The 2023 Delaware Epidemiological Profile

Substance Use, Mental Health, and Related Issues:

Alcohol
The Delaware 2023 Epidemiological Profile: Substance Use, Mental Health, and Related Issues

is prepared for

Director Joanna Champney and the
Delaware Division of Substance Abuse and Mental Health
&
The Delaware State Epidemiological Outcomes Workgroup

The annual Delaware State Epidemiological Profile is a valuable data resource for strategic planning, decision-making, and evaluation. The report includes modules that highlight indicators of mental health and wellbeing, patterns of substance use and its consequences, and risk and protective factors for people in Delaware. The report also highlights crosscutting issues that warrant attention as well as populations that may experience disproportionate risk for these concerns.

This module is part of a series of materials. To review the Annual Epidemiological Profile Companion Guide (which includes data notes), modules on additional topics, downloadable slides, and infographics, please visit the UD Center for Drug and Health Studies Delaware Epidemiological Reports page. Links to presentations referenced in the annual profile are available from the Presentations webpage.

The SEOW is facilitated by a team at the Center for Drug and Health Studies at the University of Delaware that convenes a network of more than 100 representatives from approximately 55 state and nonprofit agencies, community organizations, advocacy groups, and other entities. The SEOW’s mission is to bring data on behavioral health and associated issues to the forefront of prevention and treatment efforts in Delaware. To learn more, please visit the What is the SEOW? webpage.

The annual Delaware Epidemiological Profile is a publication of the Delaware State Epidemiological Outcomes Workgroup (SEOW) project. Funding for the SEOW has been provided by the Department of Health and Social Services, Division of Substance Abuse and Mental Health through funding from the Substance Abuse and Mental Health Services Administration (SAMHSA). Please address all inquiries to M.J. Scales, MPH, CPS, University of Delaware Center for Drug and Health Studies, Department of Sociology and Criminal Justice: mjcscales@udel.edu.
Alcohol

Figure 1: Alcohol use in Delaware by age group, NSDUH 2021 ................................................................. 5
Figure 2: Adults who consumed alcohol in the past month by sex and race/ethnicity, BRFSS 2021 .................................................................................................................................................. 6
Figure 3: Adults who consumed alcohol in the past month by age group, Delaware 2021 BRFSS ........... 7
Figure 4: Adults who consumed alcohol in the past month by educational attainment, DE BRFSS 2021 ................................................................................................................................................ 7
Figure 5: Adults who binge drink by sex and race/ethnicity, DE BRFSS 2021 ........................................ 8
Figure 6: Adults who binge drink by age group, DE BRFSS 2021 .................................................................. 8
Figure 7: Adults who binge drink by educational attainment, DE BRFSS 2021 ....................................... 9
Figure 8: Alcohol use by grade, DSS 2022 .............................................................................................. 10
Figure 9: Alcohol use by gender, 8th grade, DSS 2022 ........................................................................... 11
Figure 10: Alcohol use by gender, 11th grade, DSS 2022 ........................................................................ 11
Figure 11: Perception of risk from alcohol use, 5th grade, DSS 2022 ..................................................... 12
Figure 12: Perception of risk from alcohol use, 8th and 11th grade, DSS 2022 ................................. 12
Figure 13: High school students who had their first drink of alcohol before age 13, YRBS 2021 ........ 13
Figure 14: High school students who currently drank alcohol, YRBS 2021 ........................................... 14
Figure 15: High school students who were currently binge drinking, YRBS 2021 .............................. 14
Figure 16: Middle school students who had their first drink before age 11 years, YRBS 2021 .......... 15
Figure 17: Middle school students who ever drank alcohol, YRBS 2021 .............................................. 15
Figure 18: Driving under the influence arrests, by age and gender, Delaware State Police ............ 16
Figure 19: Trends in alcohol-involved traffic fatalities in Delaware by county, 2017-2021 .......... 17
Alcohol

While consumption has declined, alcohol use remains common among adults and youth. Approximately one in ten people age 12 and over in the U.S. fit the criteria for an alcohol use disorder (National Institute on Alcohol Abuse and Alcoholism, n.d.). Long-term use has been linked to a number of chronic conditions which carry significant personal and public health costs. The Centers for Disease Control and Prevention (CDC) report that deaths related to excessive alcohol use are on the rise and estimate that on average over 140,000 deaths were attributable to chronic or acute conditions related to excessive consumption between 2015 and 2019 (CDC, n.d.).

This module presents an overview of alcohol use in Delaware based on recent data from the following sources:

- National Survey on Drug Use and Health (NSDUH)
- Behavioral Risk Factor Surveillance System (BRFSS)
- Delaware School Survey (DSS)
- Youth Risk Behavior Survey (YRBS)
- National Highway Traffic Safety Commission
- Delaware State Police Delaware Information and Analysis Center
National Survey on Drug Use and Health

The National Survey on Drug Use and Health (NSDUH) annually provides a report with U.S. estimates and state comparisons for major substance use and mental health indicators. According to the 2021 NSDUH, approximately half of all Delawareans age 12 and older report some alcohol use in the past month. Rates of past month alcohol use and binge drinking were the highest among the 18–25 year-old age group, with more than 56% of this group reporting past month alcohol use and nearly 39% reporting binge alcohol use. Perception of risk from drinking alcohol was also lowest among this same age group.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Total 12 or Older</th>
<th>AGE GROUP</th>
<th>12-17</th>
<th>18-25</th>
<th>26 or Older</th>
<th>12-20³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past month alcohol use</td>
<td>50.70</td>
<td>6.54</td>
<td>56.77</td>
<td>54.59</td>
<td>15.59</td>
<td></td>
</tr>
<tr>
<td>Past month binge⁴ drinking</td>
<td>22.35</td>
<td>3.25</td>
<td>38.74</td>
<td>22.20</td>
<td>10.64</td>
<td></td>
</tr>
<tr>
<td>Perceived great risk of drinking 5 or more drinks once or twice a week</td>
<td>44.66</td>
<td>43.66</td>
<td>37.87</td>
<td>45.67</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1: Alcohol use in Delaware by age group, NSDUH 2021

Due to changes in the survey methodology made during the COVID-19 pandemic, NSDUH guidance advises against comparing data collected in 2020 or later with data collected in 2019 or earlier. As a result, the NSDUH estimates presented here are based on only one year of data (2021) rather than the typical combined two-year estimates and are considered preliminary. With the following data, SAMHSA cautions: “Because 2021 state estimates are based on a single year of data, there is greater variance around the estimates than for the usual two-year estimates, particularly in small states and for uncommon outcomes.” Users of this data can visit the NSDUH State Data Tables for more documentation on methodology.

---

1 Source: “2021 National Survey on Drug Use and Health: Model-Based Prevalence Estimates (50 States and the District of Columbia).” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.

2 Estimates are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.

3 Underage drinking is defined for persons aged 12 to 20.

4 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 one day in the past 30 days. In 2015, the definition for females changed from five to four drinks.
Behavioral Risk Factor Surveillance System (BRFSS)\(^5\)

The Delaware Department of Public Health participates in the annual Behavioral Risk Factor Surveillance System (BRFSS), a survey funded by the Centers for Disease Control and Prevention (CDC) to monitor trends in adult health behaviors. The first series of figures in this section report any past month alcohol use among adults by key demographic characteristics. The next series of figures report the prevalence of binge drinking among adults by these same demographics. (Additional health behavior data is available through the CDC’s interactive data portal.)

In 2021, approximately 53.9% of adults reported past month alcohol consumption. This was more prevalent among males (58%) than females (50.1%). When looking at the prevalence by race and ethnicity, white non-Hispanic adults reported the highest rates (59.3%) and Asian non-Hispanic adults reported the lowest rates (26.5%).

![Figure 2: Adults who consumed alcohol in the past month by sex and race/ethnicity, Delaware 2021 BRFSS (in percentages)](image)

---

\(^5\) Source: Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System (BRFSS). Explore BRFSS Data by Location.
When comparing rates by age group, past month alcohol consumption was most prevalent among 35-44 year-old adults (62%) and least prevalent among those aged 18-24 (47.6%). However, alcohol use was common across all age groups, with nearly half of the oldest and youngest survey participants (49.4% and 47.6%) also consuming at least one alcoholic drink in the past month.

There are differences across rates of past month alcohol use associated with levels of educational attainment. In general, adults with higher levels of education report higher levels of use. In 2021, approximately two out of three college graduates in Delaware reported having at least one alcoholic drink within the past month, nearly twice the rate of adults with less than a high school diploma (33%).

It is important to note that while there is a statistical association between these factors, this does not necessarily mean that there is a causal relationship between them; in other words, we cannot say that one factor causes the other, and there may be other conditions that also influence the association. This holds true for all of the associations discussed in this report.
Approximately 12.9% of adults reported binge drinking, which is defined as having at least four drinks (for females) or five drinks (for males) on one occasion. This was more prevalent among males (16.4%) than females (9.7%). When looking at rates by race and ethnicity, white non-Hispanic adults reported the highest rates (14.1%) and Black non-Hispanic adults reported the lowest rates (9.6%).

Binge drinking appears to decrease with age; reported rates were most prevalent among 18-24 year-old adults (20%) and least prevalent among those aged 65 and older (6.6%).

---

7 The prevalence estimates for binge drinking among Asian non-Hispanic and multiracial non-Hispanic adults are not available because either the unweighted sample size for the denominator was less than 50 or the Relative Standard Error was >0.3.
Unlike monthly alcohol use, binge drinking rates appear to decrease with higher levels of educational attainment, with the exception being the lowest rates reported by respondents who did not complete high school or attain a G.E.D (10.8%). High school graduates and those with some post high school education report the highest rates (14.8% and 14%, respectively).

Figure 7: Adults who binge drink by educational attainment, Delaware 2021 BRFSS (in percentages)
The Delaware School Surveys (DSS) are state-funded annual surveys administered to 5th, 8th, and 11th grade public school students throughout Delaware. There are two versions of the survey, one for 5th grade students and a secondary version for 8th and 11th graders. The DSS are designed to provide estimates of youth substance use and related factors. DSS data are used for National Outcomes Measures as well as state and local program planning and evaluation. (For more information or to review the survey questionnaires and earlier reports, visit the DSS page of the University of Delaware Center for Drug and Health Studies website. Due to the data gap in 2020 as well as the changes in the methodology for the 2021-2022 administration due to the COVID-19 pandemic, results of the 2022 DSS should be compared with caution to previous survey results.) The charts in this section highlight select data from the 2022 DSS.

Not surprisingly, reported use of alcohol across all time frames increases with age. In 2022, more than one in ten 5th grader reported having at least one drink of alcohol at some point in their life, and approximately one in six 11th graders reported drinking alcohol in the past month, signifying that alcohol remains one of the most common substances used by teens.

The DSS allows students to report their gender as girl, boy, nonbinary, or self-described. When looking at rates by gender, girls reported the highest rates of using alcohol during the past month and past year. This was true among 8th and 11th grade students. One in four 8th graders who describe their gender as nonbinary reported using alcohol at some point in their lifetime. This was equal to the lifetime rate reported by 8th grade girls.

---

In the 2022 DSS Secondary survey, students were asked to identify their gender as boy, girl, nonbinary, or to self-describe their gender. Data reported from the DSS by gender here reflects these three primary categories (boy, girl, and nonbinary/self-describe) and students’ responses are reported by their self-identified gender. As a result, the categories of “boy” and “girl” may include both cisgender and transgender students. For more detailed information about nonbinary and transgender students in the DSS, please visit the module on Gender and Sexuality.
A person’s perception of the risk of harm related to certain behaviors can serve as a protective factor. In 2022, only 13% of 5th graders indicated that they perceived “a lot of risk” from trying one or two drinks, although 40% believed there was such risk in drinking daily. Only one in three 8th graders and less than half of 11th graders (43%) perceived great risk in binge drinking frequently.
Youth Risk Behavior Survey\textsuperscript{10}

The Youth Risk Behavior Survey (YRBS) is a CDC-funded survey that is administered in odd-numbered years to both national and state samples of students. The survey monitors various topics of health risk behaviors, including substance use. Delaware has participated in these surveys for over 20 years. The following charts include findings from the 2021 Delaware YRBS among middle and high school students.\textsuperscript{11}

\begin{center}
\begin{figure}
\centering
\includegraphics[width=\textwidth]{chart.png}
\caption{High school students who had their first drink of alcohol before age 13, YRBS 2021 (in percentages)}
\end{figure}
\end{center}

In 2021, 13% of high school students responding to the YRBS indicated that they had had their first drink of alcohol before age 13. Older students were more likely to report current alcohol use as well as binge drinking. There were several differences noted when analyzing alcohol use by gender. Female students reported higher rates of current drinking compared to male students (26% and 15% respectively). More than one in ten female respondents reported binge drinking (11%), nearly double the rate of male respondents (6%).


\textsuperscript{11} Until the 2023 YRBS data is analyzed, comparisons of the 2021 data to previous data should be avoided, as findings from the 2021 data may be an exception to ongoing trends. For a more detailed description of pandemic impacts on data collection as it pertains to the YRBS, please refer to the Companion Guide accompanying this report.
Currently drank alcohol is defined in the YRBS as having at least 1 drink of alcohol, on at least 1 day during the 30 days before the survey.

Current binge drinking is defined in the YRBS as 4 or more drinks in a row for females or 5 or more drinks of alcohol in a row for males, within a couple of hours, on at least 1 day during the 30 days before the survey.
In 2021, 7% of middle school students reported that they had had their first alcoholic drink before age 11. One in five 8th graders reported that they had used alcohol at some point in their lifetime.

Figure 16: Middle school students who had their first drink before age 11 years, YRBS 2021

Figure 17: Middle school students who ever drank alcohol, YRBS 2021
Health and Safety Consequences

The consequences of excessive alcohol use have considerable public health implications:

- The CDC Alcohol-Related Disease Impact (ARDI) portal estimates an annual average of 466 deaths in Delaware attributable to chronic or acute causes related to excessive alcohol use between 2015 and 2019.
- In 2020, alcohol was the primary substance in more than 10% of publicly funded treatment admissions, second only to heroin. It was the secondary substance in another 8% of admissions (Delaware Treatment Admissions Dataset, 2020).
- In 2022, 4% of all traffic crashes in Delaware involved alcohol. Twenty-seven percent of fatal crashes involved alcohol along with 8% of traffic-related fatalities and injuries.
- 2,841 driving under the influence (DUI) arrests were made statewide in 2022.
- 45 fatalities and 649 injuries were associated with these accidents (Delaware State Police, Delaware Information and Analysis Center, 2023).

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 and under</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>9</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>18</td>
<td>19</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>19</td>
<td>30</td>
<td>8</td>
<td>38</td>
</tr>
<tr>
<td>20</td>
<td>40</td>
<td>12</td>
<td>52</td>
</tr>
<tr>
<td>21-24</td>
<td>234</td>
<td>94</td>
<td>328</td>
</tr>
<tr>
<td>25-34</td>
<td>715</td>
<td>217</td>
<td>932</td>
</tr>
<tr>
<td>35-44</td>
<td>486</td>
<td>175</td>
<td>661</td>
</tr>
<tr>
<td>45-54</td>
<td>285</td>
<td>97</td>
<td>382</td>
</tr>
<tr>
<td>55-64</td>
<td>242</td>
<td>75</td>
<td>317</td>
</tr>
<tr>
<td>65 &amp; older</td>
<td>72</td>
<td>22</td>
<td>94</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,134</td>
<td>707</td>
<td>2,841</td>
</tr>
</tbody>
</table>

Figure 18: Driving under the influence arrests, by age and gender, Delaware State Police

---

The National Highway Traffic Safety Administration\textsuperscript{15} also tracks traffic fatalities where alcohol is involved. The chart below provides county-level data on the last five years of alcohol-related traffic fatalities.

### National Highway Traffic Safety Administration

#### Trends in Alcohol-Involved Traffic Fatalities in Delaware by County, 2017-2021

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Castle</strong></td>
<td>2.52</td>
<td>2.69</td>
<td>2.14</td>
<td>2.1</td>
<td>3.15</td>
</tr>
<tr>
<td><strong>Kent</strong></td>
<td>5.66</td>
<td>3.91</td>
<td>3.86</td>
<td>3.29</td>
<td>4.89</td>
</tr>
<tr>
<td><strong>Sussex</strong></td>
<td>3.12</td>
<td>2.61</td>
<td>5.53</td>
<td>5.44</td>
<td>2.83</td>
</tr>
</tbody>
</table>

---

\textsuperscript{15} Source: National Highway Traffic Safety Administration, Performance Measures, Delaware.

\textsuperscript{16} Fatalities per 100,000 population. Data note: Crash involved at least one driver or motorcycle rider with a BAC of .08 or above.

---

Figure 19: Trends in alcohol-involved traffic fatalities\textsuperscript{16} in Delaware by county, 2017-2021
References and Data Sources


Substance Abuse and Mental Health Services Administration. (2023). “2021 National Survey on Drug Use and Health: Model-Based Prevalence Estimates (50 States and the District of Columbia).”