); repeated or chronic pain, including headaches (past year); difficulty using hands (0-5 years); difficulty with coordination and movement (0-5 years); serious difficulty concentrating, remembering, or making decisions (6-17 years); serious difficulty walking or climbing stairs (6-17 years); difficulty dressing or bathing (6-17 years); difficulty doing errands alone (12-17 years); deafness/hearing problems; and blindness or vision difficulties even when wearing glasses.

2018 school year, 20,580 children and youth with disabilities ages 6-21 were enrolled in Delaware schools; nearly 66% of these students spent 80% or more of their school day in a regular classroom setting. Nearly half of the students ages 6-21 enrolled with a disability have a specific learning disability that entails having difficulties with listening, speaking, reading, writing, and understanding math (*e.g.*, dyslexia, dysgraphia) that are not a result of some other disability. An additional 2,616 students with disabilities, ages 3-5, were enrolled in public schools during this time period (Delaware Department of Education, IDEA Child Count and Educational Environment, Ages [6-21](#) and [3-5](#)).

In line with national research, one public health assessment of the Delaware population with disabilities found that people with disabilities face significant health disparities in comparison to the general population, including increased incidence of some cancers, heart disease, dental problems, diabetes, current smoking, and depression. People with disabilities also report reduced healthcare access and decreased preventive cancer screening (Sparling et al., 2015). Data from the 2017 BRFSS indicates significantly higher prevalence for smoking status, e-cigarette use, and depression for Delaware adults with disabilities (CDC, [Disability and Health Data System](#), n.d.).

Data from youth surveys show alarming disparities for youth with self-reported disabilities. Data from the youngest of children surveyed by the Delaware School Survey show that 5th graders who take medicine to concentrate better in school (approximately 13%) were bullied more than other students who do not take these medications and have higher lifetime rates of drinking alcohol, smoking marijuana, and smoking most of a cigarette.

Thirty percent of middle school students surveyed by the Delaware Youth Risk Behavior Survey (YRBS) reported a disability. Disability, in this case, is defined as difficulty seeing, hearing, walking, or climbing stairs, or having a serious difficulty concentrating, remembering, or making decisions because of a physical, mental or emotional disability. Data is reported from both students who self-identify as having a disability and those who report that they have been diagnosed with a physical, mental, or emotional disability by a medical professional. By middle school, students responding to the YRBS who report having a disability also report higher rates of substance use, reports of bullying, and poorer mental health outcomes than their peers. Middle school students who stated that they have a disability reported double the rates of past month alcohol use, marijuana use, prescription painkiller use, and cigarette use, as well as higher rates of past month vaping, than students without disabilities. Middle school students with disabilities were also more likely to have had sexual intercourse than students without disabilities and were less likely to use a condom during intercourse. They were nearly three times as likely to report self-harm, make a plan to commit suicide, and attempt suicide than other students.

High school students with disabilities responding to the YRBS reported higher rates of substance use and sexual activity, as well as far poorer mental health outcomes than peers who did not report having a disability. Students with disabilities were less likely to report that their

parents show they are proud of them, that their parents take an interest in them, or that their parents listen when they talk. This is concerning considering that family connectedness for youth is deemed a protective factor against negative health outcomes (Steiner, Sheremenko, Lessesne, Dittus, Sieving, and Ethier, 2019; CDC, Division of Adolescent and School Health, n.d.). Of particular concern, youth with disabilities (either self-identified or medical professional-identified) reported misusing prescription drugs at more than three times the rate of their peers without disabilities. They were three times more likely to report feeling sad or hopeless for two or more weeks and about four times more likely to report self-harm, plan a suicide, or attempt a suicide than students without disabilities. These students were more likely to have ever had sexual intercourse or drink or use drugs before sex and less likely to have used a condom when they last had sex.

High school students diagnosed with ADD/ADHD, anxiety, or depression also had higher rates of past-month cigarette, alcohol, and marijuana use, as well as lifetime misuse of prescription pain relievers. These youth had more than double the rate of past-month cigarette use, and for youth with anxiety and depression, more than double the rate of lifetime prescription pain reliever use than their peers without these diagnoses. These students reported higher frequencies of multiple forms of bullying. Mental health outcomes were also poorer for this group compared to other students. For those students diagnosed with depression, nearly one in four had ever attempted suicide; for those diagnosed with anxiety, nearly one in five had attempted suicide.

Disability Prevalence by Age Group in Delaware

Disability by Age	%
Age	
Under 5 years	0.9
5 to 17 years	5.4
18 to 34 years	6.2
35 to 64 years	11.7
65 to 74 years	22.0
75 years and over	44.0

Figure 144: Disability prevalence by age group

Source: [U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.](#)

Disability Prevalence by Disability Type in Delaware

Disability by Type	%
Total Disabilities	12
Ambulatory Difficulty	6.8
Independent Living Difficulty	5.4
Cognitive Difficulty	4.9
Hearing Difficulty	3.1
Self-Care Difficulty	2.6
Vision Difficulty	2.1

Figure 145: Disability prevalence by type

Note: Some individuals may report multiple types of disability

Source: [U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.](#)

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2017 Delaware Youth Risk Behavior Survey Disability among Middle School Students

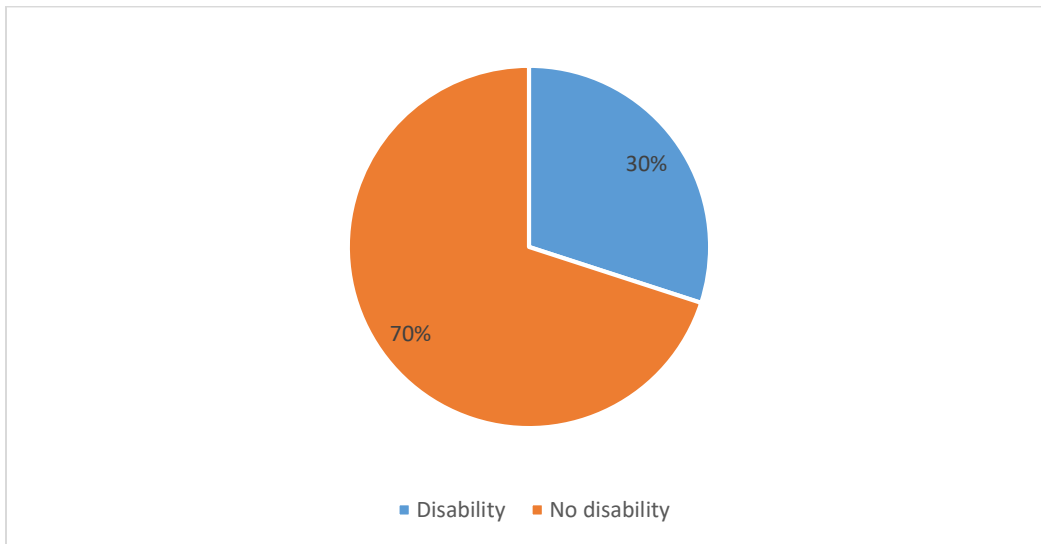


Figure 146: Disability prevalence among MS students, 2017

Disability among High School Students

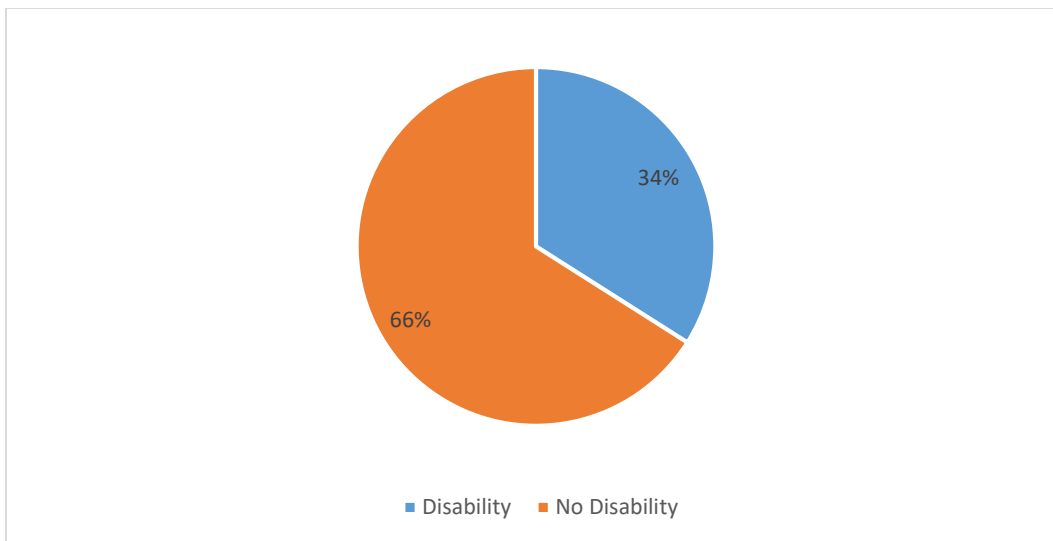


Figure 147: Disability prevalence among HS students, 2017

Note: "Disability" includes both self-identified and medical professional-identified disabilities.

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Delaware Behavioral Risk Factor Surveillance System

Smoking Status by Disability Status		
	Adults with Disability	Adults without Disability
Current Smoker	29.8	13.3
Former Smoker	25.3	22.1
Never Smoker	44.9	64.6

Current E-Cigarette Use by Disability Status		
	Adults with Disability	Adults without Disability
Yes	10.4	3.6
No	89.6	96.4

Depression by Disability Status		
	Adults with Disability	Adults without Disability
Yes	42.1	11.7
No	57.9	88.3

Figure 148: Disability/no disability, risk factors, adults, 2017

Source: ["2017 Delaware Behavior Risk Factor Surveillance System." BRFSS Prevalence & Trends Data, Centers for Disease Control and Prevention.](#)

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2017 Delaware Youth Risk Behavior Survey Substance Use among High School Students with Disabilities (aggregated)

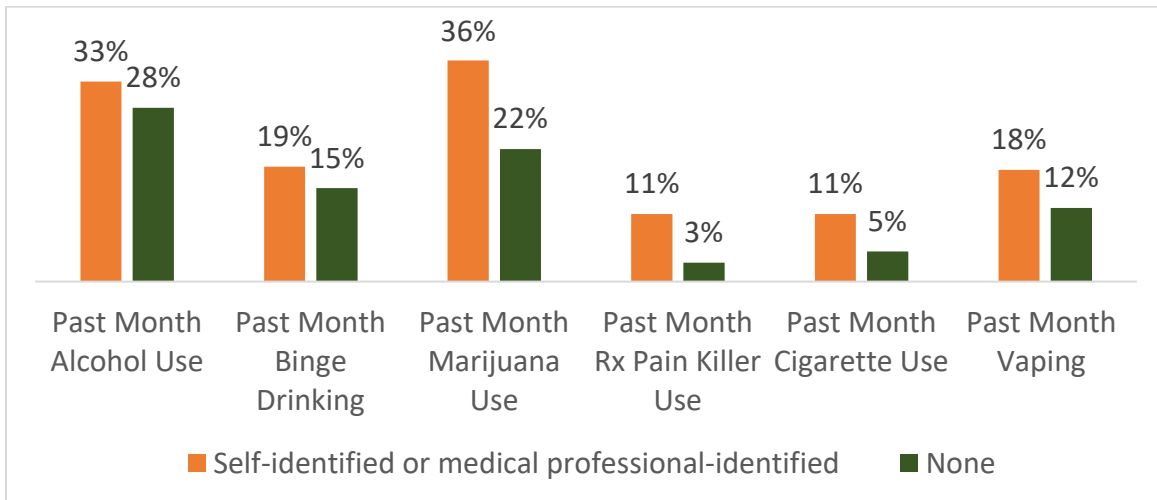


Figure 149: Disability, substance use, HS, 2017

Mental Health among High School Students with Disabilities (aggregated)

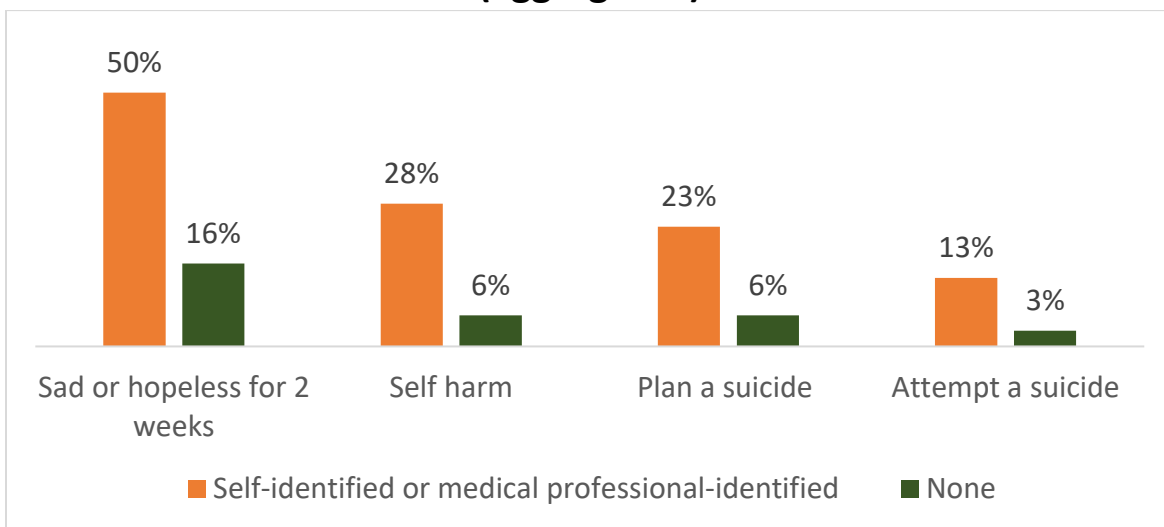


Figure 150: Disability, mental health, HS, 2017

Notes: Weighted Data; Differences in substance use were all statistically significant at the .01 level.

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Delaware Youth Risk Behavior Survey Sexual Activity among High School Students with Disabilities (aggregated)

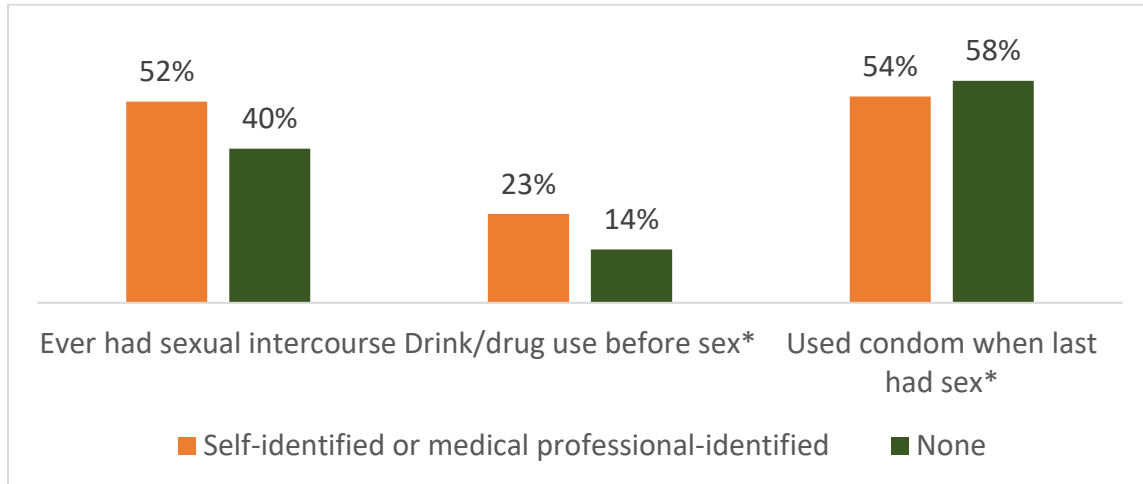


Figure 151: Disability, sexual activity, HS, 2017

Protective Factors^a among High School Students with Disabilities (aggregated)

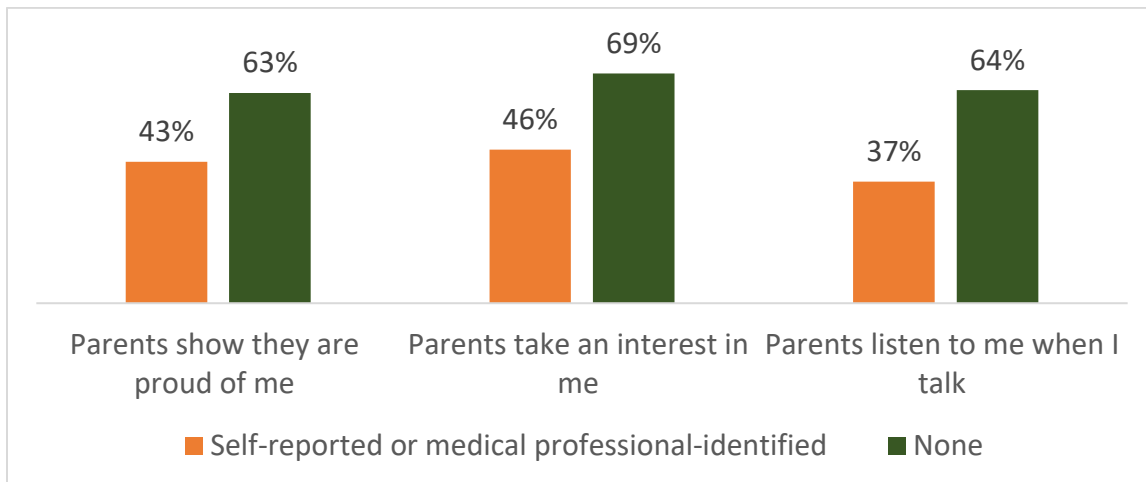


Figure 152: Disability, protective factors, HS, 2017

Notes: *Among students reported ever had sexual intercourse;

^aWhen asked how often their parents show they are proud, take an interest, or listen when they talk, students responded “always” as opposed to “sometimes” or “never”.

Weighted Data; Differences in substance use were all statistically significant at the .01 level.

Source: [“2017 Delaware Youth Risk Behavior Survey \(YRBS\).” Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Delaware Youth Risk Behavior Survey Substance Use among Middle School Students with Disabilities (aggregated)

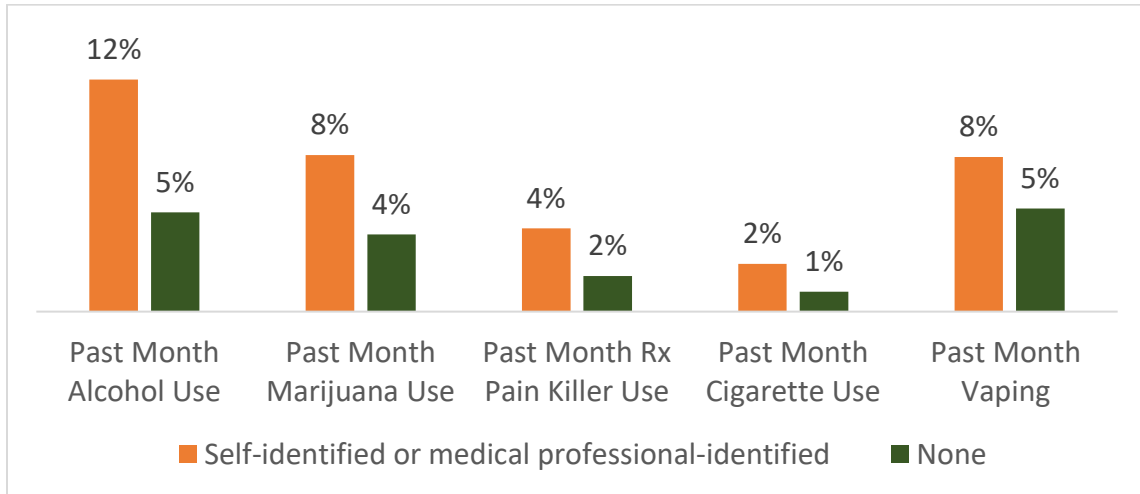


Figure 153: Disability, substance use, MS, 2017

Sexual Activity among Middle School Students with Disabilities (aggregated)

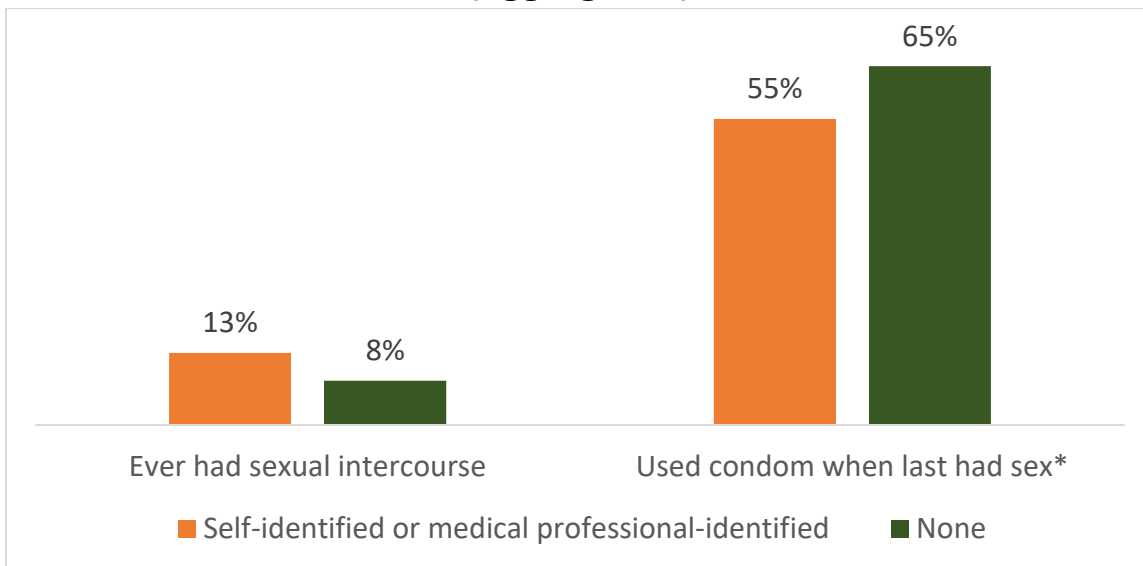


Figure 154: Disability, sexual activity, MS, 2017

Notes: *Among students reported ever had sexual intercourse; Weighted Data; Differences in substance use were all statistically significant at the .01 level.

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Delaware Youth Risk Behavior Survey Mental Health among Middle School Students with Disabilities (aggregated)

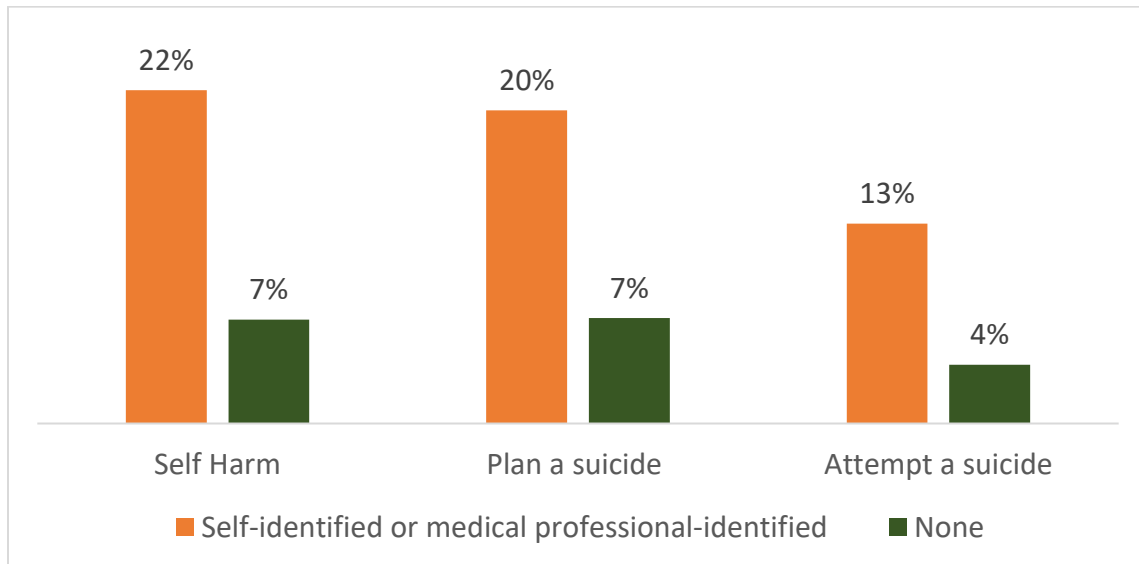


Figure 155: Disability, mental health, MS, 2017

Notes: Weighted Data; Differences in substance use were all statistically significant at the .01 level.

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2018 Delaware School Survey
Bullying and Substance Use Prevalence among 5th Grade Students
Who Take Medication to Concentrate in School
(in percentages)

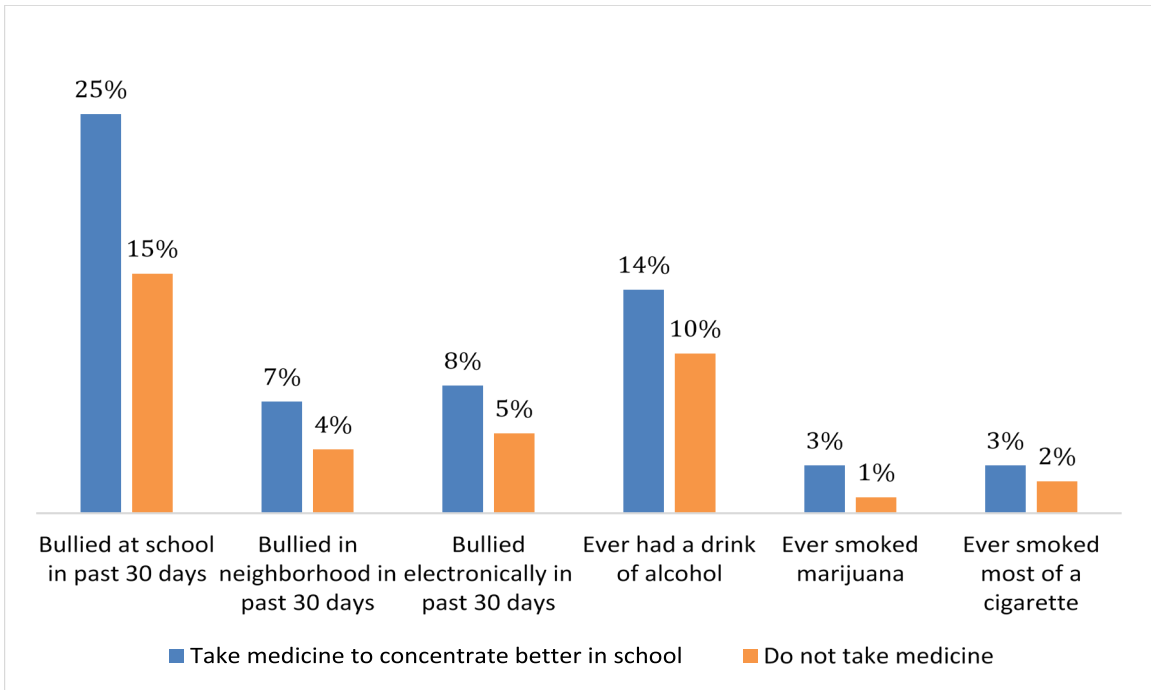


Figure 156: ADD/ADHD, depression, anxiety diagnosis, bullying & substance use
 Source: ["2018 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

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2017 Delaware Youth Risk Behavior Survey

Substance Use by ADD/ADHD, Depression, and Anxiety Diagnosis

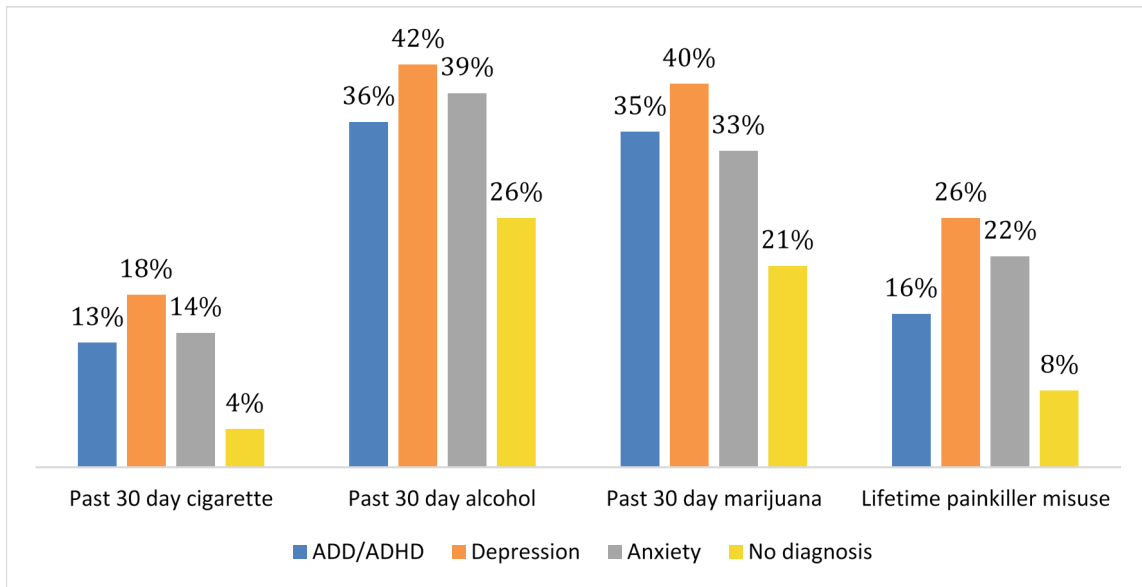


Figure 157: ADD/ADHD, depression, anxiety diagnosis, substance use, 2017

Reports of Bullying by ADD/ADHD, Depression, and Anxiety Diagnosis

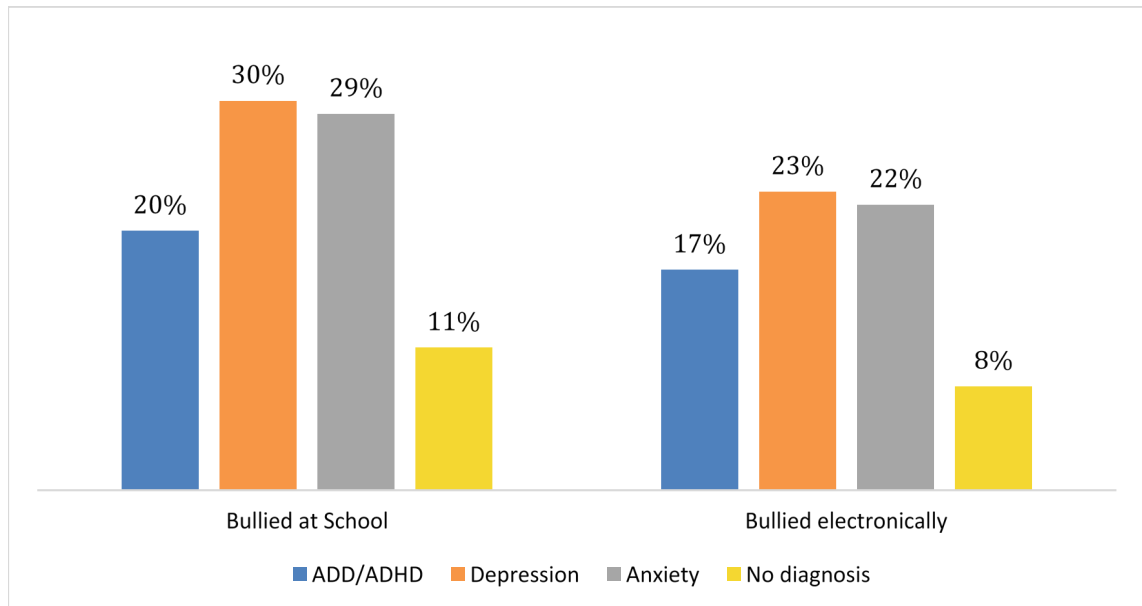


Figure 158: ADD/ADHD, depression, anxiety diagnosis, prevalence of bullying, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Delaware Youth Risk Behavior Survey

Poor Mental Health Indicators by ADD/ADHD, Depression, and Anxiety Diagnosis

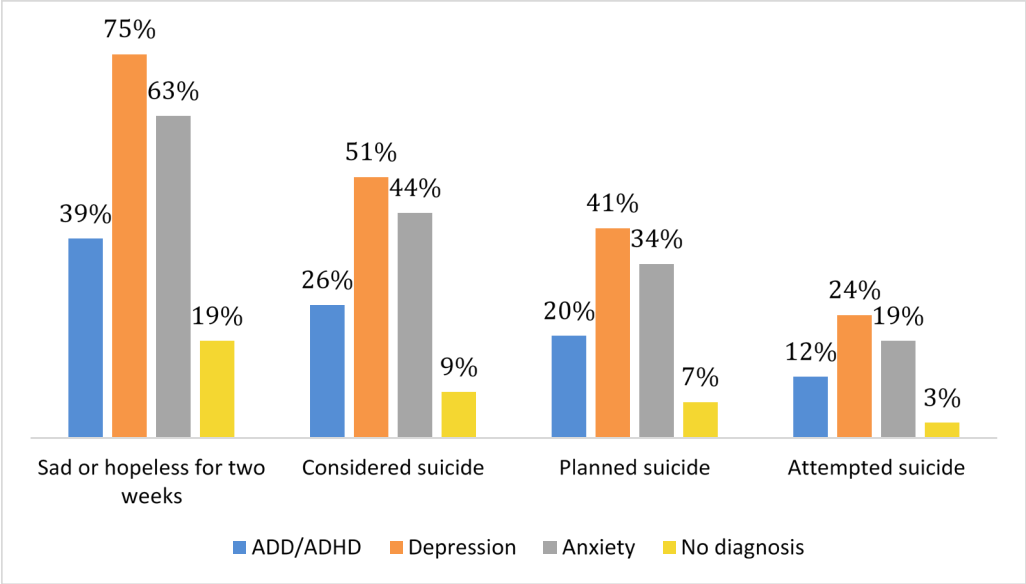


Figure 159: ADD/ADHD, depression, anxiety diagnosis, poor mental health indicators, 2017
 Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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Chapter 11 Adverse Childhood Experiences

National Overview

Adverse childhood experiences (ACEs) are traumatic events or conditions, such as abuse, neglect, homelessness, etc., that have been associated with toxic stress, health risk behaviors, and lifelong impacts. The research indicates that youth who experience significant traumas are likely to experience poorer health outcomes throughout their lifespan and even premature death. The number of ACEs that an individual experiences has an accumulated impact; a recent analysis indicates that individuals who experience six or more ACEs have a shorter life expectancy by up to 20 years. However, the presence of a supportive and caring adult has been associated with higher rates of resiliency among those who've experienced childhood trauma. In short, without intervention and support, children who experience traumatic events are likely to have increased health problems throughout their lives—lives that are likely to be shorter than the lives of others (Centers for Disease Control and Prevention [CDC], n.d.).

In the original ACEs study, conducted in the mid-90s, more than 17,000 adults in an outpatient healthcare setting were asked to report on their childhood experiences regarding the following 10 indicators:

- Emotional, Physical, Sexual Abuse
- Emotional and Physical Neglect
- Parental Divorce/Separation
- Living in a Household with a Person Who Has a Mental Illness
- Living in a Household with a Person Who Abuses Substances
- Parental Incarceration
- Exposure to Domestic Violence

Nearly two out of three respondents reported experiencing one or more ACE, with one in eight participants experiencing four or more (Kaiser/CDC, n.d.). Since then, various researchers have examined additional indicators, such as bullying, discrimination, economic hardship, and violence within the community (as distinct from domestic violence). The more ACEs an individual experiences, the greater the likelihood he or she will experience poorer health status (Hussaini et al., 2016).

Delaware Overview

In 2015, the Delaware Public Health Institute conducted the Delaware Household Health Survey, which asked respondents about their experiences with childhood trauma. When considering the original 10 ACE indicators, half of adults in Delaware reported experiencing one or more ACE, with 13.8% reporting four or more. The most commonly identified ACEs were parental divorce or separation (31.7%), followed by living in a household with someone who had abused substances (20.6%). When factoring in being bullied and/or experiencing discrimination (two indicators added to the Delaware survey), 59% of adults reported having at

least one ACE, with 16% reporting four or more (Public Health Management Corporation, 2016). In October 2018, Governor Carney issued an Executive Order (Executive Order 24) to establish Delaware as a “trauma-informed state.”

For the second time, in an effort to assess the prevalence of ACEs among youth, the 2016 National Survey of Children’s Health (NSCH) included a number of indicators relating to trauma and resiliency within the household. However, the survey, administered to parents who report on the health of their children, did not include questions on abuse or neglect. As in 2011-2012, the 2016 cohort indicates that 48% of children in Delaware experience at least one ACE, most commonly divorced/separated parents (25%) and economic hardship (23%). The third most common ACE, which impacts one in 10 children in Delaware, is parental incarceration. Findings suggest that nearly 8% of Delaware youth live with someone in the household who suffers from a mental illness, and the same number live with a household member who has a drug or alcohol problem. Almost one in four experience one ACE, and more than one in five are exposed to 2 or more (Hussaini, 2017).

The CDC Youth Risk Behavior Survey (YRBS), administered to a sample of Delaware students in odd-numbered years, includes a number of questions that address trauma, such as parental incarceration, being bullied, and exposure to various types of violence. Because the YRBS also includes questions regarding substance use and mental health, the data provides us an opportunity to explore the association between trauma and a spectrum of risk behaviors. The results of the 2017 YRBS again illustrate that youth who report experiencing trauma have higher rates of all substance use, as well as symptoms of depression, including self-harm and suicide attempts. For example, high school students who experience homelessness are nearly twice as likely to be current alcohol drinkers (46%) than students who were not homeless (28%) and six times as likely to abuse prescription pain killers in the past month (30% compared to 5%). They are also at greater risk for symptoms of depression than those who are not homeless (36% compared to 27%) and four times as likely to have attempted suicide within the past year (24% compared to 6%). As illustrated by the following graphs, these patterns are extremely similar when we consider all types of trauma.

By examining these associations, policy analysts and practitioners can begin to consider how early interventions and universally employed, trauma-informed approaches may improve lifelong health consequences and the associated costs for individuals, families, and society.

Adverse Childhood Experiences

ACEs have lifelong consequences with regard to substance use and risk behavior. In 2015, the Delaware Public Health Institute conducted a household survey of Delaware adults and found that more than half of Delaware residents (n=2,506) have experienced one or more ACEs in their lifetime.

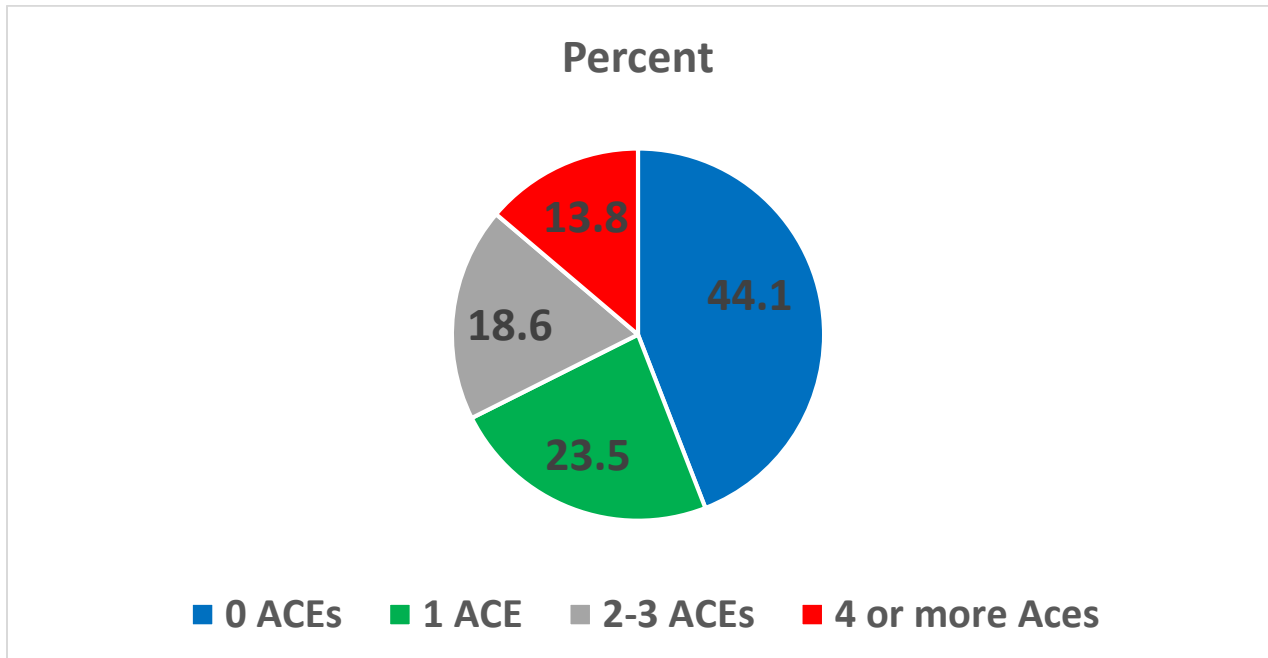


Figure 160: Prevalence of ACEs among Delaware residents, 2015

Source: ["2015 Delaware Household Health Survey \(DHHS\)." The Delaware Public Health Institute.](#)

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Delaware Household Health Survey
Delaware Adults 18 and Older
Who Indicated Having a Dysfunctional Household, 2015
(in percentages)

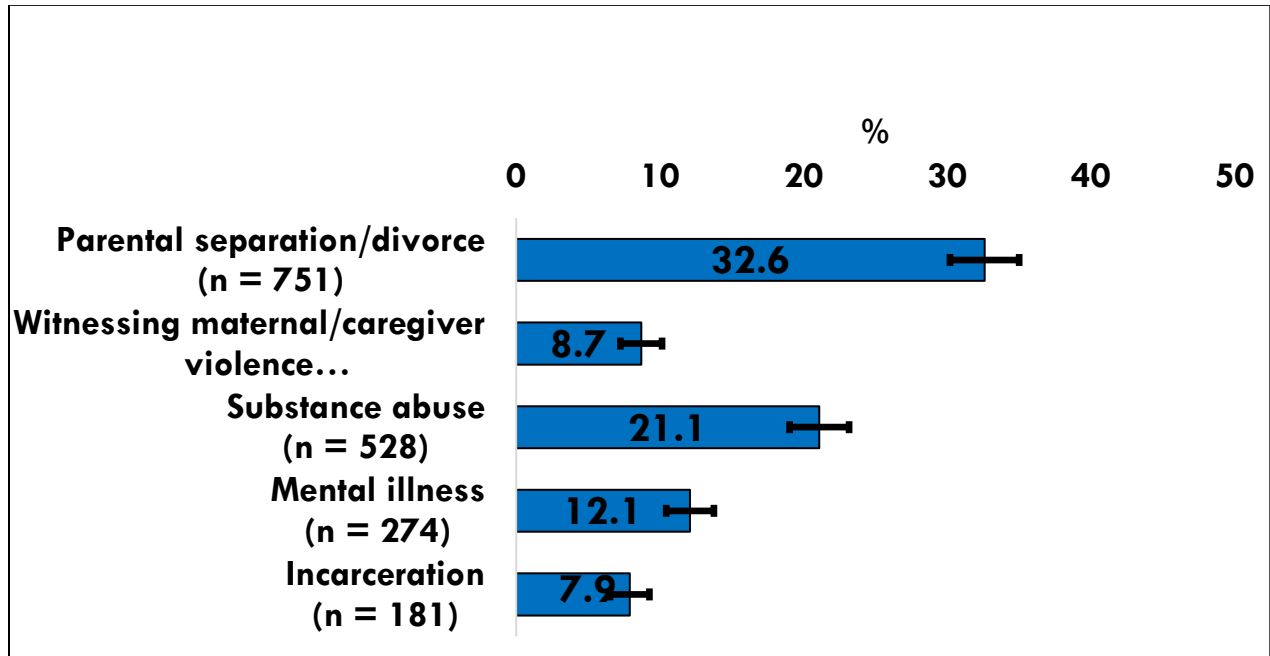


Figure 161: Adults with dysfunctional household in family of origin, 2015

Source: ["2015 Delaware Household Health Survey \(DHHS\)." The Delaware Public Health Institute.](#)

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Adverse Childhood Experiences and Health

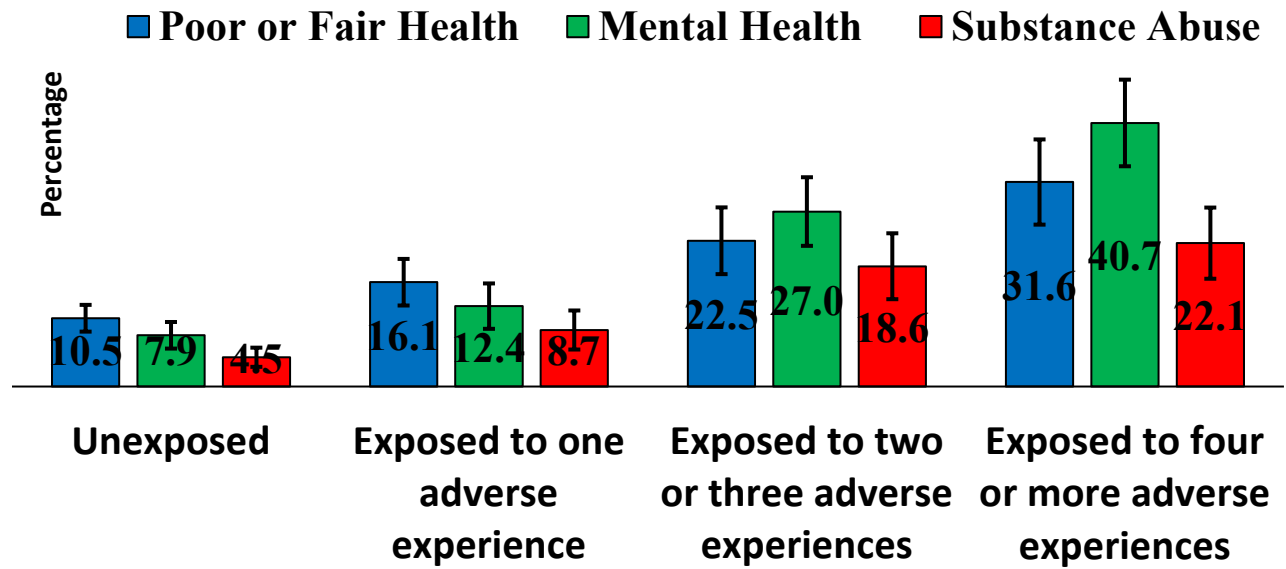


Figure 162: ACE exposure, poor health, mental health, substance use, 2015

Sources: ["2015 Delaware Household Health Survey \(DHHS\)." The Delaware Public Health Institute.](#)

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Adverse Childhood Experiences among Children 0-17 Years of Age in the U.S. and Delaware, 2016

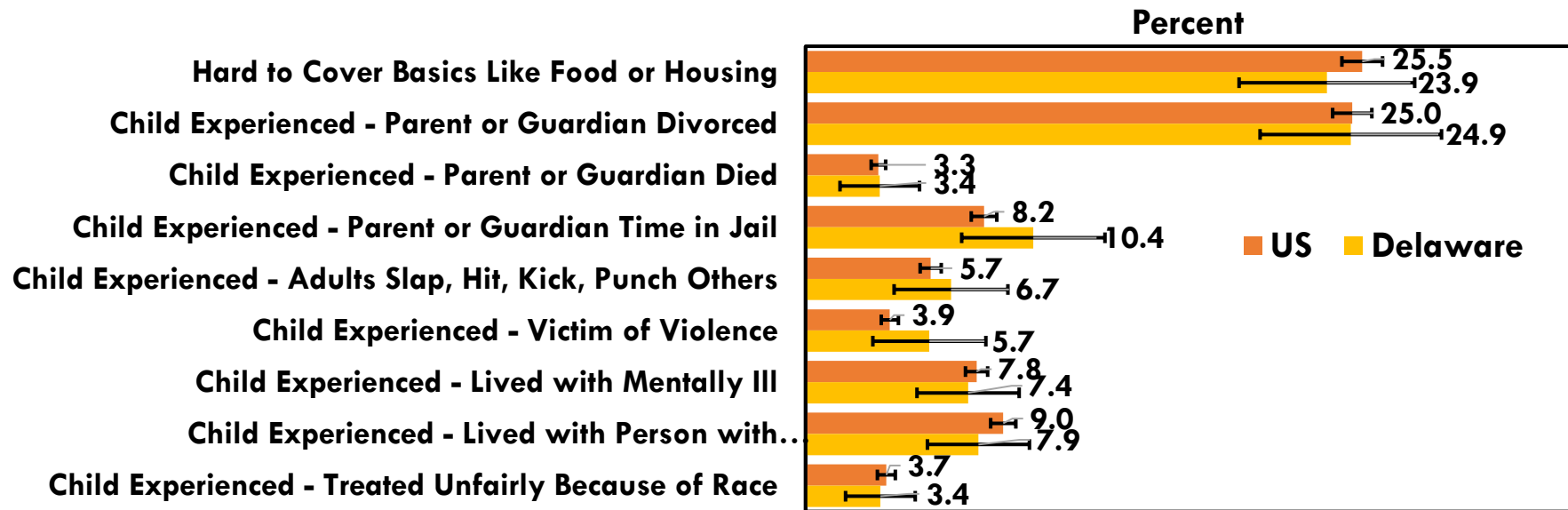


Figure 163: ACEs among children in U.S. & Delaware, 2016

Source: [National Survey of Children's Health \(NSCH\), 2016](#). *Adverse Childhood Experiences (ACE)

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Adverse Childhood Experiences Among Children 0-17 Years of Age in the U.S. and In Delaware, 2016

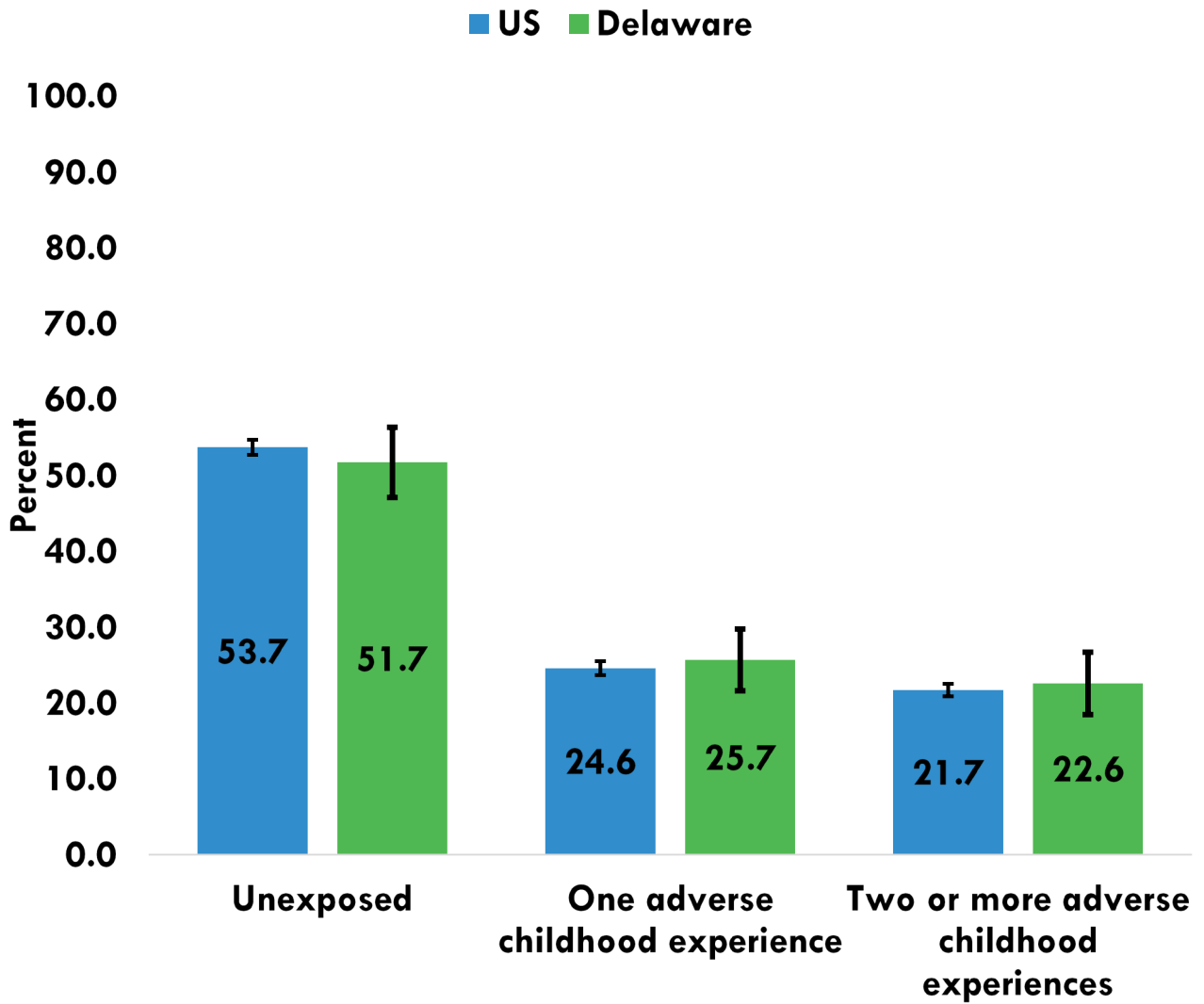


Figure 164: Prevalence of ACEs in children in U.S. & Delaware, 2016

Source: [National Survey of Children's Health \(NSCH\), 2016.*Adverse Childhood Experiences \(ACE\)](#)

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Adverse Childhood Experiences (ACE) Among Children 0-17 Years of Age in Delaware by Race and Ethnicity, 2016

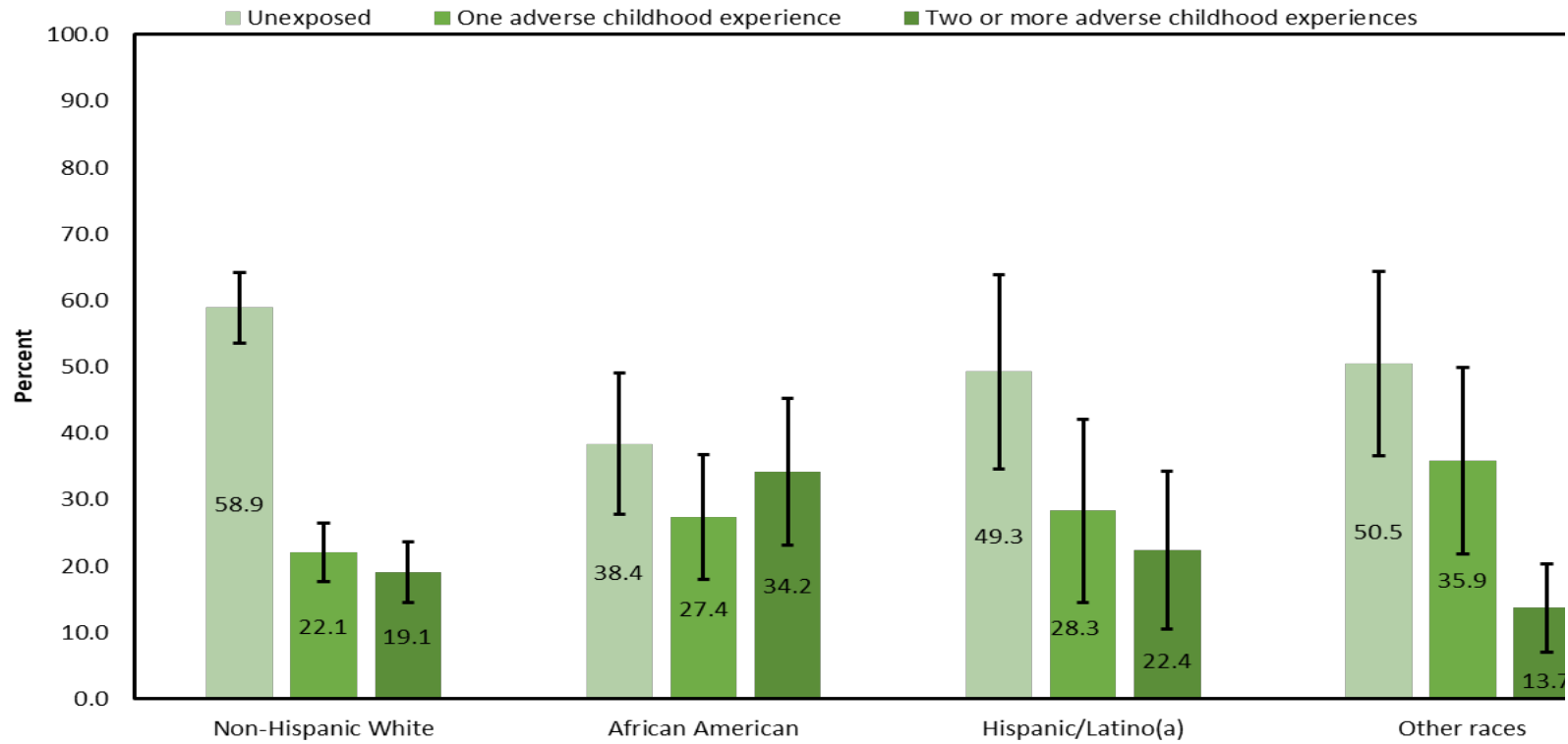


Figure 165: ACEs among children in Del. by race & ethnicity, 2016

Source: [National Survey for Children's Health \(NSCH\), 2016](#)

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Adverse Childhood Experiences (ACE) Among Children 0-17 Years of Age in Delaware by Poverty Status, 2016

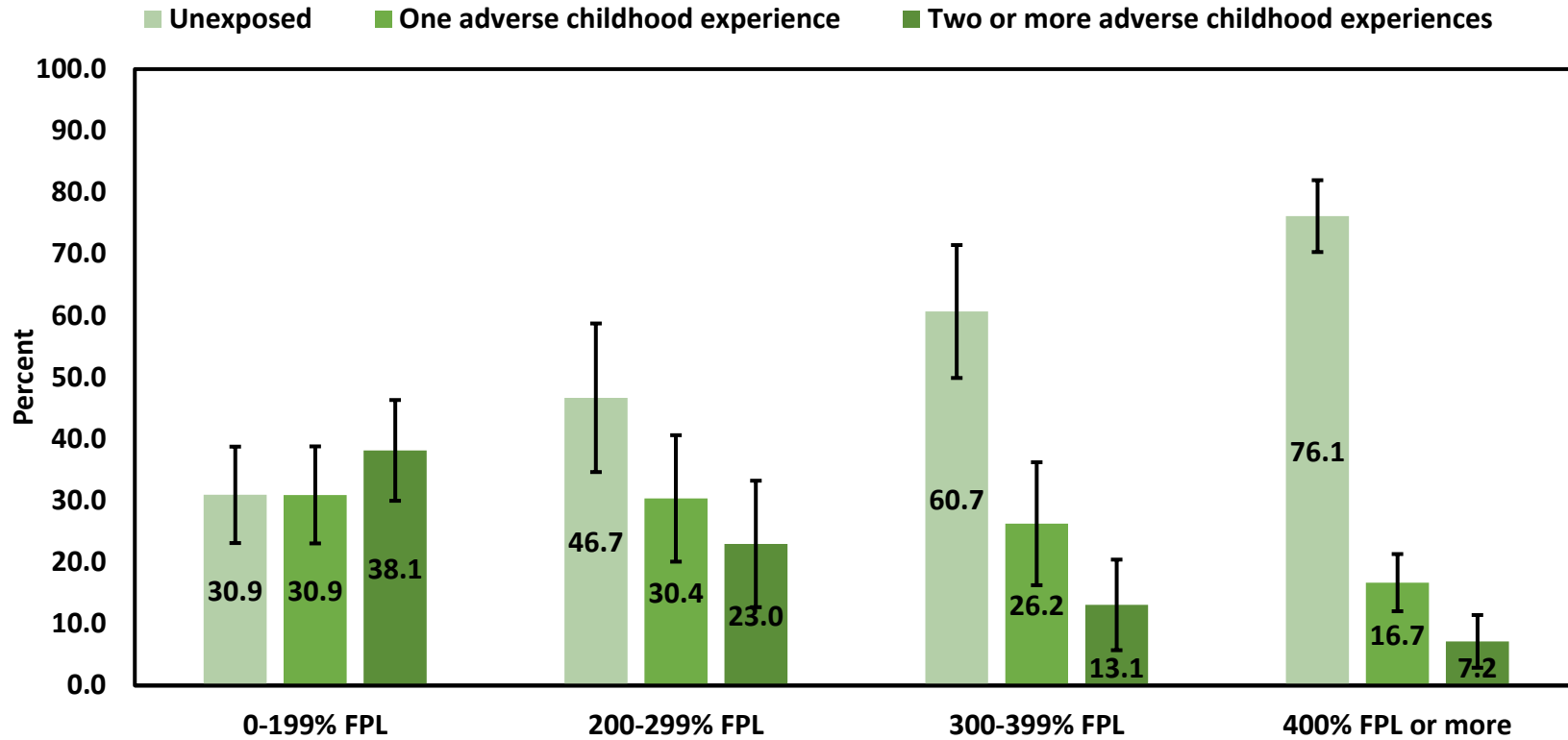


Figure 166: ACEs among children in Del. by poverty status, 2016

Source: [National Survey for Children's Health \(NSCH\), 2016](#)

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2017 High School Youth Risk Behavior Survey

Homelessness and Past-Month Substance Use among Delaware High School Students (in percentages)

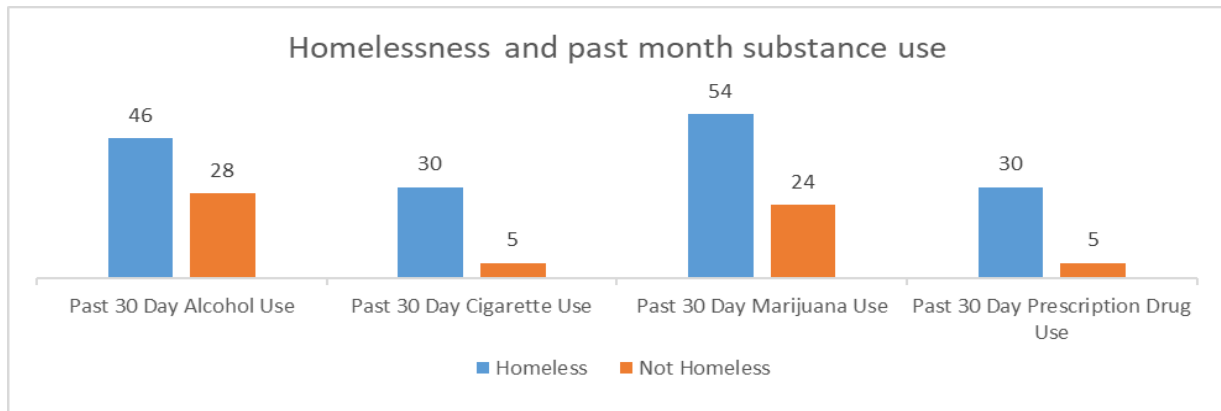
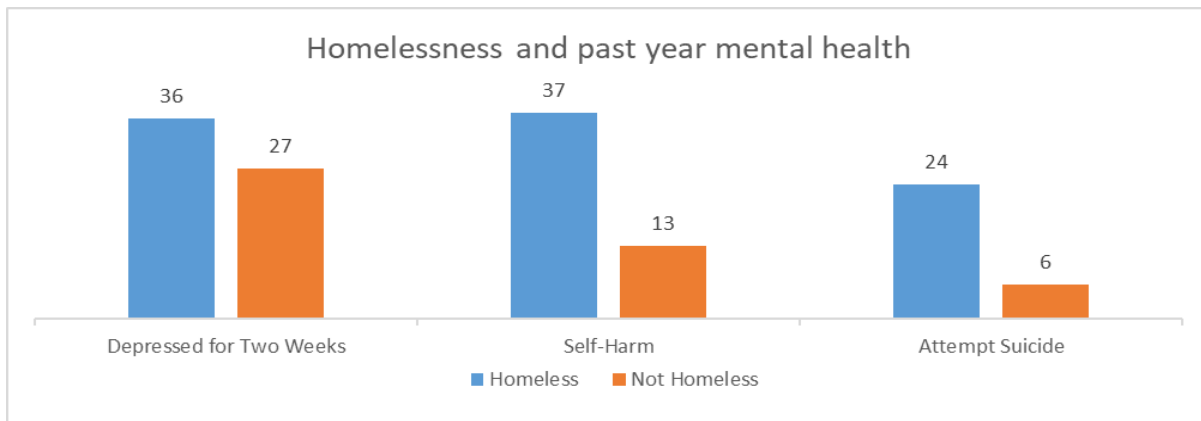


Figure 167: Homelessness & past-month substance use, HS, 2017

Homelessness and Past-Year Mental Health among Delaware High School Students (in percentages)



Homelessness^a: Where Do You Typically Sleep at Night? (in percentages)

	At Home with your Parents/Guardian	Other
Male	95	5
Female	98	2
Total	96	4

Figure 168: Homelessness & mental health indicators, HS, 2017

Note:^a “Homeless” defined here as usually sleeping anywhere other than at home with parents/guardians

Source: [“2017 Delaware Youth Risk Behavior Survey \(YRBS\).” Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey

Parental Incarceration and Past-Month Substance Use (in percentages)

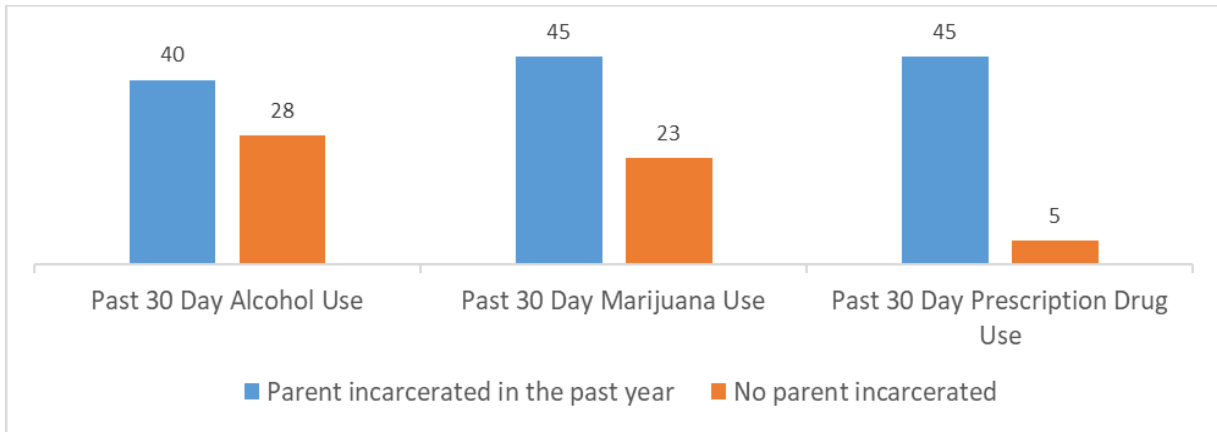
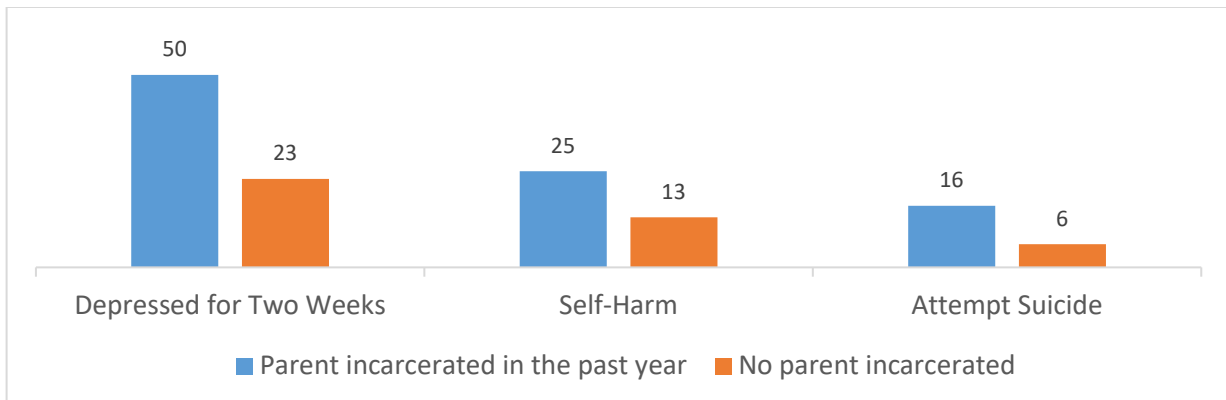


Figure 169: Parental incarceration & past-month substance use, 2017

Parental Incarceration and Past-Year Mental Health (in percentages)



Incarceration: In the Past Year, Has Either Your Mother or Father Been Incarcerated? (in percentages)

	No	Yes
Male	93	7
Female	91	9
Total	92	8

Figure 170: Parental incarceration & mental health indicators, 2017

Unweighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey Fighting and Past-Month Substance Use (in percentages)

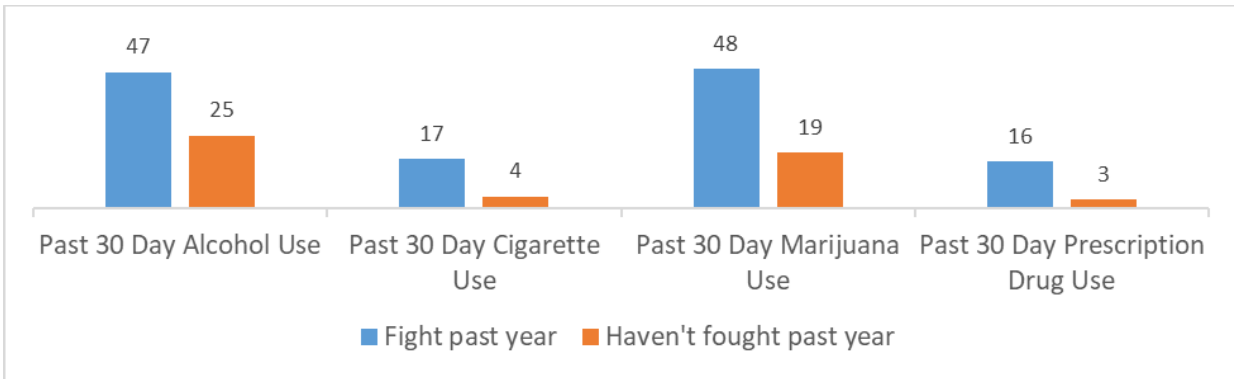
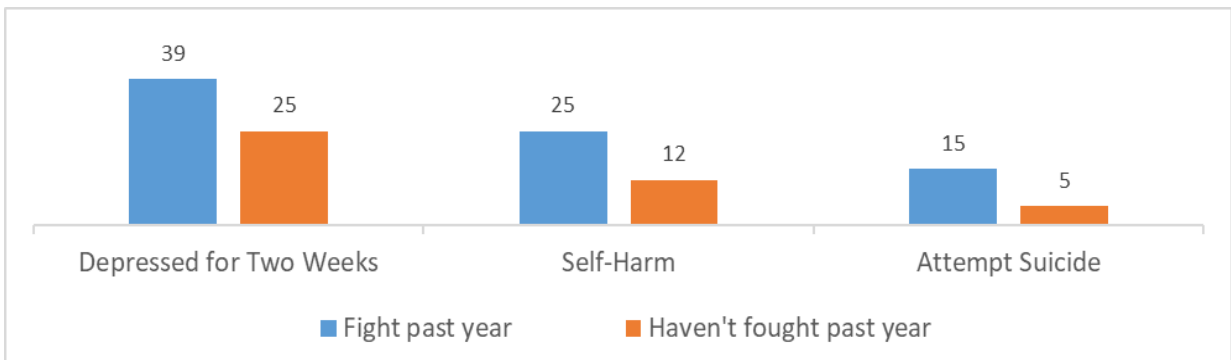


Figure 171: Fighting & substance use, past-month, 2017

Fighting and Past-Year Mental Health (in percentages)



Exposure to violence indicators (in percentages)

	I have been in a fight in the past year	I have been threatened or injured with a weapon on school property in the past 12 months	I have been bullied on school property in the past year
Male	24	7	11
Female	14	4	17
Total	19	5	14

Figure 172: Fighting & mental health indicators, past-year, 2017

Note:

Unweighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey

Threatened at School and Past-Month Substance Use (in percentages)

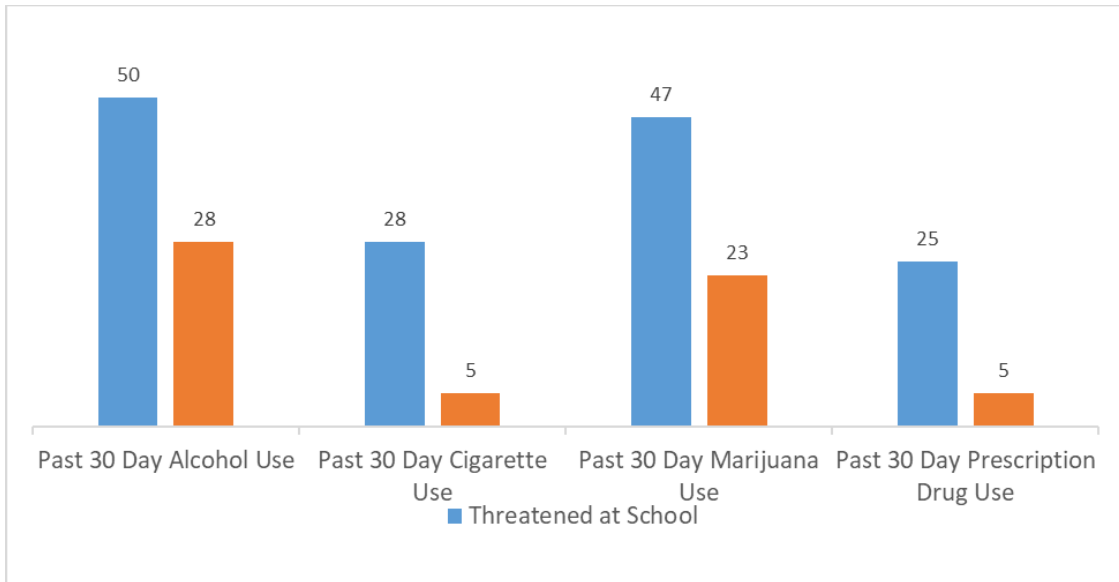


Figure 173: Threatened at school & substance use, past-month, 2017

Threatened at School and Past-Year Mental Health (in percentages)

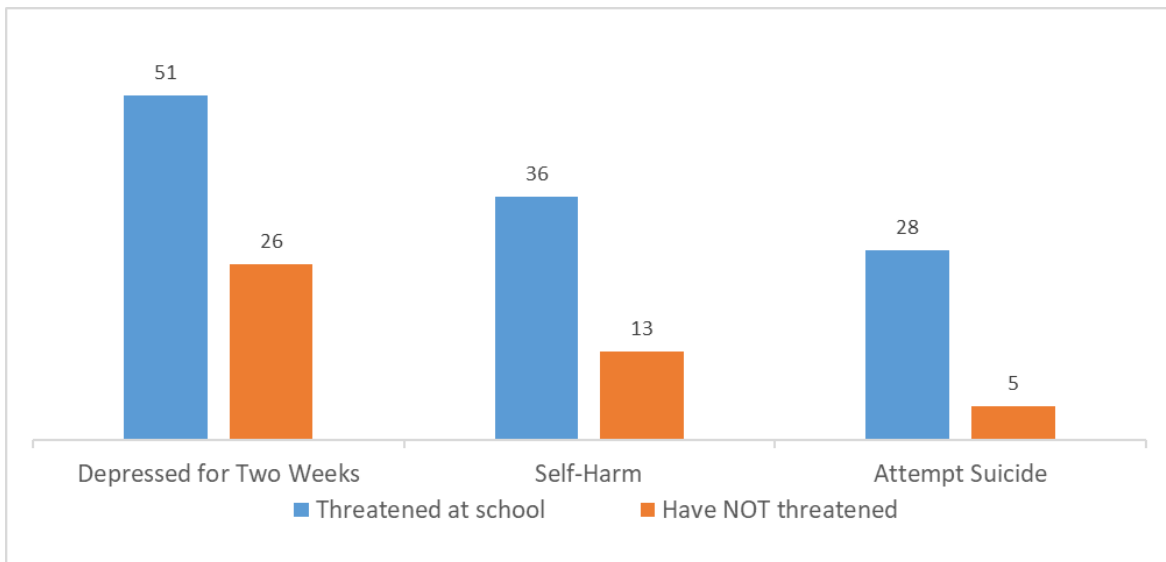


Figure 174: Threatened at school & mental health, past-year, 2017

Note:

Unweighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey Bullying and Past-Month Substance Use

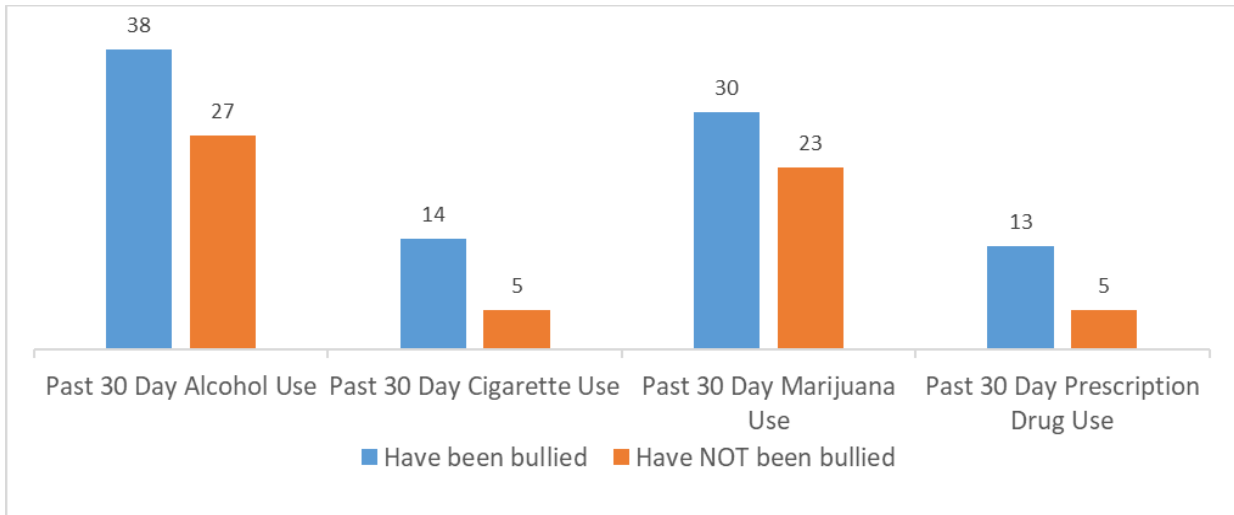


Figure 175: Bullying & substance use, past-month, 2017

Bullying and Past-Year Mental Health

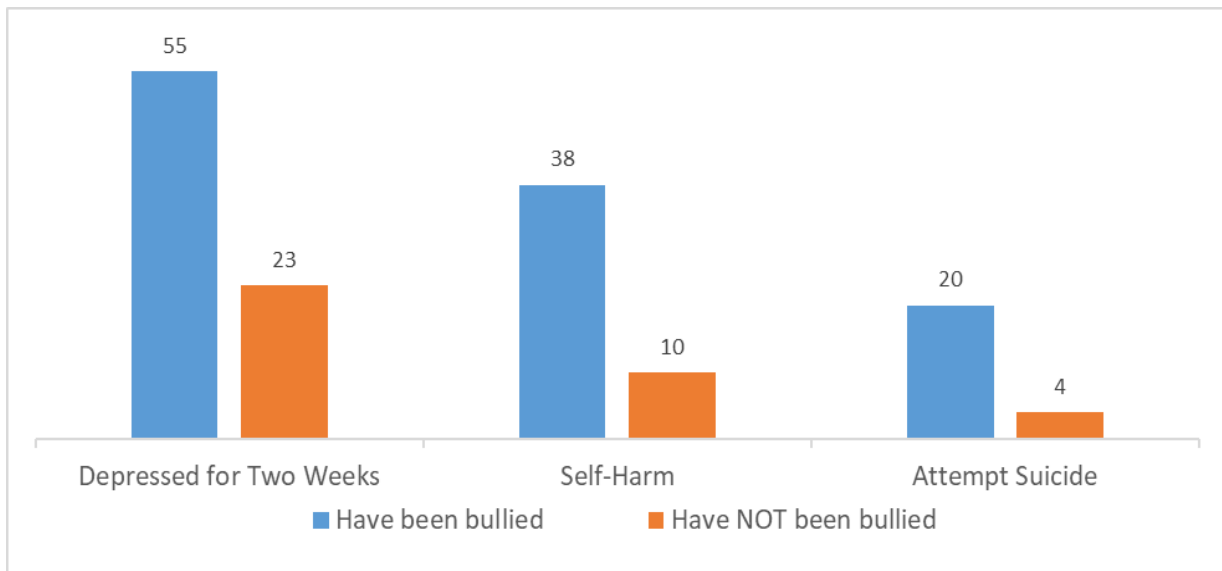


Figure 176: Bullying & mental health indicators, past-year, 2017

Note:

Unweighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey

Emotional Teen Dating Violence and Past-Month Substance Use (in percentages)

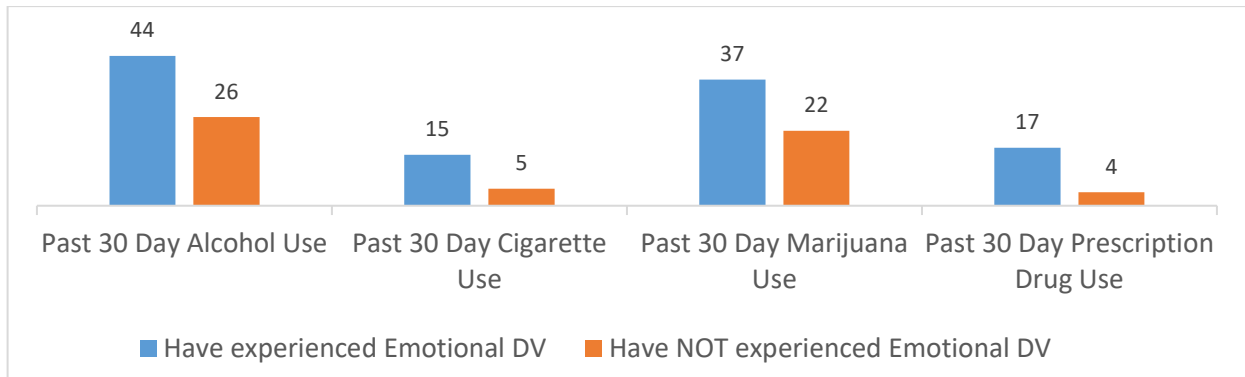


Figure 177: Emotional dating violence & substance use, past-month, 2017

Emotional Teen Dating Violence and Past-Year Mental Health (in percentages)

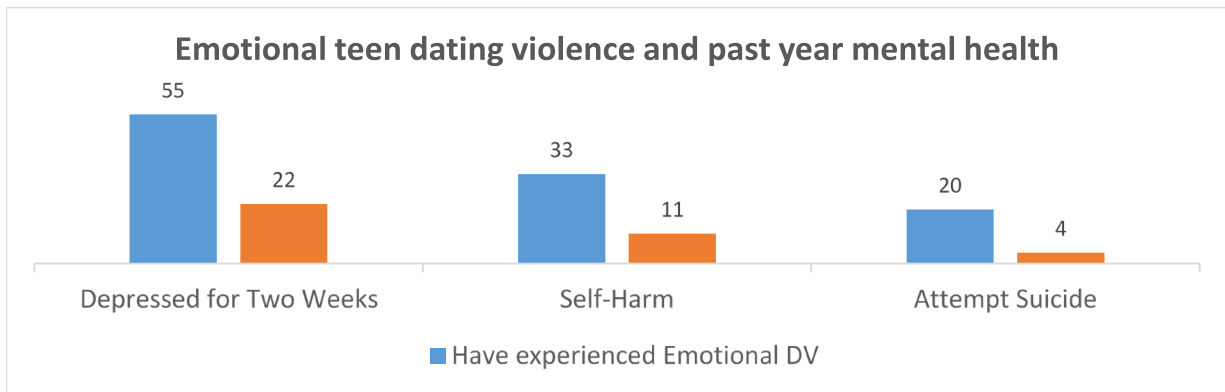


Figure 178: Emotional dating violence & mental health, past-year, 2017

Unweighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey Physical Teen Dating Violence and Past-Month Substance Use (in percentages)

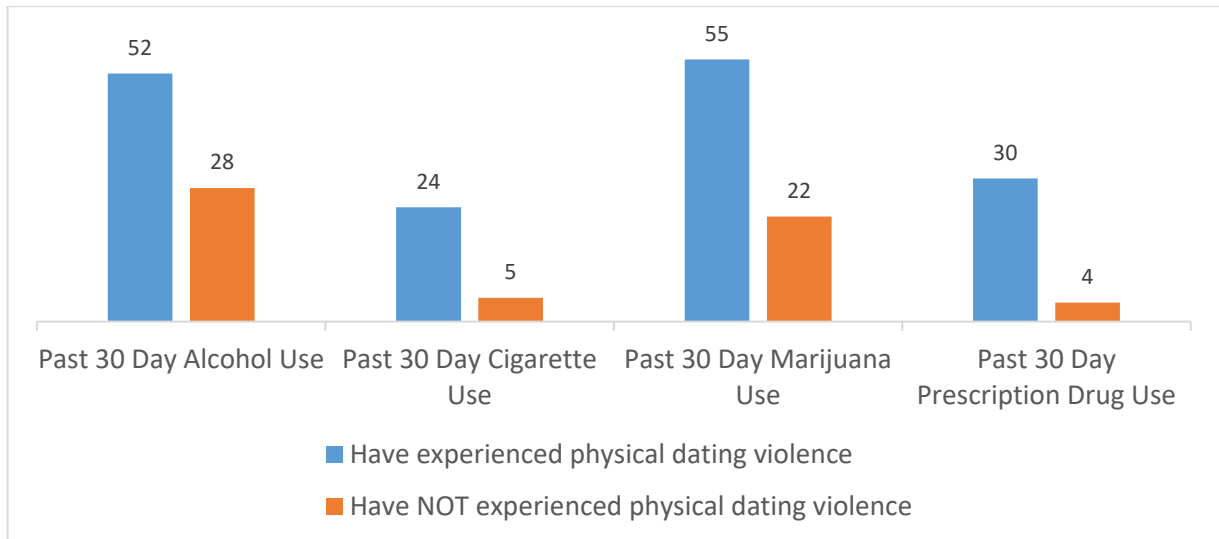


Figure 179: Physical dating violence & substance use, past-month, 2017

Physical Teen Dating Violence and Past-Year Mental Health (in percentages)

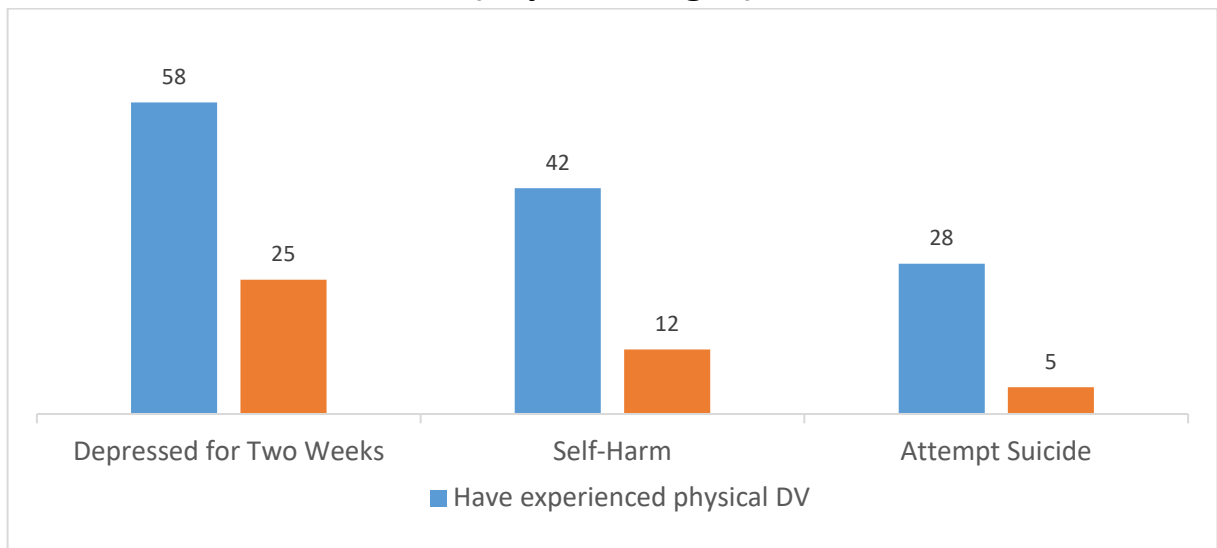


Figure 180: Physical dating violence & mental health indicators, past-year, 2017

Unweighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey Sexual Teen Dating Violence and Past-Month Substance Use (in percentages)

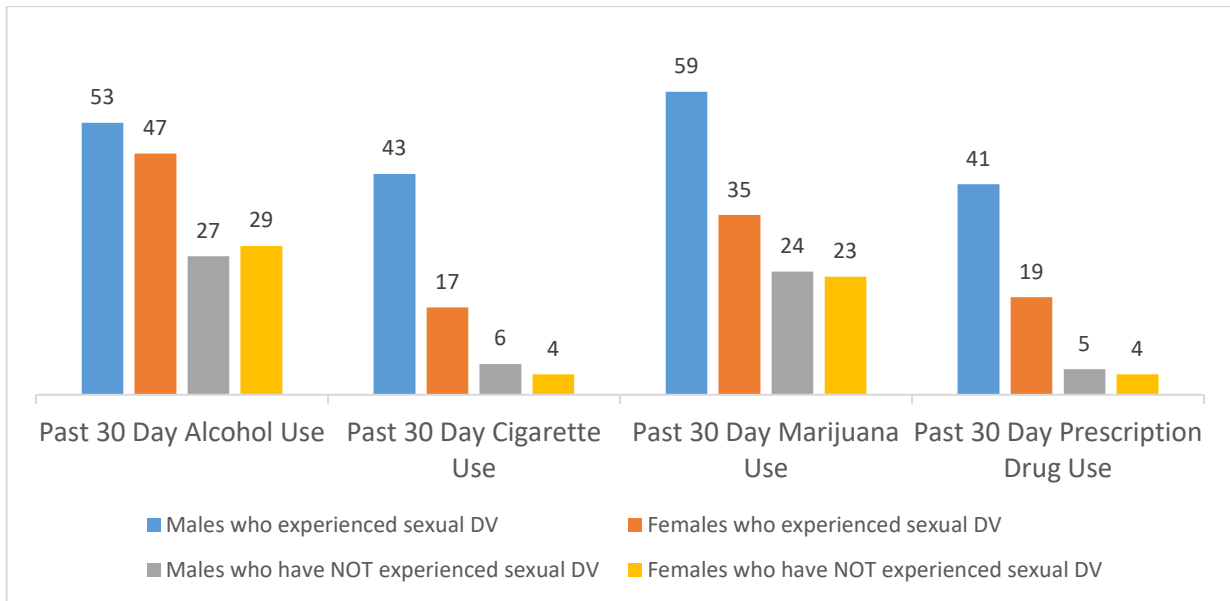


Figure 181: Sexual dating violence & substance use, past-month, 2017

Sexual Teen Dating Violence and Past-Year Mental Health (in percentages)

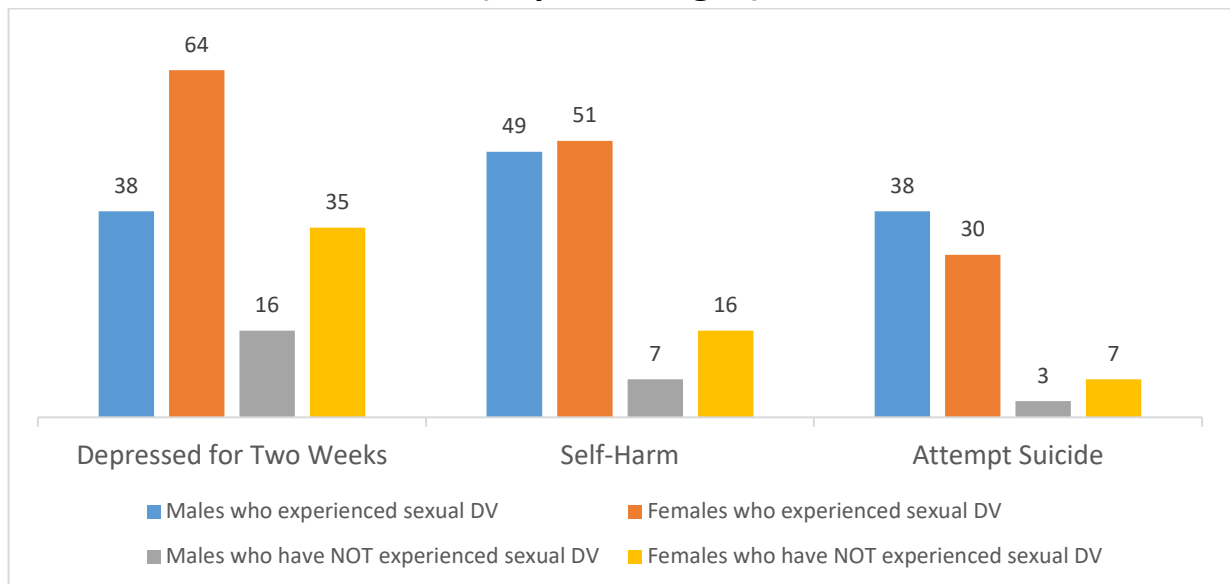


Figure 182: Sexual dating violence & mental health indicators, past-year, 2017

Unweighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey

Forced Sexual Contact and Past-Month Substance Use (in percentages)

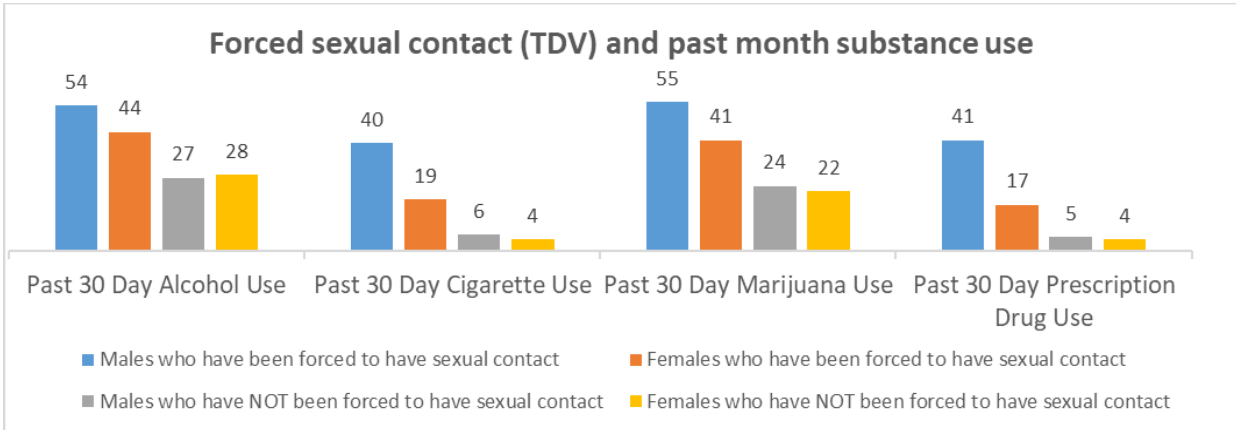
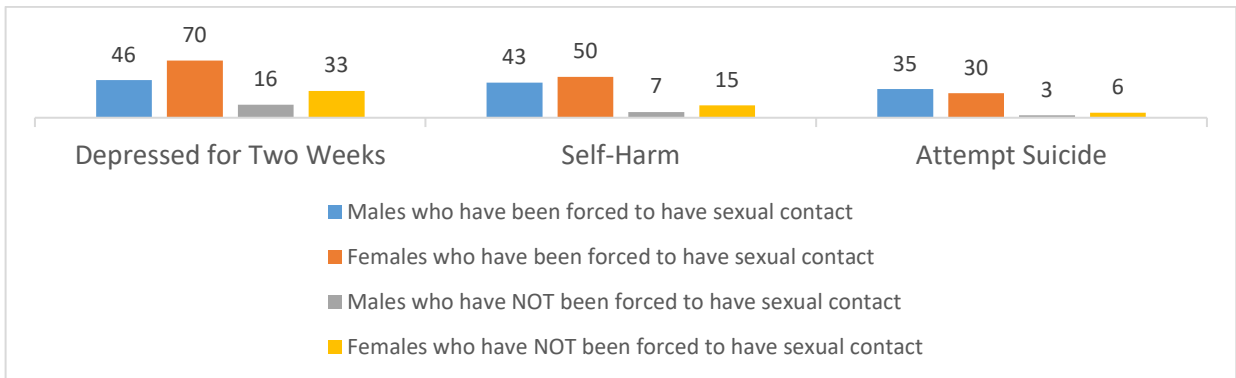


Figure 183: Forced sexual contact (from partner) & substance use, past-month, 2017

Forced Sexual Contact and Past-Year Mental Health (in percentages)



Forced Sexual Intercourse and Contact (in percentages)

	Did someone you were dating or going out with force you to do sexual things you did not want to do?	Have you ever been physically forced to have sexual intercourse when you did not want to?
Male	5	4
Female	10	11
Total	8	8

Figure 184: Forced sexual contact (from partner) & mental health indicators, 2017

Note:

Unweighted data; sexual things refer to kissing, touching, or being physically forced to have sexual intercourse

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey Forced Sexual Contact and Past-Month Substance Use (in percentages)

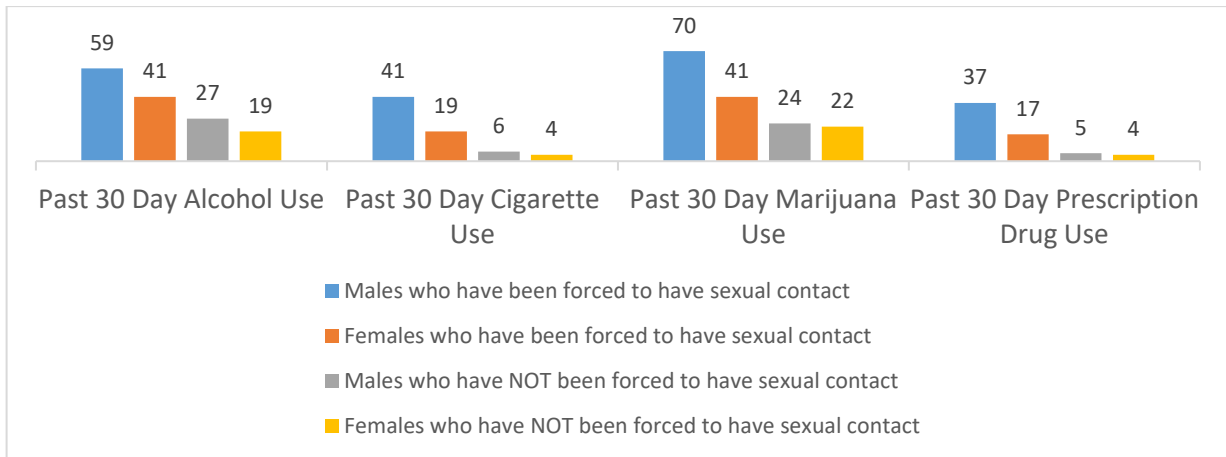


Figure 185: Forced sexual contact (anyone) & substance use, past-month, 2017

Forced Sexual Contact and Past-Year Mental Health (in percentages)

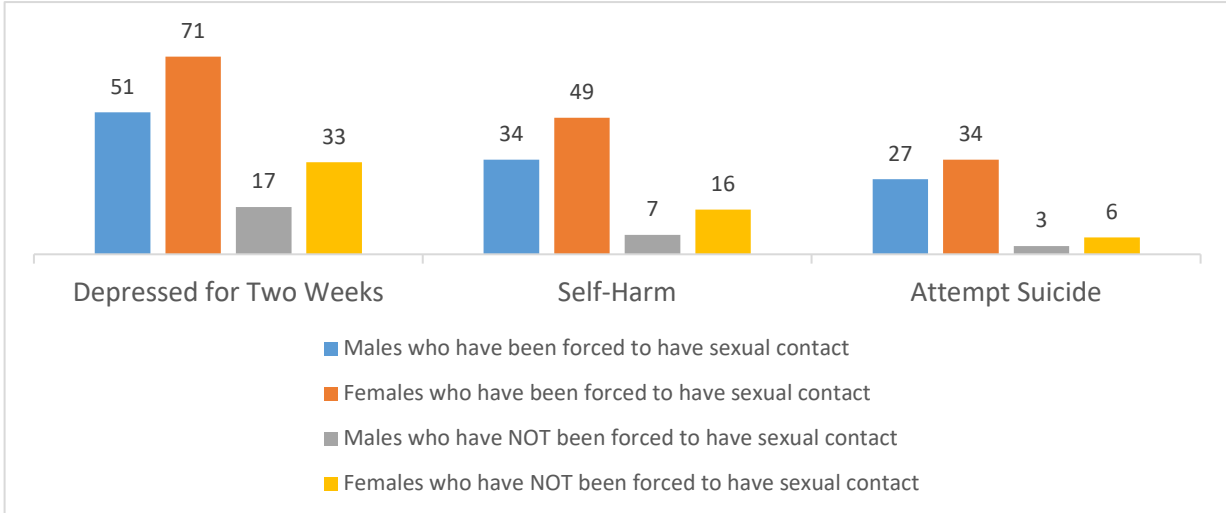


Figure 186: Forced sexual contact (anyone) & mental health indicators, 2017

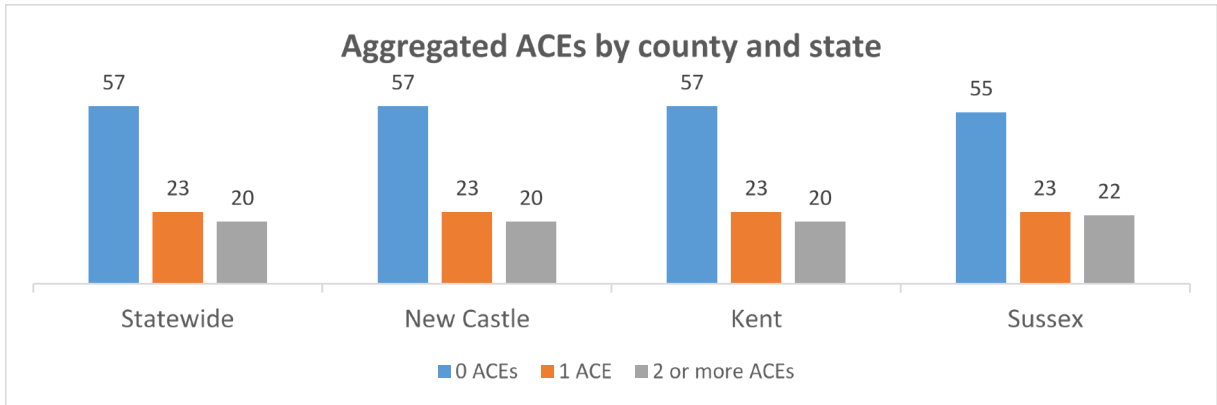
Note:

Unweighted data; sexual things refer to kissing, touching, or being physically forced to have sexual intercourse

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey Aggregated Adverse Childhood Experiences ^a By County and State (in percentages)



	0 ACEs	1 ACE	2 or more
Statewide	57	23	20
Males	60	24	16
Females	54	22	24
New Castle	57	23	20
Males	61	24	15
Females	54	22	24
Kent	57	23	20
Males	57	26	17
Females	56	21	23
Sussex	55	23	22
Males	59	22	19
Females	52	24	25

Figure 187: Aggregated adverse childhood experiences by county and state, 2017

Notes:

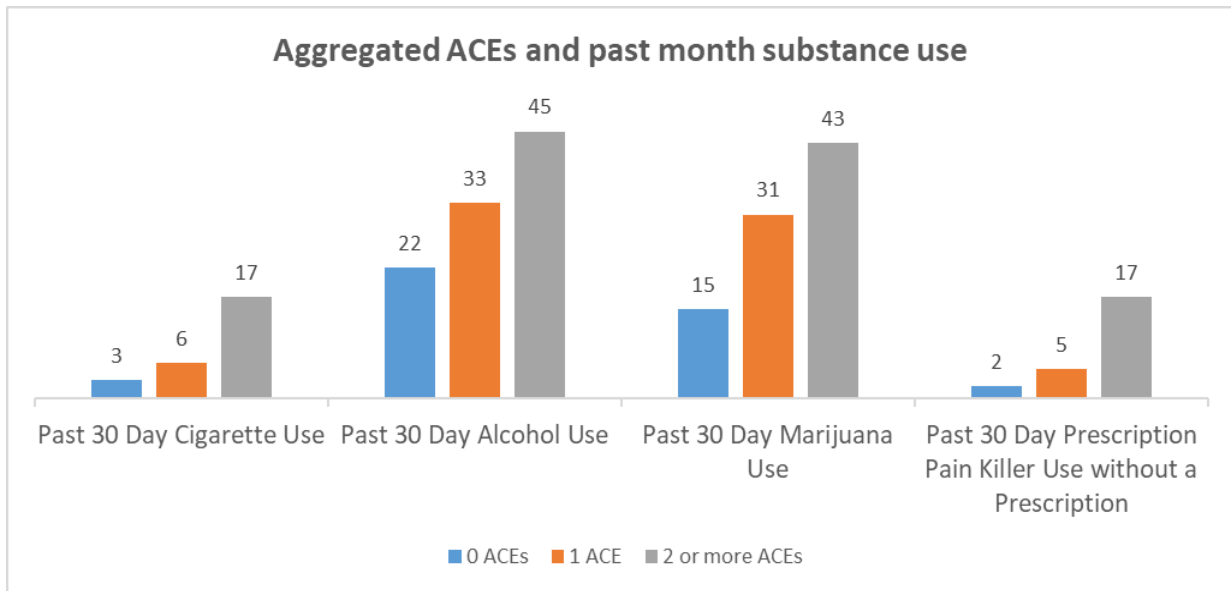
^aStudents who confirmed experiencing any of the events above such as homelessness, incarcerated parent, fighting, being threatened, being bullied, or teen dating violence or sexual violence, were placed in either “1 ACE” or “2 or More ACEs” category depending on the number of different experiences they reported.

Unweighted data

Source: [“2017 Delaware Youth Risk Behavior Survey \(YRBS\).” Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 High School Youth Risk Behavior Survey ACEs^a and Past-Month Substance Use (in percentages)



Number of ACEs	Past-30-Day Cigarette Use	Past-30-Day Alcohol use*	Past-30-Day Marijuana Use*	Past-30-Day Painkiller Use without a Prescription
0 ACEs	3	22	15	2
1 ACE	6	33	31	5
2 or more ACEs	17	45	43	17

Figure 188: Adverse childhood experiences & substance use, past-month, 2017

Notes:

Unweighted data

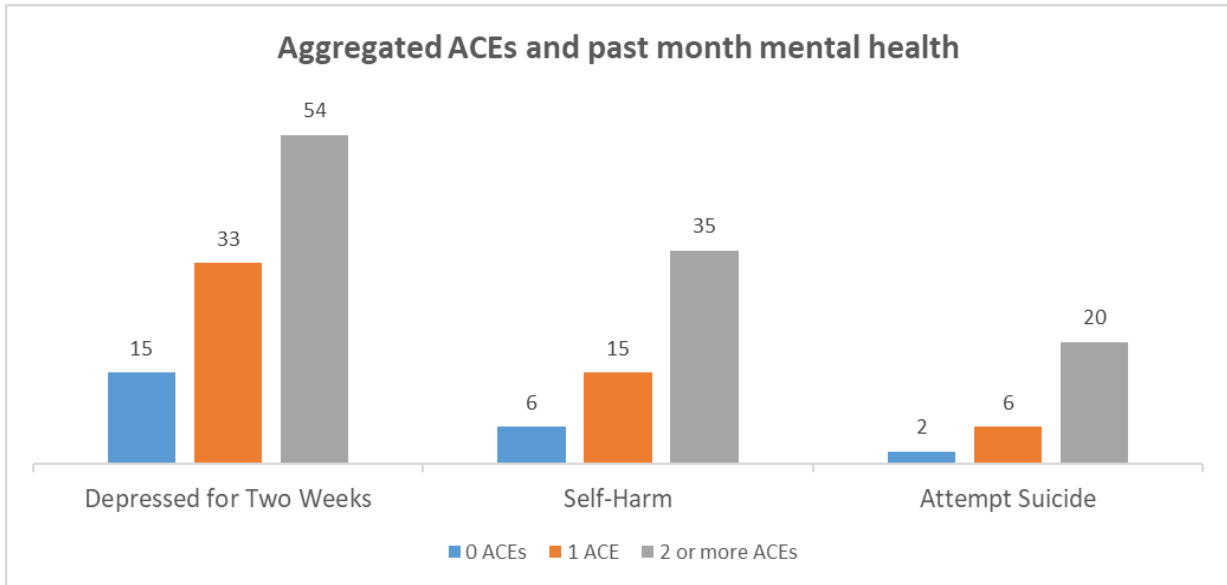
^aStudents who confirmed experiencing any of the events above such as homelessness, fighting, being threatened, being bullied, or experience teen dating violence or sexual violence, were placed in either “1 ACE” or “2 or More ACEs” category depending on the number of different experiences they reported.

Source: [“2017 Delaware Youth Risk Behavior Survey \(YRBS\).” Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey

ACEs^a and Past-Month Self-Reported Mental Health (in percentages)



Number of ACEs	Depressed for Two Weeks	Self-Harm	Attempt Suicide
0 ACEs	15	6	2
1 ACE	33	15	6
2 or more ACEs	54	35	20

Figure 189: Adverse childhood experiences & mental health indicators, 2017

Notes:

Unweighted data

^a Students who confirmed experiencing any of the events above such as homelessness, fighting, being threatened, being bullied, or experience teen dating violence or sexual violence, were placed in either “1 ACE” or “2 or More ACEs” category depending on the number of different experiences they reported.

Source: [“2017 Delaware Youth Risk Behavior Survey \(YRBS\).” Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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Chapter 12 Lesbian, Gay, Bisexual, and Questioning Youth

National Overview

Data at the national level shows patterns of health disparity in the lesbian, gay, bisexual, and questioning (LGBQ) youth community. One meta-analysis and review found that on average, LGBQ youth were 190% more likely to misuse substances than heterosexual youth (Marshal et al., 2008). Another meta-analysis found significantly higher rates of depression and suicidal ideation for sexual minority youth compared to other youth (Marshal et al., 2011). These studies suggest that victimization, discrimination, and the stress associated with both may be risk factors for both substance abuse and poor mental health status among LGBQ youth individuals.

Delaware Overview

Eleven percent of Delaware high school youth who responded to a 2017 Youth Risk Behavior Survey (YRBS) question about sexual orientation reported that they identified as lesbian, gay, or bisexual. An additional three percent indicated that they were not sure of their sexual orientation (Q or questioning). Compared to data from the 2015 YRBS, it appears the gap is narrowing across several measures; however, LGBQ youth continue to appear to be at disproportionate risk for negative psychosocial concerns. This population reported increased rates of substance use and poorer mental health than their heterosexual peers. It is important to note that being gay, lesbian, or bisexual is not the cause of increased risk behaviors; rather, internal and interpersonal conflicts very likely contribute to the heightened risk that these teens experience. Uncertainty may create even greater challenges, as the following slides illustrate that the youth who report that they unsure of their sexual orientation report highest rates of smoking cigarettes, binge drinking, and the use of numerous illegal drugs.

In terms of mental health, more than half of LGBQ youth (52.5%) reported feeling sad or hopeless for two weeks or more in the preceding year. They reported higher rates of always worrying and feeling afraid than their straight peers. LGBQ youth are at elevated risk for self-harm and suicide comparatively. Almost 39% of LGBQ youth purposefully hurt themselves (without intending death) at least once in the last year compared to 10% of heterosexual youth. Further, 30.6% of LGBQ youth planned suicide and 18% attempted suicide at least once within the last year, as opposed to nine and five percent respectively among their heterosexual peers.

Strategies to prevent substance use disorders and mental illness are designed to increase protective factors and reduce risk factors. Risk and protective factors are relevant across several domains (individual, family, peers, and communities) and during various stages of the life cycle. Data from the YRBS show two domains where sexual minority youth in Delaware have increased risk factors: LGBQ youth reported poorer relationships with their parents than other youth and increased rates of bullying victimization. Data from the 2017 Delaware YRBS show that across the entire student population, students who report positive relationships with their

parents have lower rates of substance abuse and better mental health status (see Chapter 14 in this report). In this instrument, positive parental relationships are measured by youths' perceived parental pride, parental interest in youth activities, and comfort in sharing thoughts and feelings with parents. As the following charts illustrate, straight teens reported higher rates of parental support compared to their LGBQ peers. LGBQ youth were more likely to report that they avoided going to school due to feeling unsafe and were bullied (on school property and electronically) at rates approximately twice that of their heterosexual peers. Additionally, LGBQ youth reported they were more likely to bring a weapon to school at least once within the last 30 days (6.3%), compared to 2.9% among heterosexual youth.

Data from the Delaware YRBS show LGBQ students report significantly higher rates of past-month use of cigarette, alcohol, marijuana, and prescription painkillers (without a prescription) compared to other students. They were more than twice as likely to report current cigarette use than their heterosexual peers. Seventeen percent of sexual minorities reported binge drinking in the past month, compared to 15% of heterosexual students. Past-month marijuana use was also higher among LGBQ youth than among their heterosexual peers (32% versus 23%). Sexual minorities reported more than twice the past-month use of prescription pain medicine (10.7%) than their heterosexual peers (4.9%). Across all drug categories, sexual minorities reported significantly higher rates of ever using drugs than heterosexual students.

The following charts depict the rates of substance use, mental health concerns, protective factors, and bullying experienced by Delaware high school students by reported sexual orientation (heterosexual, gay/lesbian, bisexual, or unsure). It is important to remember that differences in these rates are not intrinsically associated with being LGBQ but are largely due to internal and external challenges that these youth may face related to their sexual orientation. Efforts to increase parental and peer support for all students, and for this group in particular, will be essential to create prevention strategies for LGBQ youth.

2017 Delaware Youth Risk Behavior Survey
Reported Sexual Orientation of Delaware High School Youth
(in ages)

	Percentage	N
Heterosexual	86%	2309
Gay or Lesbian	3%	81
Bisexual	8%	207
Unsure	3%	83

Figure 190: Sexual orientation, HS, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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**2017 Youth Risk Behavior Survey
High School Students Who Reported Smoking Cigarettes
on One or More of the Past 30 Days
(by sexual orientation, in percentages)**

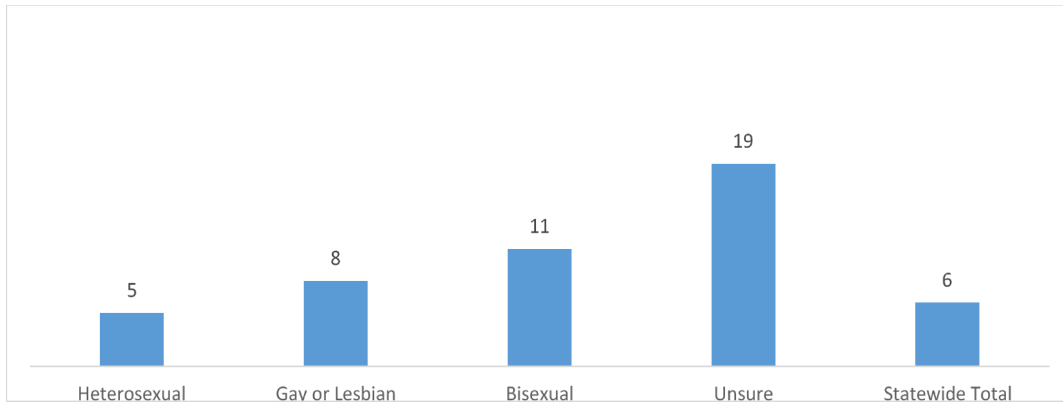


Figure 191: Sexual orientation, smoked in the past 30 days, 2017

**High School Students Who Reported Smoking a Whole Cigarette
for the First Time Before Age 13
(by sexual orientation, in percentages)**

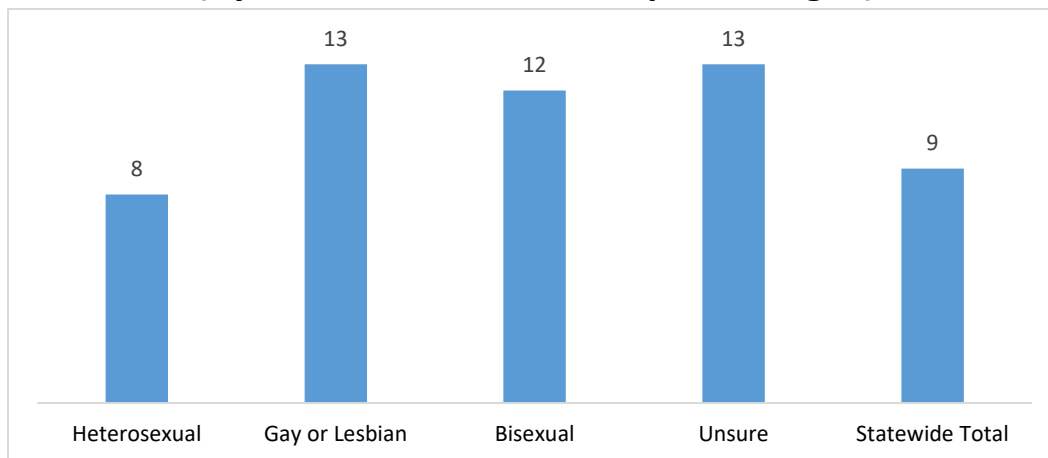


Figure 192: Sexual orientation, first smoked whole cigarette before age 13, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey
High School Students Who Reported Having
at Least One Drink of Alcohol on One or More of the Past 30 Days
(by sexual orientation, in percentages)

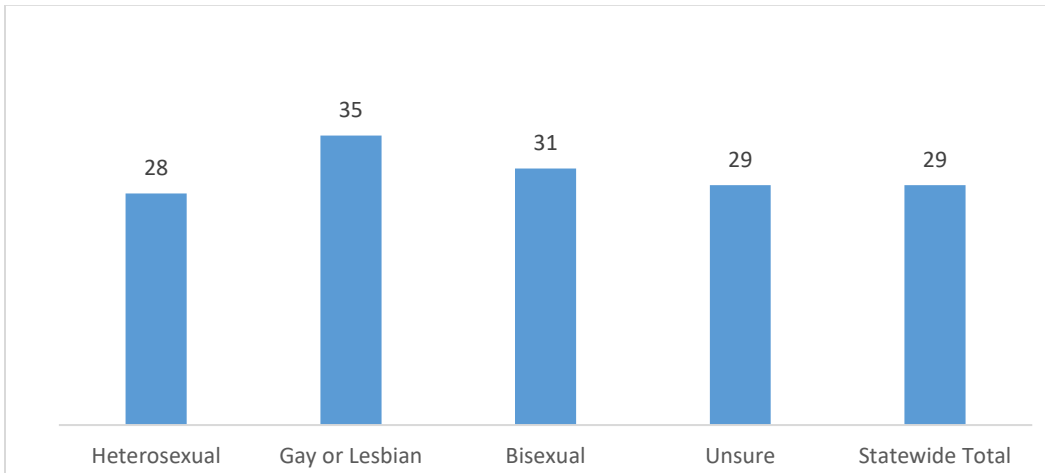


Figure 193: Sexual orientation, had at least 1 drink in past 30 days, 2017

High School Students Who Reported
Drinking Alcohol Before Age 13
(by sexual orientation, in percentages)

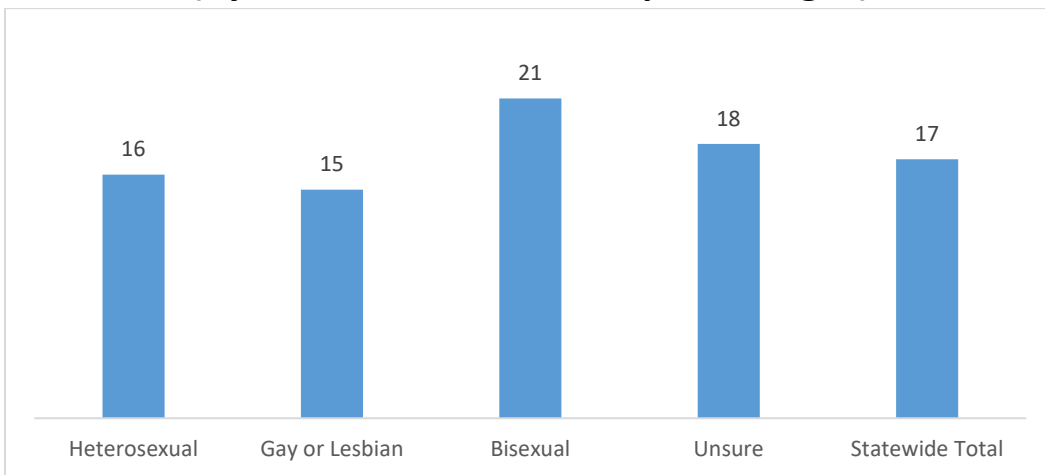


Figure 194: Sexual orientation, drank alcohol before age 13, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey High School Students Binge Drinking One or More Times in Past Month (by sexual orientation, in percentages)

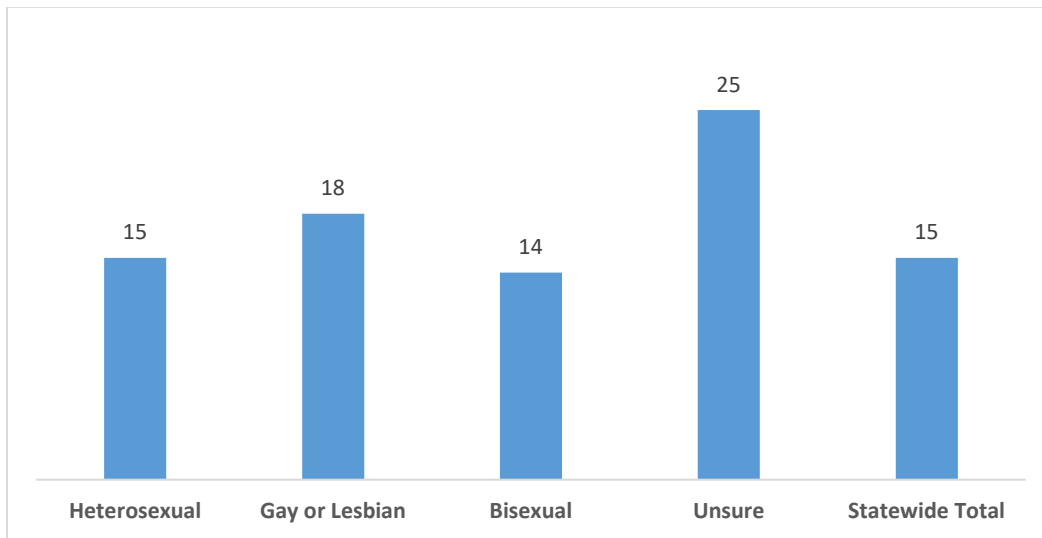


Figure 195: Sexual orientation and binge drinking, HS, 2017

Note: "Binge drinking" is defined as five or more drinks of alcohol in a row for males/four or more drinks for females.

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey
High School Students Who Reported Using Marijuana
One or More Times During the Past 30 Days
(by sexual orientation, in percentages)

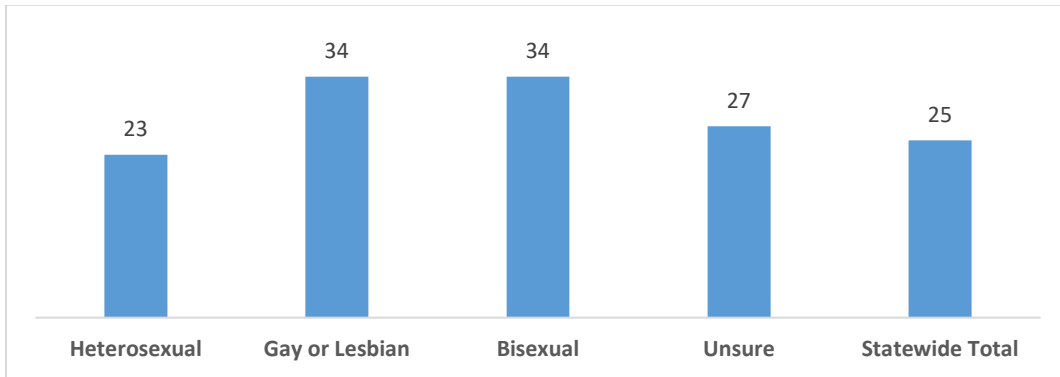


Figure 196: Sexual orientation, used marijuana in past 30 days, 2017

High School Students Who Reported Smoking Marijuana
Before Age 13
(by sexual orientation, in percentages)

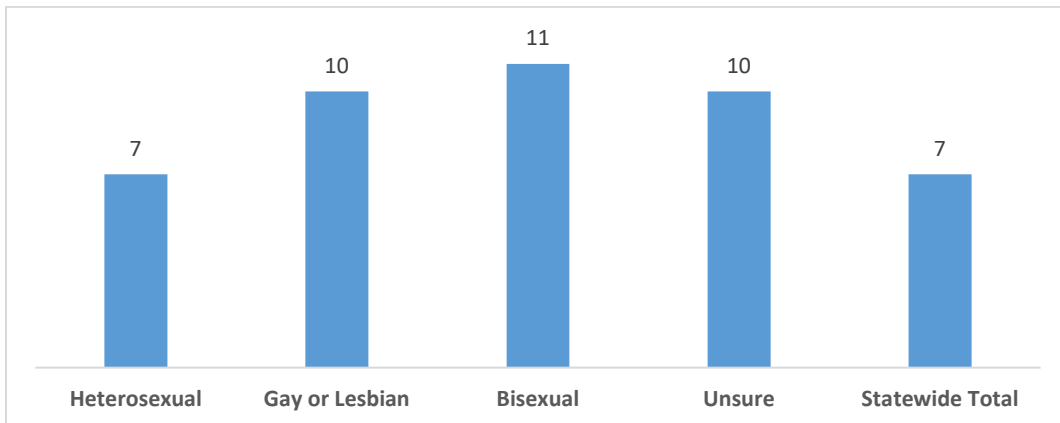


Figure 197: Sexual orientation, used marijuana before age 13, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey High School Students Who Reported Ever Using Other Illegal Drugs in their Lifetime (by sexual orientation, in percentages)

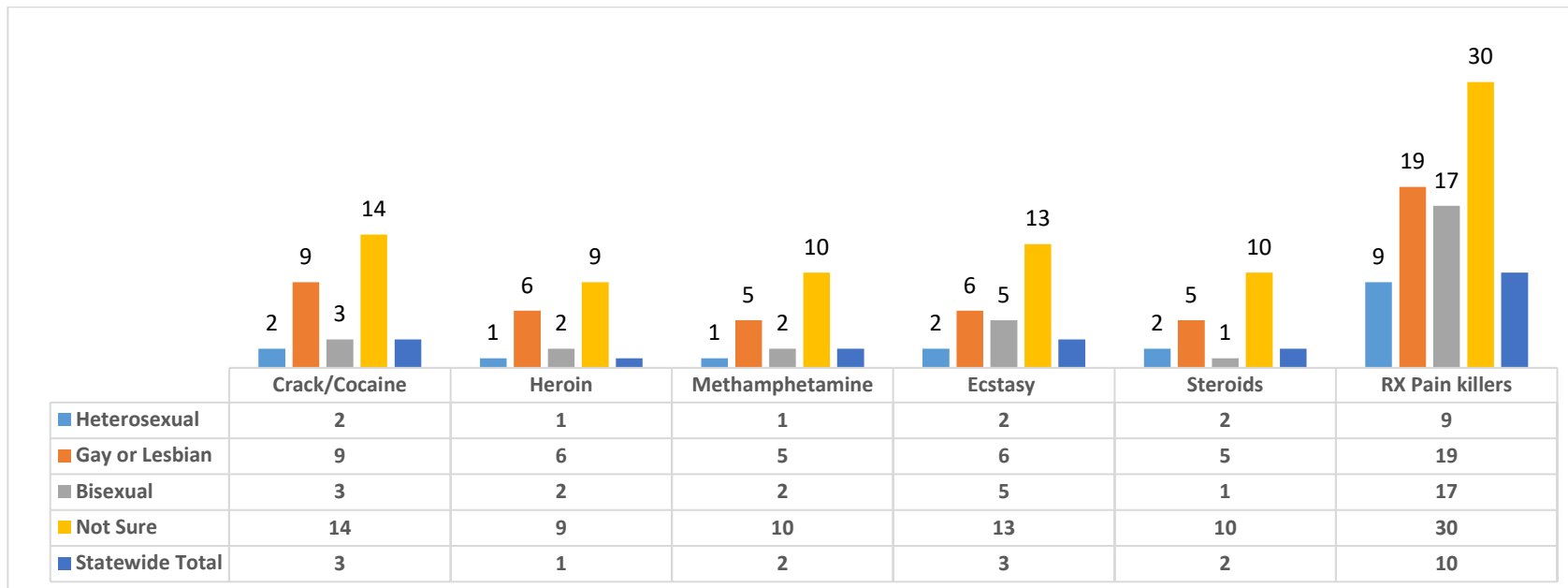


Figure 198: Sexual orientation, used other illegal drugs in lifetime, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey

High School Students Reporting Having Sexual Intercourse (by sexual orientation, in percentages)

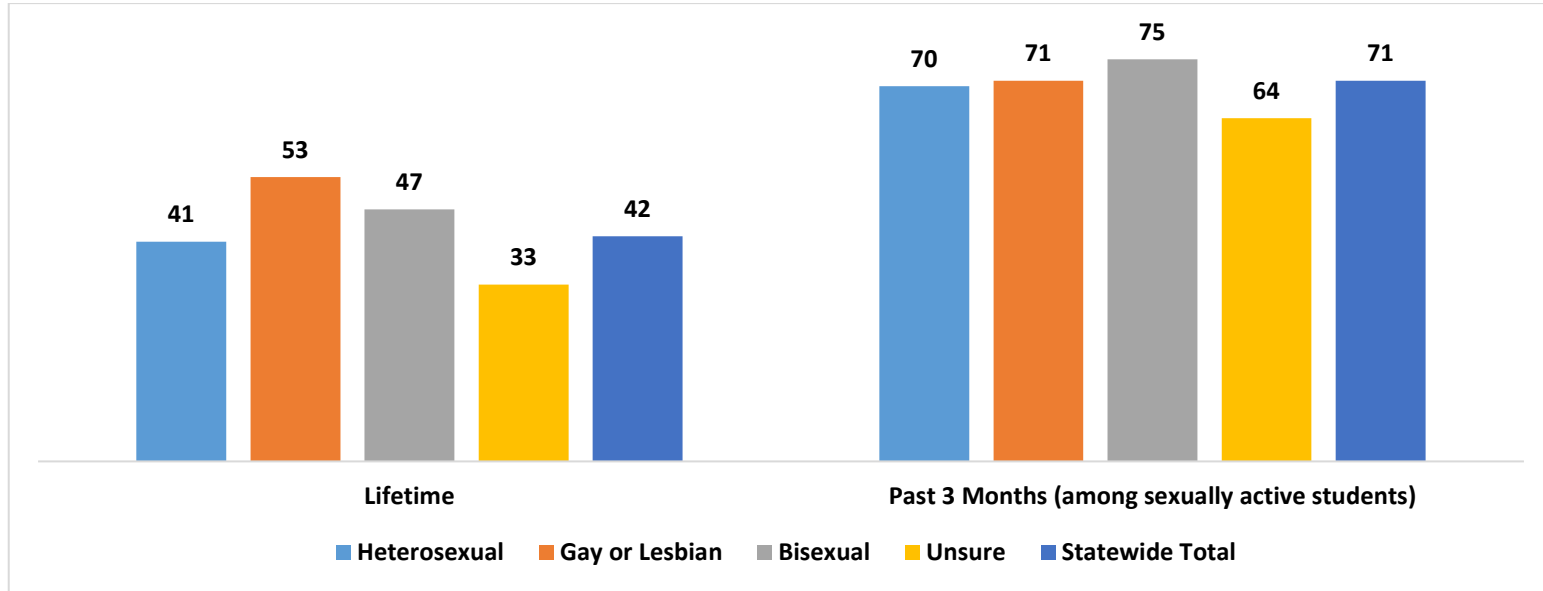


Figure 199: Sexual orientation, reported having sexual intercourse, HS, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey
High School Students Who Reported Using a Condom
the Last Time They Had Sexual Intercourse
(among sexually active students, in percentages)

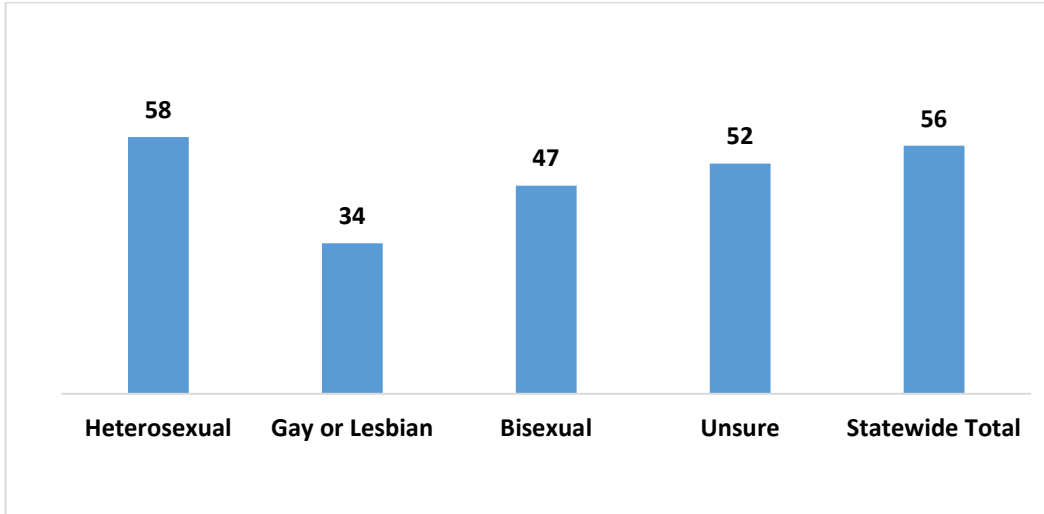


Figure 200: Sexual orientation, reported using condom, HS, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey
High School Students Who Reported Drinking Alcohol or Using Drugs
Before their Last Time Having Sexual Intercourse
(among sexually active students, in percentages)

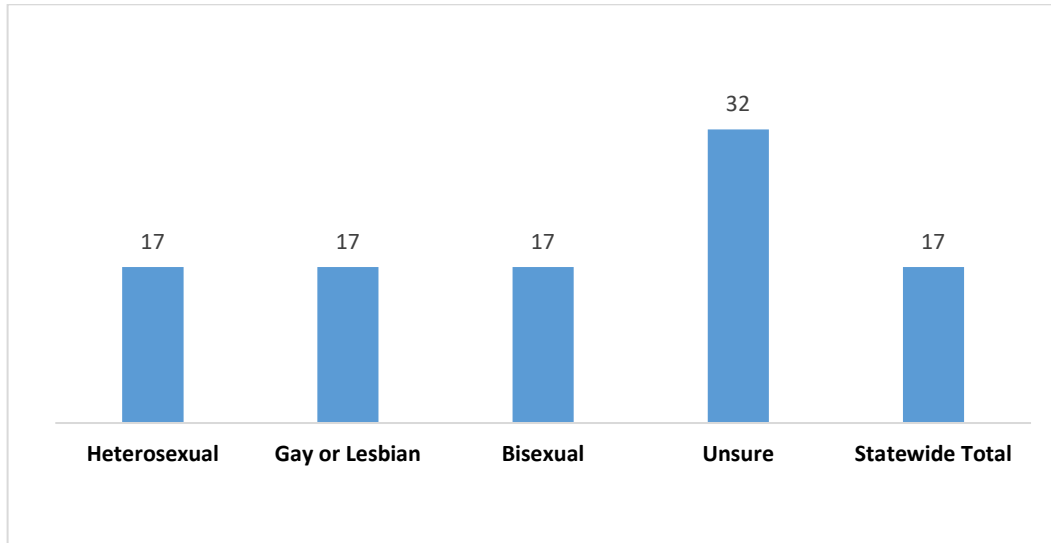


Figure 201: Sexual orientation, used alcohol/drug before last sexual intercourse
Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey High School Students Who Reported Getting into a Fight in the Past Year (by sexual orientation, in percentages)

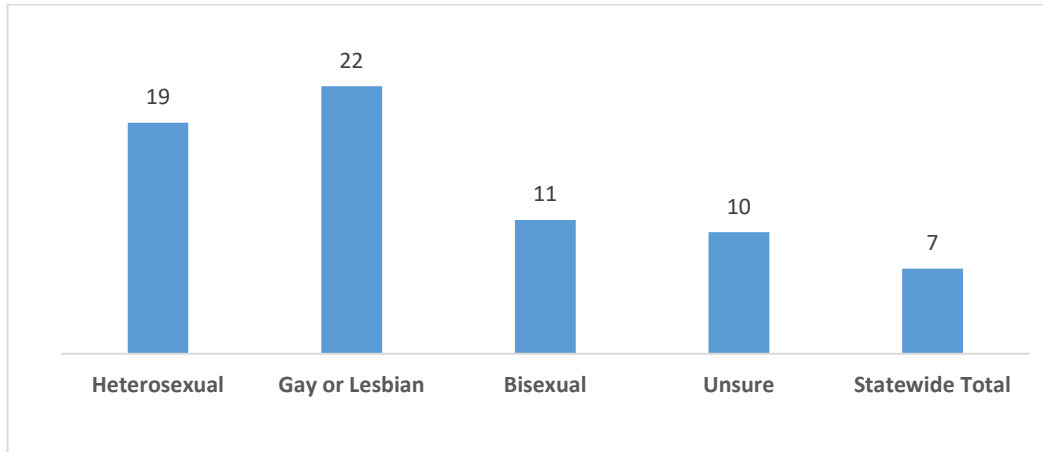


Figure 202: Sexual orientation, got into fight in past year, HS, 2017

High School Students Who Reported Carrying a Weapon on School Property in the Past 30 Days (by sexual orientation, in percentages)

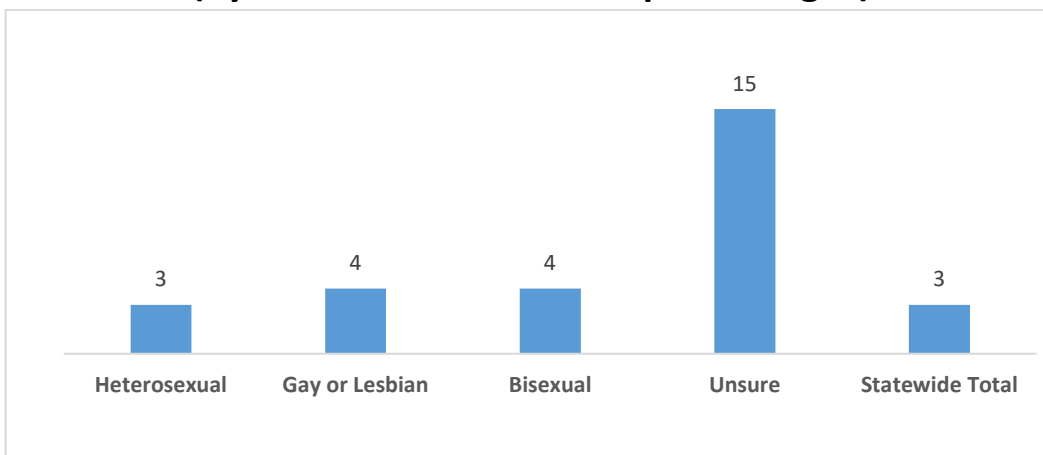


Figure 203: Sexual orientation, carried weapon on school property in past 30 days

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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**2017 Youth Risk Behavior Survey
High School Students Who Reported Being
Bullied at School in the Past Year
(in percentages)**

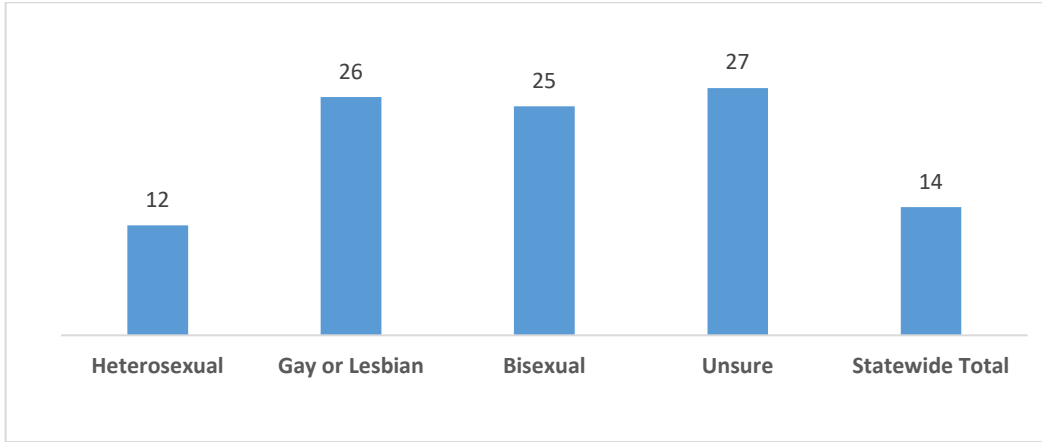


Figure 204: Sexual orientation, reported being bullied in past year, HS, 2017

**High School Students Who Reported Being
Electronically Bullied in the Past Year
(in percentages)**

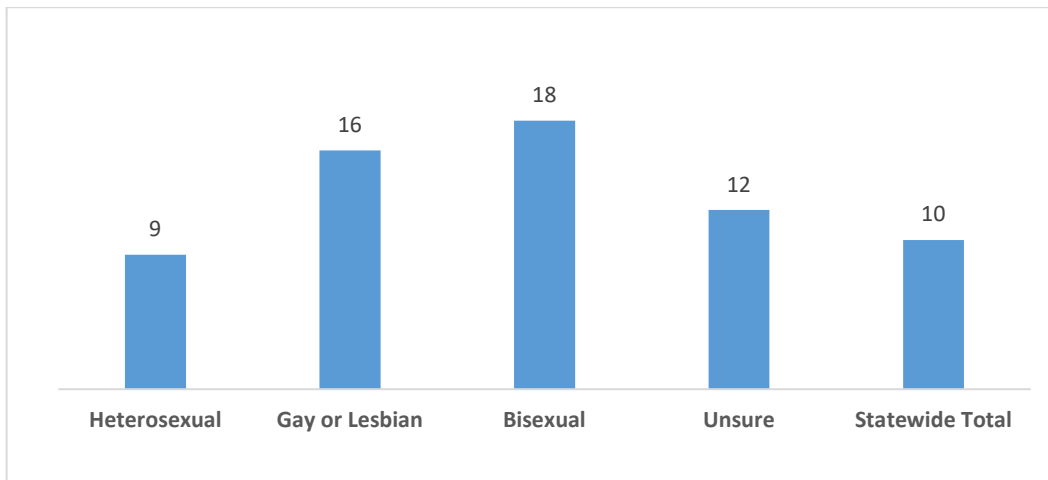


Figure 205: Sexual orientation, reported being bullied electronically, HS, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey
High School Students Who Reported Not Going to School
for One or More Days
Because They Felt Unsafe in the Past 30 Days
(by sexual orientation, in percentages)

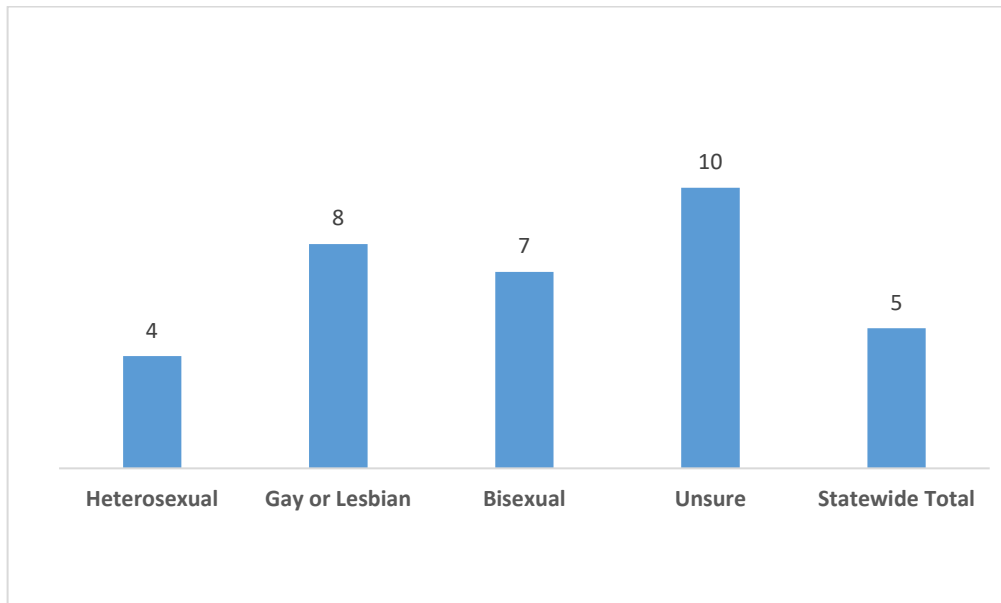


Figure 206: Sexual orientation, did not go to school b/c felt unsafe in past 30 days

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey
High School Students Who Reported their Parent(s)
Show They are Proud of Them
(by sexual orientation, in percentages)

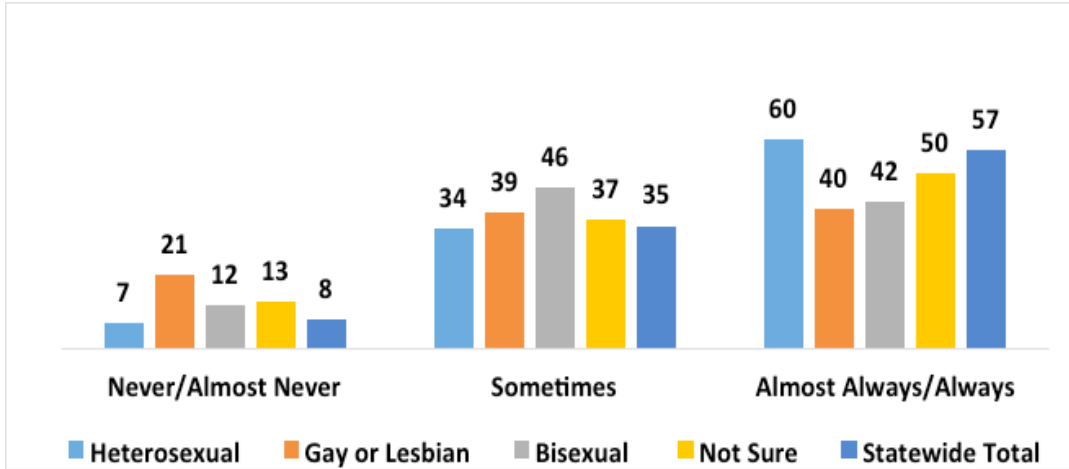


Figure 207: Sexual orientation, parents show they are proud of them, HS, 2017

High School Students Who Reported their Parent(s)
Take an Interest in their Activities
(by sexual orientation, in percentages)

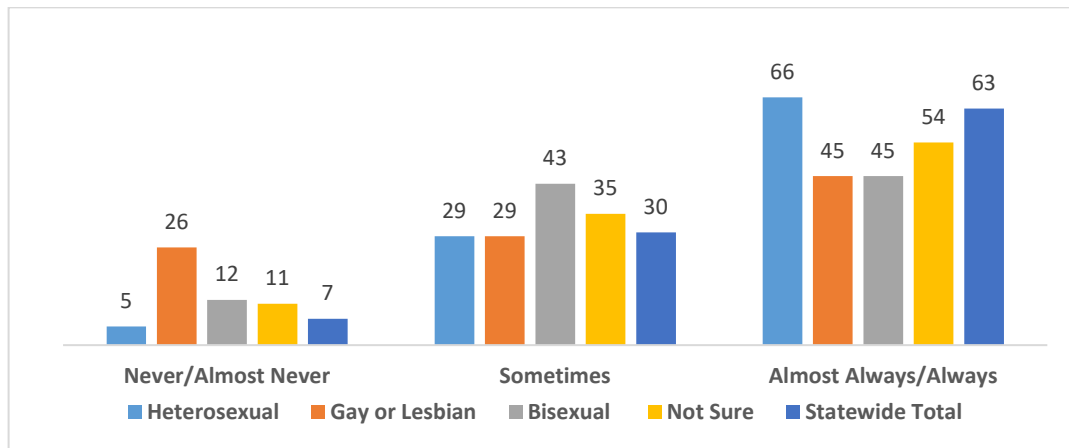


Figure 208: Sexual orientation, parents take interest in activities, HS, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey
High School Students Who Reported that their Parent(s)
Listen to Them When They Talk
(by sexual orientation, in percentages)

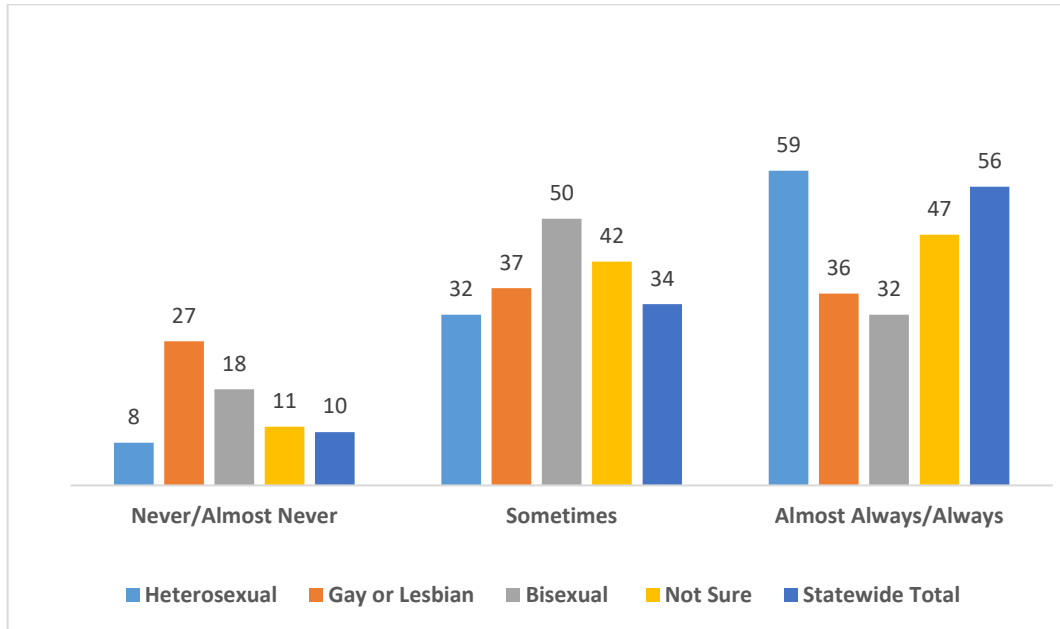


Figure 209: Sexual orientation, parents listen to them, HS, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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2017 Youth Risk Behavior Survey
High School Students Who Reported Feeling Sad or Hopeless
for Two or More Weeks in the Past Year
(by sexual orientation, in percentages)

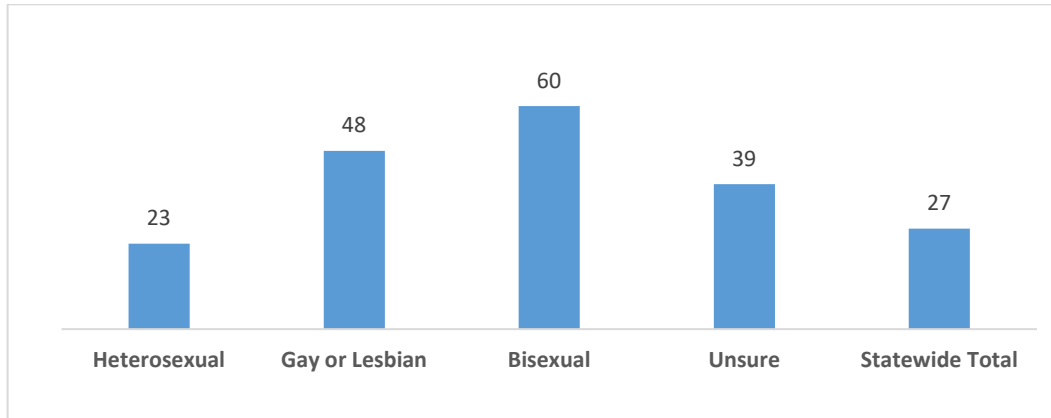


Figure 210: Sexual orientation, felt sad/hopeless for 2+ weeks in past year, HS, 2017

High School Students Who Reported
Self-Harming, Considering Suicide,
Having a Suicide Plan, or Attempting Suicide in the Past 12 Months
(by sexual orientation, in percentages)

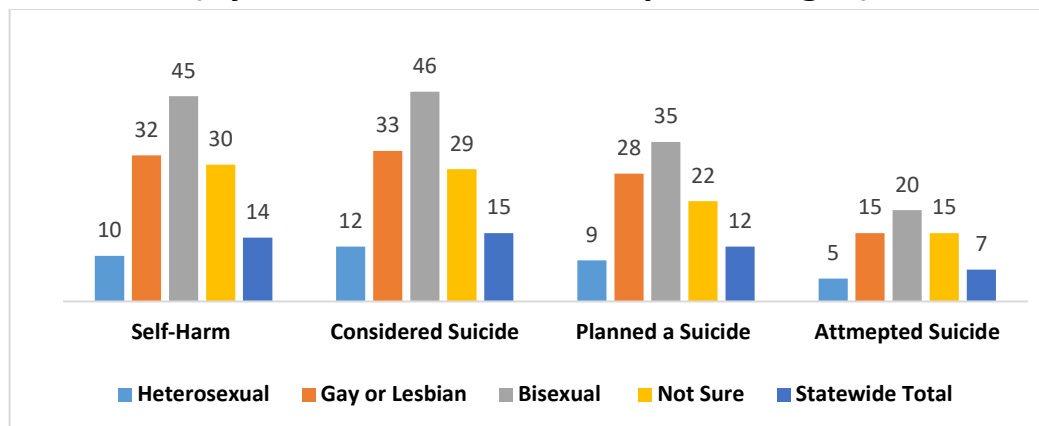


Figure 211: Sexual orientation, considered self-harm or suicidal behaviors, HS, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention \(Administered by the Center for Drug and Health Studies, University of Delaware\).](#)

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Chapter 13 Transgender Youth

National Overview

It is estimated that there are approximately one million people in the United States who identify as transgender (Meerwijk and Sevelius, 2017). For the first time, the Centers for Disease Control and Prevention (CDC) provided states with a question for the 2017 Youth Risk Behavior Survey (YRBS) to capture the rate of students reporting transgender status:

Are you transgender?

- a) No, I am not transgender.
- b) Yes, I am transgender.
- c) I am not sure if I am transgender.
- d) I do not know what this question is asking.

Delaware Overview

Among the students who responded, 1.2% identified as transgender, while another 1.2% identified as unsure. A statewide total of more than 40,000 students in Delaware public high schools would suggest that approximately 500 students identify as transgender, with an additional 500 unsure.

Historically, gender minority research has not been robust, even within studies of issues that face members of the lesbian, gay, bisexual, and transgender (LGBT) community as a whole. Despite this research gap, what is known indicates that transgender and genderqueer youth face elevated risk for physical and mental health disparities. Grossman and D'Augelli (2007) point out that these youth are exposed to internal and external stressors that may contribute to risky and dangerous behaviors, such as self-harm and substance use. Adolescence is a developmental stage associated with increased exploration and experimentation while, at the same time, defining the parameters of relationships with peers and adults. For transgender youth, youth who are questioning their gender identity, or youth who identify with neither or both genders or in some other way, there is the additional component of navigating these challenges as an individual who does not conform to traditional gender norms and expectations.

Two ways to promote wellness in adolescence, regardless of gender identity, is to encourage open, nonjudgmental conversation, safe spaces, and positive adult support. Ryan, Russell, Huebner, Diaz, and Sanchez (2010) found that "...family acceptance in adolescence is associated with young adult positive health outcomes...protective for negative health outcomes (depression, substance abuse, and suicidal ideation and attempts)."

Due to the sample size of the YRBS, further analysis among this group regarding substance use and other risk behaviors, as well as protective factors, is not feasible. It is possible that in the

future, researchers will be able to combine YRBS data sets from 2017 and subsequent years or collaborate with surveyors from other states that posed the transgender question to analyze these associations. Nonetheless, the existing literature documents the need to provide prevention strategies that are culturally competent and inclusive of this population of youth.

2017 Youth Risk Behavior Survey High School Students Who Report They Are Transgender (in percentages)

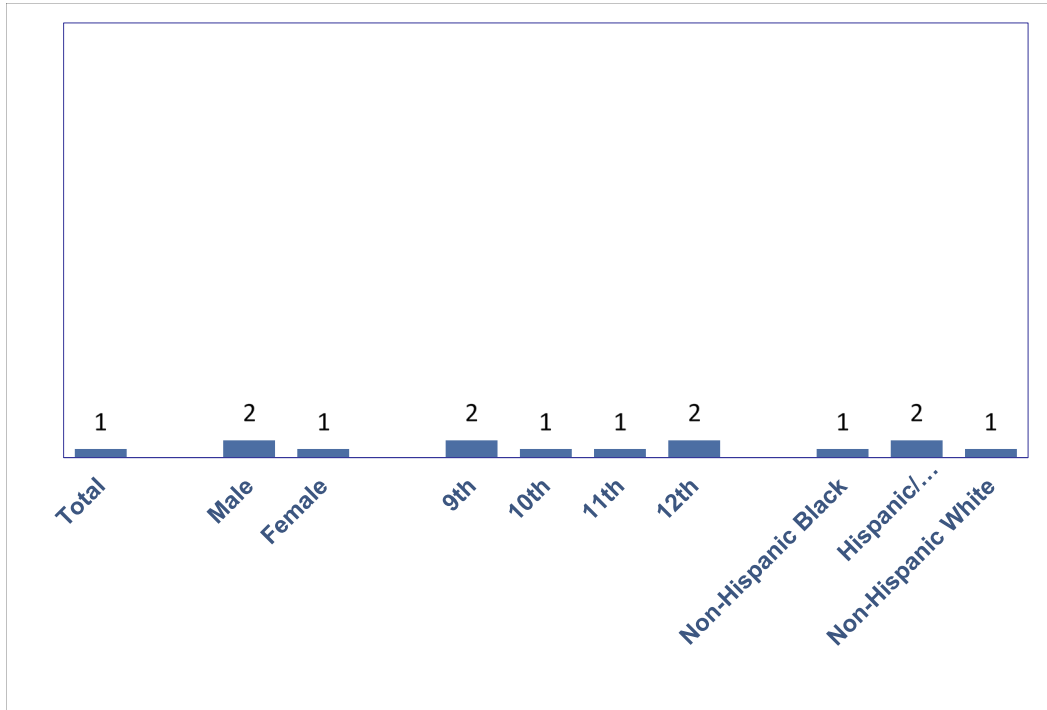


Figure 212: Prevalence of students in Del. who report as transgender, HS, 2017

Note:

Weighted data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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Chapter 14 Protective Factors

National Overview

Prevention research and work are grounded in the identification of risk factors that increase the probability of substance abuse and protective factors that help reduce the risk of substance abuse in the future. Targeted interventions that decrease risk factors, increase protective factors, or combine both approaches have been shown to be effective in decreasing problem substance use. Risk and protective factors are relevant at all stages of life and across several domains. Generally, researchers identify several levels, or domains, for intervention: the individual level, family level, peer level, and community level. At different stages in a person's life, one domain may play a larger role in comparison to another. Cleveland et al. (2008) found that peers and the school environment had a greater influence on older adolescents' substance abuse than younger adolescents. In contrast, families and the outside community had a greater impact on younger children than peers or schools. Effective prevention programming should target risk and protective factors that are most salient at each life stage and best-suited for the domain in which the intervention will be implemented.

The National Institute on Drug Abuse makes the case that prevention programs should target risk and protective factors that have been shown to have the most impact at each developmental level (2003). Early interventions, even at the preschool level, can play a powerful role in reducing risk throughout the "developmental risk trajectory" (National Institute on Drug Abuse [NIDA], 2003, p. 6). Similarly, the Substance Abuse and Mental Health Services Administration notes that risk factors are "correlated and cumulative"—that is, having a risk factor early in life increases the likelihood of having more risk factors later in life (Substance Abuse and Mental Health Services Administration [SAMHSA], n.d.). Many of the risk and protective factors that are associated with problem substance misuse or abuse are also associated with mental health conditions, so efforts to reduce risk factors and increase protective factors associated with substance abuse should also have an impact on future mental health status.

Delaware Overview

Individual risk factors include personality traits such as impulsivity, risk-taking, antisocial behaviors, and emotional problems. Protective factors include traits such as adaptability, empathy, and good social skills, as well as a value on academic achievement, hope for the future, self-efficacy, and a willingness to follow rules, to name a few. Data from the 2017 Delaware Youth Risk Behavior Survey (YRBS) illustrate the importance of academic achievement in relationship to substance abuse and mental health status. In Delaware, students who do well academically and have higher grades use substances at a lesser rate, have lower rates of depression, are less likely to self-harm, and are less likely to plan or attempt suicide than students who have low grades in school.

Family protective factors include consistent discipline, parental involvement, family stability, and clear expectations. Child abuse, parental substance abuse, lack of supervision, and poor relationships with parents (which are ACEs, discussed in Chapter 11) are a few of the risk factors that have been associated with future substance abuse. The Delaware YRBS asks a number of questions about students' relationships with their parents. Data from the 2017 survey show that the way parents interact with their children has significant impact, not only on youth substance abuse, but also on their mental health status. Youth in Delaware high schools who reported that their parents never or almost never told them they are proud of them used substances at higher rates and had higher rates of depression, self-harm, and plans and attempts at suicide than youth whose parents told them they were proud of them sometimes or always. This same pattern emerged when youth were asked, "How often do you get along well with your parents," and "I can count on my parent(s) to be there when I need them." Better mental health status and reduced substance abuse is also consistent with questions concerning parental monitoring and supervision. Youth who have parents who ask them where they are going and who they are going with use substances at lesser rate and have better mental health status than youth who do not. Youth who reported that their parents have consistent rules and expectations also have better outcomes than youth who did not.

Relationships with peers can also reduce or increase the risk of substance abuse. Maintaining friendships with peers who use substances and/or minimize the risk associated with the use of substances increases the likelihood of future substance use; however, friendships with youth who do not use substances or participation in pro-social afterschool activities with friends can reduce the likelihood of future substance abuse. The 2017 Delaware YRBS asks students to report whether their friends would think it was wrong if they smoke marijuana, use prescription drugs, smoke tobacco, or have one or two drinks nearly every day. Across all categories, the students who reported that their friends would think that it was wrong used substances at a lesser rate than students whose friends did not think substance abuse was wrong.

Schools operate at the intersection of the peer and community level—they are the location where most peer interactions occur but can also provide a powerful protective function if school leaders find ways to enhance school connectedness and promote healthy norms (Centers for Disease Control and Prevention [CDC], 2009). Community-level factors include social disorganization, norms favorable or unfavorable to substance abuse, and community safety. A report from the CDC (2009) explains how school connectedness—that is, the extent to which youth feel connected to the school community—can reduce the risk of mental health and substance abuse problems in youth. Schools can promote school connectedness by providing adult support, supporting the formation of positive peer groups, promoting the importance of education, and creating a safe and positive school environment.

The literature on risk and protective factors is extensive, and these are just a few examples at each level of intervention (CDC, 2018; SAMSHA, n.d.; Cleveland et al., 2008). In summary, clear and consistent limits, discipline, and rules from caregivers are important components that

support healthy youth development. Further, the feeling of connectedness through positive family, peer, and social relationships builds resilience in youth. Healthy relationships and social supports promote mental wellness and life skill development.

2017 Youth Risk Behavior Survey
High School: Which of the Following People
Would You Say Give You a Lot of Support and Encouragement?

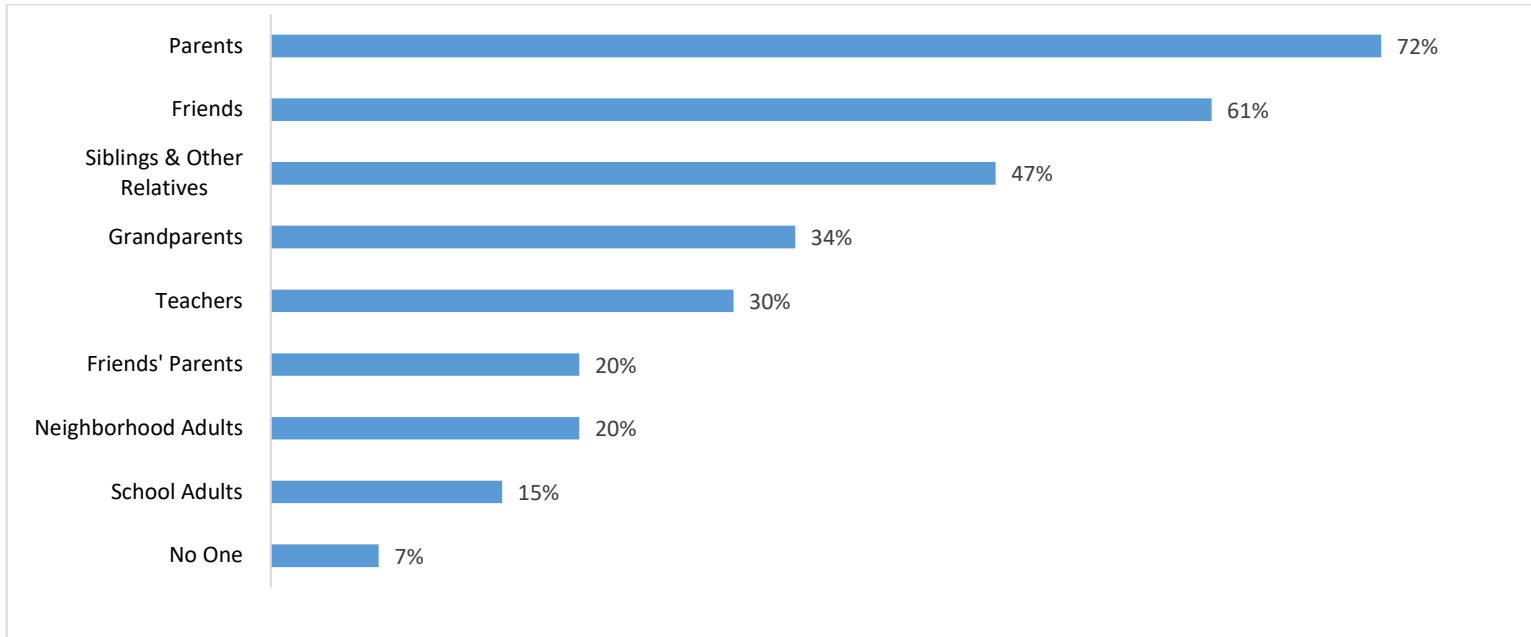


Figure 213: Protective factors, sources of support, HS, 2017

Unweighted data.

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey

High School: If You Had a Personal Problem with Drinking, Drug Use, Violence You Have Seen or that has Affected You, or Sexual Behavior, Whom Would You Most Likely Talk To?

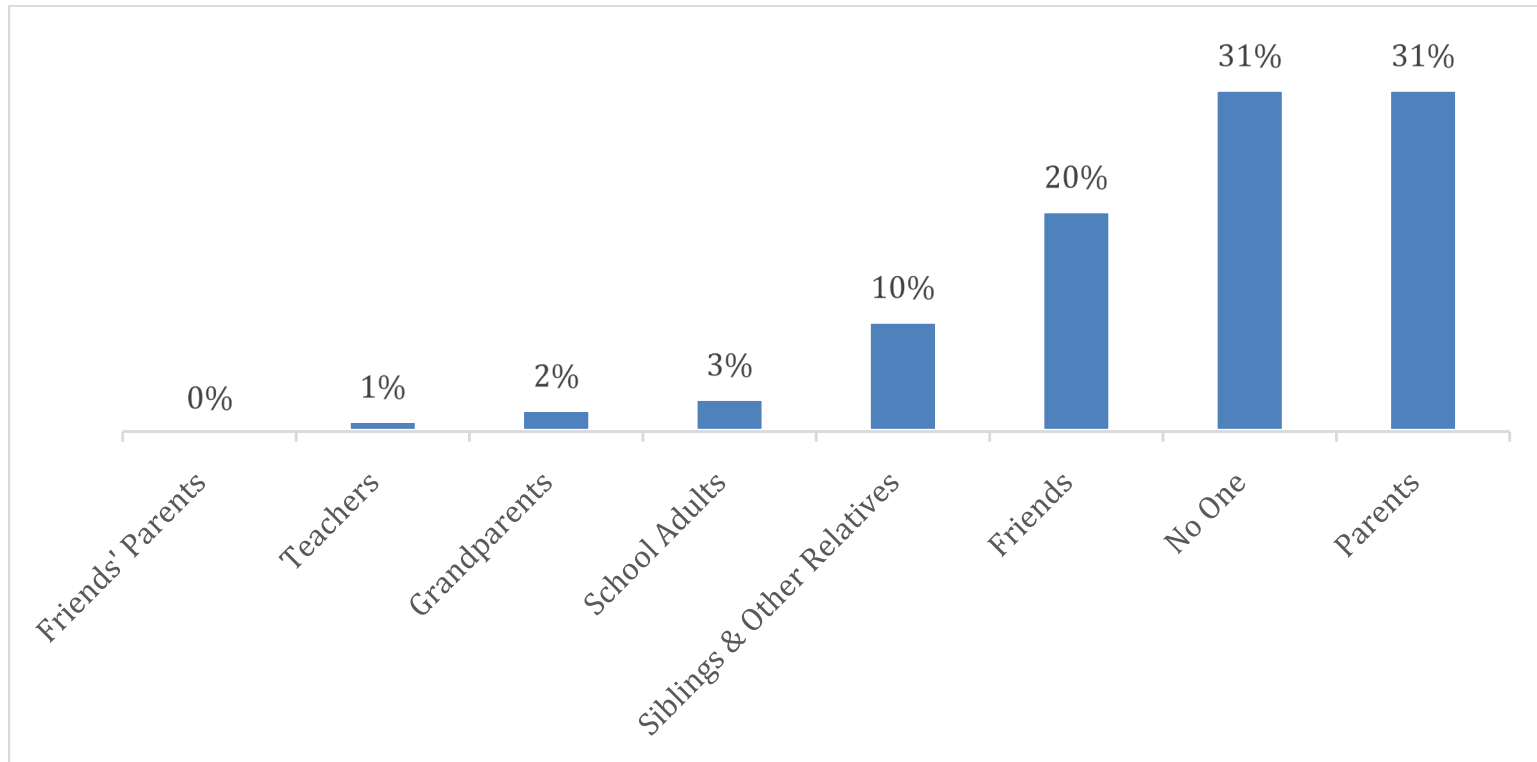


Figure 214: Protective factors, in whom would students confide, 2017

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)."](#) Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.

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2017 Youth Risk Behavior Survey Past-Month Substance Use^a and Academic Achievement for Delaware High School Students (in percentages)

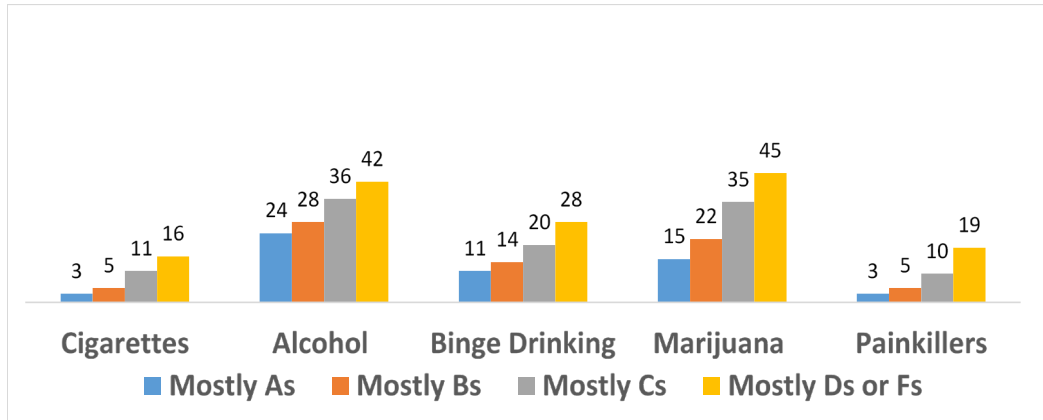


Figure 215: Protective factors, substance use and grades, past-month, 2017

Average Self-Reported Grades for Delaware High School Students, by Sex

	Mostly As	Mostly Bs	Mostly Cs	Mostly Ds or Fs
Statewide	30%	38%	22%	6%
Male	22%	38%	27%	8%
Female	38%	38%	16%	4%

Figure 216: Protective factors, average self-reported grades by sex, HS, 2017

Notes:

Unweighted Data, each column in the graph represents the percentage of students using a type of substance among all students receiving the same grade.

^aBinge drinking is having 5 or more drinks in a row within a couple hours in the past month

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey

Family Protective Factors and Past-Month Substance Use^a for Delaware High School Students (in percentages)

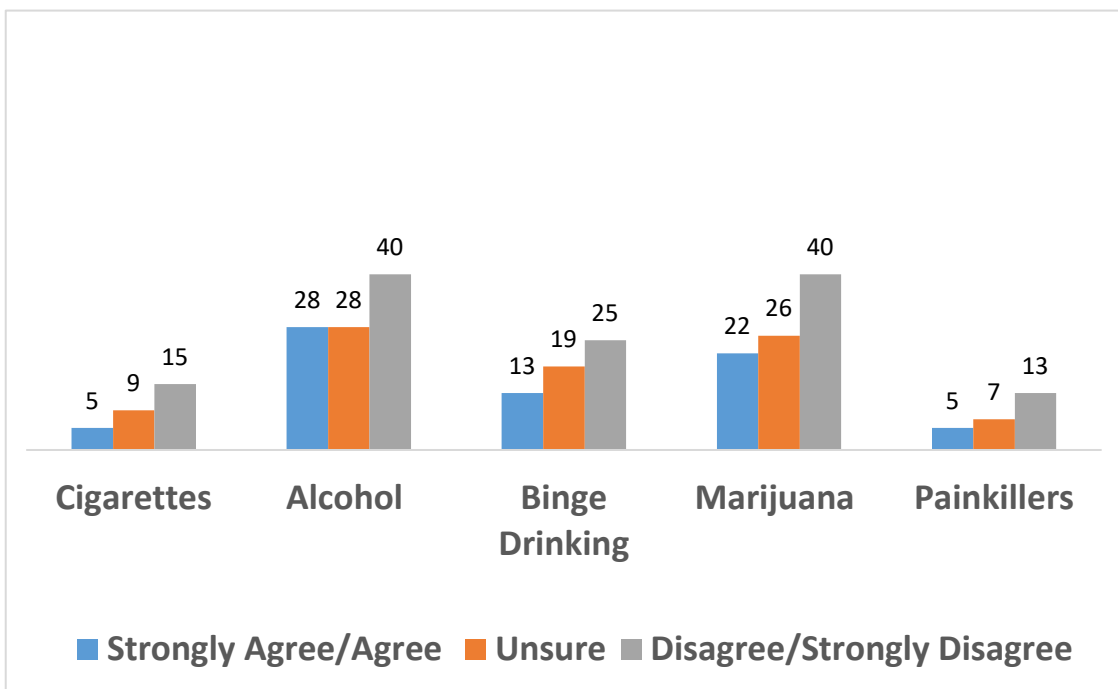


Figure 217: Protective factors, substance use and rules/consequences at home, 2017

*There are Clear Rules and Consequences at Home**

	Strongly Agree/ Agree	Unsure	Strongly Disagree/ Disagree
Statewide	81%	12%	7%
Male	81%	12%	7%
Female	81%	12%	7%

Figure 218: Protective factors, strong rules and consequences at home, by sex, 2017

Notes:

^a Binge drinking is having 5 or more drinks in a row within a couple hours in the past month

* Students were asked if they strongly agreed, agreed, were unsure, disagreed, or strongly disagreed that there were clear rules and consequences for their behavior at home

Unweighted Data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey
Peer Protective Factors and Substance Use^a
for Delaware High School Students
(in percentages)

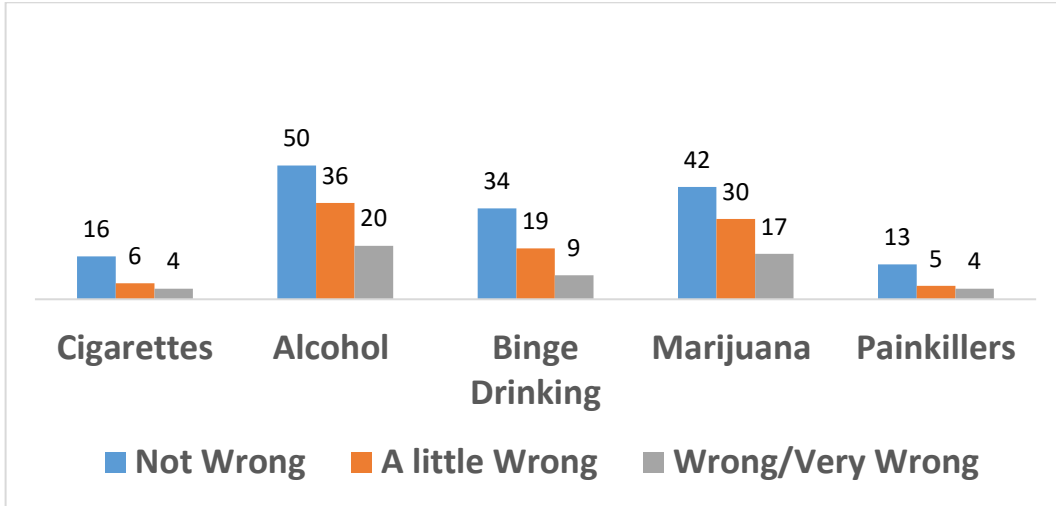


Figure 219: Protective factors, peer perceptions of substance use, 2017

***How Wrong Do Your Friends Feel It Would Be
for You to Have One or Two Drinks of Alcohol Nearly Every Day?***

	Not Wrong	A Little Wrong	Wrong/ Very Wrong
Statewide	15%	23%	62%
Male	19%	25%	57%
Female	11%	22%	66%

Figure 220: Protective factors, peer perceptions of daily alcohol use, by sex, 2017

Notes:

^aBinge drinking is having 5 or more drinks in a row within a couple hours in the past month

Unweighted Data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey

Peer Protective Factors and Past-Month Substance Use^a for Delaware High School Students (in percentages)

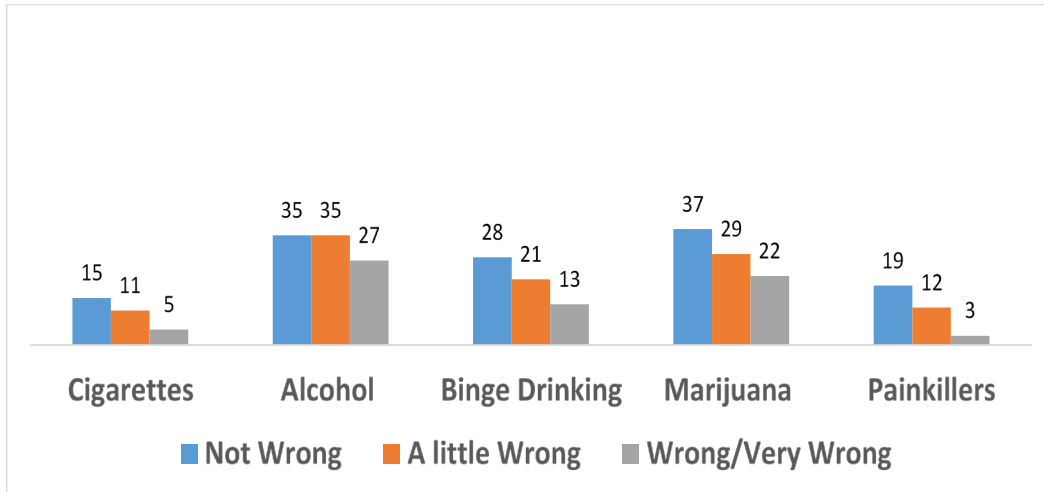


Figure 221: Protective factors, peer perceptions of substance use, past-month, 2017

How Wrong Do Your Friends Think It Would Be to Use a Prescription Drug Without a Prescription?

	Not Wrong	A Little Wrong	Wrong/Very Wrong
Statewide	7%	12%	80%
Male	11%	14%	75%
Female	4%	11%	85%

Figure 222: Protective factors, peer perceptions of prescription drug misuse, by sex, 2017

Notes:

^aBinge drinking is having 5 or more drinks in a row within a couple hours in the past month

Unweighted Data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey

Average Self-Reported Grades and Mental Health Indicators for Delaware High School Students (in percentages)

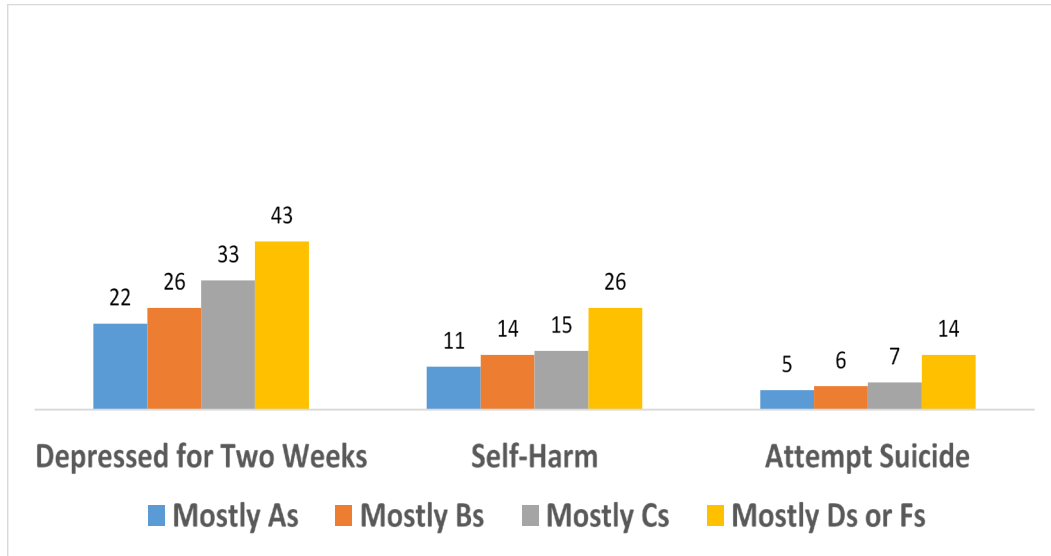


Figure 223: Protective factors, self-reported grades and mental health indicators, 2017

Individual Protective Factors and Past-Year Mental Health

	Depressed for Two Weeks at a Time	Self-Harm	Attempt Suicide
Statewide	27%	14%	7%
Male	17%	8%	4%
Female	37%	19%	9%

Figure 224: Protective factors, mental health indicators by sex, past-month, 2017

Note:

Unweighted Data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey
Family Protective Factors and Past-Year Mental Health
for Delaware High School Students
(in percentages)

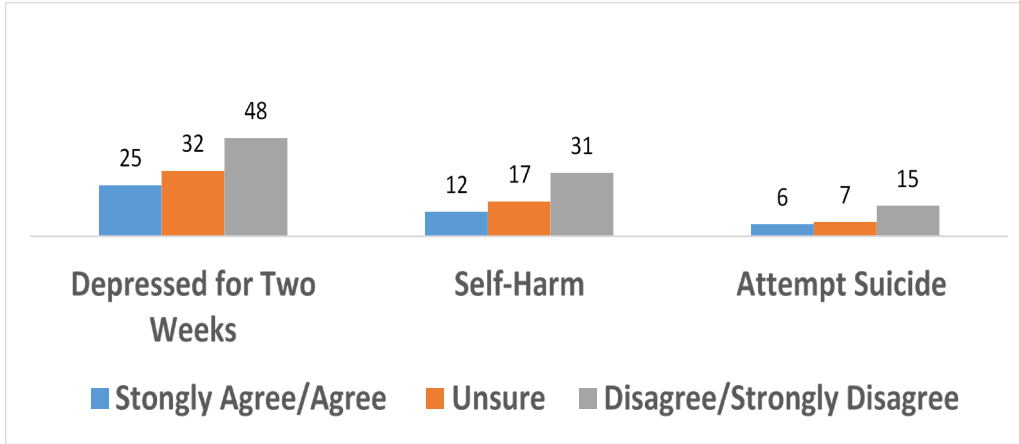


Figure 225: Protective factors, mental health indicators, past year, 2017

There Are Clear Rules/Consequences in my Home.

	Strongly Agree/Agree	Unsure	Strongly Disagree/Disagree
Depressed for two weeks at a time	25%	32%	48%
Males	15%	20%	40%
Females	34%	41%	52%
Self-Harm	12%	17%	31%
Males	7%	11%	27%
Females	17%	22%	33%
Attempt Suicide	6%	7%	15%
Males	3%	5%	17%
Females	8%	8%	12%

Figure 226: Protective factors, mental health indicators by sex, 2017

Note:

Unweighted Data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey
Peer Protective Factors and Past Year Mental Health
for Delaware High School Students
(in percentages)

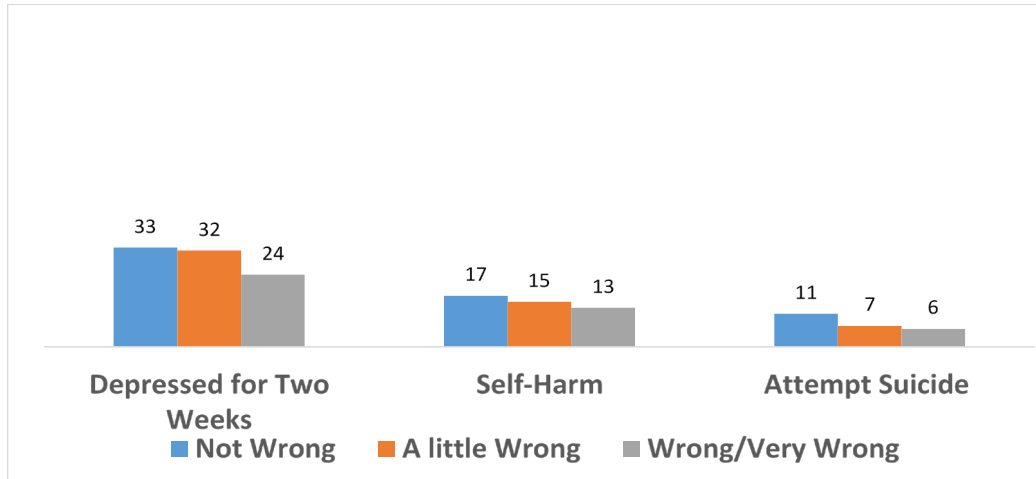


Figure 227: Peer perception of alcohol use by mental health indicators

***How Wrong Do Your Friends Feel It Would Be
for You to Have One or Two Drinks of Alcohol Nearly Every Day?***

	Not Wrong	A Little Wrong	Wrong/Very Wrong
Depressed for two weeks at a time	33%	32%	24%
Males	20%	20%	14%
Females	51%	43%	31%
Self-Harm	17%	15%	13%
Males	11%	10%	6%
Females	25%	20%	17%
Attempt Suicide	11%	7%	6%
Males	7%	3%	3%
Females	15%	10%	7%

Figure 228: Peer perception of alcohol use by mental health indicators

Unweighted Data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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2017 Youth Risk Behavior Survey

Peer Protective Factors and Past-Year Mental Health for Delaware High School Students (in percentages)

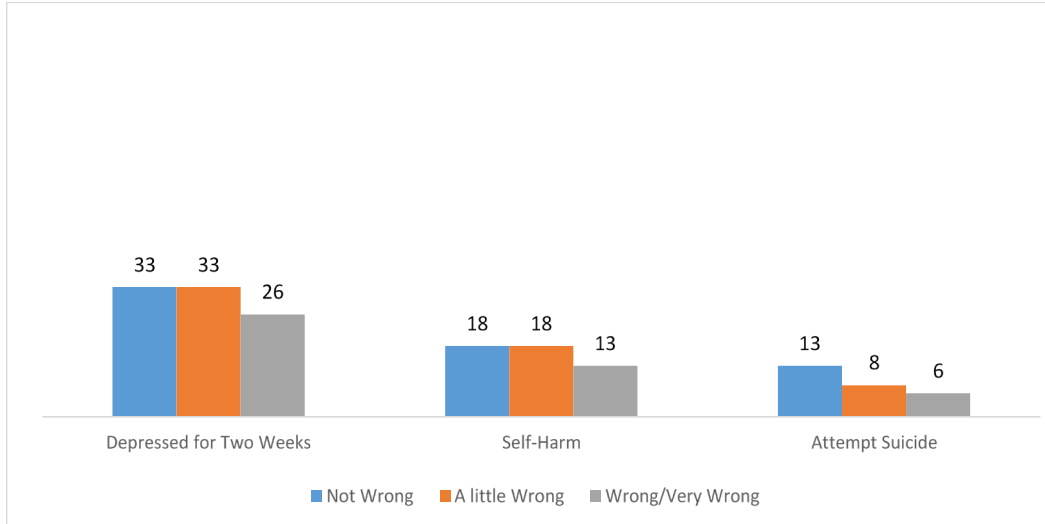


Figure 229: Peer perception of Rx drug misuse by mental health indicators, past year

How Wrong Do Your Friends Feel It Would Be to Use Prescription Drugs without a Prescription?

	Not Wrong	A Little Wrong	Wrong/Very Wrong
Depressed for two weeks at a time	33%	33%	26%
Males	22%	20%	16%
Females	55%	47%	34%
Self-Harm	18%	18%	13%
Males	14%	10%	7%
Females	25%	27%	17%
Attempt Suicide	13%	8%	6%
Males	11%	5%	3%
Females	13%	11%	8%

Figure 230: Peer perception of Rx drug misuse & mental health indicators, by sex

Note: Unweighted Data

Source: ["2017 Delaware Youth Risk Behavior Survey \(YRBS\)." Centers for Disease Control and Prevention. Administered by the Center for Drug and Health Studies, University of Delaware.](#)

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Chapter 15 References

About Delaware

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Data Sources

Data Instrument	Administered/Compiled by	Most Recent Data	Trend Range
Data Base/ Diagnostics Plus	-	-	1989-1993
Delaware Annual Traffic Statistical Report	Delaware State Police/Delaware Statistical and Analysis Center	2015	-
Delaware Criminal Justice Information System (DELJIS)	DELJIS	2016	-
Delaware Behavioral Risk Factor Surveillance System (BRFSS)	DE Division of Public Health (sponsored by the CDC)	2017	-
Delaware Household Health Survey	Delaware Public Health Institute	2015	-
Delaware Prescription Monitoring Program (PMP)	Delaware Office of Controlled Substance, Division of Professional Regulation	2017	2013 - 2017
Delaware School Survey (DSS) – 5 th , 8 th , and 11 th grades	Center for Drug and Health Studies, UD	2018	1995 - 2016
Delaware Youth Risk Behavior Survey (YRBS) – High School	Center for Drug and Health Studies, UD (sponsored by DE Division of Public Health and the CDC)	2017	1999 - 2015
Delaware Youth Risk Behavior Survey (YRBS) – Middle School	Center for Drug and Health Studies, UD (sponsored by Nemours)	2017	1999 - 2015
Department of Public Instruction	-	1994	-
Monitoring the Future	University of Michigan	2018	-
National High School Youth Risk Behavior Survey	US Centers for Disease Control	2017	1995 - 2017
National Poisoning Data System	American Association of Poison Control Centers	2014	2012-2017
Performance Measures, Delaware	National Highway Safety Administration	2017	

National Survey on Drug Use and Health (NSDUH)	US Substance Abuse and Mental Health Services Administration	2017	2002 - 2017
Tobacco Free Kids Organization	Tobacco Free Kids Organization	2014	-
Treatment Admissions Data	US Substance Abuse and Mental Health Services Administration, collected by Delaware Division of Substance Abuse and Mental Health	2018	2002 - 2018

In addition to the data sources for the figures and tables in the 2019 report, the following data sources are also cited throughout the narrative:

- America’s Health Rankings
- Bureau of Labor Statistics
- Centers for Disease Control and Prevention
- Delaware Health Tracker
- Health Resources and Services Administration
- Kaiser Family Foundation
- PolicyMap
- Prescription Behavior Surveillance System at Brandeis University
- Tobacco21.org
- U.S. Department of Health and Human Services
- U.S. Census Bureau