

# YOUTH AND ALCOHOL USE: NATIONAL AND ILLINOIS TRENDS, CONSEQUENCES, AND INTERVENTIONS



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*Abstract: Alcohol is the most commonly misused substance among youth in the United States. Underage alcohol use contributes to risky behavior, lower academic achievement, and altered brain development, and can increase the risk of future misuse. This article explored literature on underage drinking and interventions available to address the problem. Also examined were data on underage drinking in Illinois. Illinois data indicated high school students reported drinking alcohol at a slightly lower rate than the general United States population as a whole. In addition, Illinois arrests for underage drinking-related offenses have decreased in the last 15 years, especially among non-Black males.*

## Introduction

In 1984, the National Minimum Drinking Age Act was passed, requiring states to prohibit individuals under age 21 from buying or possessing alcohol as a condition for federal highway funding.<sup>1</sup> Despite this law, alcohol is the most commonly misused substance among youth in the United States.<sup>2</sup> In 2001, underage drinking accounted for about 16% of all alcohol sales in the United States.<sup>3</sup> Underage drinking can negatively impact both the youth that drink and their communities. For example, according to Sacks and colleagues (2015), underage drinking caused over \$24 billion in health care and criminal justice administration costs.<sup>4</sup> Further, youth that begin drinking earlier than their peers are more likely to report higher levels of drinking and alcohol misuse throughout their lives and are at increased risk for developing alcohol dependence.<sup>5</sup>

### National Youth and Alcohol Trends and Issues

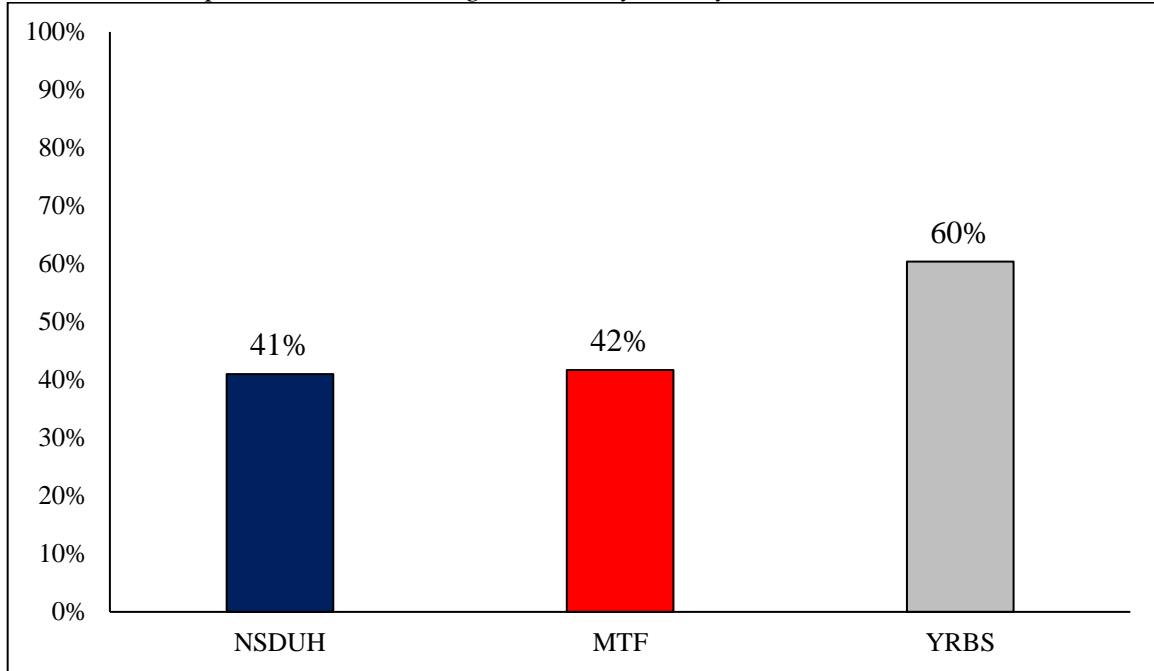
Sources that provide national data on underage drinking include:

- The annual Substance Abuse and Mental Health Services Administration (SAMHSA) **National Survey on Drug Use and Health (NSDUH)** of non-institutionalized individuals ages 12-20 on substance use and mental health issues.<sup>6</sup>
- The annual University of Michigan **Monitoring the Future (MTF)** project survey of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders on their attitudes, behaviors, and values.<sup>7</sup>
- The Centers for Disease Control and Prevention **Youth Risk Behavior Surveillance System (YRBS)** biennial survey of high school students in grades 9 through 12 on health-risk behaviors related to substance use, physical activity, and mental health.<sup>8</sup>

According to 2017 NSDUH, MTF, and YRBS survey results, about half of all youth respondents reported ever drinking alcohol, underscoring the issue of youth and alcohol misuse in America (Figure 1).<sup>9</sup>

Figure 1

*U.S. Youth Who Reported Ever Drinking Alcohol, by Survey, 2017*

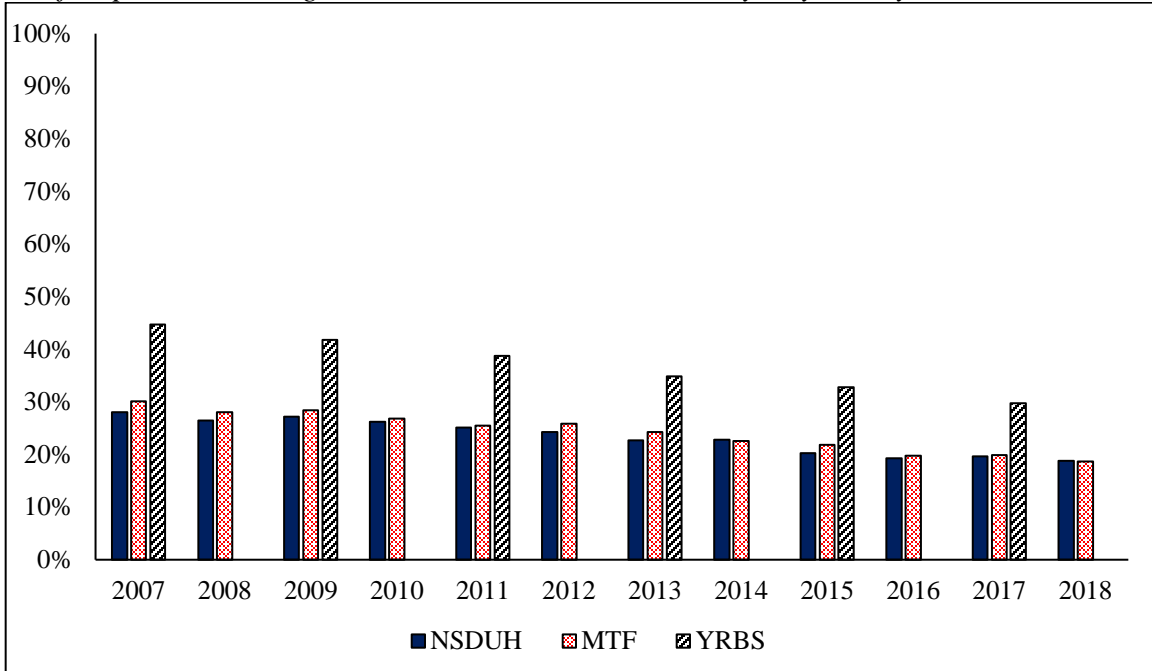


Source: 2017 NSDUH, MTF, and YRBS survey results

Figure 2 depicts the proportion of self-reported alcohol use within the past 30 days of survey response by underage respondents from the NSDUH, YRBS, and MTF over time. Data indicated that youth alcohol use decreased between 2007 and 2018, with about 20% of prior 30-day alcohol use among NSDUH and MTF respondents in 2018, and 30% among YRBS respondents in 2017.

Figure 2

*U.S. Self-Reported Underage Alcohol Use Within Past 30 Days, by Survey, 2007-2018*

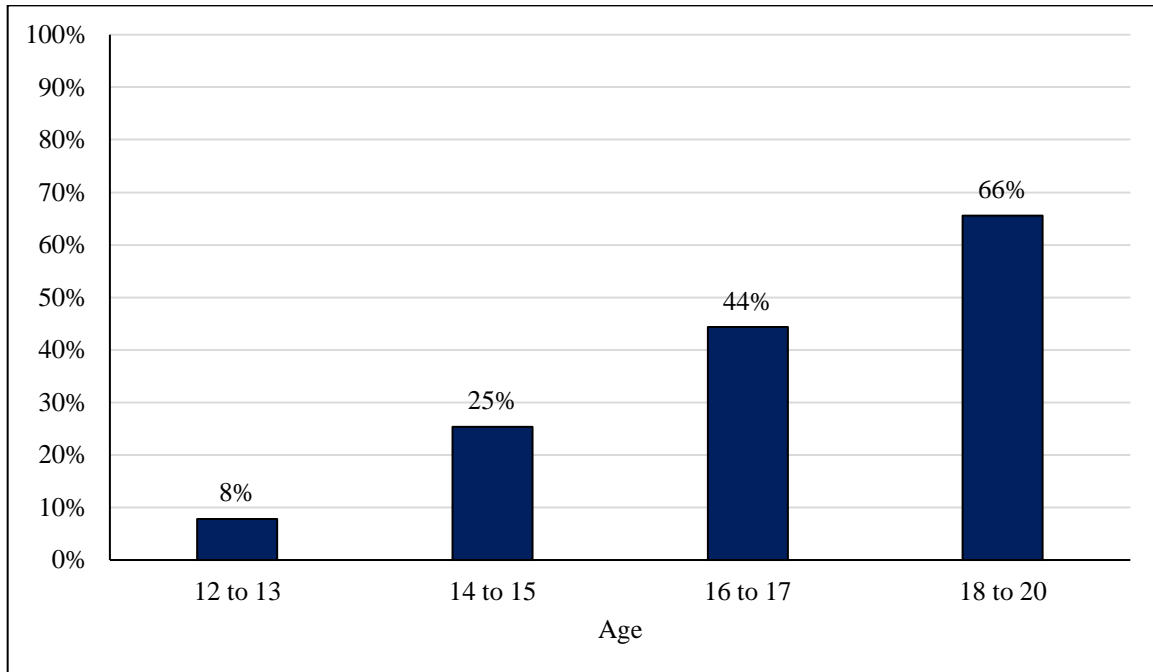


Source: NSDUH, MTF, and YRBS survey results

Note: Survey requested information on current drinking practices.

Youths' ages at time of alcohol use is especially important, as youth who begin drinking at an earlier age are at a greater risk for alcohol problems and other negative consequences (e.g., violence, suicide, academic failure).<sup>10</sup> Figure 3 depicts reported lifetime alcohol use by age group, according to the 2018 NSDUH report.<sup>11</sup> Alcohol use increased as individuals neared the legal drinking age of 21, and about two-thirds of individuals reported use of alcohol by the time they were 18 to 20 years old.

Figure 3  
*Self-Reported Lifetime Alcohol Use Among Adolescents in the United States, by Age Group, 2018*



Source: 2018 NSDUH

The YRBS found 15.5% of high school respondents reported drinking alcohol before the age of 13.<sup>12</sup> Other data sources revealed a glimpse of alcohol use at even younger ages. Pride Surveys are used by school districts to gather data and then compiled into nationally representative samples.<sup>13</sup> Pride survey data on fourth, fifth, and sixth graders during the 2008-2009 school year revealed 3.7%, 4.6%, and 7.6%, respectively, reported using alcohol during that past year.<sup>14</sup> Data collected on the 2016-2017 school year indicated 10% of sixth, seventh, and eighth graders surveyed reported using alcohol, a decrease of roughly 64% from the 2007-2008 school year, when 26.7% reported using alcohol.<sup>15</sup>

Binge drinking, or consuming five or more drinks for men and four or more drinks for women on one occasion, tends to begin in adolescence.<sup>16</sup> In fact, youth consume over 90% of their alcohol through binge drinking.<sup>17</sup> Research indicates while youth may drink less often, they are more likely to drink higher amounts when they do consume alcohol.<sup>18</sup> The 2018 NSDUH report found that of respondents between 12 and 20 years old, 18.8% were self-reported alcohol users, 11.4% were self-reported binge alcohol users, and 2.3% were self-reported heavy alcohol users.<sup>19</sup> Similarly, the YRBS found that 13.5% of high school students in its 2017 sample reported binge drinking in the past 30 days.<sup>20</sup>

Paschall and colleagues (2007) found 87% of underage drinkers obtained alcohol from social sources (e.g., friends, parties) and 23% of underage drinkers obtained alcohol from commercial sources (e.g., gas stations, grocery stores).<sup>21</sup> Of the social sources, friends of any age and availability at parties were the most common alcohol sources.<sup>22</sup> Almost half of YRBS respondents (43.5%) reported obtaining alcohol from other people.<sup>23</sup>

The Illinois Department of Human Services funds the Core survey, which seeks to assess the prevalence of drug and alcohol use on the state's college campuses. The latest Core survey report, based on 2016 survey data, found that underage drinkers most commonly indicated friends over age 21 as their source for alcohol (73%).<sup>24</sup> This poses an issue for drinking laws that aim to restrict commercial alcohol purchases from those under age 21; with a variety of ways to obtain alcohol, commercial restrictions alone will not reduce youth alcohol use. A study on internet alcohol sales to minors found that many of 45% of the online alcohol orders placed by underage buyers were successful.<sup>25</sup> A Chicago-based study found that underage purchasers had a successful alcohol purchase rate of 35.1%.<sup>26</sup>

### **Illinois Youth and Alcohol Data**

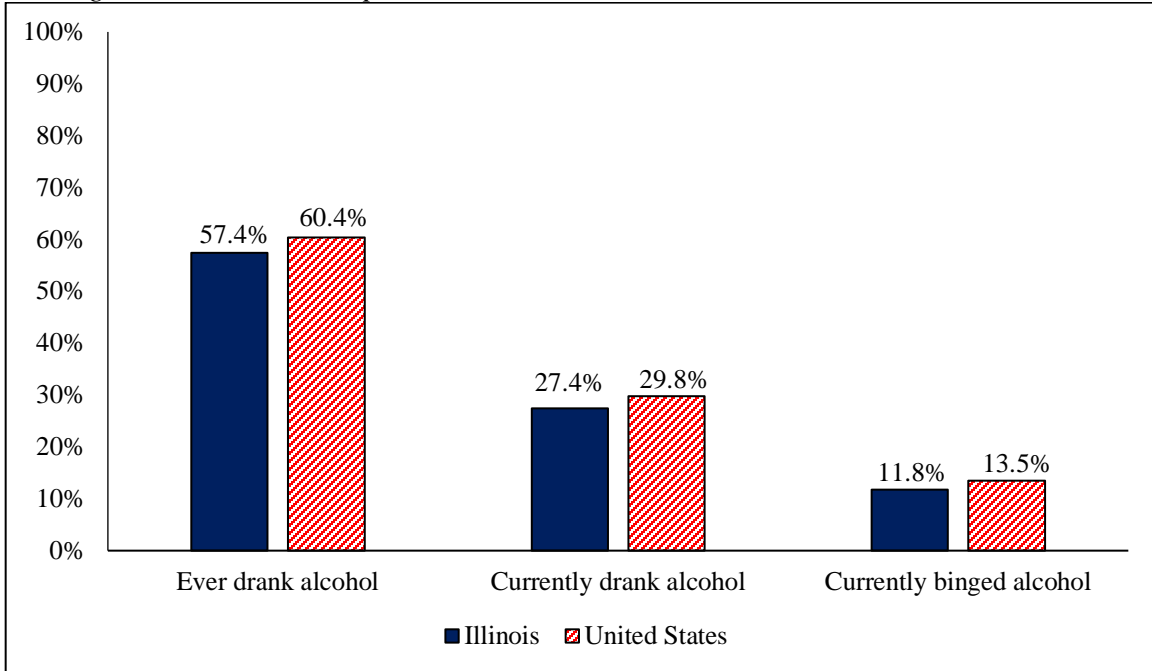
Researchers examined trends on youth alcohol use in Illinois with data from the YRBS and NSDUH. Also gathered were arrest data on underage drinking offenses from the Illinois Criminal History Record Information (CHRI) system, which is maintained by the Illinois State Police.

#### **Prevalence**

##### *Alcohol Use*

A state and national comparison of YRBS data on self-reported alcohol use among high school students indicates alcohol use was slightly lower among Illinois high school students in 2017 (Figure 4).<sup>27</sup>

Figure 4  
*Illinois High School Student-Reported Alcohol Use, 2017*



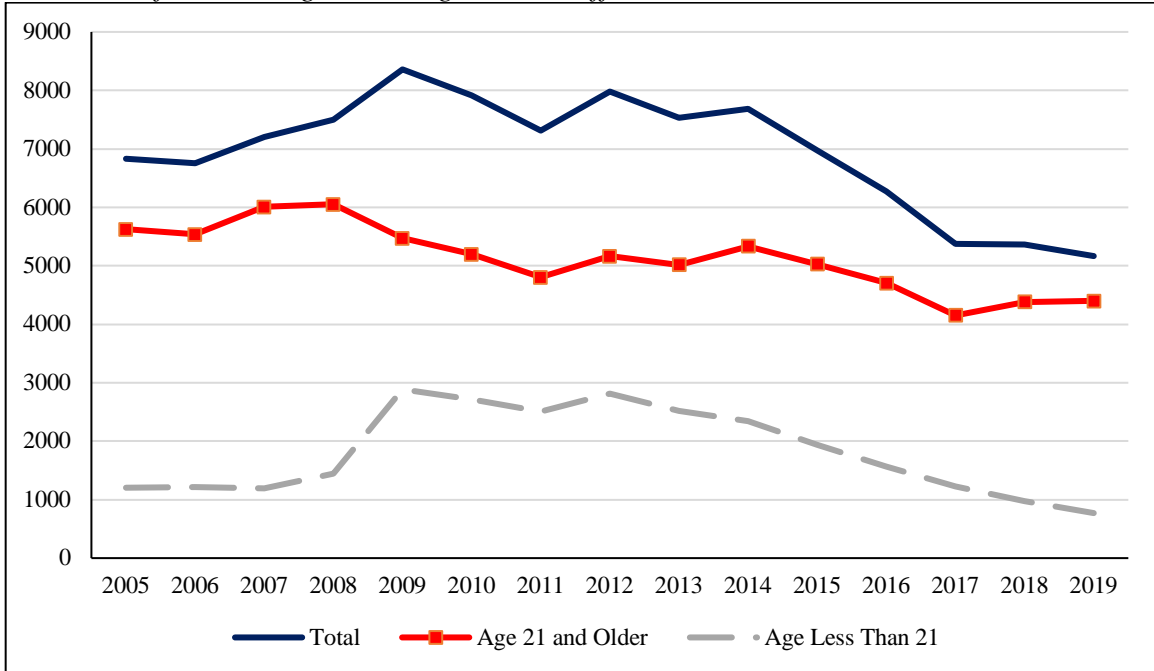
Source: YRBS, 2017

Estimates from NSDUH for the 2017-2018 school year indicated that 19.8% of Illinois youth between 12 and 20 had consumed alcohol in the past month at time of survey, slightly more than the national total of 19.3%. Further, in Illinois, youth self-reports of underage drinking decreased between the 2008-2009 and 2017-2018 school years, from 28.4% to 19.8%.<sup>28</sup> The 2016 Core survey found that 72% of underage males and 74% of underage females reported drinking alcohol in their lifetimes.<sup>29</sup>

***Alcohol-related Arrests***

According to CHRI, nearly 130,000 arrests for underage drinking were made between 2000 to 2019. Arrests for underage drinking-related offenses decreased by nearly 40% between 2009 to 2019, from 8,349 to 5,166 (Figure 5).

Figure 5  
*Illinois Arrests for Underage Drinking-Related Offenses, 2005-2019*



Source: ICJIA analyses of CHRI data

Males accounted for the vast majority of underage drinking-related arrests between 2005 and 2019 (82%). While these arrests decreased 31% during this period, female arrests increased 24%.

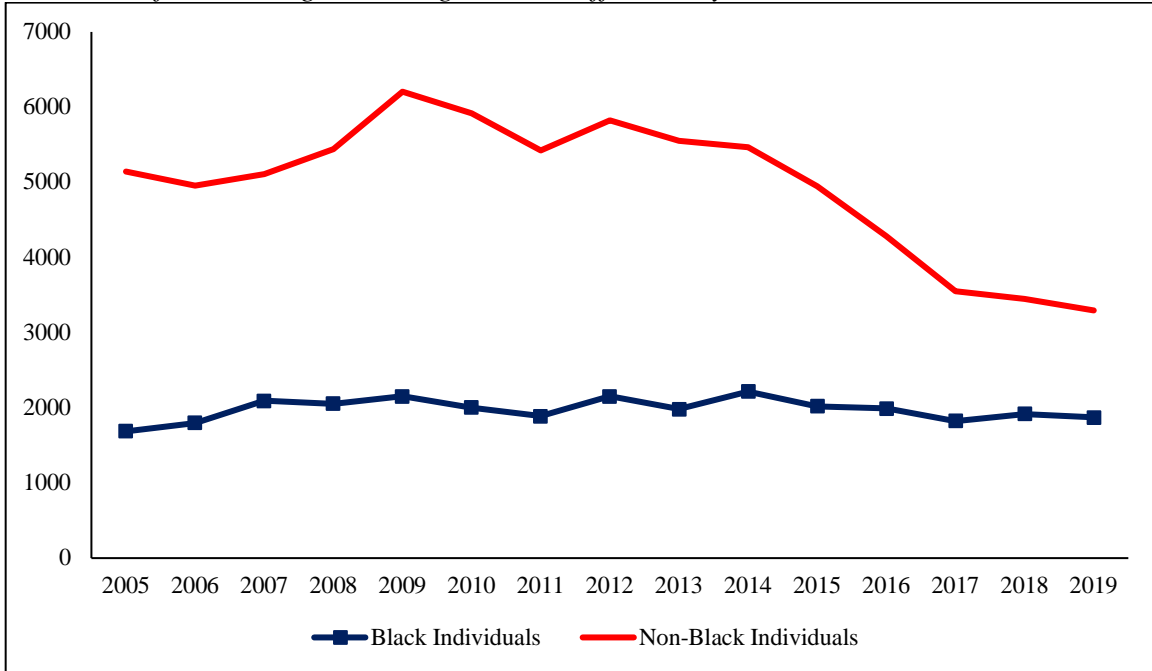
Due to a change in CHRI coding procedures, race was analyzed in the dichotomous categorization of Black and non-Black (Figure 6). From 2005 to 2019, non-Black individuals in Illinois were arrested more frequently than Black individuals for underage drinking-related offenses. However, arrests for these types of offenses among Black individuals have remained relatively stable, while arrests among non-Black individuals have steadily declined more noticeably since 2009.

In fact, since the peak of 6,205 arrests in 2009 for underage drinking-related offenses among non-Black individuals, annual arrests have decreased by nearly 50% (3,295 arrests in 2019). Arrests for underage drinking-related offenses among Black individuals decreased from 2,154 to 1,871 in that same time, representing about a 13% decrease in annual arrests. As such, arrests among non-Black individuals for underage drinking-related offenses have been decreasing at a higher rate than arrests among Black individuals.



Figure 6

*Illinois Arrests for Underage Drinking-Related Offenses, by Race, 2005-2019*



Source: ICJIA analyses of CHRI data

It is important to consider, however, the effect that record expungement may have on arrest data. Specifically, a new Illinois law in 2018 resulted in expungement of certain juvenile records ([705 ILCS 405/5-915](#)). These expungements may contribute to the decrease in the number of arrests for underage drinking-related offenses from 2013 to 2019 observed in Figure 5 and Figure 6. The law details various events in which expungement must occur, including if a year has passed since the date of arrest or documented law enforcement interaction, six months have passed since the initial arrest without any new arrests, or there have been no court filings for petitions for delinquency or criminal charges to circuit court clerk related to an arrest, among other events.

Records for arrest events happening between January 1, 2013 and January 1, 2018 were expunged prior to January 1, 2020. Arrests occurring between January 1, 2000 and December 31, 2012 must be expunged by January 1, 2023. As such, the data presented here may be a less accurate reflection of actual trends in criminal behavior related to underage drinking-related offenses.

## Consequences of Underage Drinking

### Physical Health

A total of 4,358 youth under the age of 21 died of alcohol attributable deaths between 2006 and 2010 in the United States.<sup>30</sup> Youth who drink are at increased risk for several health problems. Studies show the human brain is not fully developed until well into an individual's late 20s and heavy substance use before that age can have detrimental effects on brain development.<sup>31</sup> For example, a study comparing the brains of individuals between ages 14 and 21 who did and who

did not abuse alcohol found that the hippocampus in alcohol abusers was 10% smaller than those who did not abuse alcohol.<sup>32</sup> This finding is significant, as the hippocampus is vital in the creation of memories and learning.<sup>33</sup> Another study found that alcohol consumption during adolescence is linked to underdevelopment in certain areas of the brain crucial to learning, memory, and emotion, which can impact future cognitive growth.<sup>34</sup>

Underage drinking increases the risk for injury and death. Research indicates youth ages 16 to 20 are 17 times more likely to die in a car crash with a blood alcohol content (BAC) of .08% compared to when they had not been drinking.<sup>35</sup> Motor vehicle accidents accounted for 36% of the over 4,000 alcohol-attributable deaths between 2006 and 2010.<sup>36</sup> In 2017, 5.5% of YRBS respondents reported they had driven after drinking alcohol.<sup>37</sup>

## **Risky Behaviors**

Youth who drink alcohol, when compared to those who do not, are more likely to engage in risky sexual behavior, including engaging in sexual activity at an earlier age and having unprotected/unplanned sex, more sexual partners, and sexual activity while under the influence of alcohol.<sup>38</sup>

### **Illinois Laws Related to Alcohol and Minors**

#### **Sale and Delivery:**

- Individuals cannot sell, serve, deliver, or give alcoholic beverages to anyone under the age of 21 (235 *ILCS* 5/6-16).
- After purchasing/obtaining alcohol, individuals cannot sell, serve, deliver, or give alcoholic beverages to anyone under the age of 21 (235 *ILCS* 5/6-16).

#### **Purchase/Possession/Consumption:**

- Individuals under the age of 21 cannot consume alcohol (235 *ILCS* 5/6-20).
- Individuals under the age of 21 cannot possess alcohol in a public place (235 *ILCS* 5/6-20).
- Individuals under the age of 21 cannot purchase, possess, consume, or accept alcohol, except under the direct supervision of a parent in the privacy of a home or during a religious ceremony (235 *ILCS* 5/6-20).

#### **Social Host:**

- Individuals cannot knowingly authorize residence to be used by anyone under the age of 21 to possess or consume alcoholic beverages (235 *ILCS* 5/6-16).
- The penalty increases in severity when a violation results in great bodily harm/death to anyone present (235 *ILCS* 5/6-16).

#### **False ID:**

- Individuals cannot possess or present any false or fraudulent ID in the attempt to purchase or procure alcohol (235 *ILCS* 5/6-20).
- Individuals cannot lend a license or state ID to someone for use to purchase or procure alcohol (235 *ILCS* 5/6-20).
- Individuals reserve the right to refuse sale/service of alcohol to anyone unable to provide adequate proof of age (235 *ILCS* 5/6-20).

#### **Underage Drinking and Driving**

- Minors found driving with a BAC of over 0.0% face immediate suspension of driving privileges, with harsher penalties for repeat offenses or a BAC of at least .08%. (625 *ILCS* 5/11-502).

Drinking alcohol at a young age also increases a youth's risk for developing an alcohol use disorder or other alcohol problems later in life. A survey of over 43,000 adults found that the younger the respondents had begun drinking, the greater the likelihood they had experienced alcohol dependence.<sup>39</sup>

### **Academic Achievement**

Research shows alcohol use can impact academic achievement. Similarly, underage drinking can result in poor school performance.<sup>40</sup> Balsa and colleagues (2011) found that alcohol consumption has a statistically significant, albeit small, negative correlation with GPA among high school males.<sup>41</sup> In other words, research suggests that alcohol consumption may have at least a slight detrimental impact on GPA scores.

## **Preventing Youth and Alcohol Crimes**

### **Theoretical Framework for Intervention**

Criminological theories attempt to understand why crime occurs and with this knowledge, allow for interventions grounded in theory. Interventions for youth who use alcohol and commit alcohol-related crimes can be based on the following theories.

#### ***Deterrence Theory***

Stemming from the Classical School of Criminology, deterrence theory posits that individuals are rational beings and will commit crime if the benefits outweigh the costs.<sup>42</sup> According to deterrence theory, laws and punishment exist to deter future crimes by increasing the "cost" of crime. There are two types of deterrence: general and specific.

**General Deterrence.** General deterrence occurs when an individual in society observes or has knowledge of another individual's punishment.<sup>43</sup> Underage drinking laws attempt to deter youth consumption of alcohol by increasing the risks associated with it in the form of legal punishment.

**Specific Deterrence.** Specific deterrence occurs when punishment is experienced directly by an individual. Deterrence theory begets interventions that increase the "cost" of underage drinking.<sup>44</sup> Further, the theory assumes that those who are punished for underage drinking offenses are less likely to commit underage drinking offenses.

#### ***Rational Choice Theory***

As stated by Lilly et al. (2011), rational choice theory assumes that "crime is not simply due to underlying motivation or predispositions; it also involves a concrete choice...that must be made if these motivations are to result in an actual criminal act."<sup>45</sup> Within rational choice theory, factors such as the area where the crime occurs, the specific victim chosen, the steps taken to avoid detection, and the decision to recidivate are just as important as an individual's

background factors.<sup>46</sup> *Situational crime prevention* is an approach that stems directly from rational choice theory. These interventions work to alter environments in a way that helps deter crime, perhaps through cameras and lighting.<sup>47</sup> A situational crime approach to prevent underage drinking would be to place alcohol in locked cabinets, reducing youth accessibility.

### ***Routine Activities Theory***

Routine activities theory focuses on the circumstances of crime rather than on the offender and hypothesizes that criminal acts can occur when there is a motivated offender, a suitable target, and the absence of a capable guardian.<sup>48</sup> While routine activities theory research tends to focus on victimization, some researchers have applied this theory to individual deviant behavior, including substance use.<sup>49</sup> Interventions that are grounded in routine activities theory seek to reduce youth motivation to drink alcohol and reduce adult motivation to provide youth with alcohol. This can be done through education, product pricing, or knowledge of the consequences of the illegal behavior. Further, interventions to increase capable guardianship for youth, whether through increased parental presence or positive parental relationships, also are based in routine activities theory. Like rational choice theory, routine activities theory supports a situational crime prevention approach.<sup>50</sup>

### ***Differential Association Theory***

Differential association theory is a multi-part theory that essentially hypothesizes that crime is learned from others by way of techniques, attitudes, motives, and rationalizations.<sup>51</sup> Further, this theory assumes individuals hold definitions favorable to both criminal and conforming behavior and crime is more likely to occur when an individual holds more definitions that are favorable to crime.<sup>52</sup> Differential association assumes underage drinking is learned from others and that youth who surround themselves with those who do not drink or who hold more prosocial definitions are less likely to drink themselves. Interventions that work to change antisocial values and peer associations are based in these theories.

### ***Social Control Theory***

Social control theory focuses on why individuals do not commit crime. This theory posits that individuals have four important bonds: attachment (emotional closeness to others, specifically parents), commitment (educational and occupational ambitions), involvement (participation in conventional activities), and belief (embracing the validity of the law and conventional norms).<sup>53</sup> Within social control theory, youth that do not want to disappoint their parents, are invested in their school success, are involved in more structured activities, and believe that following the rules is important are less likely to commit alcohol crimes. Social control theory posits programs that work to strengthen youth-parent relationships and provide youth with a positive adult role models and afterschool programs that keep youth busy can reduce and prevent underage drinking crimes.

## **Intervention Level**

Interventions to help prevent youth and alcohol crimes fall into two broad categories: environmental and individual.<sup>54</sup>

### ***Environmental-level Interventions***

Environmental-level approaches work to reduce youth and alcohol offenses by essentially making it more difficult for those crimes to occur. Environmental-level policies for youth and alcohol crimes can include:<sup>55</sup>

- Laws prohibiting alcohol consumption, possession, sales to youth, and furnishing alcohol to juveniles under the age of 21.
- Keg-registration laws requiring retailers to attach a unique marker including identifying information of a purchaser.
- Alcohol taxes and pricing.
- Enforcement.

A study from Sacks and colleagues (2014) examined multiple drinking laws and found that keg registration laws, driver's license penalties for consumption, and beer taxes had a significant impact on reduction of underage drinking.<sup>56</sup> Fell and colleagues (2008) found that laws prohibiting the possession and purchase of alcohol by youths led to an 11% decrease in alcohol-related fatal crashes among drivers younger than 21.<sup>57</sup>

### ***Individual-level Interventions***

Individual-level approaches work to increase youth capacity to resist alcohol-related crimes through change in knowledge, motivations, and attitudes.<sup>58</sup> These approaches may include school-based, family-based, and extracurricular interventions.<sup>59</sup> Project D.A.R.E. has been the most widely used school-based substance use prevention program. However, there has been no evidence to suggest the program is effective in reducing substance use. A 2004 meta-analysis of Project D.A.R.E. outcomes indicated the overall effects of the program were extremely small and nonsignificant.<sup>60</sup>

Springer and colleagues (2004) evaluated 46 substance abuse prevention programs targeted at high-risk youth to determine what makes these programs effective in reducing substance use within 30-days prior to being surveyed.<sup>61</sup> The evaluation revealed programs focusing on life skills and recreational programming, along with programs requiring higher levels of active participation, introspective participation, and connection building were effective at reducing 30-day substance use.<sup>62</sup>

## **Conclusion**

Alcohol is the most commonly misused substance among youth in the United States.<sup>63</sup> Results from a 2017 national survey suggested nearly 80% of U.S. residents had consumed alcohol by the time they were 20 years old.<sup>64</sup> However, rates of underage drinking have decreased over the years. Survey sources suggested underage drinking rates decreased over 30% between 2007 and 2018.<sup>65</sup> In Illinois, data suggests that rates of alcohol consumption (defined as consumption

within a month of being surveyed) among youths between the ages of 12 and 20 decreased by about 8% between the 2008-2009 and 2017-2018 school years.<sup>66</sup> Analyses of CHRI arrest data also indicate arrests for underage drinking-related offenses decreased by about 25% from 2005 to 2019 in Illinois, though arrests of non-Black people accounted for the majority of the decline and arrests of females actually increased.

While the data seemed to indicate an overall decline in underage alcohol consumption, it is important to recognize that underage drinking is still an important health and safety issue. Evidence suggests that consuming alcohol at an earlier age may increase an individual's risk for alcohol problems and other negative consequences.<sup>67</sup> Underage drinking also can increase risky sexual behavior, negatively impact academic achievement, increase safety risks, and alter brain development.<sup>68</sup> In fact, research shows consuming alcohol in adolescence can inhibit growth in certain areas of the brain linked to learning, emotion, and memory.<sup>69</sup>

Interventions intended to curb youth alcohol consumption are broadly categorized as working at the environment or individual level. Environment-level interventions generally refer to the enforcement of laws designed to deter alcohol consumption among youths.<sup>70</sup> Individual-level interventions focus more on school-based, family-based, and extra-curricular programming designed to promote individuals' capacity to resist or desist from alcohol consumption.<sup>71</sup> Research suggests that individual-level interventions that focus on life skills and recreational programming were more effective at reducing substance use among youths.<sup>72</sup>

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