Executive Summary

prepared for

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Delaware Division of Substance Abuse and Mental Health
&
The Delaware State Epidemiological Outcomes Workgroup

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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). The Division of Substance Abuse and Mental Health (DSAMH) in the Department of Health and Social Services supported the establishment of the Delaware SEOW through SAMHSA Strategic Prevention Framework grants awarded previously. The SEOW is a group of people and organizations that have and use analytical data concerning substance use and related behaviors and consequences; this information can be used to establish and monitor indicators related to substance use prevention. Formerly known as the Delaware Drug and Alcohol Tracking Alliance (DDATA), Delaware’s SEOW mission is to bring data on substance use and associated issues to the forefront of the prevention 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

The annual 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 describes patterns of consumption, context, consequences, and trends of substance use, as well as other risk and protective factors, especially among young people in Delaware. The report also highlights crosscutting issues that warrant attention as well as populations that may experience disproportionate risk for these concerns.

The Executive Summary summarizes highlights of each chapter of the 2020 Delaware Epidemiological Profile and provides a snapshot of substance use in Delaware. To review the complete Delaware Epidemiological Profile, other chapters, infographics, or SEOW data products, please visit the UD Center for Drug and Health Studies Delaware Epidemiological Reports page.
SEOW Collaborators

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

atTAcK Addiction
Bellevue Community Center
Christiana Care Health System
Colonial School District
Delaware Academy of Medicine/Delaware Public Health Association
Delaware Afterschool Network
Delaware Center for Justice
Delaware Coalition Against Domestic Violence
Delaware Council on Gambling Problems
Delaware Courts - Office of the Child Advocate
Delaware Criminal Justice Council
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 Department of 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 Department of Safety and Homeland Security
  Delaware State Police
  Division of Alcohol and Tobacco Enforcement
  Division of Forensic Science
Delaware Department of State
  Delaware Office of Controlled Substances
  Division of Professional Regulation, Prescription Monitoring Program
Delaware Domestic Violence Coordinating Council
Delaware Information and Analysis Center
Delaware Multicultural and Civic Organization
Delaware Prevention Coalition
Holcomb BHS/Open Door, Inc.
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
Milford School District
Nemours Health and Prevention Services
Planned Parenthood of Delaware
Red Clay Consolidated School District
Sussex County Health Coalition
Transitions Delaware
Trauma Matters Delaware
United Way of Delaware
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Executive Summary

Introduction

Each year, the Center for Drug and Health Studies at the University of Delaware (CDHS), the facilitator of the State Epidemiological Outcomes Workgroup (SEOW)\(^1\), releases the Delaware State Epidemiological Profile. The report highlights the most recently available data on substance use among various populations in Delaware and nationwide. The 2020 report includes the following chapters:

1. About Delaware: State Demographic Background and a Snapshot of Substance Use
2. Tobacco and Electronic Cigarettes (Vaping)
3. Alcohol
4. Marijuana
5. Opioid Use and Other Trends
6. Other Illegal Drugs
7. Substance-Exposed Infants
8. Gambling
9. Mental Health and Wellness
10. Persons with Disabilities
11. Adverse Childhood Experiences
12. Gender and Sexuality
13. Protective Factors

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. It is intended to help prevention advocates accomplish goals related to needs assessments, strategic planning, and evaluation.

The first chapter provides an overview of demographic and other indicators for Delaware. Subsequent chapters provide data relevant to specific types of substance use, crosscutting issues, and populations who experience disproportionate rates of risk behaviors. This Executive Summary includes a chapter by chapter synopsis of key highlights on each topic, including general rates of substance use captured by various surveys. When observed, associations between

\(^1\) The SEOW project was established with funding under the federal Strategic Prevention Framework initiative on behalf of the Delaware Division of Substance Abuse and Mental Health.
population characteristics and rates of behaviors are reported. However, it is important to note that while there is often a strong statistical association between substance use, risk behaviors, and other measured indicators, this does not necessarily mean that there is a causal relationship between these variables in all instances, and there may be additional unobserved indicators that also influence the outcome.

Chapter Highlights

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 Latino/a/x (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) indicate 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. However, Delaware youth report a greater use of e-cigarettes and other electronic vaping devices than traditional tobacco products. Findings from the 2019 Delaware Youth Risk Behavior Survey indicate that 43% of high school students have tried vaping at some point in their lifetime, and more than one in four (28%) vape regularly. 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). In 2019, a new health threat emerged, E-cigarette or Vaping Use Associated Lung Disease (EVALI) which, by February 2020, had resulted in nearly 3,000 hospitalizations and 68 deaths nationally, including one in Delaware (Centers for Disease Control and Prevention, 2020; Delaware Department of Health and Social Services, n.d.).

Alcohol: Alcohol misuse is a major concern that presents extensive public health risks and significant social costs. Data from the most recent Delaware School Survey (DSS) and Youth Risk Behavior Surveys (YRBS) illustrate that alcohol remains the most commonly reported substance used by students throughout the state. Driving while intoxicated is a major public health concern associated with alcohol. According to data reported by the Delaware State Police, there were 2,657 driving while under the influence (DUI) arrests in 2019. Nearly two-thirds (65%) of Delaware 8th graders report that they rode in a car with someone who had been drinking, and
14% of 11th graders reported that they had driven a car after drinking at some point in their lifetime (DSS, 2019). More than one in ten 11th graders report drinking and driving at least once in the past year (DSS, 2019). Overall, adults in Delaware tend to report drinking alcohol at rates comparable to national estimates, with approximately 53% reporting past month use (National Survey on Drug Use and Health [NSDUH], 2017-2018). Heavy drinking can also lead to serious health complications, including diseases of the liver and pancreas and various cancers. Binge drinking remains a concern, with 23% of Delawareans aged 12 and older reporting this risk behavior in the previous month (NSDUH, 2017-2018). According to NSDUH, approximately 37% of young adults from age 18-25 report binge drinking within the past month. Sixteen percent of all adults in Delaware responding to the 2018 Behavioral Risk Factor Surveillance System report binge drinking in the past 30 days, and 6% meet the criteria for heavy drinking (consuming 14 drinks a week for men and seven drinks a week for women).

**Marijuana:** Over the past couple of decades, states have enacted various laws that have changed the legal status of marijuana. Delaware currently permits medical marijuana for certain conditions and 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 use has declined among students surveyed by the Delaware School Survey (DSS, 2010-2019) over the past decade, while rates of use among high school students have increased. Fifty-four percent of 12th grade respondents to the 2019 Delaware Youth Risk Behavior Survey (YRBS) report using marijuana at least once in their lifetime, and 39% of high school students overall report such use (YRBS, 2019). 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. The 2019 DSS indicates that 6% of 11th graders report using edibles to ingest marijuana, and 12% report vaping it.

**Opioid Use and Other Trends:** Delaware has been hit hard by the opioid epidemic. The most recently available data from the Centers for Disease Control and Prevention (CDC) estimate Delaware’s overdose mortality rate as 43.8 deaths per 100,000 residents, which is substantially higher than the national rate of 20.7 deaths per 100,000 (Hedegaard, Minino, & Warner, 2020). In 2018, 355 of the 401 overdose deaths in Delaware were attributed to opioids (National Institute on Drug Abuse, 2020). Data from the 2017-2018 NSDUH estimate that 4.23% of Delawareans aged 12 and over and 6.9% of adults aged 18-25 have misused prescription pain relievers in the past year. Among Delaware youth, approximately 4% of 8th and 5% of 11th grade students report rates of lifetime misuse of prescription pain medications (2019 Delaware School Survey [DSS]; students of both grades report a past year misuse rate of 3%. The 2019 Youth Risk Behavior Survey (YRBS) indicates slightly higher rates as one in ten high school student reports using prescription pain medications that they were not prescribed or in ways that were not prescribed at least once in their lifetime. Five percent of this sample report such misuse in the previous month. Middle school respondents to the 2019 YRBS report 7% lifetime and 4% past month rates of misuse. Treatment data from the U.S. Department of Health and Human Services indicate that...
heroin was the primary drug used in nearly half of all substance use treatment admissions in Delaware in 2019 with an additional 7% attributed to other opiates (Treatment Episode Data Set, 2019).

**Other Illicit Drugs:** Although the majority 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. According to the National Survey on Drug Use and Health (NSDUH) 2017-2018 estimates, approximately 3.5% of Delawareans aged 12 and over report using an illicit drug, not including marijuana, in the past month. Three percent of 8th grade students and 5% of 11th grade students report use of an illicit drug (other than marijuana) in the past month (Delaware School Survey [DSS], 2019). The age-adjusted rate of overdose deaths involving cocaine are on the rise in the U.S., tripling from 1.4 per 100,000 people in 2012 to 4.5 per 100,000 in 2018 (Hedegaard, Minino, & Warner, 2020). Fentanyl, which may be mixed with cocaine, increases the risk of overdose and death. Approximately 2.2% of Delaware adults age 12 and older report past year cocaine use, with adults aged 18 to 25 reporting highest rates (6.9%) of use (NSDUH, 2016-2017). Nearly 5% of all drug treatment admissions to publicly funded treatment programs in the state were primarily due to cocaine use last year (Treatment Episode Data Set, 2019). Synthetic cannabinoids, referred to as synthetic marijuana or “fake weed,” are human-made chemicals similar to those found in the marijuana plant. Prevention advocates are concerned about the misperception that these are safer alternatives to marijuana. Six percent of 8th and 12% of 11th grade students report using synthetic marijuana at least once in their lifetime, while 2% of 8th and 4% of 11th graders report past month use (DSS, 2019). Eight percent of 5th grade students report using an inhalant at least once in their lifetime, 3% report a past year use rate, and 1% report inhaling a substance such as glue, sprays, or gasoline in the past month (DSS, 2019).

**Substance-Exposed Infants:** Infants are a special population that can be uniquely impacted by substance use. Substance-exposed infants (SEI) are babies born after pre-natal 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 2019, there were 705 cases of substance exposed infant births reported in Delaware. Marijuana is the most prevalent substance identified in single substance exposure; marijuana followed by opioids are most prevalent among cases of two substance exposure; and opioids followed by cocaine are most commonly identified among cases involving polysubstance exposure (three or more substances). Plans of safe care were developed for 661 of these cases in 2019.

**Gambling:** Gambling has become an area of interest among prevention specialists. 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). Gambling is prevalent among Delaware youth; 51% of all middle school students and approximately 43% of high school students report that they gambled at least once in the past year (Delaware Youth Risk Behavior Survey [YRBS], 2019). Among both middle and high school students, those who report gambling in the past year tend to report using substances at higher rates than their non-gambling peers. Middle school students who report gambling are also twice as likely to report lifetime rates of vaping and drinking alcohol; high school students who report past year gambling are more likely to also report past month rates of smoking, vaping, using alcohol, binge drinking, and using marijuana (YRBS, 2019).

**Mental Health and Wellness:** According to the Centers for Disease Control and Prevention (CDC), more than half of all people in the U.S. will be diagnosed with a mental illness or disorder at some time; one in five Americans will experience a mental illness each year; one in five child will experience a “serious debilitating mental illness”; and 4% of adults live with a serious mental illness such as major depression or schizophrenia (CDC, n.d). Mental health problems and substance use disorders often co-occur. National Institute on Drug Abuse (NIDA, 2020) research indicates approximately half of individuals who experience a mental disorder will also experience a substance use disorder at some point in their life. Comorbidity may be due to common risk factors for both conditions or one condition may lead to the other. With respect to the overall mental health of Delaware residents, nearly 15% of adults report experiencing any mental illness in the preceding year, and 4.3% report experiencing a serious mental illness (Substance Abuse and Mental Health Services Administration [SAMHSA], n.d.). In 2019, 12.4% of adults in Delaware experienced frequent mental distress (United Health Foundation, n.d.). Approximately 4% of adults throughout the state report seriously considering suicide in the past year (SAMHSA, 2018). From 2014-2018, the suicide rate in Delaware was 12 deaths per 100,000 people (Delaware Department of Health and Social Services, Division of Public Health, 2020). Nearly one in three Delaware high school students report feeling sad or hopeless for most days of a two week or longer period in the past year; 17 percent report they had seriously considered attempting suicide during the past year; 13% report that they had had a plan for suicide; and 8% report that they had actually attempted suicide in the past year (Delaware Youth Risk Behavior Survey, 2019). These data substantiate the need for prevention strategies to foster mental wellness as well as a need for mental health services across all age groups.

**Persons with Disabilities:** There are definitional variations and other challenges to collecting data regarding the rate of persons with disabilities and their needs. A recent analysis of data from the Behavioral Risk Factor Surveillance System (BRFSS) indicates that approximately one in four noninstitutionalized adults in the U.S. report having a disability. This study suggests 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). Additional national research indicates that disparities also exist in rates of substance use (Glazier & Kling, 2013) and prescribing of opioids (Hong, Geraci, Turk, Love, McDermott, 2019). Prevalence estimates of persons with disabilities in Delaware range from 12% to 27% (American Community Surveys, 2014-2018; Behavioral Risk Factor Surveillance System
BRFSS data (2017-2018) indicates considerably higher rates for smoking status, e-cigarette use, and depression among Delaware adults with disabilities (CDC, *Disability and Health Data System*, n.d.). The *National Survey of Children’s Health* (2017-2018) denotes that 29% of children in Delaware have one or more functional difficulty and 14% have two or more. The Delaware Department of Education (DOE, n.d.) reports that 16.7% of students currently enrolled in public schools have a disability. Youth survey data parallels results of adult surveys regarding rates of risk behaviors among persons with disabilities. Middle and high school respondents to the 2019 Delaware Youth Risk Behavior survey who report having a disability also report higher rates of substance use and poorer mental health outcomes than their peers. At the same time, these students also report lower rates of family connectedness which is a protective factor against risk behaviors.

**Adverse Childhood Experiences:** The impact of adverse childhood experiences (ACEs) on health and life course outcomes is a crosscutting issue within the prevention field. ACEs are traumatic events or conditions such as abuse, neglect, or parental separation that, when experienced in childhood, can result in toxic stress and may 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 effect. The National Survey on Children’s Health (NSCH) 2016-2018 data indicate that approximately 43% of children in Delaware experience at least one ACE, most commonly divorced/separated parents and economic hardship. According to NSCH data provided by parental respondents, the third most prevalent ACE among Delaware youth is parental incarceration, experienced by one in ten children. Nearly 8% of Delaware youth live in a household with someone who suffers from a mental illness, and the same number live with a household member who has a substance use problem. Approximately one in four Delaware youth experiences one ACE, and almost one in five experience two or more. NSCH data illustrate some groups (African American youth; children whose parents were born outside of the US; children who are poor; and children who have special healthcare needs) experience higher rates of ACEs (Hussaini, 2020). The Delaware Youth Risk Behavior Survey (YRBS) includes a number of questions that address trauma, such as parental incarceration, being bullied, and exposure to various types of violence. 2019 Delaware YRBS findings again illustrate that youth who report experiencing trauma also report higher rates of all substance use, as well as symptoms of depression, including self-harm and suicide attempts. Students who experience multiple ACEs report even greater rates of substance use or mental health concerns.

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2 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.
Gender and Sexuality: The lesbian, gay, bisexual, and transgender (LGBT) population constitutes approximately 4.5% of the adult U.S. population (Williams Institute, 2019). Members of this community have consistently faced discrimination, harassment, and violence at the interpersonal and at the systemic level. Despite making up a substantial portion of the population and ample evidence of discriminatory practices and policies, historically, research on LGBTQ individuals has not been robust nor conducted on a nationally representative scale. Difficulties in data collection are due to limitations of survey instruments, a lack of a mandate to collect this information, the complexities of gender identity and expression, and for other reasons. However, most existing research provides strong evidence for the disadvantages faced by members of the LGBTQ community that is also associated with disproportionate risk for substance use, poor mental health, social and emotional instability, and violent victimization. The 2018 National Survey on Drug Use and Health (NSDUH) shows that substance use among lesbian, gay, and bisexual (also termed sexual minorities) adults is higher than heterosexual adults; for example, while 16.2% of the overall adult population report using marijuana in the past year, the rate more than doubles to 37.6% for sexual minority adults (SAMHSA, 2020). Similar disparities are observed among youth. Approximately 16% of surveyed high school students report that they are either gay, lesbian, bisexual, or unsure of their sexual orientation and close to 3% of students report that they are transgender or unsure of their gender (Delaware Youth Risk Behavior Survey [YRBS], 2019). LGBTQ youth report significantly higher rates of past month substance use than their peers who identify as heterosexual or straight and are more likely to report poorer mental health indicators. For example, 18% of LGBTQ students compared to 12% of cisgender heterosexual students report binge drinking in the past month. Mental health disparities appear even greater: when comparing rates of self harm (also known as non-suicidal self-injury), planned suicides, and attempted suicides, LGBTQ students report rates more than three times greater than their peers across each of these indicators. It is important to note that differences in these rates are not intrinsically associated with being LGBTQ but rather related to the adversities these individuals frequently face due to their sexual orientation or gender identity.

Protective Factors: While childhood trauma is associated with higher rates of health issues and risk behaviors, positive experiences and conditions can function as protective factors. The final section of this report focuses specifically on the role of protective factors at the individual, family, peer, and community level. Prevention advocates recognize the importance of developing

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3 While the acronym LGBT explicitly references lesbian, gay, bisexual, and transgender identities, there are a variety of sexual orientations and gender identities that may be included within this community, such as pansexual, asexual, queer, non-binary, or people who are questioning their sexuality and/or gender.

4 The letter “Q” has multiple meanings in this context. It is typically short for queer but can represent those individuals who do not feel fully represented by the adjectives of lesbian, gay, bisexual, or transgender, or those who are questioning or unsure how they identify in terms of sexual orientation, gender identity, or in terms of gender expression. In the data discussion of the Delaware Context section of this narrative, the “Q” also represents students who are questioning. While the LGBTQ acronym (or LGBT depending on the wording of the referenced data source) is used in this text, it is important to acknowledge that this is an imperfect and non-exhaustive identifier, and many sources may use variations of this acronym to refer to the community. The Trevor Support Center and GLSEN offer terminology resources on this topic.
programming that seek to enhance protective factors while also addressing risk factors. The National Survey on Children’s Health (NSCH) includes a number of protective factor indicators, including a series of four questions that comprise a Family Resilience Composite Measure. The questions ask parent respondents to report if the child lives in a home where family members: talk together about what to do; work together to solve problems; know that they have strengths to draw upon; and stay hopeful even in difficult times. Approximately four out of five parent respondents of children living in Delaware agree with all of these statements most or all of the time, commensurate with the rate among the national sample. Nearly 44% of families report eating a meal together most days, and more than one in three report reading aloud to children aged 0-5 every day (NSCH, 2017-2018). Delaware School Survey (DSS, 2019) data indicates that more than 84% of 5th, 8th, and 11th grade students report feeling encouragement and support from their parents, and more than two-thirds report feeling encouragement and support from their peers. Data from the Youth Risk Behavior Survey (YRBS, 2019) indicate that middle and high school students who report 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 as well as better mental health outcomes. Prevention programming in schools and communities may be more successful if it focuses on bolstering these types of protective factors.

COVID-19 in Delaware

Delaware, along with the rest of the country, is undergoing enormous health and economic challenges related to the ongoing public health crisis of the COVID-19 pandemic. The pandemic resulted in a statewide stay-at-home order that began in March 2020. Although Delaware is reopening gradually and indicators previously suggested that we had “flattened the curve” of infections and related deaths, all aspects of daily life have been affected by this, from healthcare service delivery to education, from business and industry to travel and entertainment. As of October 2, 2020, the Delaware Health Tracker data dashboard reports a statewide daily average incidence rate of COVID-19 at 16.7 cases per 100,000 residents, and a daily average case-fatality rate of 1.9 deaths per 100 cases. Nationally, evidence is emerging to suggest that rates of mental health issues and substance use are on the rise as people face uncertainty over health and financial security and experience isolation due to social distancing measures (Czeisler et al., 2020). Persons of color have been disproportionately impacted by the pandemic. As readers review the data in this and future annual Delaware epidemiological profiles, it will be important to consider the COVID-19 crisis as part of the overall context.

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5 According to the notations on the Delaware Health Tracker dashboard, these indicators show the population-adjusted confirmed daily average new COVID-19 cases recorded in the preceding seven days, and the daily average confirmed deaths due to COVID-19 calculated from the daily average confirmed cases recorded in the preceding seven days.
Notes on Data Reporting and Interpretation

In order to protect the anonymity of respondents and to ensure that the data reported meet certain statistical standards, the Center for Drug and Health Studies (CDHS) at the University of Delaware recently updated its guidelines for reporting and interpreting data from surveys that it administers to students across the state of Delaware. As a result, in the 2020 Delaware State Epidemiological Profile, data in some tables and figures have been aggregated or otherwise reported differently than in years prior. The following notes summarize the guidelines for interpreting data presented in this report:

- **Reporting small numbers:** For any estimate where the raw number of responses is less than 30, no statistical estimates are reported. Statistics computed from such a small proportion of the total number of students may be unreliable, inflating the significance of existing relationships in the data, and among some special populations, may put individuals at risk of being identified. In some data products such as our heat maps, multiple years of data have been combined in order to increase the sample sizes to a reportable figure.

- **Rounding:** All figures from Delaware school survey data (DSS, YRBS, YTS) are rounded to the *nearest whole percent*. As such, in some cases the cells in a table may add up to slightly more or less than 100%.

- **Missing Observations:** In our analysis, any missing observations (responses) are not calculated into the total percentages. Because different questions have varying numbers of missing responses, the total sample size and percent missing may fluctuate slightly from question to question. This is due to a few factors:
  - Students may not answer all questions on a survey, particularly those towards the end if they run out of time or they tire of answering questions.
  - Students may also skip or decide not to respond to certain questions for various reasons (e.g., if they fear their responses will not be kept confidential; if they consider the question too personal or sensitive; if they do not understand the question; etc.)

- **Discrepancies in Reporting:** With respect to the Delaware YRBS survey, there may be slight discrepancies in how CDHS reports some data points compared to how the Centers for Disease Control and Prevention (CDC) and their national technical advisors (Westat, Inc.) report the data. This is largely due to differing practices when conducting analysis with missing observations in the data and does not substantially impact the overall prevalence estimates, trends, and relationships among these data points.

- **Statistical Significance:** Unless otherwise indicated, all reported correlations between variables are statistically significant at the p<.05 level. Null hypothesis testing, used to estimate statistical significance, provides an estimate of the likelihood that the relationship between two indicators is not due to random chance. If the p-value for a given crosstab is less than .05, this suggests that in 95% of cases, the correlation between the relevant variables is because there is a relationship between them.
• **Weighted Data:** Weighting data is a correction technique that compensates for nonresponses, helps correct for unequal probabilities of being selected within the sample, and helps ensure that the sample drawn is representative of the Delaware student population. If data is weighted there will be a notation indicating the data is weighted for the specific fact, figure, or table. Prevalence data from the Youth Risk Behavior Survey and Youth Tobacco Survey are usually weighted, however, data is not weighted when exploring small subpopulations to ensure an accurate analysis that is not influenced due to the small number of individuals in those subpopulations.

  o **2019 Weighted Data:** In previous years, advisors to the CDC have provided weights with the Youth Risk Behavior Survey data, and frequencies have been estimated using weighted data. In 2019, the YRBS sample population in Delaware did not meet threshold requirements for weighting data, so any prevalence estimates relying on YRBS data for this year are unweighted.

  
  In 2019, a total of 10,765 Delaware students responded to either the Delaware School Survey (DSS) or the Delaware Youth Risk Behavior Survey (YRBS). By survey, the total number of respondents are as follows:

<table>
<thead>
<tr>
<th>Survey Administration</th>
<th># of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DSS</strong></td>
<td></td>
</tr>
<tr>
<td>5th Grade</td>
<td>2,992</td>
</tr>
<tr>
<td>8th Grade</td>
<td>2,126</td>
</tr>
<tr>
<td>11th Grade</td>
<td>2,299</td>
</tr>
<tr>
<td><strong>Delaware YRBS</strong></td>
<td></td>
</tr>
<tr>
<td>Middle School</td>
<td>1,162</td>
</tr>
<tr>
<td>High School</td>
<td>2,186</td>
</tr>
</tbody>
</table>
**Snapshot: Substance Use in Delaware**

The following figures have been updated to provide an overview of substance use in Delaware. Rates of use among specific substances are detailed in subsequent chapters throughout the annual profile.

**What’s New in the 2020 Edition?**

- Vaping is an increasing public health concern particularly among youth. The State Epidemiological Outcomes Workgroup (SEOW) has produced new heat maps that depict past month vaping rates among Delaware 8th and 11th graders.

- The SEOW also continues to examine shared risk and protective factors in order to support integrated and comprehensive prevention efforts. The 2017 Shared Risk Factor Venn Diagram illustrates the overlap of substance use, sexual risk behaviors, and mental health issues experienced by Delaware high school students. Nearly two-thirds of surveyed students reported the presence of at least one of these risk factors, and *more than one in ten (12%)* reported experiencing all three.
2019 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 grade

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.

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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.

<table>
<thead>
<tr>
<th>Substance</th>
<th>% Reporting Past-Year Use</th>
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</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>45%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>34%</td>
</tr>
<tr>
<td>E-cigarette/Vape</td>
<td>17%</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>7%</td>
</tr>
<tr>
<td>At least one other drug</td>
<td>12%</td>
</tr>
<tr>
<td>All of the above categories</td>
<td>2%</td>
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</table>

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

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.


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This Venn Diagram uses 2017 high school Youth Risk Behavior Survey data to illustrate shared risk factors among students in Delaware. Each circle has been scaled relative to the number of people who reported that risk factor, and the areas where circles overlap are accurate to the proportion of students who reported at least one of each type of risk factor.

Substance use is the most common type of risk factor, followed by sexual risk factors, then mental health concerns. More than one in three students reported two or more of these types of risk factors. Of note, more than one in ten (12%) students reported all three types of risk factors.

<table>
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<th>At least 1 risk factor</th>
<th>64%</th>
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<td>Used at least one substance, past month</td>
<td>41%</td>
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<tr>
<td>At least one mental health concern, past year</td>
<td>32%</td>
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<td>At least one sexual risk behavior, lifetime</td>
<td>37%</td>
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<tr>
<td>At least two types of risk factors</td>
<td>35%</td>
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<tr>
<td>Reported all three types of risk factors</td>
<td>12%</td>
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Substance use is defined as the student reporting that they used at least one of the following in the past month: alcohol, marijuana, cigarettes, or e-cigarettes.

Sexual Risk Behavior is defined as the student reporting at least one of the following: having had sex under the age of 16; having had three or more sexual partners, or not having used a birth control method the last time they had intercourse.

Mental Health Concern is defined as the student reporting at least one of the following in the past year: that they have felt sad or hopeless most days for two or more weeks, or experienced suicidal ideation.

2019 Delaware School Survey
Reported Use of Selected Substances in the Past 30 Days
among Delaware 8th and 11th Grade Students
(in percentages)

Figure 4: Selected substances used in past 30 days, 8th and 11th grade

Note: Past month cigarette use among 8th grade students is too small (n<30) to report here.
“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.

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Figure 5: Map of past month cigarette use, 8th grade

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Figure 6: Map of past month cigarette use, 11th grade


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Figure 7: Map of past month alcohol use, 8th grade


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Figure 8: Map of past month alcohol use, 11th grade


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Figure 9: Map of binge drinking, 8th grade

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Reported Past Two Week Binge Drinking Among Delaware 11th Grade Public School Students: 2018-2019

Figure 10: Map of binge drinking, 11th grade

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Figure 11: Map of past month marijuana use, 8th grade
Figure 12: Map of past month marijuana use, 11th grade

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Figure 13: Map of past year prescription painkiller misuse, 8th grade
Note: Prescription misuse is defined by the survey as using a medication without a prescription or in a way other than prescribed.

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Figure 14: Map of past year prescription painkiller misuse, 11th grade

Note: Prescription misuse is defined by the survey as using a medication without a prescription or in a way other than prescribed.

Figure 15: Map of past year prescription drug misuse, 8th grade

Note: Prescription misuse is defined by the survey as using a medication without a prescription or in a way other than prescribed.


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Figure 16: Map of past year prescription drug misuse, 11th grade
Note: Prescription misuse is defined by the survey as using a medication without a prescription or in a way other than prescribed.

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Figure 17: Map of past month vaping, 8th grade


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Figure 18: Map of past month vaping, 11th grade

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References

Executive Summary


Substance Abuse and Mental Health Services Administration. (n.d.)[Table]. Treatment Episode Data Set. *Delaware TEDS admissions aged 12 years and older, by primary substance use and gender, age at admission, race, and ethnicity: Percent, 2019*. Retrieved September 28, 2020 from https://wwwdasis.samhsa.gov/webt/newmapv1.htm#


The Williams Institute, UCLA School of Law. (January 2019). LGBT Demographic Data Interactive. Los Angeles, CA:. Retrieved on September 10, 2020 from https://williamsinstitute.law.ucla.edu/visualization/lgbt-stats/?topic=LGBT#density

Data Sources

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In addition to the data sources for the figures and tables in the 2020 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 Department of Education
- Delaware Department of Safety and Homeland Security, Division of Forensic Science
- Delaware Health Tracker
- Delaware Household Health Survey
- Drug Enforcement Administration
- Health Resources and Services Administration
- KIDS COUNT in Delaware
- National Center for Health Statistics
- National Conference of State Legislatures
- National Institute on Drug Abuse
- National Institute on Mental Health
- RTI International
- State of Delaware Economic Development Office
- The Trevor Project
- U.S. Census Bureau