



Report to Congress

on the Prevention and Reduction of Underage Drinking

2018



SAMHSA
Substance Abuse and Mental Health
Services Administration

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Foreword

As the first U.S. Department of Health and Human Services Assistant Secretary for Mental Health and Substance Use and Chair of the Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD), I am pleased to present the ICCPUD's 2018 Report to Congress on the Prevention and Reduction of Underage Drinking. This report is mandated by the Sober Truth on Preventing Underage Drinking Act, originally passed by Congress in 2006 and reauthorized in 2016 as part of the 21st Century Cures Act. This is the tenth annual Report examining the issue of underage drinking, and it includes recent data from federal surveys, prevention activities by federal agencies, and an evaluation of "Talk. They Hear You.", the national media campaign to prevent underage drinking.

Among Americans under age 21, alcohol is the most frequently used substance, used more often than tobacco, marijuana, or other illicit drugs. Nineteen percent of 12- to 20-year-olds report having used alcohol in the previous month (National Survey on Drug Use and Health [NSDUH]; Center for Behavioral Health Statistics and Quality [CBHSQ], 2017c).

Underage alcohol consumption is a persistent and serious public health challenge, resulting in thousands of deaths each year through motor vehicle crashes, violence, suicide, alcohol poisoning, and other causes. Underage drinking is also implicated in sexual assault and other crimes, impaired brain function, decreased academic performance, and the increased risk of developing an alcohol use disorder later in life. Binge drinking (four drinks in a row for a female or five for a male) exacerbates underage drinking's harmful consequences and increases with age: by age 20, one-third of young people report binge drinking at least once in the past month.

There has been improvement over the past several years: since 2004, past-month alcohol use by underage drinkers has declined by 33 percent (CBHSQ, 2017c). Past-month binge drinking decreased by 30 percent between 2004 and 2014, according to the most recent available data (CBHSQ, 2015). However, persistent patterns of underage alcohol use, particularly among older underage drinkers, have led the ICCPUD agencies to begin development of a new comprehensive plan that brings a renewed focus to addressing the problem while continuing to rely on evidence-based practices for preventing or reducing underage alcohol use.

Research indicates that these strategies are most effective when implemented as part of a multifaceted approach that includes parents and families, law enforcement, healthcare providers, community organizations, schools and universities, local and state governments, and the federal government. With community support, law enforcement can more effectively prevent youth from accessing alcohol. Parents, schools, and universities can provide clear, consistent education about the consequences of underage drinking. Healthcare providers can screen patients under age 21 for alcohol use and provide brief intervention and referral to treatment as appropriate.

The new comprehensive plan will draw upon information contained in this report to call upon all levels of government and our universities, schools, communities, and families to implement strategies that have proven to be effective. SAMHSA and the ICCPUD agencies are committed to working together to provide national leadership in these critical efforts.

Elinore F. McCance-Katz, M.D., Ph.D.

Assistant Secretary for Mental Health and Substance Use
U.S. Department of Health and Human Services

EXECUTIVE SUMMARY

Introduction

Alcohol causes 88,000 deaths in America each year, making alcohol the third leading preventable cause of death in the U.S. (Stahre, Roeber, Kanny, Brewer, & Zhang, 2014).¹ Rates of binge drinking and alcohol use disorders among adults have increased significantly over the past 20 years (Grant, Chou, Saha, Pickering, Kerridge, Ruan, et al., 2017). The economic cost of this excessive alcohol use is estimated at \$249 billion each year (Sacks, Gonzales, Bouchery, Tomedi, & Brewer, 2015).

Against this backdrop, alcohol use by people under age 21 has declined in the past two decades, but continues to contribute to a wide range of costly health and social problems. These include motor vehicle crashes (the greatest single mortality risk for underage drinkers), suicide, interpersonal violence (e.g., homicides, assaults, rapes), unintentional injuries (e.g., burns, falls, drownings), brain impairment, alcohol dependence, risky sexual activity, academic problems, and alcohol and drug poisoning. Annually, alcohol is a factor in the deaths of approximately 4,300 youths in the United States, shortening their lives by an average of 60 years (Stahre, Roeber, Kanny, Brewer, & Zhang, 2014).

In 2006, Congress enacted the Sober Truth on Preventing Underage Drinking Act, popularly known as the “STOP Act.” The STOP Act, which was reauthorized in 2016 as part of the 21st Century Cures Act, established the Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD), and required two annual Reports to Congress, which are included in this volume. The first Report includes the most current data on underage alcohol use in the United States and information on federal prevention efforts (Chapters 1 through 3). The second Report details the production, broadcasting, and evaluation of “Talk. They Hear You.”, the national adult-oriented media public service campaign required by the STOP Act (Chapter 4).

The STOP Act also requires annual reports on state prevention and enforcement activities. Accordingly, the ICCPUD has prepared individual reports for each of the 50 states and the District of Columbia, including state-specific population and underage alcohol use data. The State Reports, available on stopalcoholabuse.gov, also list whether the states have adopted 26 evidence-based policies and practices to reduce youth access to alcohol, and include data from states and the District of Columbia on their underage drinking enforcement and prevention activities, including expenditures on enforcement and prevention programs. These data are collected through a survey administered to state governments annually since 2011. Accompanying the State Reports is the “State Performance and Best Practices for the Prevention and Reduction of Underage Drinking” (State Performance and Best Practices), which summarizes and compares the states’ performance in adopting the 26 evidence-based policies and in enforcing them.

Characteristics of Underage Drinking in America

Alcohol Is the Most Widely Used Substance Among American Youth

Alcohol continues to be the most widely used substance among America’s youth, and a higher proportion use alcohol than use tobacco, marijuana, or other drugs. For example, according to

¹Complete references are provided in Appendix D.

the 2016 Monitoring the Future (MTF) study, 19.9 percent of 10th graders reported alcohol use in the past 30 days, 14 percent reported marijuana use in the past 30 days, and 4.9 percent reported cigarette use in the same period (Miech et al., 2017).²

Youth Start Drinking at an Early Age

As discussed below, early initiation to alcohol use increases the risk for a variety of developmental problems during adolescence and for problems later in life. Early initiation is often an important indicator of future substance use and alcohol dependence (Buchmann et al., 2009; Grant & Dawson, 1998; Hawkins et al., 1997; Liang & Chikritzhs, 2015; Robins & Przybeck, 1985). Accordingly, delaying the onset of alcohol initiation may significantly improve later health. The peak years of initiation of alcohol use are in grades 7 to 11, and data from the 2015 Youth Risk Behavior Survey (YRBS)³ indicate that almost one-fifth (17.2 percent) of underage drinkers currently in high school reported use of alcohol before they were 13 years old (Kann et al., 2016). Approximately 2,078 youths ages 12 to 14 initiated alcohol use each day in 2016, according to data from the National Survey on Drug Use and Health (NSDUH; Center for Behavioral Health Statistics and Quality [CBHSQ], 2017c).

Why Is Underage Drinking a Problem?

- Alcohol is used more widely than tobacco, marijuana, and other drugs by our nation's young people (Miech et al., 2017).
- Motor vehicle crashes are the greatest mortality risk for underage drinkers. In 2016, of the 1,908 drivers ages 15 to 20 who were killed in motor vehicle traffic crashes, 451 (24 percent) had a blood alcohol concentration (BAC) of 0.01 or higher (National Center for Statistics and Analysis [NCSA], 2017).
- Alcohol use contributes to brain impairment, sexual assault, and suicide, and is associated with academic problems (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004; Brown & Tapert, 2004; White & Hingson, 2013).
- Early initiation of drinking is associated with development of an alcohol use disorder later in life (Grant & Dawson, 1997; Hingson & Zha, 2009).

Binge Drinking

Approximately 4.5 million (12.1 percent) of 12- to 20-year-olds reported past-month binge alcohol use⁴ in 2016 (CBHSQ, 2017a). High BACs and impairment levels associated with binge drinking place binge drinkers and those around them at a substantially elevated risk for negative consequences, such as motor vehicle crashes, injuries, unsafe sexual practices, and sexual victimization. Given these consequences, reducing binge drinking has become a primary public health priority (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014).

Approximately 2.8 percent of 12- to 20-year-olds (1.1 million) could be also classified in an even higher-risk drinking category: heavy drinkers (consuming five or more drinks on the same occasion on each of 5 or more days in the past 30 days). By definition, all heavy alcohol users are also binge alcohol users (CBHSQ, 2017a). Although youths, compared with adults, generally consume alcohol less frequently and consume less alcohol overall, they are much more likely to binge drink. A significant proportion of underage drinkers consume substantially more than the five-drink binge criterion. For example, averaged 2015 and 2016 data from the NSDUH

²For comparability with data from the 2016 National Survey on Drug Use and Health (NSDUH), the latest MTF data included in this report are also from 2016. The 2017 MTF data, available in December 2017, will be included in the next report.

³YRBS data are collected every 2 years; the latest available data are for 2015.

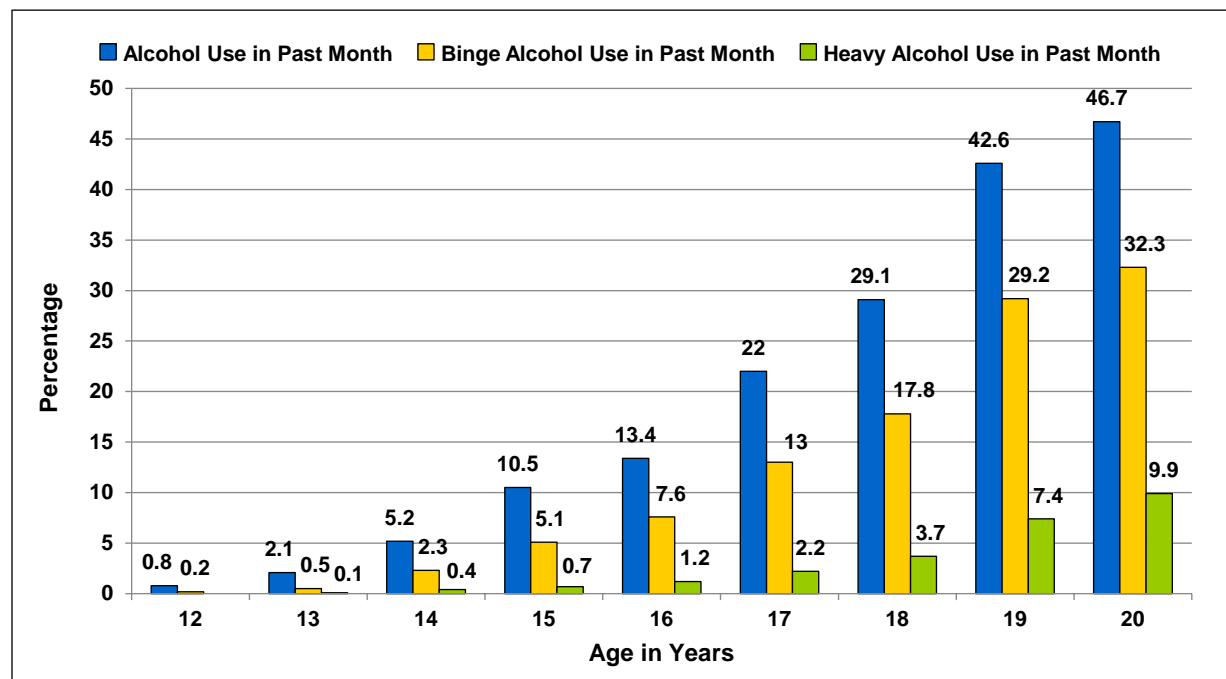
⁴Binge drinking is generally defined as five or more drinks on a single occasion for males, and four or more drinks on a single occasion for females.

show that 8.5 percent of underage drinkers had nine or more drinks during their last drinking occasion (CBHSQ, 2017c).

A troubling subset of binge drinking is very high-intensity binge drinking, or consumption of 10 to 15 or more drinks on a single occasion. According to MTF data for 2016, 4.4 percent of 12th graders reported consuming 10 or more drinks in a row, and 2.3 percent reported consuming 15 or more drinks in a row within the previous 2 weeks. Although these percentages continue to shift downward, a substantial number of underage drinkers still meet the definition of high-intensity binge drinkers (Miech et al., 2017).

Binge rates increase rapidly with age (Exhibit E.1). It is important to note that, because of their smaller size, very young adolescents (ages 12 to 15) may reach high risk levels of BACs with fewer drinks (three to four drinks) than older adolescents (age 18 or older; Donovan, 2009). This suggests that binge and heavy drinking may be even riskier for younger adolescents than for older youth and may occur with greater frequency than is reflected in survey data.

Exhibit E.1: Current, Binge, and Heavy Alcohol Use Among People Ages 12–20 by Age: NSDUH, 2016 (CBHSQ, 2017a)



Prevalence of Alcohol Abuse and Dependence Among Youth Is High

The prevalence of alcohol abuse and dependence among underage drinkers, based on the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR (American Psychiatric Association [APA], 2000) criteria⁵ is quite high. According to combined 2015–2016 NSDUH data, the prevalence of alcohol abuse or dependence is about 1 in 12 (8.5 percent) among 18- to 20-year-olds. In comparison, the prevalence for 21- to 24-year-

⁵The more recent DSM-V (APA, 2013) integrates the two DSM-IV disorders, alcohol abuse and alcohol dependence, into a single disorder called alcohol use disorder (AUD). DSM-V does not specifically address adolescents. NSDUH assesses substance use disorders based on DSM-IV criteria.

olds, who have the highest prevalence of alcohol use disorders, is 12.4 percent. In addition, 0.6 percent of 12- to 14-year-olds and 3.8 percent of 15- to 17-year-olds are estimated to have met criteria for alcohol use disorder (CBHSQ, 2017c).

College Drinking

Drinking and bingeing rates are higher for older underage youth, particularly 18- to 20-year-olds (see Exhibit E.1), and rates are higher for college students⁶ than for same-age peers not attending college. Of college students, 63.2 percent drink, compared with 59.2 percent of those of the same age and not in college (Schulenberg et al., 2017). The problems associated with college drinking, in addition to traffic crashes and injury-related deaths, include sexual assault, other violent crime on college campuses, and reduced academic performance.

Underage Access to Alcohol

Selling alcohol to youth under age 21 is illegal in all 50 states and the District of Columbia. Giving alcohol to youth under age 21 is also illegal, although some states make it legal to provide alcohol to youth under special circumstances, such as at religious ceremonies, in private residences, or in the presence of a parent or guardian. Despite broad restrictions, underage youth find it relatively easy to acquire alcohol, often from adults. Younger underage drinkers (ages 12 to 14) are more likely to get alcohol from their own house than from another source, according to NSDUH data. Older drinkers are more likely to buy alcohol themselves, give money to an adult to buy it for them, or receive alcohol from an unrelated adult (CBHSQ, 2017c).

Prevention Efforts

Since the mid-1980s, the nation has proactively and systematically implemented underage drinking prevention efforts at the federal, state, and local levels. Key evidence-based prevention research strategies are described and called for in: *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs and Health* (Department of Health and Human Services [HHS], 2016); the Surgeon General's *Call to Action to Prevent and Reduce Underage Drinking* (HHS, 2007); the Community Preventive Services Task Force *Guide to Community Preventive Services: Preventing Excessive Alcohol Consumption* (Community Preventive Services Task Force, 2016); the National Research Council (NRC) and Institute of Medicine (IOM) report *Reducing Underage Drinking: A Collective Responsibility* (NRC & IOM, 2004); the National Institute on Alcohol Abuse and Alcoholism (NIAAA) *Call to Action: Changing the Culture of Drinking at U.S. Colleges* (NIAAA, 2002), and CollegeAIM: College Alcohol Intervention Matrix (NIAAA, n.d.). Several of these important initiatives to encourage use of evidence-based strategies are discussed in Chapter 1 of this report.

Framework for Success in Reducing Underage Drinking

Epidemiological data demonstrates that the rate of underage drinking has decreased over the past decades in several segments of the 12- to 21-year-old population. Factors that have contributed to this success are varied and complex, with one clear factor being the increased attention to underage drinking at all levels of society. Federal initiatives have raised underage drinking to a

⁶College students are defined as MTF panel participants who are full-time students enrolled in a 2- or 4-year college 1 to 4 years after high school in March during the year of the MTF survey (Johnston et al., 2016). Same-age peers are defined as individuals 1 to 4 years post-high school graduation who are not enrolled in either a 2- or 4-year college at the time of survey completion.

prominent place on the national public health agenda, created a policy climate in which significant legislation has been passed by states and localities, raised awareness of the importance of proactive and systematic law enforcement, promoted both routine screening of youth in the healthcare system and brief intervention and referral to treatment where appropriate, and stimulated coordinated citizen action. Private and public efforts support the development of drug-free communities. These changes are mutually reinforcing and have provided a framework for a sustained national commitment to reducing underage drinking.

The federal agencies that participate in the ICCPUD (see Appendix A and sidebar in this section) contribute leadership and vision to the national effort specific to their missions and mandates. For example, NIAAA supports research on prevalence and patterns of underage alcohol use, underage drinking prevention, and treatment for youth who misuse alcohol or who have alcohol use disorder. The National Institute on Drug Abuse (NIDA) supports research on patterns and usage of drug use and alcohol use. The Centers for Disease Control and Prevention (CDC) provide research on the effectiveness of prevention strategies. SAMHSA works to reduce underage demand for alcohol, and the National Highway Traffic Safety Administration (NHTSA) provides data on underage alcohol use and traffic crashes. SAMHSA, CDC, and the National Institutes of Health (NIH) all conduct surveys (either directly or through grants) that gather the most current data on underage alcohol use.

Every ICCPUD agency engages in programs and activities that are aimed, either directly or indirectly, at underage drinking prevention or reduction. Together, these programs and activities constitute a coordinated federal approach that has helped to support year-by-year reductions in underage alcohol use rates as reported in national surveys.

Effective Solutions

Risk and protective factors that affect underage drinking can be influenced by programs and policies at multiple levels, including federal, state, community, family, school, and individual. As noted in the 2016 Surgeon General's report, *Facing Addiction in America* (HHS, 2016):

Targeted programs implemented at the family, school, and individual levels can complement the broader population-level policy interventions and assist in reducing specific risk factors and promoting protective factors.

A comprehensive underage drinking prevention initiative includes a balance of evidence-based prevention programs and strategies, with multi-targeted approaches.

The Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) includes the following officials, as specified in the STOP Act:

- Secretary of Health and Human Services
- Secretary of Education
- Attorney General
- Secretary of Transportation
- Secretary of the Treasury
- Secretary of Defense
- Assistant Secretary for Mental Health and Substance Use
- Assistant Secretary for Children and Families
- Surgeon General
- Director of the Centers for Disease Control and Prevention
- Director of the National Institute on Alcohol Abuse and Alcoholism
- Director of the National Institute on Drug Abuse
- Director of the Office of National Drug Control Policy
- Administrator of the National Highway Traffic Safety Administration
- Administrator of the Office of Juvenile Justice and Delinquency Prevention
- Chairman of the Federal Trade Commission

Evidence-based programs focusing on individuals that are highlighted in *Facing Addiction in America* include:

- *Good Behavior Game (GBG)*: A school-based intervention that provides teachers with a method of classroom behavior management and aims to reduce early aggressive or disruptive behavior problems. Long-term research on GBG, supported by NIDA, shows a significant reduction in drug and alcohol misuse and in substance use disorders.
- *LifeSkills Training (LST)*: A curriculum for middle-school students that has delayed early use of alcohol and reduced use for up to 5 years after the training ended. NIDA funds continued research on LST.
- *Strengthening Families Program: For Parents and Youth 10–14 (SFP)*: A seven-session skills-building program developed with NIDA funding that enhances parenting skills and adolescent substance refusal skills. Multiple studies have showed reduction in youth alcohol use through age 21.
- *Screening, Brief Intervention, and Referral to Treatment (SBIRT)*: An approach to community-based interventions intended to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs. Use of these tools can reduce risky behavior before it becomes more problematic in adolescents and youth who are at risk of or show signs of alcohol use. NIAAA has developed a screening guide titled *Alcohol Screening and Brief Intervention for Youth: A Practitioner’s Guide* (NIAAA, n.d.).

These and many other programs are supported by federal agencies and are described in more detail in Chapter 3.

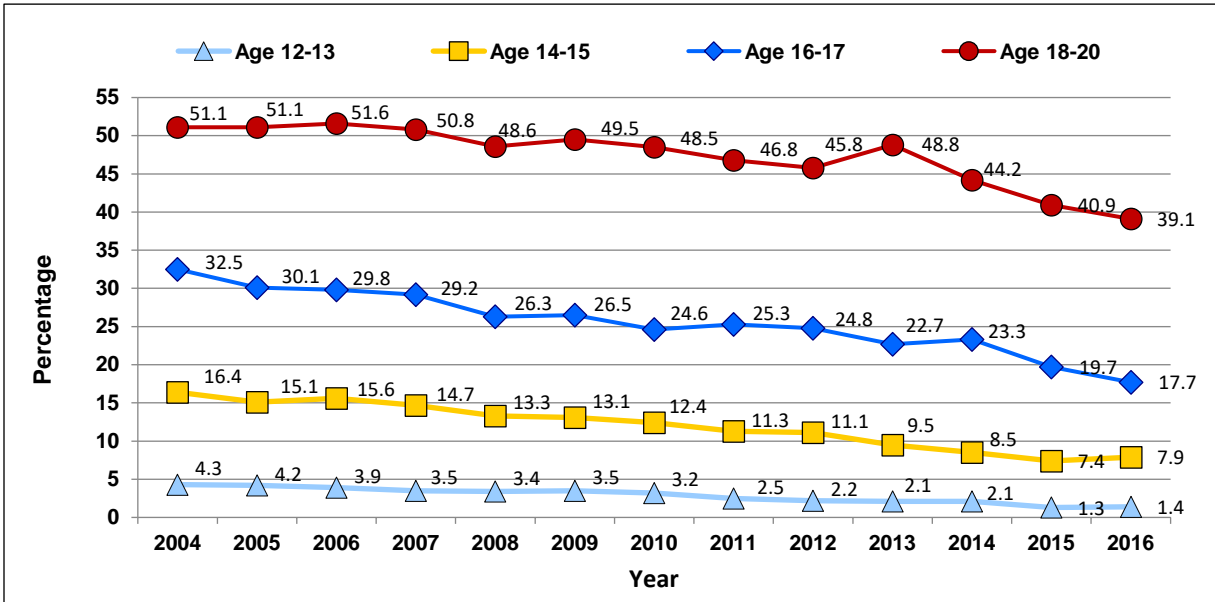
National Media Campaign

The STOP Act mandated the creation of a national media campaign to prevent underage drinking, and the “**Talk. They Hear You.**” national media campaign was developed by SAMHSA’s Center for Substance Abuse Prevention (CSAP) in response. This campaign is a significant environmental initiative and aims to prevent underage drinking among youth under age 21 by providing their parents and caregivers with information to address alcohol use early. The campaign, which consists of television and print Public Service Announcements (PSAs), a website, and a mobile app, has received an estimated 6.82 billion media impressions (number of times people have seen the ads or messages). The annual Report to Congress on the campaign is found in Chapter 4.

Extent of Progress in Reducing Underage Drinking

National epidemiologic data demonstrate that national and state prevention efforts are having positive effects. Local- and community-level activity, which is not generally measured, is also contributing. The overall prevalence of drinking for 12- to 20-year-olds has declined by 32.9 percent since 2004. Young adult (ages 18 to 20) past-month use remains at a high level, although (as illustrated in Exhibit E.2), some decline is evident since 2014 (CBHSQ, 2017a). In addition, alcohol-related traffic deaths among drivers ages 15 to 20 have declined 82 percent since 1982 (NCSA, 2017).

**Exhibit E.2: Trends in Past-Month Alcohol Use for 12- to 20-Year-Olds:
NSDUH, 2004–2016 (CBHSQ, 2017a)**



Continued Effort Is Needed

Sustained efforts on prevention programs, policies, and enforcement are needed to (1) maintain the current successes, and (2) continue to lower the rates of underage drinking along with the many problems related to alcohol use.

The shifting landscape of issues and trends related to underage drinking—such as the development of new products (e.g., powdered alcohol products); the sale of high-alcohol-content grain beverages; changes in marijuana policies and laws; and the risk to youth of adverse effects of combined drug and alcohol use—must be continuously identified, monitored, and addressed. Ongoing engagement of policymakers, citizen coalitions, health professionals, educators, law enforcement, and others is essential to the implementation of effective prevention strategies.

CHAPTER 1

Underage Drinking: Public Health Consequences and Prevention Efforts

Overview

Approximately 88,000 Americans die from alcohol-attributed causes each year, making alcohol the third leading preventable cause of death in the U.S. (Stahre, Roeber, Kanny, Brewer, & Zhang, 2014). The economic burden of excessive alcohol use in the U.S. is estimated at \$249 billion annually, and three-quarters of those costs are from binge drinking (defined as four or more drinks on a single occasion for women and five or more drinks for men; Sacks, Gonzales, Bouchery, Tomedi, & Brewer, 2015). Over the past two decades, alcohol use, binge and high-intensity binge drinking, and alcohol use disorders have all increased, especially among women, older adults, racial/ethnic minorities, and the socioeconomically disadvantaged (Grant, Chou, Saha, Pickering, Kerridge, Ruan, et al., 2017). Alcohol also plays a role in many drug overdoses; between 2002-2003 and 2014-2015, alcohol involvement in opioid deaths increased by 8.5 percent, second only to benzodiazepines and heroin-involved deaths (Kandel, et al., 2017).

Despite these concerning trends in overall alcohol use, significant progress in reducing underage drinking has been achieved. For example, past-month underage alcohol use has dropped by one-third since 2004 (CBHSQ, 2017a). Nevertheless, underage drinking rates remain unacceptably high. Alcohol is still the most widely consumed substance among America's youth—used more often than tobacco or marijuana. Alcohol use often begins at a young age and underage youths who drink tend to consume more on a single drinking occasion than adults do and without regard for consequences.

The benefits of reducing underage drinking are substantial, including saving lives and dollars and promoting the health of young people. In addition, delaying the age at which young people begin drinking will reduce their chances of developing an alcohol use disorder and of experiencing other negative consequences.

Increased attention to underage drinking may help prevent underage drinking rates from following the patterns of increased excessive alcohol use currently seen among adults. Research shows a correlation between youth drinking behaviors and those of adult relatives and other adults in the community (Nelson, Naimi, Brewer, & Nelson, 2009; Xuan et al., 2013).

Similarly, it is important to monitor the effects of marijuana legalization on underage alcohol use. Currently, eight states and the District of Columbia have legalized adult recreational use since 2012 (Alcohol Policy Information System, n.d.). If this trend continues, it may lead to greater youth access to marijuana. As with underage alcohol use, marijuana use by youths is associated with the use of other substances, including alcohol, tobacco, and other drugs (Dupont, Han, Shea & Madras, 2018).

The substantial cost of underage drinking can be reduced by increased implementation of effective prevention policies and programs around the country. The federal government, together with state and local governments, has sought to develop effective approaches to reduce underage drinking and its associated costs and consequences.

This volume includes two reports that are required by the Sober Truth on Preventing (STOP) Underage Drinking Act (Pub. L. 109-422), which was enacted by Congress in 2006 and reauthorized in December 2016 as part of the 21st Century Cures Act (Pub. L. 114-255). First,

the STOP Act requires the Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) to submit an annual report to Congress (Chapters 1 through 3) that includes:

- A description of all federal agency programs and policies designed to prevent and reduce underage drinking
- The extent of progress in preventing and reducing underage drinking nationally
- Information related to patterns and consequences of underage drinking, as well as evidence-based best practices to prevent and reduce underage drinking and provide treatment services
- Measures of the exposure of underage populations to messages regarding alcohol in advertising and the entertainment media, as reported by the Federal Trade Commission (FTC)
- Surveillance data, including information about the initiation and prevalence of underage drinking, consumption patterns, and the means of underage access
- Other information about underage drinking that the Secretary of Health and Human Services (HHS) determines appropriate

Second, the STOP Act requires ICCPUD to submit an annual report to Congress on the national media campaign mandated by the STOP Act (Chapter 4), including the production, broadcasting, and evaluation of the effectiveness and reach of the campaign. (The STOP Act also requires annual state reports on underage drinking prevention and enforcement efforts, which are published separately. See stopalcoholabuse.gov.)

This chapter describes the harmful public health consequences of underage drinking and provides background on the ongoing national effort to prevent and reduce underage drinking.

Adverse Consequences of Underage Drinking

Underage drinking affects the health and well-being of not only the underage people who drink alcohol, but also their families, their communities, and society overall.

Individual health and social impacts of underage drinking include, foremost, the risk of death due to motor vehicle crashes, other unintentional injuries (such as fires/burns, falls, and drowning), alcohol and drug poisoning, and suicide (e.g., Centers for Disease Control & Prevention [CDC], 2016).

Other risks include brain impairment, interpersonal violence, engagement in risky sexual activity, and involvement with the legal system. The family of the adolescent who drinks alcohol may experience a disruption of normal relationships and a family crisis. Social costs include risks to other drivers and passengers, risk of violence, and enormous economic costs (National Research Council [NRC] & Institute of Medicine [IOM], 2004).

In 2010, almost \$24.3 billion (about 10 percent) of the total \$249 billion economic cost of excessive alcohol consumption was related to underage drinking. Approximately 56 percent of underage drinking costs can be attributed to lost productivity; most of that is due to premature mortality from alcohol-attributable conditions involving underage youth (Sacks, Gonzales, Bouchery, Tomedi, & Brewer, 2015). Underage drinking not only imposes societal costs in its own right, but also, given the increased risk that those who drink at young ages will develop alcohol use disorders later in life, contributes indirectly to the costs of excessive adult alcohol use.

Individual Consequences

Mortality and Injury from Traffic Crashes

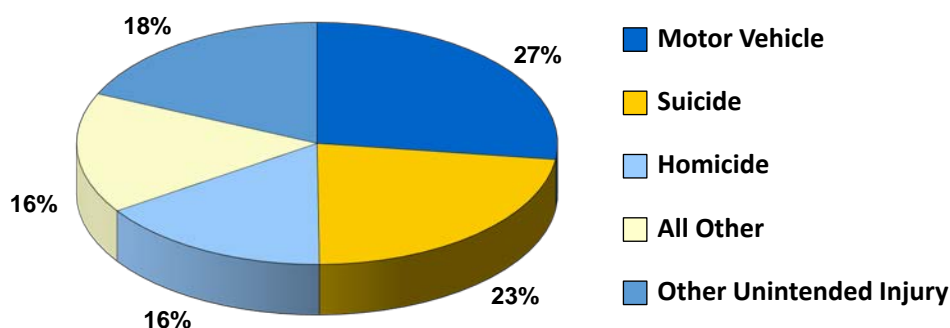
The greatest mortality risk for underage drinkers continues to be from motor vehicle crashes. In 2016, of the 1,908 drivers ages 15 to 20 who were killed in motor vehicle traffic crashes:

- 451 (24 percent) had a blood alcohol concentration (BAC) of 0.01 or higher.
- 83 (4 percent) had a BAC of 0.01 to 0.07 g/dL.
- 368 (19 percent) had a BAC of 0.08 g/dL or higher (NCSA, 2017).⁷

Other Leading Causes of Death in Youth

In addition to contributing to motor vehicle crashes, underage drinking contributes to all major causes of fatal and nonfatal injuries experienced by young people. Suicide, other unintentional injuries, and homicide, along with motor vehicle traffic crashes, are the four leading causes of death among youths ages 12 to 20 (Exhibit 1.1; CDC, 2016).

Exhibit 1.1: Leading Causes of Death for Youth Ages 12–20: 2016 (CDC, 2016)



In 2016 (the latest date for which these data are available), 2,505 youths ages 12 to 20 died from unintentional injuries caused by events other than motor vehicle crashes, such as poisoning, drowning, falls, and fires/burns (CDC, 2016). Recent estimates of the extent to which unintentional injuries in youth were alcohol-related is not available. However, a 1999 meta-analysis of the involvement of alcohol in unintentional injuries for all ages reported an aggregate percentage of 31.0 percent, although estimates varied widely across studies and injury type (Smith, Branas, & Miller, 1999).

Smith and colleagues (1999) also estimated that, for the population as a whole, alcohol (the presence of a BAC of 0.10 g/dL or greater) was a major contributing factor in nearly one-third (31.5 percent) of homicides and almost a quarter (22.7 percent) of suicides. Data from 17 states show that among people who died by suicide who were ages 10 to 19 and were tested, 12 percent had BACs >0.08 g/dL (Crosby, Espitia-Hardeman, Ortega, & Clavel-Arcas, 2009). Another study focusing on youth suicide estimated that 9.1 percent of hospital-admitted suicide acts by

⁷Special data analysis provided by the National Highway Traffic Safety Administration (NHTSA) for this report (A. Toth, personal communication, November 2017).

those under age 21 involved alcohol, and of those cases, 72 percent were attributable to or caused by alcohol use (Miller, Levy, Spicer, & Taylor, 2006).

Brain Impairment

Adverse effects on normal brain development are a potential long-term risk of underage alcohol consumption. During adolescence, dramatic changes to the brain's structure, neuron connectivity (“wiring”), and physiology occur (Restak & Grubin, 2001). These changes affect everything from emerging sexuality to emotionality and judgment. However, not all parts of the brain mature at the same time. Differences in maturational timing across the brain can result in impulsive decisions or actions, disregard for consequences, and emotional reactions that can lead to alcohol use or otherwise put teenagers at serious risk.

Neurobiological research suggests that adolescence may be a period of unique vulnerability to the effects of alcohol. For example, research on adolescents with alcohol use disorders shows that early and heavy (defined in the study as five or more drinks in a row) alcohol use may have negative effects on the actual physical development of the brain structure (Brown & Tapert, 2004) as well as on brain functioning. Negative effects indicated by neuropsychological studies include decreased ability in planning, executive functioning, memory, spatial operations, and attention, all of which play important roles in academic performance and future levels of functioning (Brown, Tapert, Granholm, & Delis, 2000; Giancola & Mezzich, 2000; Tapert & Brown, 1999; Tapert et al., 2001; Winward, Hanson, Bekman, Tapert, & Brown, 2014).

Adverse consequences include death, injury, and brain impairment.

As Brown and colleagues (2000) noted, these deficits may put alcohol-dependent adolescents at risk for falling behind in school, putting them at an even greater disadvantage relative to nonusers. Some of these cross-sectional findings are supported by longitudinal analyses (Squeglia, Jacobus, & Tapert, 2009). A 10-year prospective study (Hanson, Medina, Padula, Tapert, & Brown, 2011) found that having a history of heavy (defined as five or more drinks in a row) alcohol or other substance use during adolescence appears to be more important in determining cognitive deficits than whether individuals continued to have substance-related problems into their mid-twenties.

The Adolescent Brain Cognitive Development (ABCD) study, (Volkow et al., 2017), launched in 2015, is expected to provide information on factors that contribute to adolescent alcohol and other substance use and their long-term effects on brain development and associated life outcomes. The Collaborative Research on Addiction (CRAN), an initiative of the National Institutes of Health (NIH), is leading the ABCD study in partnership with other NIH Institutes, including the National Institute on Drug Abuse (NIDA), the National Institute on Alcohol Abuse and Alcoholism (NIAAA), and the National Cancer Institute (NCI).

The ABCD study is the “largest long-term study of brain development and child health in the United States,” according to the study website (<http://abcdstudy.org>). The study, conducted at 19 research institutions across the United States, will enroll about 10,000 children ages 9 and 10 and follow them for 10 years, into early adulthood. Researchers will use noninvasive neuroimaging and cognitive, academic, social, emotional, and biological assessments to determine how

childhood experiences interact with children's changing biology to affect brain development and other outcomes.

Risky Sexual Activity

Underage drinking plays a significant role in risky sexual behavior, including unintended and unprotected sexual activity. Such behavior increases the risk for unplanned pregnancy and contracting sexually transmitted diseases, including infection with HIV, the virus that causes AIDS (Cooper & Orcutt, 1997). Additional risks associated with alcohol consumption during pregnancy include fetal alcohol spectrum disorders, including fetal alcohol syndrome, which remains a leading cause of intellectual disabilities (Jones, Smith, Ulleland, & Streissguth, 1973; Stratton, Howe, & Battaglia, 1996; Warren & Bast, 1988).

Impaired Academic Performance

In general, cross-sectional studies have found that students who do poorly in school drink more than students whose school performance is better (Bryant, Schulenberg, O'Malley, Bachman, & Johnston, 2003). For example, students who report binge drinking are three times more likely to report earning mostly Ds and Fs on their report cards than non-binge drinkers (Miller, Naimi, Brewer, & Jones, 2007).

However, evidence from longitudinal studies is less clear cut, and in some cases, data suggest that academic failure leads to increased drinking rather than the reverse. Using data from the Youth Development Study (Mortimer, 2003), Owens, Shippee, and Hensel (2008) tracked a panel of youth from their freshman to senior years in high school. The authors failed to find a significant link across the high school years between increased drinking and diminishing academic performance.

A one-year longitudinal analysis of middle school and high school students using the National Longitudinal Study of Adolescent Health found that, independent of consumption levels, students who drank experienced modest declines (one-tenth of a letter grade) in academic achievement (Crosnoe, Muller, & Frank, 2004). Using a similar design, Crosnoe (2006) found that academic failure was a greater risk factor for later adolescent drinking than adolescent drinking was for later academic failure. Academic failure appeared to lead to increased drinking through weakened bonds that traditionally control problem behavior, especially bonding to teachers (Crosnoe, 2006).

Renna (2008) tracked educational attainment and alcohol use at ages 19 and 25 among two cohorts of 18-years-olds in 1982 and 1983, using data from the National Longitudinal Survey of Youth. Binge drinking in the senior year of high school reduced the probability of receiving a high school diploma and increased the probability of graduating later in life with a general education development diploma (and hence realizing lowered earning potential). Also of interest, the study found that increases in the minimum legal drinking age (MLDA) increased the probability of people graduating by age 19 by 5.3 percentage points.

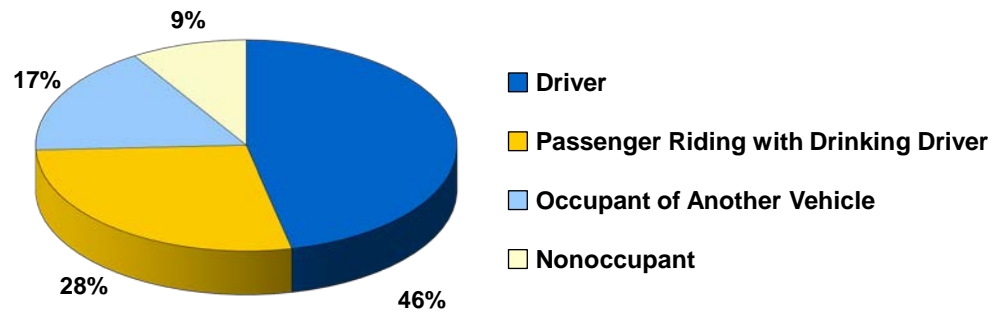
College-age drinking also has educational impacts. About 25 percent of college students report academic consequences as a result of their drinking, including missing class, falling behind, doing poorly on exams or papers, and receiving lower grades overall (White & Hingson, 2013).

Social Costs

Mortality and Injury

Individuals other than the young person who drinks alcohol experience the consequences of underage alcohol use through destruction of property, unintentional injury, violence, and even death. In 2016, 967 people were killed in motor vehicle traffic crashes involving a 15- to 20-year-old driver with a BAC of .01 or higher. The distribution of fatalities by person type in 2016 is shown in Exhibit 1.2.

Exhibit 1.2: Distribution of Fatalities in Motor Vehicle Traffic Crashes Involving a 15- to 20-Year-Old Driver with a BAC of 0.01 or Higher by Person Type in 2016
(NCSA, 2017)



As demonstrated in Exhibit 1.2, 54 percent of all deaths in traffic crashes involving a 15- to 20-year-old driver with a BAC of 0.01 or higher were people other than the driver (e.g., passengers, occupants of other vehicles; NCSA, 2016).

Police and child protective services records suggest that individuals under age 21 commit 30 percent of murders, 31 percent of rapes, 46 percent of robberies, and 27 percent of other assaults (Miller et al., 2006). As the authors note, relying on victim reports rather than agency records would yield higher estimates. The degree to which alcohol is a factor in violent crimes committed by persons under 21 is unknown. Review articles by Abbey and Nolen-Hoeksema cited a number of studies suggesting that underage drinking by both victim and assailant increases the risk of physical and sexual assault (Abbey, 2011; Nolen-Hoeksema, 2004).

Social Costs on College Campuses

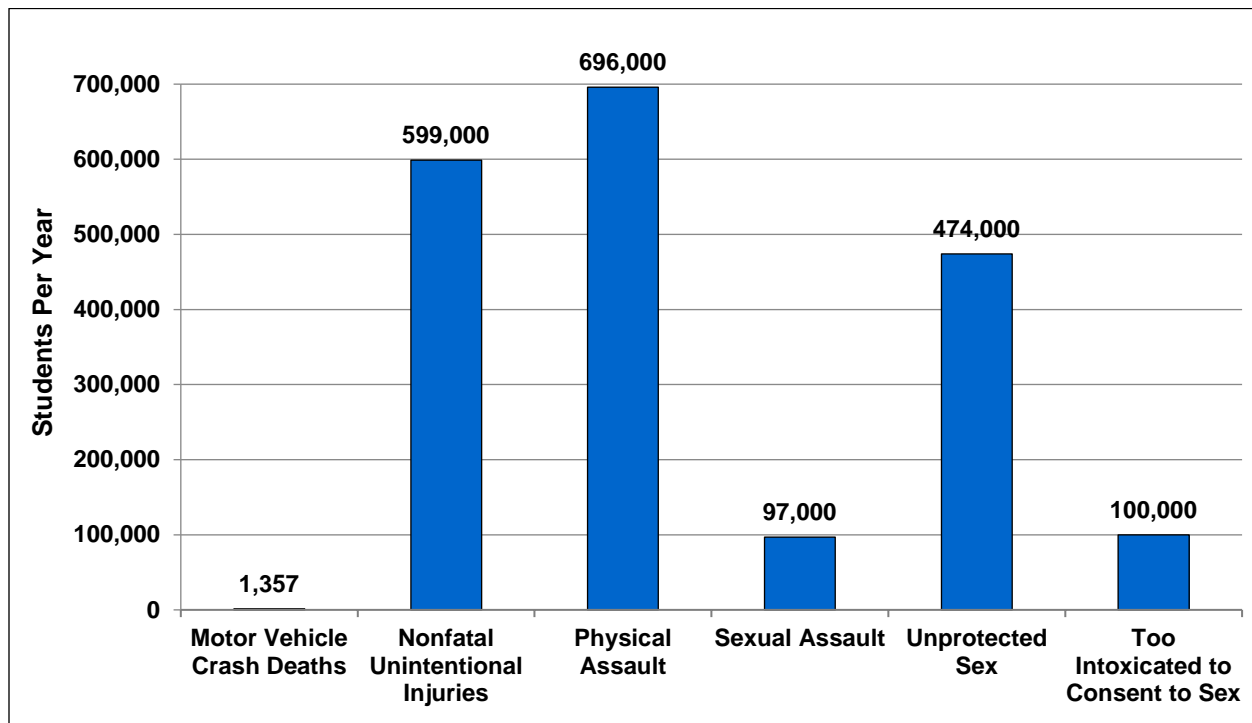
The problems associated with college student drinking include sexual assault (including date rape) and other violent crime on college campuses (White & Hingson, 2013). A study of roughly 5,500 college women on two campuses revealed that nearly 20 percent experienced some form of sexual assault while at college (Krebs, Lindquist, Warner, Fisher, & Martin, 2009). One estimate based on a national survey of college students is that 97,000 students may be victims of alcohol-related sexual assault in a given year (Hingson, Heeren, Winter, & Wechsler, 2005). However, the incidence of college sexual assaults is difficult to measure and different studies report different rates (DeMatteo & Galloway, 2015).

A review by Abbey (2011) of three relevant studies concluded that approximately half of all reported and unreported sexual assaults involve alcohol consumption by the perpetrator, victim,

or both (Abbey, Zawacki, Buck, Clinton-Sherrod, & McAuslan, 2004; Seto & Barbaree, 1995; Testa, 2002). Abbey and colleagues further reported that if alcohol was involved, usually both the victim and the perpetrator had consumed alcohol. Estimates of perpetrators’ intoxication during the incident ranged from 30 to 75 percent.

Many other adverse social consequences are linked with college student alcohol consumption. Hingson, Zha, & Weitzman (2009) estimated that annually, more than 696,000 college students were assaulted or hit by another student who had been drinking. Another 599,000 were unintentionally injured while under the influence of alcohol. In addition, Hingson and colleagues (2009) estimated that roughly 474,000 students ages 18 to 24 have had unprotected sex while under the influence of alcohol. Furthermore, each year more than 100,000 students ages 18 to 24 report having had sexual intercourse when so intoxicated they were unable to consent (Hingson, 2002; Hingson et al., 2005; Exhibit 1.3). About 11 percent of college students report having damaged property while under the influence of alcohol (Hingson et al., 2005).

Exhibit 1.3: Prevalence of Alcohol-Related Adverse Consequences Among College Students Ages 18–24 (Hingson et al., 2005; 2009)



Increased Risk of Developing Alcohol-Related Problems Later in Life

Early-onset alcohol use—alone and in combination with increased drinking in adolescence—has been noted as a risk factor for developing increased alcohol involvement in later life (Agrawal et al., 2009; Grant et al., 2006; Dawson, Goldstein, Chou, Ruan, & Grant, 2008; Hingson, Heeren, & Winter, 2006; Hingson & Zha, 2009; Pitkänen, Lyra, & Pulkkinen, 2005; York, Welte, Hirsch, Hoffman, & Barnes, 2004). Grant and Dawson (1997) found that more than 40 percent

of people who initiated drinking before age 13 met DSM-IV diagnostic criteria for alcohol dependence at some time in their lives.⁸

The onset of alcohol consumption in childhood or early adolescence is also associated with later use of drugs, drug dependence, and drug-related crash involvement (Hermos, Winter, Heeren, & Hingson, 2008; Hingson, Heeren, & Edwards, 2008). Use of both alcohol and marijuana or alcohol, marijuana, and cigarettes before age 16 is associated with a spectrum of young adult substance use problems, as well as substance use disorder diagnoses (Moss, Chen, & Yi, 2014).

Adults who started drinking at age 14 were three times more likely to report driving after drinking too much ever in their lives than were those who began drinking after age 21. Crashes were four times more likely for those who began drinking at age 14 than for those who began drinking after age 21 (Hingson, Heeren, & Zakocs, 2001).

The National Effort to Reduce Underage Drinking

Over the past 30 years, a comprehensive national effort to address underage drinking has been initiated and subsequently intensified as the multidimensional consequences associated with underage drinking have become more apparent. Substantial progress has been made through strengthening federal policy, implementing national media campaigns, increasing and supporting the involvement of communities through grants and other mechanisms, and collaborating with private agencies, such as the Robert Wood Johnson Foundation.

Development and evaluation of different approaches to prevention have been ongoing at the national level for the past three decades, with NIAAA playing a key role. Prevention efforts have focused on both the individual level (aimed at changing individual behavior), and the environmental level (aimed at limiting the availability of alcohol while increasing the safety of drinking contexts). This combined approach incorporates changes in policy and social environments along with continued education and skills training for individuals, family members, and the community (Harding et al., 2016).

Federal efforts are coordinated through the ICCPUD, which includes representatives from HHS' Office of the Surgeon General (OSG), CDC, Administration for Children and Families, Office of the Assistant Secretary for Planning and Evaluation, and NIH (including NIAAA and NIDA); U.S. Department of Justice (DOJ), Office of Juvenile Justice and Delinquency Prevention (OJJDP); U.S. Department of Education (ED), Office of Safe and Healthy Students; Department of Transportation, National Highway Traffic Safety Administration (NHTSA); White House Office of National Drug Control Policy (ONDCP); Department of the Treasury; U.S. Department of Defense; and FTC.

Federally sponsored research has been synthesized into several publications summarizing evidence-based prevention research strategies. The most recent is the 2016 *Facing Addiction in America, The Surgeon General's Report on Alcohol, Drugs and Health* (HHS, 2016). Other key documents include the Surgeon General's 2007 *Call to Action* (OSG, 2007; discussed in more detail below); the Community Preventive Services Task Force (2016; *Guide to Community Preventive Services: Preventing Excessive Alcohol Consumption*, based on systematic reviews

⁸Note that the criteria for alcohol-related disorders in the DSM-V (American Psychiatric Association, 2013) do not specifically address adolescents.

conducted between 2006 and 2012); the 2003 NRC & IOM report (2004) entitled *Reducing Underage Drinking: A Collective Responsibility*; the 2002 NIAAA report, *A Call to Action; Changing the Culture of Drinking at U.S. Colleges* (NIAAA, 2002); and the NIAAA CollegeAIM (the College Alcohol Intervention Matrix; (NIAAA, n.d.), also detailed below.

National efforts aimed at the reduction of alcohol-related deaths and disability and associated healthcare costs are outlined below. Individual states have also adopted comprehensive policies and practices (detailed in the STOP Act State Reports) that can alter individual and environmental factors that contribute to underage drinking and its consequences.

Adoption of the Minimum Legal Drinking Age

After Prohibition ended in 1933, states assumed authority for alcohol control, including enactment of laws restricting youth access to alcohol. Most states then designated 21 as the minimum legal drinking age (MLDA) for “purchase or public possession” of alcohol. Significantly, on December 31, 1970, Congress established NIAAA to “develop and conduct comprehensive health, education, training, research, and planning programs for the prevention and treatment of alcohol abuse and alcoholism” (NIH, 2017).

Between 1970 and 1976, 29 states lowered their MLDA from 21 to 18, 19, or 20 years of age, in part because the voting age had been lowered (Wagenaar, 1981). However, studies conducted in the 1970s found that motor vehicle crashes increased significantly among teens, resulting in more traffic injuries and fatalities (Cucchiari, Ferreira, & Sicherman, 1974; Douglass, Filkins, & Clark, 1974; Wagenaar, 1983, 1993; Whitehead, 1977; Whitehead et al., 1975; Williams, Rich, Zador, & Robertson, 1975). As a result, 24 of the 29 states raised their MLDA between 1976 and 1984, although to different minimum ages. Some placed restrictions on the types of alcohol that could be consumed by people younger than 21. Only 22 states set an MLDA of 21.

Differences across states led to youths driving across borders to buy and drink alcohol in neighboring states, with increased mortality (NHTSA, 2001). In response, Congress enacted the National Minimum Drinking Age Act of 1984, which mandated reduced federal highway funds to states that did not raise their MLDA to 21. By 1987, all remaining states had raised their MLDA to 21 in response to the federal legislation (although exceptions based on parental permission, location, and other factors exist in many states).

While enforcement varies across states, the age-21 MLDA has led to significant reductions in traffic crashes among youths (NHTSA, 2014; Wagenaar & Toomey, 2002). Subsequent research has supported the finding that reducing access to alcohol has a significant effect on mortality rates, particularly for young adults (Carpenter & Dobkin, 2011), and that it reduces the rate of non-fatal injuries (alcohol overdoses, accidental injuries, and injuries inflicted by others) in youths under 21 as well (Carpenter & Dobkin, 2016).

Congressional Actions Between 1992 and 2004

In 1992, Congress created the Substance Abuse and Mental Health Services Administration (SAMHSA) to “focus attention, programs, and funding on improving the lives of people with or at risk for mental and substance abuse disorders.” In 1998, Congress mandated that DOJ, through OJJDP, establish and implement the Enforcing the Underage Drinking Laws (EUDL) program, a state- and community-based initiative.

As national concern about underage drinking grew—in part because of advances in science that increasingly revealed adverse consequences—Congress appropriated funds for a study by the National Academies to examine the relevant literature to “review existing federal, state, and nongovernmental programs, including media-based programs, designed to change the attitudes and health behaviors of youth.” NRC and IOM issued the report, *Reducing Underage Drinking: A Collective Responsibility*, in 2004 (NRC & IOM, 2004).

Interagency Coordinating Committee on the Prevention of Underage Drinking

The conference report accompanying H.R. 2673, the “Consolidated Appropriations Act of 2004,” directed the HHS Secretary to establish the ICCPUD (see member list, sidebar) and to issue an annual report summarizing all federal agency activities related to the prevention of underage drinking. The HHS Secretary directed the SAMHSA Administrator to convene ICCPUD in 2004.

ICCPUD coordinates federal efforts to reduce underage drinking and served as a resource for the development of *A Comprehensive Plan for Preventing and Reducing Underage Drinking*, for which Congress called in 2004 (SAMHSA, 2017). ICCPUD received input from experts and organizations representing a wide range of parties, including public health advocacy groups, the alcohol industry, ICCPUD member agencies, and the U.S. Congress. The latest research available at the time was analyzed and incorporated into the plan, which HHS reported to Congress in January 2006. It included three general goals, a series of federal action steps, and three measurable performance targets for evaluating national progress in preventing and reducing underage drinking. The three goals were:

1. Strengthen a national commitment to address underage drinking.
2. Reduce demand for, availability of, and access to alcohol by people younger than 21 years.
3. Use research, evaluation, and scientific surveillance to improve the effectiveness of policies and programs designed to prevent and reduce underage drinking.

The Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) includes the following officials, as specified in the STOP Act:

- Secretary of Health and Human Services
- Secretary of Education
- Attorney General
- Secretary of Transportation
- Secretary of the Treasury
- Secretary of Defense
- Assistant Secretary for Mental Health and Substance Use
- Assistant Secretary for Children and Families
- Surgeon General
- Director of the Centers for Disease Control and Prevention
- Director of the National Institute on Alcohol Abuse and Alcoholism
- Director of the National Institute on Drug Abuse
- Director of the Office of National Drug Control Policy
- Administrator of the National Highway Traffic Safety Administration
- Administrator of the Office of Juvenile Justice and Delinquency Prevention
- Chairman of the Federal Trade Commission

The STOP Act

In December 2006, Congress passed the Sober Truth on Preventing (STOP) Underage Drinking Act, Public Law 109-422, popularly known as the STOP Act. The Act states that:

A multi-faceted effort is needed to more successfully address the problem of underage drinking in the United States. A coordinated approach to prevention, intervention, treatment, enforcement, and research is key to making progress. This Act recognizes the need for a focused national effort, and addresses particulars of the federal portion of that effort, as well as federal support for state activities.

The STOP Act requires the HHS Secretary, in collaboration with other federal officials enumerated in the Act, to “formally establish and enhance the efforts of the interagency coordinating committee (ICCPUD) that began operating in 2004.” The STOP Act was reauthorized in 2016 as part of the 21st Century Cures Act (Pub. L. 114-255).

The Surgeon General’s 2007 Call to Action

In fall 2005, ICCPUD sponsored a national meeting of the states to prevent and reduce underage alcohol use. At the meeting, the Surgeon General announced his intent to issue a *Call to Action* on the prevention and reduction of underage drinking. Subsequently, OSG worked closely with SAMHSA and NIAAA to develop the report. Based on their work on the Comprehensive Plan, the ICCPUD agencies collaborated to provide information and data for the *Surgeon General’s Call to Action to Prevent and Reduce Underage Drinking* (HHS, 2007), issued in 2007.

By issuing the *Call to Action*, the Surgeon General sought to raise public awareness and foster changes in American society—goals similar to those described to Congress in the Comprehensive Plan. The *Call to Action* built on the Comprehensive Plan by outlining a wide-ranging national effort to prevent and reduce underage alcohol consumption based on the latest and most authoritative research, particularly on underage drinking as a developmental issue. The goals listed in the *Call to Action* are:

1. Foster changes in American society that facilitate healthy adolescent development and help prevent and reduce underage drinking.
2. Engage parents and other caregivers, schools, communities, all levels of government, all social systems that interface with youth, and youth themselves in a coordinated national effort to prevent and reduce underage drinking and its consequences.
3. Promote an understanding of underage alcohol consumption in the context of human development and maturation that takes into account individual adolescent characteristics as well as ethnic, cultural, and gender differences.
4. Conduct additional research on adolescent alcohol use and its relationship to development.
5. Work to improve public health surveillance on underage drinking and on population-based risk factors for this behavior.
6. Work to ensure that laws and policies at all levels are consistent with the national goal of preventing and reducing underage alcohol consumption.

Strategies for implementing these goals for parents and other caregivers, communities, schools, colleges and universities, businesses, the healthcare system, juvenile justice and law

enforcement, and the alcohol and entertainment industries are included in the full *Call to Action*, available at <http://www.surgeongeneral.gov/topics/underagedrinking/calltoaction.pdf>.

ICCPUD agencies implemented a variety of federal programs to support the goals of the *Call to Action*. For example, SAMHSA and NIAAA worked with OSG to support rollouts of the *Call to Action* in 13 states; SAMHSA collaborated with ICCPUD to support more than 7,000 town hall meetings, using the *Call to Action's Guide to Action for Communities* (OSG et al., 2007) as a primary resource; and SAMHSA asked community coalitions funded under the STOP Act to implement strategies contained in the *Call to Action*. These and other programs are described in more detail in Chapter 3.

The Surgeon General's 2016 Report

In 2016, the OSG released *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*, addressing the use and misuse of substances, including alcohol (HHS, 2016). The report is broad, and covers substance use by all age groups, along with public health consequences, prevention, and treatment. It describes the extent of the substance use problem in the United States; the neurobiology of substance use, misuse, and addiction; prevention programs and policies; early intervention, treatment, and management of substance use disorders; the many services and systems that support the recovery process; the integration of healthcare systems and substance use services; and a vision for the future (including a public health approach and concrete recommendations for reducing substance misuse and related harms).

In addition, the report lists risk and protective factors for substance initiation and misuse by adolescents and young adults at the individual, family, school, and community levels. It also describes evidence-based prevention programs and policies in three different categories:

- Universal (aimed at all members of a given population, such as all children of a certain age).
- Selective (aimed at a subgroup determined to be at higher risk, such as youth involved with the justice system).
- Indicated (aimed at individuals who are already using substances but have not developed a substance use disorder).

Prevention programs and policies that have proven effective with various groups of underage people, including the 0–10 age group, 10–18 age group, young adults, and college students, are highlighted in the report. Programs aimed at individuals and families include:

- Nurse–Family Partnership
- Raising Healthy Children/Seattle Social Development Project (SSDP)
- Good Behavior Game
- LifeSkills Training
- Keepin' it REAL
- Strengthening Families Program 10-14
- Guiding Good Choices
- Positive Family Support/Family Check-Up
- BASICS

Environmental policies that have proven effective in preventing or reducing underage drinking and related problems include:

- MLDA of 21
- Compliance checks of retailers to enforce the MLDA
- Zero tolerance laws that prohibit people under age 21 from driving with any detectable BAC
- Use/lose laws that take away the driver's licenses of people under age 21 caught driving after drinking
- Laws that hold social hosts criminally liable for hosting underage drinking parties
- Laws that allow social hosts to be sued for hosting underage drinking parties
- Proposals to reduce underage people's exposure to alcohol advertising, although the evidence on effectiveness is mixed.

NIAAA's CollegeAIM

As described in more detail in Chapter 2, the problem of college drinking has been particularly persistent. However, knowledge about best practices with this population continues to grow, as NIAAA has invested substantial research and resources in supporting studies on individual and environmental interventions to address college drinking.

In 2015, NIAAA launched a major new resource, CollegeAIM (College Alcohol Intervention Matrix; NIAAA, n.d.) to help college officials address harmful and underage student drinking. The centerpiece of CollegeAIM is a comprehensive, easy-to-use, matrix-based tool that informs college staff about potential alcohol interventions and guides them to evidence-based interventions. Although college officials have numerous options for alcohol interventions, these are not all equally effective. CollegeAIM is designed to help schools make informed choices among available strategies, thereby increasing the schools' chances for success and helping to improve student health and safety.

CollegeAIM compares and rates nearly 60 types of interventions on effectiveness, anticipated costs and barriers to implementation, public health reach, and research amount and quality. Matrix interventions are classified as either environmental- or individual-level strategies (Exhibits 1.4 and 1.5). Environmental-level strategies target the campus community and student population as a whole. Individual-level strategies focus on individual students, including those in higher risk groups such as first-year students, student-athletes, and members of Greek organizations. (See <https://www.collegedrinkingprevention.gov/collegeaim/> for more details about these strategies.)

Exhibit 1.4: NIAAA College Alcohol Intervention Matrix, Individual-Level Strategies (NIAAA, n.d.)

INDIVIDUAL-LEVEL STRATEGIES:

Estimated Relative Effectiveness, Costs, and Barriers; Public Health Reach; Research Amount; and Primary Modality¹



COSTS: Combined program and staff costs for adoption/implementation and maintenance				
Lower costs \$		Mid-range costs \$\$	Higher costs \$\$\$	
EFFECTIVENESS: Success in achieving targeted outcomes	Higher effectiveness ★★★	IND-3 Normative re-education: Electronic/mailed personalized normative feedback (PNF)—Generic/other ² [#], B, ●●●, online/offsite IND-10 Skills training, alcohol focus: Self-monitoring/self-assessment <i>alone</i> ³ [#], F, ●●, online/offsite IND-21 Personalized feedback intervention (PFI): eCHECKUP TO GO (formerly, e-CHUG) ² [#], B, ●●●, online	IND-9 Skills training, alcohol focus: Goal/intention-setting <i>alone</i> ² [#], F, ●●, IPI IND-12 Skills training, alcohol plus general life skills: Alcohol Skills Training Program (ASTP) ² [#], F, ●●●, IPG IND-16 Brief motivational intervention (BMI): In-person—Individual (e.g., BASICS) [#], F, ●●●●, IPI IND-22 Personalized feedback intervention (PFI): Generic/other ² [#], B, ●●●●, online	IND-17 Multi-component education-focused program (MCEFF): AlcohoEdu [®] for College ¹ [#], B, ●●, online Interventions Delivered by Health Care Professionals Strategies in which health care professionals identify and help students whose drinking patterns put them at risk for harm, or who are already experiencing alcohol-related problems: IND-23 Screening and behavioral treatments IND-24 Medications for alcohol use disorder These approaches can reduce harmful drinking, according to studies conducted mainly in general adult populations (ages 18–65). <i>The differences in research populations, along with wide variations in costs and barriers across campuses, precluded ratings relative to other strategies. See page 18 for more information.</i>
	Moderate effectiveness ★★		IND-8 Skills training, alcohol focus: Expectancy challenge interventions (ECI)—Experiential [#], F, ●●●, IPG IND-13 Skills training, alcohol plus general life skills—Parent-based alcohol communication training [#], F, ●●, offsite IND-14 Skills training, alcohol plus general life skills or general life skills only: Generic/other ² [#], F, ●●●●, IPG IND-15 Brief motivational intervention (BMI): In-person—Group [#], F, ●●, IPG	Legend Effectiveness rating, based on percentage of studies reporting any positive effect: ●●● = 75% or more ●● = 50% to 74% ● = 25% to 49% X = Less than 25% Barriers: ### = Higher ## = Moderate # = Lower Public health reach: B = Broad F = Focused Research amount: ●●●● = 11+ studies ●●● = 7 to 10 studies ●● = 4 to 6 studies ● = 3 or fewer studies Primary modality: IPI = In-person individual IPG = In-person group Online Offsite
	Lower effectiveness ★	IND-2 Normative re-education: Electronic/mailed personalized normative feedback (PNF) Event-specific prevention (21st birthday cards) [#], B, ●●, online/offsite	IND-4 Normative re-education: In-person norms clarification <i>alone</i> ¹ [#], F, ●●, IPG	
	Not effective X	IND-7 Skills training, alcohol focus: Expectancy challenge intervention (ECI)—By proxy/didactic/discussion <i>alone</i> ¹ [#], F, ●●, IPG	IND-1 Information/knowledge/education <i>alone</i> ³ [#], B, ●●●●, IPG IND-5 Values clarification <i>alone</i> ¹ [#], F, ●●, IPG	
	Too few studies to rate effectiveness ?	IND-11 Skills training, alcohol plus general life skills: Alcohol 101 Plus™ ² [#], B, ●, online IND-19 Personalized feedback intervention (PFI): CheckYourDrinking (beta 1.0 version) ² [#], B, ●, online IND-20 Personalized feedback intervention (PFI): College Drinker's Check-up ² [#], B, ●, online	IND-6 Skills training, alcohol focus: Blood alcohol concentration feedback <i>alone</i> ³ [#], F, ●, IPI IND-18 Multi-component education-focused programs (MCEFF): Miscellaneous ² [#], B, ●, online	

See brief descriptions and additional ratings for each individual-level strategy on the summary table beginning on page 13.

¹ Effectiveness ratings are based on the percentage of studies reporting any positive outcomes (see legend). Strategies with three or fewer studies were not rated for effectiveness due to the limited data on which to base a conclusion. Cost ratings are based on the relative program and staff costs for adoption, implementation, and maintenance of a strategy. Actual costs will vary by institution, depending on size, existing programs, and other campus and community factors. Barriers to implementing a strategy include cost and opposition, among other factors. Public health reach refers to the number of students that a strategy affects. Strategies with a broad reach affect all students or a large group of students (e.g., all underage students); strategies with a focused reach affect individuals or small groups of students (e.g., sanctioned students). Research amount refers to the number of randomized controlled trials (RCT) of a strategy (see legend).

² Strategies are listed by brand name (e.g., CheckYourDrinking) if they were evaluated by at least two RCTs; strategies labeled generic/other have similar components and were not identified by name in the research or were evaluated by only one RCT; strategies labeled miscellaneous have the same approach but very different components.

³ Although this approach is a component of larger, effective programs such as BASICS and ASTP, it is evaluated here as a stand-alone intervention.

Exhibit 1.5: NIAAA College Alcohol Intervention Matrix, Environmental-Level Strategies (NIAAA, n.d.)

ENVIRONMENTAL-LEVEL STRATEGIES:

Estimated Relative Effectiveness, Costs, and Barriers; Public Health Reach; and Research Amount/Quality¹



COSTS: Combined program and staff costs for adoption/implementation and maintenance				
		Lower costs \$	Mid-range costs \$\$	Higher costs \$\$\$
EFFECTIVENESS: Success in achieving targeted outcomes	Higher effectiveness ★★★	ENV-16 Restrict happy hours/price promotions [##, B, ●●●] ENV-21 Retain ban on Sunday sales (where applicable) [##, B, ●●●●] ENV-22 Retain age-21 drinking age [##, B, ●●●●]	ENV-11 Enforce age-21 drinking age (e.g., compliance checks) [##, B, ●●●●] ENV-23 Increase alcohol tax [##, B, ●●●●]	
	Moderate effectiveness ★★	ENV-17 Retain or enact restrictions on hours of alcohol sales [##, B, ●●●●] ENV-34 Enact social host provision laws [##, B, ●●●]	ENV-3 Prohibit alcohol use/sales at campus sporting events [##, F, ●●●●] ENV-25 Enact dram shop liability laws: Sales to intoxicated [##, B, ●●●●] ENV-26 Enact dram shop liability laws: Sales to underage [##, B, ●●●] ENV-30 Limit number/density of alcohol establishments [###, B, ●●●●] ENV-35 Retain state-run alcohol retail stores (where applicable) [##, B, ●●●●]	ENV-31 Enact responsible beverage service training laws [##, B, ●●●]
	Lower effectiveness ★		ENV-1 Establish an alcohol-free campus [##, B, ●●●] ENV-7 Conduct campus-wide social norms campaign ² [#, B, ●●●●]	ENV-12 Restrict alcohol sponsorship and advertising [##, B, ●●●] ENV-14 Implement beverage service training programs: Sales to intoxicated [C = #, S/L = ##, B, ●●●] ENV-15 Implement beverage service training programs: Sales to underage [C = #, S/L = ##, B, ●●●●] ENV-28 Enact keg registration laws [##, B, ●●●]
	Too few robust studies to rate effectiveness—or mixed results ?	ENV-4 Prohibit alcohol use/service at campus social events [##, B, 0] ENV-5 Establish amnesty policies ² [#, F, ●●●] ENV-8 Require Friday morning classes ² [#, B, ●●] ENV-9 Establish standards for alcohol service at campus social events [#, B, ●●●] ENV-10 Establish substance-free residence halls ² [#, F, ●●] ENV-13 Prohibit beer kegs [C = #, S/L = ##, B, ●●●] ENV-18 Establish minimum age requirements to serve/sell alcohol [##, B, ●●●●] ENV-19 Implement party patrols [##, B, ●●●] ENV-24 Increase cost of alcohol license [##, B, 0] ENV-27 Prohibit home delivery of alcohol [##, B, ●●] ENV-29 Enact noisy assembly laws [##, B, 0]	ENV-6 Implement bystander interventions ² [#, F, 0]	ENV-2 Require alcohol-free programming ² [#, F, ●●] ENV-20 Implement safe-rides program ² [##, F, ●●] ENV-32 Conduct shoulder tap campaigns [##, B, ●●] ENV-33 Enact social host property laws [##, B, 0] ENV-36 Require unique design for state ID cards for age < 21 [##, B, 0]

Legend

<p>Barriers:</p> <p>### = Higher # = Moderate # = Lower C = Barriers at college level S/L = Barriers at the state/local level</p> <p>Public health reach:</p> <p>B = Broad F = Focused</p>	<p>Research amount/quality:</p> <p>●●●● = 5 or more longitudinal studies ●●● = 5 or more cross-sectional studies or 1 to 4 longitudinal studies ●● = 2 to 4 studies but no longitudinal studies ● = 1 study that is not longitudinal</p> <p>0 = No studies</p>
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See brief descriptions and additional ratings for each environmental-level strategy on the summary table beginning on page 19.
¹ Effectiveness ratings are based on estimated success in achieving targeted outcomes. Cost ratings are based on a consensus among research team members of the relative program and staff costs for adoption, implementation, and maintenance of a strategy. Actual costs will vary by institution, depending on size, existing programs, and other campus and community factors. Barriers to implementing a strategy include cost and opposition, among other factors. Public health reach refers to the number of students that a strategy affects. Strategies with a broad reach affect all students or a large group of students (e.g., all underage students); strategies with a focused reach affect individuals or small groups of students (e.g., sanctioned students). Research amount/quality refers to the number and design of studies (see legend).
² Strategy does not seek to reduce alcohol availability, one of the most effective ways to decrease alcohol use and its consequences.

Identification of Evidence-Based Best Practices

The STOP Act requires the ICCPUD to include in the Report to Congress evidence-based practices to prevent and reduce underage drinking and to provide treatment services to youth who need them. Accordingly, the ICCPUD has identified 26 legal policies that are evidence-based (see Exhibit 1.6) and has tracked state adoption of these policies in “State Performance and Best Practices” and the individual State Reports, also required by the STOP Act. Seventeen of these policies were specified in the original STOP Act legislation or in Congressional appropriations language. The remaining nine policies were added after ICCPUD review. Additionally, the majority of these policies were identified as best practices by one or more of the following five sources:

- Community Preventive Services Task Force (*Guide to Community Preventive Services. Preventing Excessive Alcohol Consumption*; Community Preventive Services Task Force, 2016).
- The Surgeon General (*The Surgeon General’s Call to Action to Prevent and Reduce Underage Drinking*; Office of the Surgeon General, 2007).
- Institute of Medicine (*Reducing Underage Drinking: A Collective Responsibility*; NRC and IOM, 2004).

- National Institute on Alcohol Abuse and Alcoholism (*CollegeAIM: Alcohol Intervention Matrix*, NIAAA).
- The Surgeon General (*Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs, and Health*; Office of the Surgeon General, 2016).

Exhibit 1.6 lists the 26 policies and indicates which policies are identified as best practices by one or more of the five sources listed above as well as by ICCPUD. The evidence base for each of these policies, as well as adoption of the policy by the states, is described in detail in “State Performance and Best Practices” which is available at stopalcoholabuse.gov. The federal government’s approach to evidence-based practices is described in more detail in Chapter 3.

Exhibit 1.6: Underage Drinking Prevention Policies – Best Practices

Source Identifying Policy as a Best Practice						
Underage Drinking Prevention Policies	ICCPUD determination based on input from stakeholders and literature review	Community Preventive Services Task Force	Surgeon General’s Call to Action	IOM Report, <i>Reducing Underage Drinking: A Collective Responsibility</i>	CollegeAIM (Alcohol Intervention Matrix; NIAAA)	<i>Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs and Health</i>
Policies addressing minors in possession of alcohol						
Possession by minor	X		X	X	X	
Consumption by minor	X		X	X	X	
Internal possession by minor	X					
Purchase or attempt to purchase alcohol by minor	X		X	X	X	
False identification/Incentives for retailers to use ID scanners or other technology	X		X	X	X	
Policies targeting underage drinking and driving						
Youth BAC limits (zero tolerance)	X		X	X		X
Loss of driving privileges for alcohol violations by minors (use/lose law)	X					X
Graduated driver’s licenses	X		X	X		
Policies targeting alcohol suppliers						
Furnishing or sale to a minor	X		X	X	X	
Compliance checks	X	X	X	X	X	X
Penalty guidelines for violations of furnishing laws by retailers	X					
Mandatory/voluntary server-seller training (responsible beverage service programs)	X		X	X	X	
Minimum age for off-sale server	X					
Minimum age for on-sale server	X					
Outlet siting near schools	X					
Dram-shop liability	X	X		X	X	X

Source Identifying Policy as a Best Practice						
Underage Drinking Prevention Policies	ICCPUD determination based on input from stakeholders and literature review	Community Preventive Services Task Force	Surgeon General's Call to Action	IOM Report, Reducing Underage Drinking: A Collective Responsibility	CollegeAIM (Alcohol Intervention Matrix; NIAAA)	Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs and Health
Social-host liability	X			X	X	X
Hosting underage drinking parties	X		X	X	X	X
Retailer interstate shipment	X					
Direct sales/shipment from producer	X					
Keg registration	X		X	X	X	
Home delivery	X			X		
High-proof grain alcoholic beverages	X					
Policies affecting alcohol pricing						
Increasing alcohol tax rates	X	X		X	X	X
Restrictions on drink specials	X		X	X	X	
Wholesaler pricing provisions	X					

Emerging Issues in Underage Drinking and the Government Response

Although prevention efforts have had an effect on underage drinking rates, there is a need for ongoing monitoring of trends in the marketplace and emerging public health issues. Not only are new products continuously introduced, but youth behavior and experimentation with different ways to consume alcohol changes over time. Two products that have generated governmental response at the federal and/or state levels are caffeinated alcoholic beverages and powdered alcohol.

Federal and State Actions to Address Caffeinated Alcoholic Beverages

The combination of alcohol with caffeine may pose a public health issue for young people. Research suggests that mixing alcohol and caffeine (particularly with highly caffeinated energy drinks) poses public health and safety risks, because caffeine can mask the depressant effects of alcohol without changing the alcohol's intoxicating properties (CDC, 2017). This could lead some individuals to believe they are more capable of operating a vehicle, and presents other risks such as encouraging binge drinking, particularly among young drinkers.

Due to federal and state actions, premixed caffeinated alcoholic beverages (CABs) are no longer on the market. In 2007, health and safety risks prompted members of the National Association of Attorneys General Youth Access to Alcohol Committee to initiate investigations and negotiations with the Anheuser-Busch and MillerCoors Brewing Companies regarding their CAB products. In 2008, those companies agreed to remove caffeine and other stimulants from their products. In 2009, the U.S. Food and Drug Administration (FDA) initiated an investigation into the marketing and distribution of other CABs.

In November 2010, three federal agencies—FDA, FTC, and the Alcohol and Tobacco Tax and Trade Bureau (TTB)—took coordinated action to address these concerns, issuing warning letters to four manufacturers of caffeinated beverages:

- FDA letters advised that, as used in the products at issue, caffeine was an “unsafe food additive,” rendering the products adulterated under the FDA Act; it warned that further action was possible.
- FTC letters advised that marketing and sale of caffeinated alcohol could constitute an unfair or deceptive act in violation of the FTC Act; it urged the companies to take “swift and appropriate steps to protect consumers.”
- TTB letters warned that adulterated caffeinated malt beverages were mislabeled under the Federal Alcohol Administration Act. Letters stated that further action, including seizure and injunction, was possible.⁹

In response, the four companies stopped using added caffeine in their products; by summer 2011, with few exceptions, malt-based CABs were no longer available in the United States. In parallel with the federal actions against CABs, numerous states enacted statutory or administrative bans on these beverages.

For more references and details on health and safety risks associated with caffeinated alcoholic beverages and successful efforts to remove them from the marketplace, see the *2012 Report to Congress on the Prevention and Reduction of Underage Drinking* (SAMHSA, 2012).

Young people continue to mix alcohol and energy drinks on their own, despite the federal government’s removal of CABs from the marketplace. An NIAAA research study assessed the extent of this practice and its public health and safety effects on college students (Patrick & Maggs, 2014). A sample of 508 students reported alcohol and energy drink use on 4,203 days over four consecutive semesters, starting in their freshman year. Of the sample, 30.5 percent reported combined use at least once, and respondents consumed energy drinks on 9.6 percent of the days when they reported drinking alcohol. Heavier drinking, longer times drinking, and increased negative effects occurred when alcohol was combined with energy drinks, compared with drinking occasions without energy drinks. Research suggests that continued attention to this issue is needed among policymakers and educators.

Federal and State Actions Regarding Powdered Alcohol

On March 10, 2015, the TTB, which approves alcohol labeling, issued label approvals for Palcohol, a powdered alcoholic product. A container of Palcohol contains one ounce of powder, which, when mixed as directed with 200 milliliters of water, results in a beverage with 10 percent alcohol by volume. The company—Lipsmark, LLC—was approved to market five versions: vodka, rum, cosmopolitan, lemon drop, and powderita (margarita flavor).

Public health professionals and state government officials raised concerns that because powdered alcohol is easy to conceal and transport, it would appeal to underage drinkers (Naimi & Mosher, 2015). They also argued that the product raised safety issues—drinks made from powdered

⁹ See <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm233987.htm#2>. The FDA investigation and warning letters involved companies that produced malt-based alcoholic beverages and did not include wine- and spirits-based products. The investigation did not address products that contain naturally brewed caffeine (e.g., coffee-based drinks).

alcohol could intentionally or unintentionally be made much stronger than standard drinks and could be consumed in other ways that may prove harmful (Firger, n.d). Two recent studies suggest that underage drinkers would consume powdered alcohol if they had access to it (Stogner, Baldwin, Brown, & Chick, 2015; Vail-Smith, Chaney, Martin, & Chaney, 2016). Given this evidence, the American Medical Association (AMA) adopted a policy on June 14, 2016, calling for a ban on powdered alcohol in the United States (AMA, 2016).

States have authority to determine which alcohol products may be sold within their borders. The sale of powdered alcohol has been illegal in Alaska since 1995. As of February 2018, 34 other jurisdictions have enacted a permanent or temporary ban on the sale of powdered alcohol. Alabama, California, Connecticut, the District of Columbia, Georgia, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Nebraska, Nevada, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, and West Virginia statutorily prohibit the sale of powdered alcohol.

Maryland enacted a temporary 2-year statutory ban on powdered alcohol that expired on June 30, 2018. Four states—Colorado, Delaware, New Hampshire, and New Mexico—have expanded the statutory definition of alcohol so that powdered alcohol can be regulated under their existing alcohol statutes. (For complete legal citations, go to <https://www.stopalcoholabuse.gov>.) Prior to legislatively banning powdered alcohol, two control states—Massachusetts and Pennsylvania—stated they would not sell powdered alcohol in their state stores.

As of February 2018, the Palcohol website states that Lipsmark, LLC will be auctioning off its “secret manufacturing process” to representatives in other countries rather than manufacture and distribute the powdered alcohol product itself. Currently, Palcohol is not available for purchase in the United States.

CHAPTER 2

The Nature and Extent of Underage Drinking in America

STOP Act Requirements for the Report to Congress

The STOP Act requires the HHS Secretary to report to Congress on the “extent of progress in preventing and reducing underage drinking nationally.”

The report is to include:

- Patterns of underage consumption as described in research, including federal surveys.
- Information on the onset and prevalence of underage drinking.
- Measures of the availability of alcohol and the means of underage access.
- Measures of the exposure of underage populations to messages regarding alcohol in advertising and entertainment media as reported by the Federal Trade Commission (FTC).

This chapter sets out detailed updates in response to this mandate.

Federal Surveys Used in This Report

Progress on reducing underage drinking and current status on consumption is monitored through three major national surveys funded by the federal government that collect data on, among other topics, underage drinking and its consequences:

- The annual National Survey on Drug Use and Health (NSDUH; formerly called the National Household Survey on Drug Abuse)
- The annual Monitoring the Future (MTF) survey (conducted pursuant to federal grants)
- The biennial Youth Risk Behavior Survey (YRBS)

Key findings from these data sources and other research related to underage alcohol use in the United States are described in this chapter.¹⁰

Each survey makes a unique contribution to an understanding of the nature of alcohol use, and each survey was developed for a specific purpose. However, direct comparison of findings across the three surveys (e.g., in the prevalence of underage drinking) is not generally appropriate because each survey has a unique design and a different sampling frame and weighting approach (see, e.g., Cowan, 2001). The only overlap in the survey populations sampled is students in the 10th and 12th grades in traditional schools in 47 states (Exhibit 2.1).

Because the surveys use varied data collection methods (e.g., Chen, Yoon, & Faden, 2017; Fendrich & Johnson, 2001; Harrison, 2001), each provides a different perspective on the status of underage drinking. For consistency in reporting, detailed statistics from the survey most appropriate to address the topic of interest are provided in the main text of this report; supporting, contrasting, and supplementary data from the other surveys are also provided when appropriate.

These surveys are revised periodically to reflect the current state of the research in underage drinking. In 2015, the NSDUH definition of binge drinking was changed from five drinks on a

¹⁰Four additional surveys used by the government to obtain data on underage persons (ages 18 and older) who drink are the Behavioral Risk Factor Surveillance System (BRFSS), National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), National Health Interview Survey (NHIS), and Survey of Health-Related Behaviors Among Active Duty Military Personnel (HRB; formerly called the Worldwide Survey of Substance Abuse and Health Behaviors Among Military Personnel). Appendix B provides a more detailed description of each of these surveys and their unique contribution to research.

single occasion to five drinks for males or four drinks for females. This change was made to reflect the evidence that there are differences in how alcohol is processed by males and females. Trend data for female and total binge drinking through 2015 are therefore not currently available (Center for Behavioral Health Statistics and Quality [CBHSQ], 2017b).

Exhibit 2.1: Summary of Major Federal Surveys Assessing Underage Drinking¹¹

Survey/ Sponsoring Agency	Purpose	Target Population	Administration Schedule	Data Collection Method
National Survey on Drug Use and Health (NSDUH)–SAMHSA Center for Behavioral Health Statistics and Quality (CBHSQ)	Measurement of substance use, misuse, and related problems for U.S. population ages 12–65	Civilian, noninstitutionalized population ages 12–65 in the U.S. Group homes, shelters, etc., included.	Annually since 1991	In-person visit to home; audio computer-assisted self-interviews
Monitoring the Future (MTF) ¹² –NIDA	Measurement of alcohol, tobacco, and other drug use by secondary school students	Secondary school students in coterminous U.S. in grades 8, 10, and 12; a randomly selected sample from each senior class has been followed up biannually after high school on a continuing basis.	Annually for 12th graders since 1975 and for 8th and 10th graders since 1991; biannually for college students and adults ages 19–20 (and through 55)	School-based, self-administered questionnaire in classroom
Youth Risk Behavior Survey (YRBS)–CDC	Assessment of a variety of behaviors that affect adolescent health	Public, Catholic, and other private school students in grades 9–12 in the U.S. and the District of Columbia (excluding most of Louisiana)	Biennially since 1991	School-based, self-administered questionnaire in classroom

Extent of Progress

Progress in the reduction of underage drinking is assessed both by examining drinking behavior directly and by assessing changes in behaviors and outcomes that are correlated with underage drinking. An examination of trend data across the three federally sponsored surveys suggests that meaningful progress is being made in reducing the extent of underage drinking, including overall alcohol use, age of initiation, and binge drinking. Progress is also being made in reducing driving after drinking. In addition, there has been a steady decline in past-year alcohol use disorder among 12- to 20-year-olds.

Extent of Progress: Alcohol Use

Exhibits 2.2 and 2.3 provide NSDUH-based estimates of trends of alcohol use in two key areas—current use and age at first use—from 2004 (when the Interagency Coordinating Committee on the Prevention of Underage Drinking [ICCPUD] was first convened) through 2016.¹³ Exhibit 2.4 provides NSDUH-based estimates of binge drinking, a third key area, from 2015 to 2016.

¹¹See Chen, Yoon, & Faden (2017) for details on differences in the surveys.

¹²For comparability with 2016 NSDUH (the most recent data available as this report was being prepared), the latest MTF data included in this report are also from 2016. The 2017 MTF data became available in December 2017 and will be included in the next report.

¹³2006–2010 estimates are based on data files revised in March 2012.

All age groups showed a statistically significant decline in past-month alcohol use over time. As shown in the last columns in Exhibit 2.2, declines have been substantial for most age groups. Not unexpectedly, changes among 18- to 20-year-olds were smaller but still statistically significant. The large number of 18- to 20-year-olds using alcohol also accounts for the smaller percentage change among 12- to 20-year-olds compared with 12- to 17-year-olds.¹⁴

**Exhibit 2.2: Past-Month Alcohol Use for 12- to 20-Year-Olds:
2004–2016 NSDUH Data (CBHSQ, 2017c)¹⁵**

Age	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Change 2004 2016
12–13	4.3%	4.2%	3.9%	3.5%*	3.4%*	3.5%*	3.2%*	2.5%*	2.2%*	2.1%*	2.1%*	1.3%*	1.4%*	-66.5%
14–15	16.4%	15.1%	15.6%	14.7%*	13.3%*	13.1%*	12.4%*	11.3%*	11.1%*	9.5%*	8.5%*	7.4%*	7.9%*	-52.2%
16–17	32.5%	30.1%*	29.8%*	29.2%*	26.3%*	26.5%*	24.6%*	25.3%*	24.8%*	22.7%*	23.3%*	19.7%*	17.7%*	-45.8%
18–20	51.1%	51.1%	51.6%	50.8%	48.6%*	49.5%	48.5%*	46.8%*	45.8%*	43.8%*	44.2%*	40.9%*	39.1%*	-23.2%
12–17	17.6%	16.5%*	16.7%*	16.0%*	14.7%*	14.8%*	13.6%*	13.3%*	12.9%*	11.6%*	11.5%*	9.6%*	9.2%*	-47.8%
12–20	28.7%	28.2%	28.4%	28.0%	26.5%*	27.2%*	26.2%*	25.1%*	24.3%*	22.7%*	22.8%*	20.3%*	19.3%*	-32.9%

*Difference between 2004 estimate and this estimate is statistically significant at the 0.05 level.

As shown in Exhibit 2.3, among past-year initiates¹⁶ of alcohol use who initiated before age 21, the overall trend in the mean age at first alcohol use went up from 15.6 in 2004 to 16.2 in 2016 with significant increases since 2006. This indicates a delay in initiation of drinking. Trends in age of initiation of alcohol use are important to follow because delaying the age of first alcohol use can ameliorate some of the negative consequences of underage alcohol consumption (CBHSQ, 2017c).

**Exhibit 2.3: Average Age at First Use Among Past-Year Initiates of Alcohol Use
Who Initiated Before Age 21: 2004–2016 NSDUH Data (CBHSQ, 2017c)**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Average Age at First Use	15.6	15.6	15.8*	15.8*	15.8*	15.9*	16.0*	15.9*	16.0*	16.2*	16.2*	16.3*	16.2*

*Difference between 2004 estimate and this estimate is statistically significant at the 0.05 level.

Appendix B further discusses methodological issues in measuring age at first use and other indicators of alcohol initiation. NSDUH data for binge-drinking levels, the third key area of progress in alcohol use, is shown in Exhibit 2.4. There was a significant decline overall (ages 12 to 20) and in three of the five age subgroups (12 to 13; 16 to 17; and 12 to 17) for binge drinking in 2016 compared with 2015.¹⁷

¹⁴CBHSQ provided special analyses of NSDUH data for this report.

¹⁵Based upon CBHSQ-provided special analyses of NSDUH data.

¹⁶Past-year initiates are those who drank alcohol for the first time in their lives in the 12 months before the survey interview.

¹⁷NSDUH questionnaire changes for 2015 included a revision of the definition of binge drinking for females from five to four drinks; therefore, data for males and females combined for 2015 cannot be compared with those from previous years.

**Exhibit 2.4: Past-Month Binge Alcohol Use for 12- to 20-Year-Olds:
2015–2016 NSDUH Data (CBHSQ, 2017c)**

Age	2015	2016	% Change 2015 2016
12–13	0.7	0.3*	-52.7%
14–15	3.8	3.7	-1.9%
16–17	12.6	10.2*	-18.8%
18–20	27.4	26.3	-6.1%
12–17	5.8	4.9*	-15.8%
12–20	13.3	12.1*	-9.6%

*Difference between 2015 estimate and this estimate is statistically significant at the 0.05 level.

Similarly, MTF trend data among students in grades 8, 10, and 12 indicate binge drinking¹⁸ increased slightly in the 1990s, leveled off in the early 2000s, and then began a gradual decline in 2002. Two recent publications provide a detailed analysis of this trend (Esser, Clayton, Demissie, Kanny, & Brewer, 2017; Jang, Patrick, Keyes, Hamilton, & Schulenberg, 2017). Declines in binge drinking have continued as shown by data recorded in 2016, which marks the lowest levels in all three grades measured by the MTF survey.

The authors note that the declines in binge drinking from 1991 to 2016 are quite substantial, with 8th graders declining by 70 percent, 10th graders by 50 percent, and 12th graders by 30 percent (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2017b).

Analyses of multiple surveys through 2009 (Chen, Yi, & Faden, 2011; Faden & Fay, 2004) and then through 2013 (Chen, Yi, & Faden, 2015) confirm the patterns described above.

Extent of Progress: Driving After Drinking

One important sign of progress in addressing underage drinking is that alcohol-related traffic deaths among young drivers ages 15 to 20 have declined 82 percent since 1982 (NCSA, 2017). However, the 2016 NSDUH survey indicates that 5.1 percent of youths ages 16 to 20 reported driving after drinking at least once in the past year (CBHSQ, 2017a).

Using MTF data, O'Malley and Johnston (2013) reported, and have subsequently updated through annual special analyses, longitudinal data for high school seniors who reported any of the following behaviors in the past two weeks: driving after drinking any alcohol; driving after five or more drinks; being a passenger when the driver has had any alcohol; or being a passenger with a driver who has had five or more drinks (Exhibit 2.5). As demonstrated in Exhibit 2.5, all four of these behaviors have declined in the last decade, but they remain unacceptably high, especially given the risks associated with driving after even small amounts of alcohol.

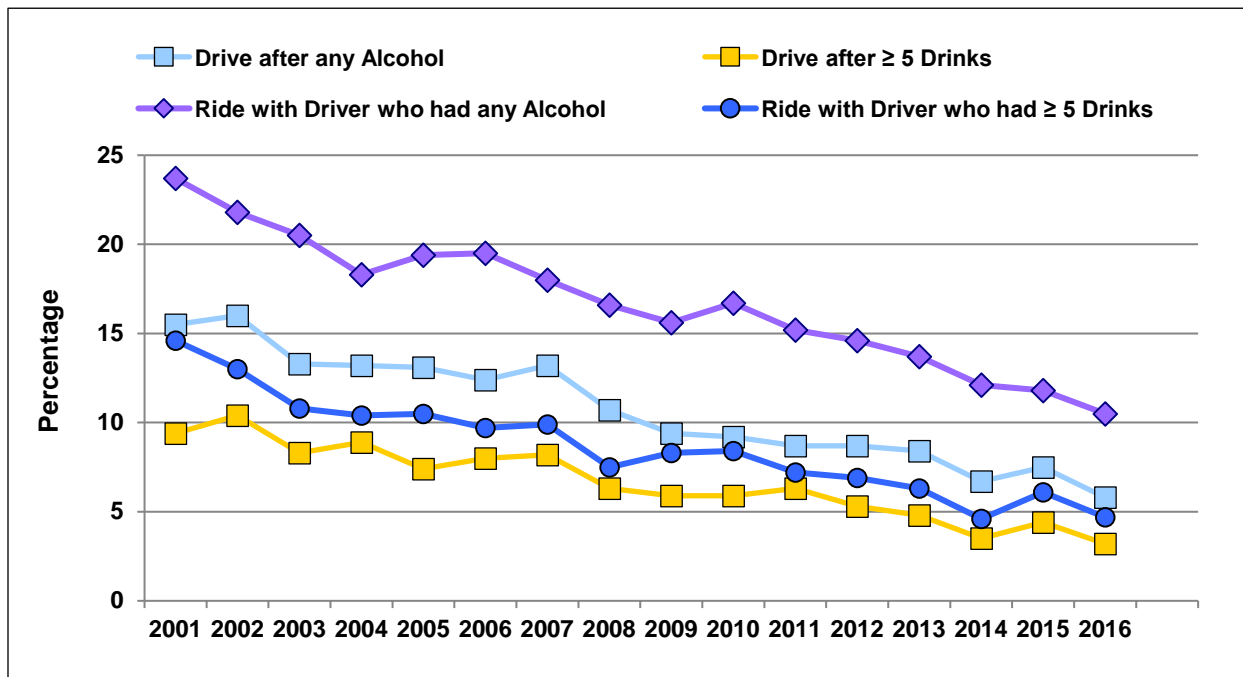
Males were more than twice as likely as females to report driving after five or more drinks, a finding replicated in other studies (Quinn & Fromme, 2012a; "Teen Drivers," 2017). Very high percentages of high school seniors who drove after drinking five or more drinks experienced

¹⁸Binge drinking in the MTF survey is defined as five drinks for both males and females.

consequences. O’Malley and Johnston (2013) reported that 43.2 percent received a ticket or warning and 30.2 percent were involved in a crash.

O’Malley and Johnston (2013) note that high school seniors who drive more frequently are more likely to drive after drinking. Driving after drinking in college students is associated with living off campus (Quinn & Fromme, 2012b), spending more evenings out (O’Malley & Johnston, 2013), higher socioeconomic status, and driving someone’s car without permission (Delcher, Johnson, & Maldonado-Molina, 2013).

Exhibit 2.5: Trends in Percentage of 12th Graders Reporting Driving after Alcohol Use or Riding after Alcohol Use by the Driver: 2016 MTF Data
(O’Malley & Johnston, 2013; O’Malley, 2017)¹⁹



A number of policy approaches have been shown to reduce driving after drinking and associated mortality and morbidity among youth. Chief among these is the age-21 minimum legal drinking age (MLDA). Two reviews of the research on the age-21 MLDA concluded that this policy reduces injuries and saves lives, even though the law is imperfectly enforced and widely disobeyed (DeJong & Blanchette, 2014; McCartt, Hellinga, & Kirley, 2010). Fell, Scherer, Thomas, and Voas (2016) found that the age-21 MLDA was associated with a 4 to 8 percent decline in the ratio of drinking to nondrinking drivers under age 21 involved in fatal crashes, after controlling for other state-level traffic safety and alcohol-related policies. Another study examining the effects of a variety of laws designed to reduce driving after drinking found significant effects of laws related to underage purchase and consumption as well as to production and use of false identification (Fell, Fisher, Voas, Blackman, & Tippetts, 2008).

¹⁹Updates to 2012 report have been provided annually by Patrick O’Malley (O’Malley, 2017).

Policies targeting young people’s drinking and driving behavior may also be factors in the trend of reduction in traffic fatalities. (These policies are discussed in more detail in the State Performance and Best Practices.) Graduated driver’s license (GDL) policies limit the extent to which young people drive and the conditions under which they drive. “Use/lose” policies revoke driving privileges of young people convicted of an alcohol offense. Cavazos-Rehg and colleagues (2012) used 1999–2009 YRBS data to examine the impact of GDL and “use/lose” laws on drinking and driving behaviors of youth ages 16 to 17. They found that restrictive GDL laws and “use/lose” laws were associated with decreased driving after drinking any alcohol and decreased riding in a car with a driver who had been drinking alcohol (Cavazos-Rehg et al., 2012).

Extent of Progress: Prevalence of DSM-IV-TR Alcohol Abuse and Dependence Among Youth

There was a significant decline in past-year alcohol use disorder from 2004 to 2016 as defined by the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*²⁰ (DSM-IV-TR; American Psychiatric Association [APA], 2000) for all age groups, and for both males and females. Trends in DSM-IV-TR alcohol use disorders (abuse and dependence) among people ages 12 to 20 from 2004 to 2016 are provided in Exhibit 2.6. Nonetheless, the prevalence of DSM-IV-TR alcohol abuse and dependence among underage drinkers remains quite high.

As shown in Exhibit 2.7, according to combined 2015–2016 NSDUH data, about 8.5 percent (or 1 in 12) 18- to 20-year-olds met criteria for DSM-IV-TR alcohol abuse or dependence. The prevalence rate for 18- to 20-year-olds is significantly lower than for 21- to 24-year-olds (12.4 percent) and 25- to 29-year-olds (10.1 percent), but not significantly different than for 30- to 34-year-olds (8.6 percent). In addition, 0.6 percent of 12- to 14-year-olds and 3.8 percent of 15- to 17-year-olds met criteria for DSM-IV alcohol abuse or dependence (CBHSQ, 2017c). The prevalence of alcohol abuse or dependence as defined by DSM-IV-TR is highest among those ages 21–29 (Exhibit 2.7).

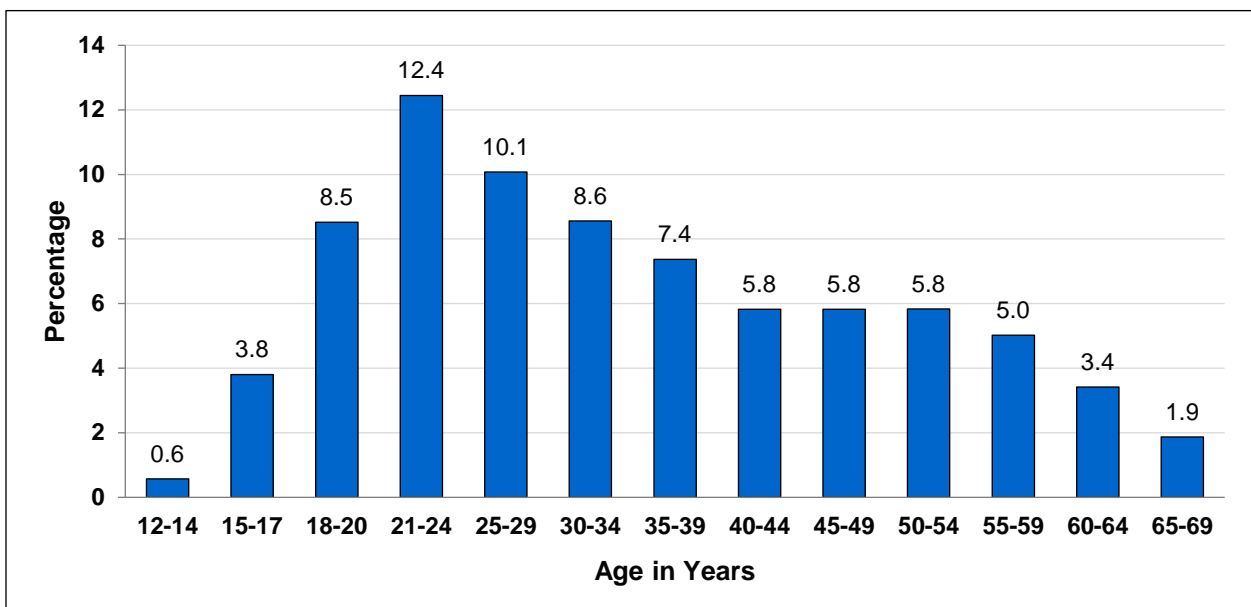
²⁰The DSM-IV-TR (APA, 2000) criteria for abuse and dependence used in this study were originally developed for use with adults, and using them to assess abuse and dependence in adolescents may lead to inconsistencies. The more recent *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-V; APA, 2013) integrates the two DSM-IV disorders, alcohol abuse and alcohol dependence, into a single disorder called alcohol use disorder (AUD). DSM-V does not specifically address adolescents. Research suggests that the criteria for DSM-V and the criteria for DSM-IV would result in similar outcomes (Winters, Martin, & Chung, 2011).

Exhibit 2.6 Past-Year DSM-IV-TR Alcohol Abuse or Dependence for 12- to 20-Year-Olds, by Age and Sex: 2004–2016 NSDUH Data (CBHSQ, 2017c)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% change 2004–16	p value for the overall trend
Ages 12–20	9.6	9.4	9.1	9	8.9*	8.2*	8.0*	7.1*	6.6*	5.6*	5.1*	4.7*	4.1*	-57.4%	<0.001
Ages 12–17	6.0	5.5	5.4*	5.4*	4.9*	4.6*	4.6*	3.8*	3.4*	2.8*	2.7*	2.5*	2.0*	-67.4%	<0.001
Ages 18–20	16.8	16.9	16.5	15.8	16.4	14.7*	14.0*	13.1*	12.5*	11.0*	9.7*	8.8*	8.2*	-51.0%	<0.001
Males ages 12–20	10.8	10	9.6*	9.8*	9.5*	8.9*	8.7*	7.2*	6.5*	5.8*	5.2*	4.5*	3.7*	-65.9%	<0.001
Females ages 12–20	8.3	8.7	8.5	8.1	8.3	7.6	7.2*	6.9*	6.6*	5.4*	5.1*	4.8*	4.5*	-45.8%	<0.001

*Difference between 2004 estimate and this estimate is statistically significant at the 0.05 level.

Exhibit 2.7: Prevalence of Past-Year DSM-IV-TR Alcohol Abuse or Dependence by Age: 2015–2016 NSDUH Data (CBHSQ, 2017c)



Summary of Progress

The above data demonstrate that meaningful progress has been made in reducing underage drinking prevalence, DSM-IV-TR alcohol abuse and dependence disorders, and related problems such as traffic fatalities. Factors that have contributed to this progress are varied and complex; however, one clear factor has been increased attention to this issue at all levels of society. Federal initiatives have lifted underage drinking to a prominent place on the national public health agenda, created a policy climate in which significant legislation has been passed by states and localities, raised awareness of the importance of aggressive enforcement, and stimulated coordinated citizen action. These changes are mutually reinforcing and have provided a framework for a sustained national commitment to reducing underage drinking.

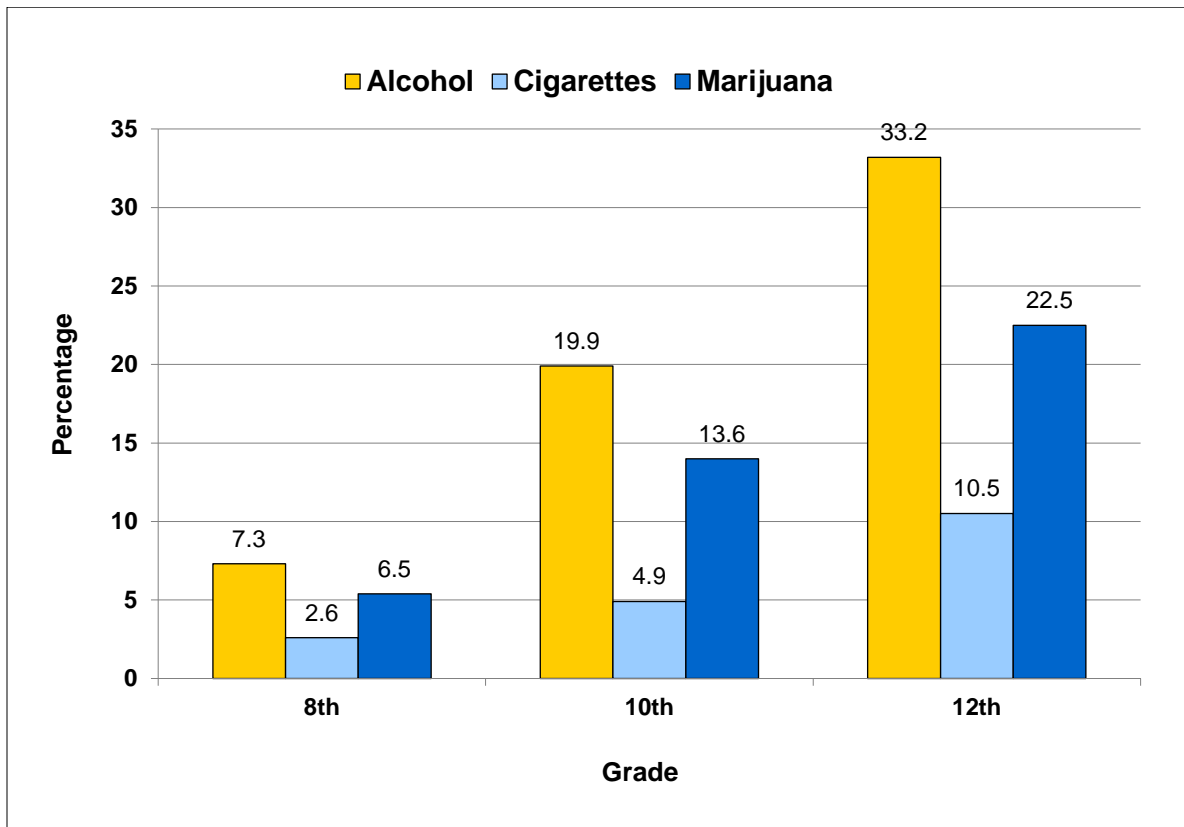
Patterns of Consumption

Despite progress, underage alcohol use in the United States continues to be a widespread and serious problem, the consequences of which remain a substantial threat to public health. Rates of underage drinking are still unacceptably high, resulting in preventable and tragic health and safety consequences for the nation's youth, families, communities, and society. Therefore, ICCPUD remains committed to an ongoing, comprehensive approach to preventing and reducing underage drinking. This report, along with the yearly updates to state reports and survey responses, is part of that sustained effort to continue to reduce underage drinking in America.

Alcohol continues to be the most widely used substance of misuse among American youth (CBHSQ, 2017a; Miech et al., 2017).

According to CBHSQ, through special analyses of NSDUH 2016 data, a higher percentage of youth who are 12 to 20 years old used alcohol in the past month (19.3 percent) than tobacco (12.3 percent) or illicit drugs (13.3 percent; CBHSQ, 2017c). Similarly, as shown in Exhibit 2.8, based on MTF data, a higher percentage of youth in grades 8, 10, and 12 used alcohol in the month prior to being surveyed than used marijuana (the illicit drug most commonly used by adolescents) or tobacco (Miech et al., 2017).

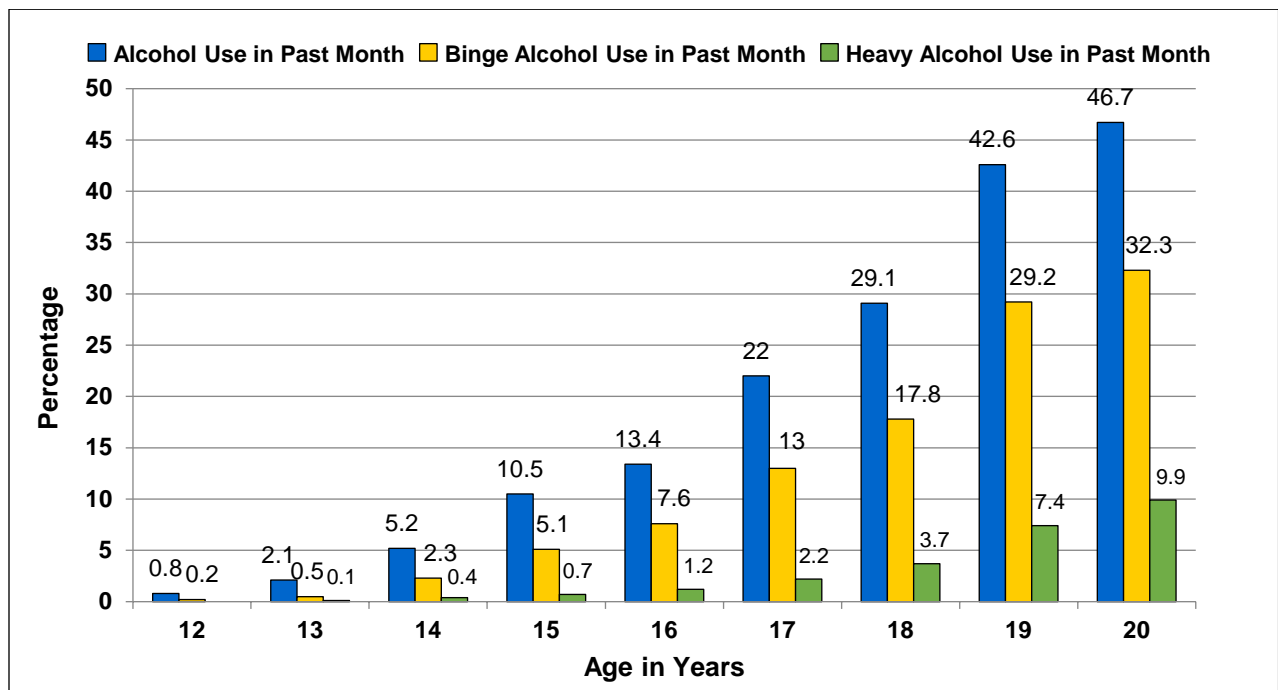
Exhibit 2.8: Past-Month Adolescent Alcohol, Cigarette, and Marijuana Use by Grade: 2016 MTF Data (Miech et al., 2017)



Underage alcohol consumption rates can be viewed from several perspectives, as detailed below:

- **Lifetime Use:** Data from the 2016 NSDUH indicate that 41.0 percent of those ages 12 to 20 have had alcohol (more than a sip) in their lifetime (CHBSQ, 2017a).
- **Current Use:** The 2016 NSDUH reported that approximately 19.3 percent of Americans ages 12 to 20 (about 7.7 million people) reported having at least one drink in the 30 days prior to the survey interview (CBHSQ, 2017a).
- **Binge Drinking:** Among underage drinkers (12- to 20-year-olds), 12.1 percent (4.5 million) engaged in binge drinking (five or more drinks for males or four or more for females on the same occasion, either at the same time or within a few hours) on at least 1 day in the past 30 days. Binge drinking was reported at all ages, with frequency increasing by age (see Exhibit 2.9; CBHSQ, 2017a).
- **Heavy Drinking:** Approximately 2.8 percent of this age group (1.1 million) are heavy drinkers (consuming five or more drinks on the same occasion on each of 5 or more days in the past 30 days). By definition, all heavy alcohol users are also binge alcohol users (CBHSQ, 2017a).
- **Geographic Extent of Use:** Current consumption by underage individuals varies slightly by region, with reports of consumption by those ages 12 to 20 at 23.7 percent in the Northeast, 20.8 percent in the Midwest, 17.6 percent in the South, and 17.6 percent in the West (CBHSQ, 2017a).

Exhibit 2.9: Current, Binge, and Heavy Alcohol Use Among People Ages 12–20 by Age: 2016 NSDUH Data (CBHSQ, 2017a)



Onset and Prevalence

Drinking often begins at very young ages. The NSDUH survey (CBHSQ, 2017c) indicates that approximately:

- 13.3 percent of lifetime alcohol users ages 12 to 20 began drinking before age 13.
- 11.0 percent of past-year alcohol users ages 12 to 20 began drinking before age 13.

Similarly, YRBS data shows that almost one-fifth (17.2 percent) of underage drinkers in high schools begin drinking before age 13 (Kann et al., 2016).

The average age of first use for youth who initiated before age 21 is about 16.2 years old. However, among those who initiated alcohol use in the past year, 759,000 reported being ages 12 to 14 when they initiated. This means that for every day in 2016, approximately 2,078 youths (12 to 14 years of age) drank alcohol for the first time (CBHSQ, 2017c).

Youth who report drinking before age 15 are more likely to experience problems, including intentional and unintentional injury to self and others after drinking (Hingson, Heeren, Jamanka, & Howland, 2000; Hingson & Zha, 2009); violent behavior, including predatory and dating violence (Blitstein, Murray, Lytle, Birnbaum, & Perry, 2005; Ellickson, Tucker, & Klein, 2003; Ramisetty-Mikler, Caetano, Goebert, & Nishimura, 2004, 2006); criminal behavior (Eaton, Davis, Barrios, Brener, & Noonan, 2007); prescription drug misuse (Hermos, Winter, Heeren, & Hingson, 2008); unplanned and unprotected sex (Hingson, Heeren, Winter, & Wechsler, 2003); motor vehicle crashes (Hingson, Heeren, Levenson, Jamanka, & Voas, 2002); and physical fights (Hingson, Heeren, & Zakocs, 2001).

Early-onset drinking is a marker for future problems, including heavier use of alcohol and drugs during adolescence (Buchmann et al., 2009; Hawkins et al., 1997; Liang & Chikritzhs, 2015; Robins & Przybeck, 1985) and alcohol dependence in adulthood (Grant & Dawson, 1998). Delaying the age of first alcohol use can ameliorate some of the negative consequences of underage alcohol consumption, which means that trends in age of initiation of alcohol use are important to follow.

Supporting Data

Ever Used Alcohol

MTF: 61.2 percent of 12th graders, 43.4 percent of 10th graders, and 22.8 percent of 8th graders have had alcohol at some point in their lives (Exhibit 2.10, Miech et al., 2017).

YRBS: 63.2 percent of students have had at least one drink of alcohol on at least 1 day in their lives (Kann et al., 2016).

Current Use of Alcohol

MTF: 33.2 percent of 12th graders; 19.9 percent of 10th graders; and 7.3 percent of 8th graders report having had at least one drink in the 30 days before the survey (Miech et al., 2017).

YRBS: 32.8 percent of students reported having had at least one drink in the 30 days before the survey.

Binge and Heavy Use of Alcohol

MTF: 46.3 percent of 12th graders, 26.0 percent of 10th graders, and 8.6 percent of 8th graders reported having been drunk at least once (Exhibit 2.10; Miech et al., 2017).

MTF: 15.5 percent of 12th graders, 9.7 percent of 10th graders, and 3.4 percent of 8th graders reported consuming five or more drinks in a row in the 2 weeks prior to the survey (Miech et al., 2017).

YRBS: 17.7 percent of students reported five or more drinks in a row in the 30 days prior to the survey (Kann et al., 2016).

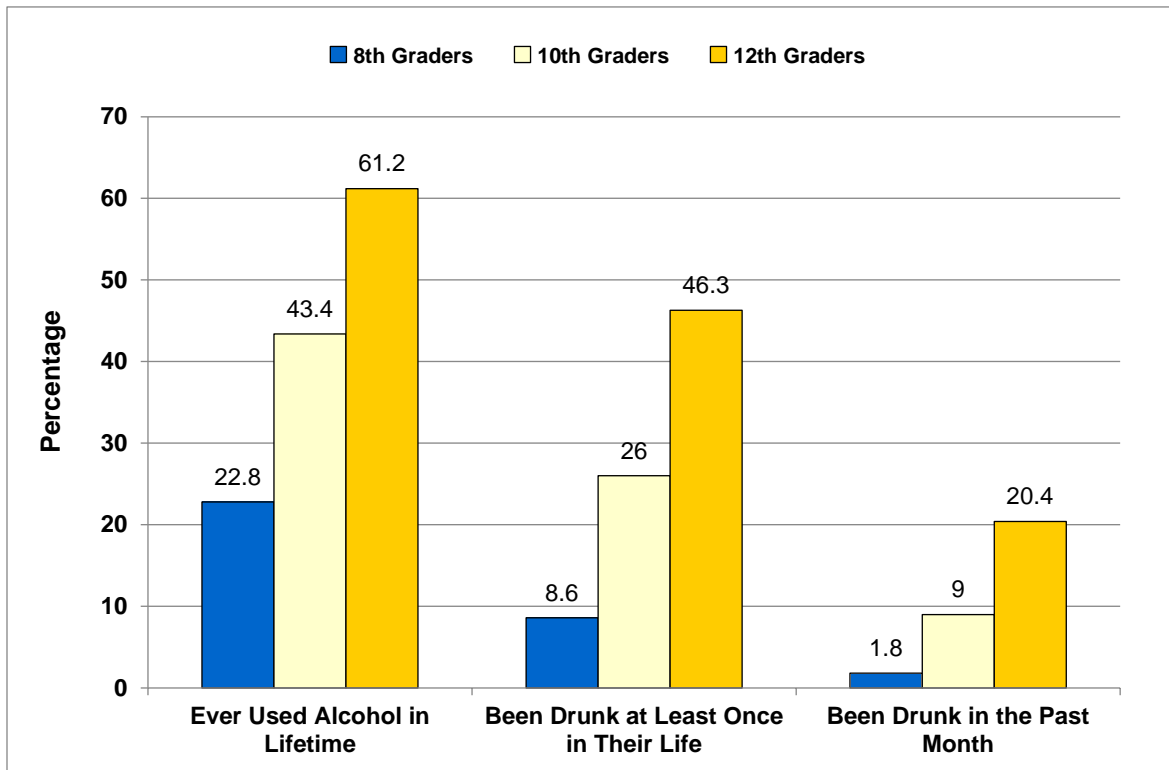
Appendix B further discusses methodological issues in measuring age at first use and other indicators of alcohol initiation.

Alcohol Use and Binge Drinking Increase with Age

Drinking becomes increasingly common through the teenage years (O’Malley, Johnston, & Bachman, 1998). Frequent, heavy use by underage drinkers also increases each year from age 12 to age 20 (Flewelling, Paschall, & Ringwalt, 2004). The 2016 NSDUH reported that underage alcohol consumption in the past month increased with age from 0.8 percent for 12-year-olds to 46.7 percent for 20-year-olds. Past-month alcohol consumption across all age groups peaked at 69.3 percent for 23-year-olds (CBHSQ, 2017a).

Binge drinking also increased steadily between ages 12 and 20 (Exhibit 2.9), peaked at age 21 (46.8 percent), and then decreased beyond young adulthood (data not shown). Approximately 4.5 million (12.1 percent) of 12- to 20-year-olds reported past-month binge alcohol use (CBHSQ, 2017a).

Exhibit 2.10: Lifetime Alcohol Use, Lifetime Use to Intoxication, and Use to Intoxication Within the Past Month among 8th, 10th, and 12th Graders: 2016 MTF Data (Miech et al., 2017)



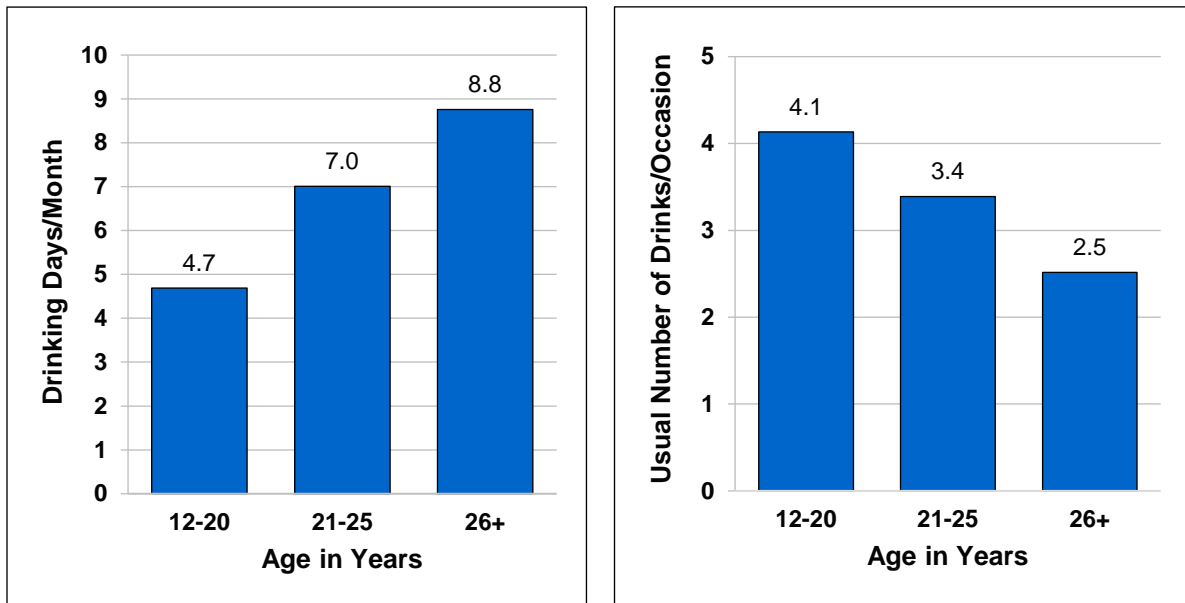
More information about patterns of alcohol use among emerging adults (ages 18 to 24), including binge drinking, alcohol-impaired driving, and alcohol-related deaths and overdose hospitalizations, is provided in a recent article. Hingson, Zha, and Smyth (2017) reported that, among 18- to 20-year-olds in college, binge drinking in the past month declined from 39 percent in 1999 to 30 percent in 2014. Among non-college respondents, it remained steady at 32

percent. Driving under the influence among 18- to 20-year-olds in college declined from 25 percent to 18 percent and from 17 percent to 9 percent among those not in college. The publication reported trends in alcohol-related injury deaths among 18- to 24-year-olds as a group. Those rose from 4,827 in 1998 to 5,512 in 2005, then steadily declined to 4,139 in 2014, a 29 percent decline per 100,000 persons. Specifically, among 18- to 20-year-olds, alcohol-related injury deaths steadily declined from 2,033 in 1998 to 1,338 in 2014, a 34 percent decline per 100,000 persons. Alcohol-related traffic deaths declined from 1,588 in 1998 to 867 in 2014, a 45 percent decline per 100,000 persons. Alcohol poisoning deaths among 18- to 20-year-olds rose from 77 in 1998 to 215 in 2014, a 153 percent increase per 100,000 persons. All other types of alcohol-related non-traffic injury deaths declined among 18- to 20-year-olds from 1998 to 2014 (Hingson et al., 2017).

Youth Binge More and Drink More Than Adults When They Drink

Young drinkers tend to drink less often than adults; however, when they do drink, they drink more intensely. Underage drinkers consume, on average, about four drinks per occasion, about five times a month, whereas adult drinkers 26 and older average two and one half drinks per occasion, about nine times a month (CBHSQ, 2017c; Exhibit 2.11).

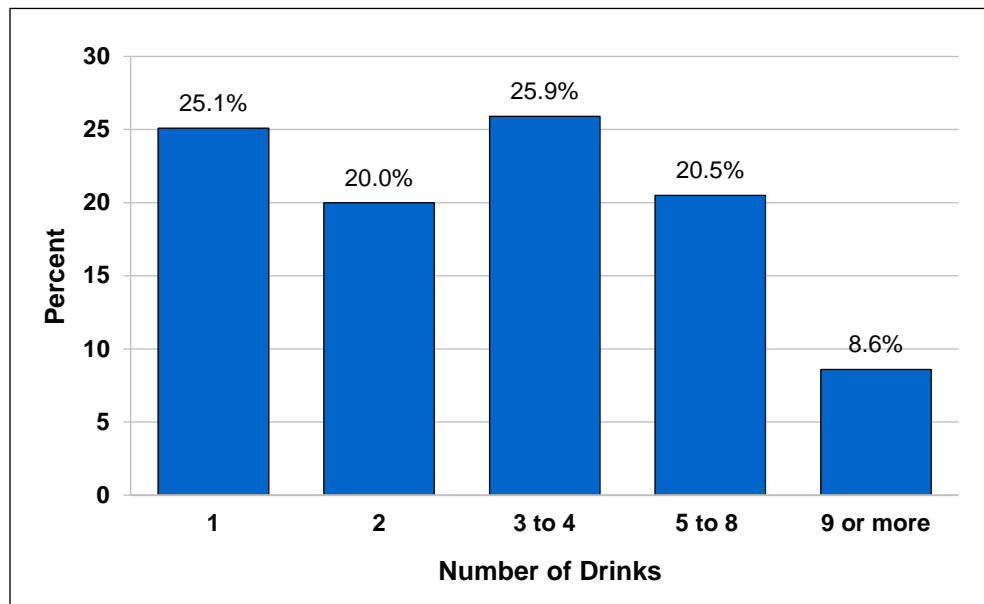
Exhibit 2.11: Number of Drinking Days per Month and Usual Number of Drinks per Occasion for Youth (12–20), Young Adults (21–25), and Adults (≥26): 2016 NSDUH Data (CBHSQ, 2017c)



Youths ages 12 to 15 can, according to a theoretical analysis, reach the same blood alcohol concentration (BAC) after consuming three to four drinks within 2 hours as adults ages 18 and older who consume four to five drinks during this same time period (Donovan, 2009). This suggests that binge and heavy drinking may be even riskier for younger adolescents than for older youth and may occur with greater frequency than is reflected in survey data.

Youths were asked about the number of drinks consumed on their last occasion of alcohol use in the past month as part of the NSDUH survey. Combining the results from the 2015 and 2016 surveys, the majority of underage drinkers report consuming three or more drinks on a single occasion. Nearly 30 percent of underage youth consume five or more drinks, and almost nine percent consume nine or more drinks (Exhibit 2.12; CBHSQ, 2017c)

Exhibit 2.12. Number of Drinks Consumed on a Single Occasion by Underage Youth: 2015, 2016 Combined Data NSDUH (CBHSQ, 2017c)



Particularly worrisome is the high prevalence of binge drinking among underage drinkers, which MTF defines as five or more drinks in a row in the past 2 weeks. In 2016, 3.4 percent of 8th graders, 9.7 percent of 10th graders, and 15.5 percent of 12th graders reported binge drinking (Miech et al., 2017). According to NSDUH data, approximately 4.5 million youths ages 12 to 20 (12.1 percent) engaged in binge alcohol use (defined as four drinks or more on at least 1 day in the past 30 days).

A subset of this group (about 1.1 million or 2.8 percent) exhibited heavy alcohol use, defined as binge drinking 5 or more days a month. In 2016, approximately 3.0 percent of males ages 12 to 20 reported heavy drinking, and 2.6 percent of females (CBHSQ, 2017a).

Faden and Fay (2004) used statistical trend analyses to examine underage drinking data from 1975 to 2002. Among 12th graders, drinking five or more drinks in a row in the past 2 weeks declined 7.6 percent, from 36.8 percent in 1975 to 29.2 percent in 2002. Analysis of the intervening years showed that the prevalence of drinking five or more drinks in a row in the past 2 weeks rose from 1975 to 1980, fell from 1980 to 1987, steeply declined from 1987 to 1993, rose from 1993 to 1997, and declined from 1997 to 2002 (Faden & Fay, 2004). Subsequent statistical trend analyses showed that for 12th graders, the prevalence of drinking five or more drinks in a row in the past 2 weeks continued to fall between 2002 and 2015 and from 2005 to 2015 (Chen et al., 2017).

From 2002 to 2012, there were statistically significant declines in binge drinking for all three grades assessed by the MTF. For 8th, 10th, and 12th graders, 2016 marked the lowest levels for alcohol use and drunkenness ever recorded by the MTF survey (Johnston et al., 2017b).

A troubling subset of binge drinking is “extreme” binge drinking or high-intensity binge drinking, often defined as consumption of 10 or 15 or more drinks on one or more occasions in the previous 2 week period (Miech et al., 2017). MTF has tracked the prevalence of consuming 10 or more and 15 or more drinks in a row since 2005. According to MTF data for 2016, 4.4 percent of 12th graders reported consuming 10 or more drinks in a row, and 2.3 percent reported consuming 15 or more drinks in a row within the previous 2 weeks.

Since 2005, there has been a decline of 6.2 percent for 10 or more drinks in a row and a decline of 3.4 percent for 15 or more drinks in a row, compared with a decline of 11.6 percent for all binge drinking. Rates for 2016 for extreme binge drinking are at the lowest levels recorded by the MTF to date (Miech et al., 2017). However, an in-depth analysis of high-intensity binge drinking (15+ drinks) suggests it may be more entrenched in some adolescent subcultures than lower-intensity binge drinking (5+ drinks; Patrick et al., 2013).²¹ In addition, analysis of high school seniors in the MTF study indicates that the heaviest drinkers and marijuana users are more likely to use both substances simultaneously (Patrick, Veliz, & Terry-McElrath, 2017).

YRBS data from 2015 indicated that 4.3 percent of high schoolers (grades 9 through 12) reported drinking 10 or more drinks within 2 hours at least once in the last month. The percentage for males was 6.1 percent and for females, 2.5 percent (Kann et al., 2016).

Teen Binge Drinking Is Not Limited to the United States

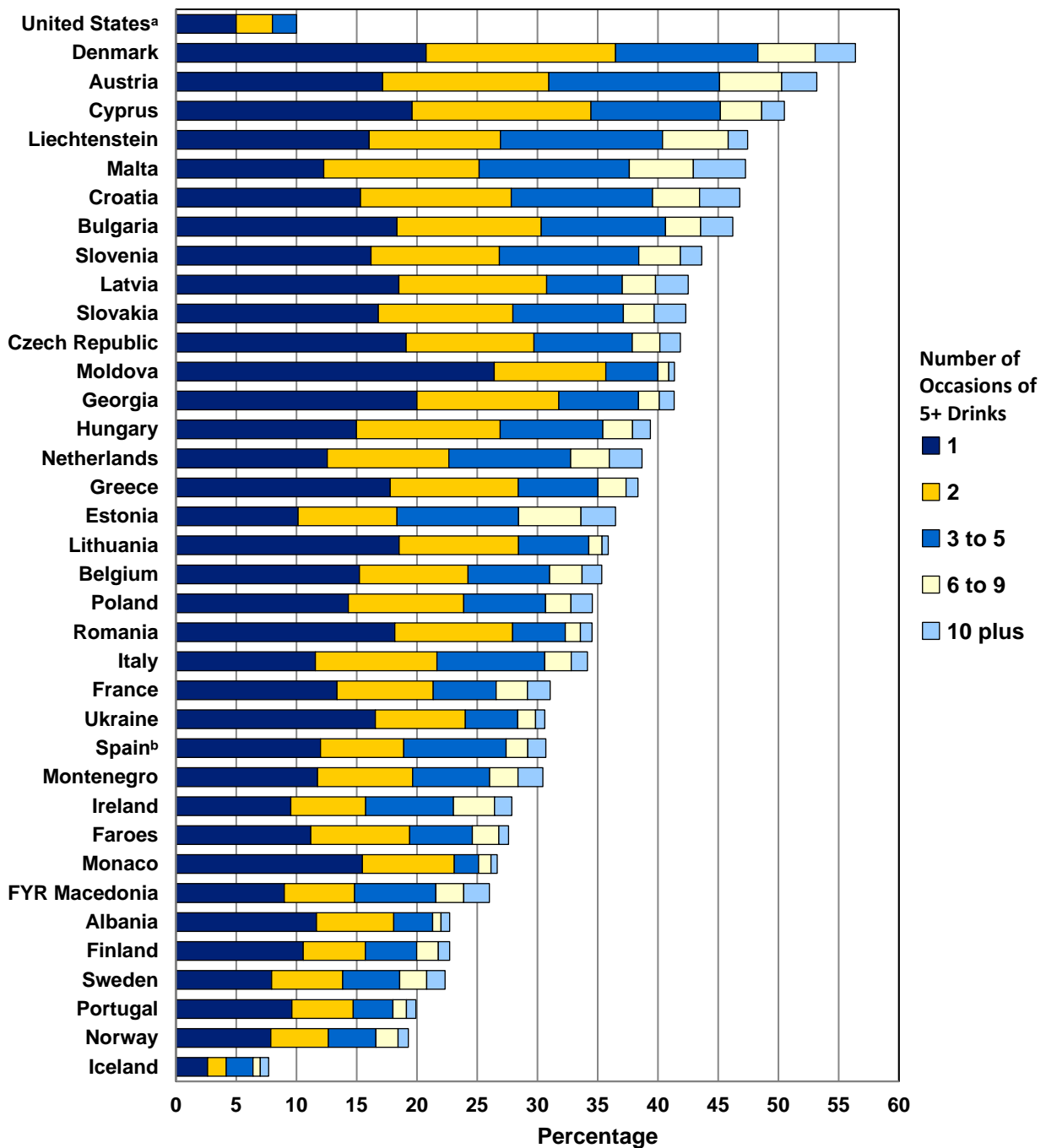
The most recently available data (from 2015), indicate that in many European countries, a significant proportion of young people ages 15 to 16 report binge drinking at rates higher than in the United States (Exhibit 2.13; Kraus et al., 2016). In all countries listed in Exhibit 2.13, the MLDA is lower than in the United States. These data call into question the suggestion that having a lower MLDA results in less problem drinking by adolescents.

Individual, Family, and Contextual Differences in Underage Drinkers

Adolescent alcohol consumption is a complex behavior influenced by multiple factors, including the normal maturational changes that all adolescents experience; the various social and cultural contexts in which adolescents live (e.g., family, peers, school); genetic, psychological, and social factors specific to each adolescent; and environmental factors that influence availability and appeal of alcohol (e.g., enforcement of underage alcohol policies, marketing practices, media exposure).

²¹It should be noted that data estimates for 10+ and 15+ drinks for 12th graders are subject to a larger sampling error due to the limited number of cases in a single questionnaire form; data estimates on 5+ drinks are more stable.

Exhibit 2.13: Percentage of European Students Ages 15–16 Who Reported Drinking 5+ Drinks on a Single Occasion in the Past 30 Days Compared with American 10th Graders: Data from 2015 European School Survey Project on Alcohol and Drugs (Kraus et al., 2016)



Notes: “Think back again over the LAST 30 DAYS. How many times (if any) have you had five or more drinks on one occasion? (A ‘drink’ is [INSERT NATIONALLY RELEVANT EXAMPLES].” *Information on ESPAD data collection is available at www.espad.org*

^a – U.S. data is from MTF

^b – Number of days, not occasions

Biological factors (such as genes and hormones) and environmental factors (such as family, peers, school, and the overall culture) interact and influence the extent to which the adolescent will use alcohol. Internal and external factors influence in reciprocal ways as the adolescent's development unfolds over time. Youths are not all at risk in the same way or to the same degree. The next sections address some of the individual, family, and contextual differences correlated with alcohol consumption.

Genetics

Children whose families include individuals who misuse alcohol are at increased risk for alcohol dependence throughout their lives. Genes account for more than half the risk for alcohol dependence; environmental factors account for the rest. However, no single gene accounts for the majority of risk. Development of a complex behavioral disorder, such as alcohol dependence, likely depends on specific genetic factors interacting with one another, multiple environmental factors, and the interaction between genetic and environmental factors. Research suggests that genes have a stronger influence on the development of problematic use, whereas environment seems to play a greater role in initiation of use (Rhee et al., 2003).²² The current college environment may increase the likelihood that people with genetic predispositions to alcohol use disorders will have those predispositions expressed (Timberlake et al., 2007).

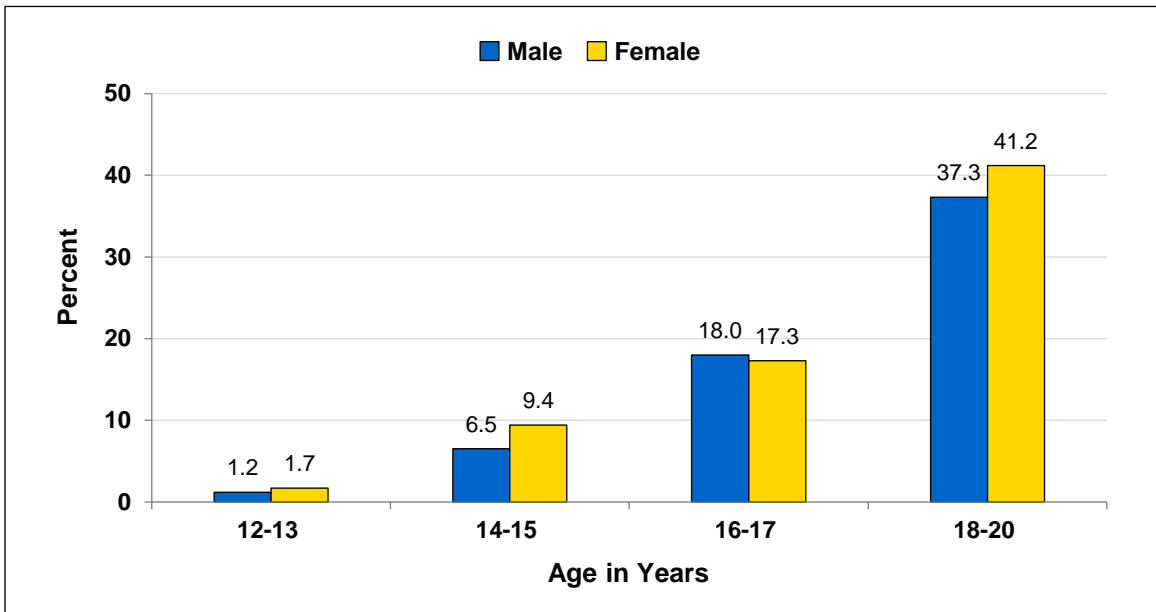
Gender

Although underage males and females tend to start drinking at about the same age and have approximately the same prevalence of any past-month alcohol use, males are more likely to drink with greater frequency and to engage in binge and heavy drinking. According to the 2016 NSDUH data, among underage drinkers, the overall prevalence of past-month alcohol use by females has now exceeded use by males: 18.6 percent of males ages 12 to 20 were current drinkers compared with 20.1 percent of females in that age group (CBHSQ, 2017a). The prevalence was higher for females than males for ages 14 to 15 and 18 to 20; it was similar between girls and boys for ages 12 to 13 and 16 to 17 (Exhibit 2.14).

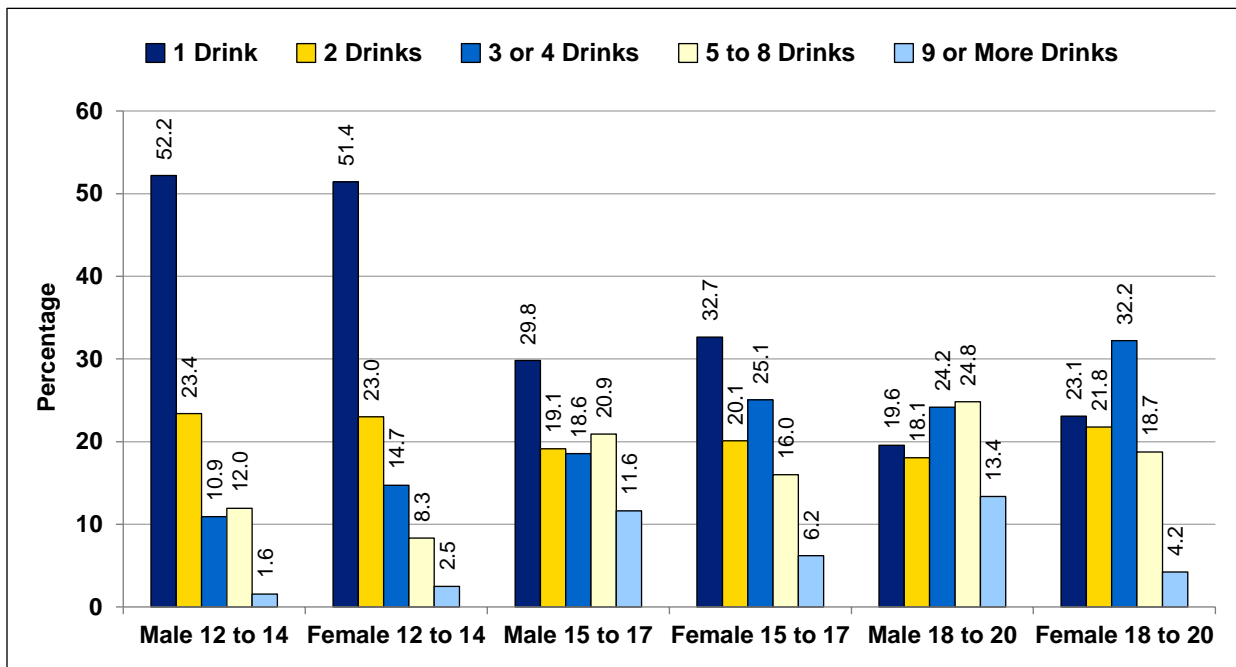
According to 2016 NSDUH data (Exhibit 2.15), the number of drinks consumed on last occasion of alcohol use differs by gender: underage females are more likely to report consuming one to four drinks, and underage males five to nine drinks or more. Among past-month alcohol users ages 12 to 20, the number of drinks reported on the last occasion tends to increase with age (CBHSQ, 2017c).

²²“Problematic use” was defined as having at least one DSM-IV abuse or dependence symptom for alcohol.

**Exhibit 2.14. Past Month Alcohol Use by Age and Gender:
2016 NSDUH Data (CBHSQ, 2017c)**



**Exhibit 2.15: Number of Drinks Consumed on Last Occasion of Alcohol Use
in the Past Month Among Past-Month Alcohol Users Ages 12–20,
by Gender and Age Group: 2015, 2016 Combined Data NSDUH (CBHSQ, 2017c)**



In the 2016 MTF data, females were more likely to report drinking in the lower grades, with 8th grades females at 7.8 percent and males at 6.7 percent; 10th grade females at 20.9 percent and males at 18.6 percent. In the 12th grade, a higher percentage of males (34.5 percent) than females (32 percent) reported drinking.

MTF trend data demonstrate that since 1991, rates of binge drinking have generally been *decreasing* across all grade groups, including college age respondents (ages 19 to 22), with rates for males decreasing faster than for females. The gap between male and female binge rates has been steadily closing since 1991 (Exhibit 2.16; Miech et al., 2017). For example, in 1991, among 12th graders, there was a 16.6 percentage point spread between the rates of males and females; in 2016, it was 3.7 points.

Any discussion of gender differences in underage drinking should include consideration of the biological factors that may underlie or contribute to differences in drinking behavior and their consequences. Differences in body composition (e.g., increased body fat, decreased muscle mass, and subsequently less body water, in females) result in a greater BAC in females compared with males consuming the same amount of alcohol. These physiological differences suggest that females will experience alcohol-related problems at lower doses of alcohol. On the other hand, males tend to have lower reactivity (perceived effects of alcohol as a function of amount consumed), putting them at greater risk for binge and heavy drinking (Schulte, Ramo, & Brown, 2009).

Race and Ethnicity

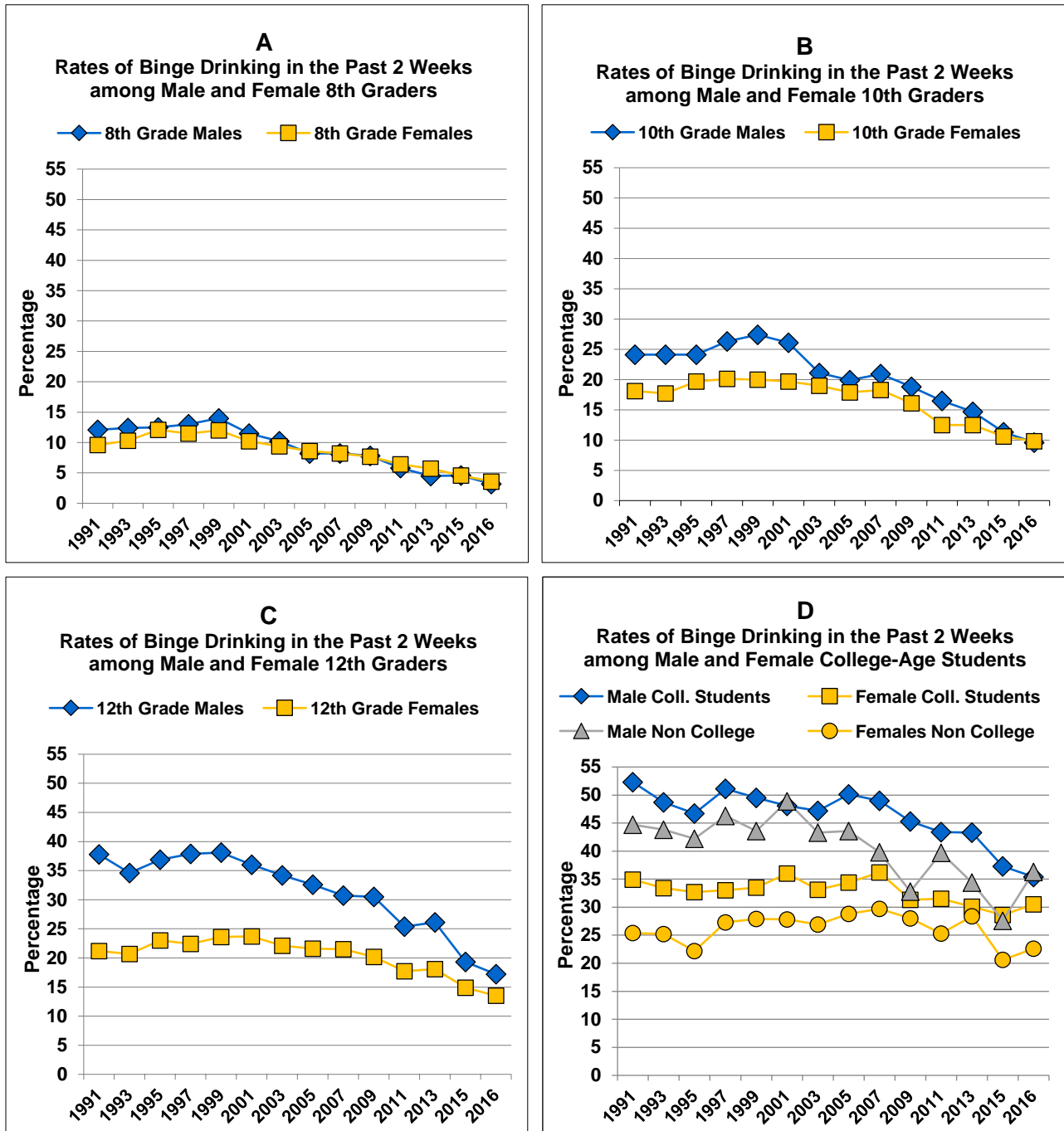
According to 2002–2016 NSDUH data,²³ Whites ages 12 to 20 were more likely to report current alcohol use than any other race or ethnic group. The detailed prevalence of past-month alcohol use by gender and race/ethnicity was White males (29.9 percent), White females (28.9 percent), American Indian or Alaska Native females (24.9 percent), Native Hawaiian or Other Pacific Islander females (24.8 percent), Native Hawaiian or Other Pacific Islander males (24.6 percent), Hispanic or Latino males (24.0 percent), females of multiple races (23.8 percent), males of multiple races (22.8 percent), Hispanic or Latina females (21.7 percent), American Indian or Alaska Native males (21.6 percent), Black or African American males (18.5 percent), Black or African American females (17.8 percent), Asian males (16.4 percent), and Asian females (15.2 percent).

NSDUH data (2015–2016) on binge alcohol use for males and females²⁴ ages 12 to 20 indicate that an estimated 15.2 percent of White females and 15.0 percent of White males reported having five or more drinks on the same occasion on at least 1 day within the past 30 days. The remaining race/ethnicity and gender group rates in descending order include females of multiple races (14.3 percent), Hispanic females (11.6 percent), Hispanic males (11.5 percent), American Indian or Alaska Native females (11.5 percent), males of multiple races (10.5 percent), Black females (8.5 percent), Asian males (8.2 percent), Asian females (7.9 percent), Native Hawaiian or Other Pacific Islander males (7.9 percent), American Indian or Alaska Native males (7.0 percent), and Black males (7.0 percent; Exhibit 2.17; CBHSQ, 2017c).

²³To provide sample sizes sufficient to produce reliable estimates for each race/ethnic group, multiyear estimates of past-month alcohol use and binge drinking by race/ethnicity were calculated.

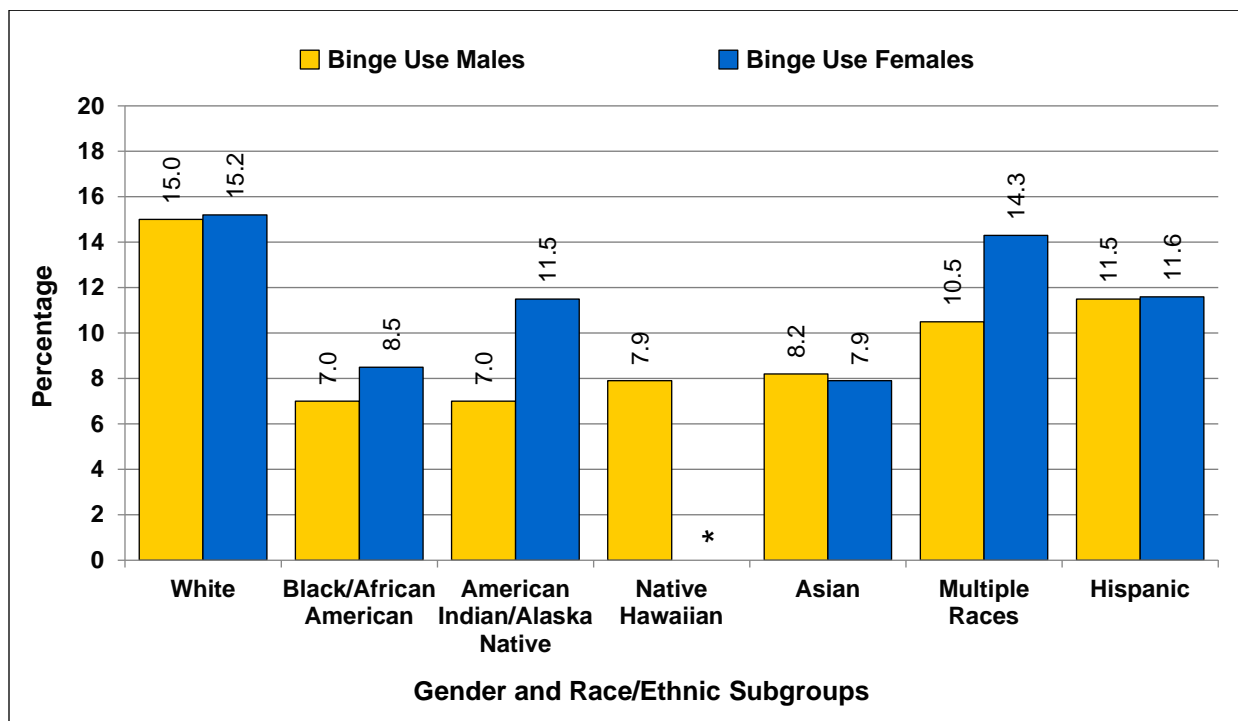
²⁴Data for Native Hawaiian or other Pacific Islander females are suppressed due to low numbers.

Exhibit 2.16: Rates of Binge Drinking in the Past 2 Weeks Among Male and Female 8th, 10th, and 12th Graders and College/College-Age Students:²⁵ 1991–2016 MTF Data
 (Johnston, O’Malley, Miech, Bachman, & Schulenberg, 2017a; Miech et al., 2017)



²⁵MTF Volume 2 defines college students as follow-up respondents (i.e., high school graduates) 1 to 4 years past high school who report that they were taking courses as full-time students in a 2- or 4-year undergraduate college at the beginning of March in the year in question. Non-college students are those 1 to 4 years past high school, not enrolled in college. Note that some of these respondents may be age 21 or over.

**Exhibit 2.17: Binge Drinking in the Past Month
Among People Ages 12–20 by Race/Ethnicity and Gender,
Annual Averages: 2015–2016 Combined Data NSDUH (CBHSQ, 2017c)**



Ethnic and racial differences must be viewed with some caution. As Caetano, Clark, and Tam (1998) noted, there are important differences in alcohol use and related problems among ethnic and racial subgroups of Blacks, Hispanics, Asians, and Native Americans/Alaska Natives. Moreover, the patterns of consumption for any group or subgroup represent a complex interaction of psychological, historical, cultural, and social factors inadequately captured by a limited set of labels. A recent study examined the effectiveness of prevention strategies in communities of racial minorities, specifically for youth in the Cherokee Nation in Oklahoma (Komro, et al., 2017). The study was one of the largest alcohol prevention trials ever conducted with an American Indian population, and the first to demonstrate the effectiveness of screening and brief counseling intervention in significantly reducing youth alcohol use at a community level. More such research could help to identify successful interventions for preventing alcohol use among racial and ethnic minorities.

Parental Attitudes and Behaviors

Parental monitoring and parental attitudes and perceptions about drinking (such as seeing underage drinking as a rite of passage) have been shown to be very important influences on underage drinking. Studies have found that some parenting practices have proven beneficial in reducing adolescent alcohol use (Beck, Boyle, & Boekeloo, 2003; Ennett, Bauman, Foshee, Pemberton, & Hicks, 2001; Resnick et al., 1997; Watkins, Howard-Barr, Moore, & Werch, 2006). Parental monitoring, communication, and emotional support have a positive effect on adolescent alcohol use and are predictive of reduced adolescent alcohol problems (Ennett et al., 2001; Wood, Read, Mitchell, & Brand, 2004). At least one study suggests that parental

disapproval of any alcohol use during high school is correlated with reduced alcohol use in college (Abar, Abar, & Turrisi, 2009).

Some parents believe that providing alcohol to their children at home under supervision will lead to more moderate drinking practices. However, a meta-analysis of 22 studies found that parental provision of alcohol was associated with increased adolescent alcohol use, heavy episodic drinking, and higher rates of alcohol problems (Kaynak, Winters, Cacciola, Kirby, & Arria, 2014). The data were equivocal that parental provision is protective in the face of other risks.

Youth drinking is correlated with adult drinking behaviors.

Combined Factors

Generational transmission has been widely hypothesized as one factor shaping the alcohol consumption patterns of young people. Whether through genetics, social learning, or cultural values and community norms, researchers have repeatedly found a correlation between youth drinking behaviors and those of their adult relatives and other community adults at the household and community levels.

Nelson, Naimi, Brewer, & Nelson (2009) demonstrated this relationship at the population level as well, using YRBS state-based estimates. State estimates of youth and adult current drinking and binge drinking from 1993 through 2005 were significantly correlated when pooled across years. Analyzing YRBS data from 1999 to 2009, Xuan and colleagues (2013) found a positive correlation between state-level adult binge drinking and youth binge drinking. A 5 percent increase in binge-drinking prevalence among adults was associated with a 12 percent relative increase in the odds of alcohol use among youth.

Paschall, Lipperman-Kreda, & Grube (2014) examined relationships between characteristics of the local alcohol environment and adolescent alcohol use and beliefs in 50 California cities. A greater increase in past-year alcohol use and heavy drinking over a 3-year period was observed among adolescents living in cities with higher levels of adult drinking (measured at baseline), compared with adolescents not living in such cities.

Stronger state alcohol policies directed to the general population (e.g., alcohol taxes and regulations on alcohol outlet density) are independently associated with less youth drinking, and the effect of these policies on youth drinking is mediated, in part, through their effects on adults (Xuan et al., 2015). Similarly, a study found that while more than one-fourth of traffic crash deaths among young people are alcohol-related, stronger alcohol policy environments are associated with lower mortality rates from alcohol-related motor vehicle crashes (Hadland et al., 2017).

Other Substance Use

While underage youth use a wide variety of substances, marijuana is the illicit substance²⁶ most often consumed by youths. This has been true since the very first MTF assessments (Johnston et al., 2017b). Twenty-five percent of 12th-grade males and 19.7 percent of 12th-grade females

²⁶Marijuana is classified as an illicit drug at the federal level, although a number of states have legalized consumption for adults.

report use of marijuana in the past 30 days in the MTF survey. An analysis of multi-substance use patterns among youth ages 12 to 17 in NSDUH data (2002 to 2014) revealed that 16.1 percent used multiple substances, and that the use of more than one substance is associated with an increased likelihood of a substance use disorder. Use of multiple substances has also been linked to heavier consumption patterns in adulthood compared with single or dual substance use (Han, Compton, Blanco, & DuPont, 2017).

NSDUH data indicate that for underage drinkers ages 12 to 17, higher levels of alcohol use are associated with higher levels of marijuana use. Reports of marijuana use among heavy drinkers is 60.4 percent; 48 percent among binge drinkers; and 24.4 percent of occasional alcohol users. Only 3.3 percent of those who do not consume alcohol reported marijuana use (CBHSQ, 2017a).

The simultaneous use of substances while driving has significant public safety implications; impairment increases as the number of substances increases. An analysis of NSDUH data related to driving under the influence noted that 4.7 percent of males and 3.2 percent of females ages 16 to 20 reported driving under the simultaneous influence of alcohol and illicit drugs in 2014. Although the trend in impaired driving has decreased since 2002, it remains a concern (Lipari, Hughes, & Bose, 2016). Another concern is the potential combined effect of alcohol with opioids. A recent study found that respiratory depression caused by opioids, which can be fatal, is exacerbated by the effects of alcohol in young adults (Schrier et al., 2017).

Number of People Present at a Drinking Event

Underage alcohol use is strongly affected by the context in which drinking occurs. Of particular concern is underage drinking at large parties. Most (75.2 percent) people ages 12 to 20 who had consumed alcohol in the past month were with two or more people the last time they drank, 17.9 percent were with one other person the last time they drank, and 6.9 percent were alone (CBHSQ, 2017c).

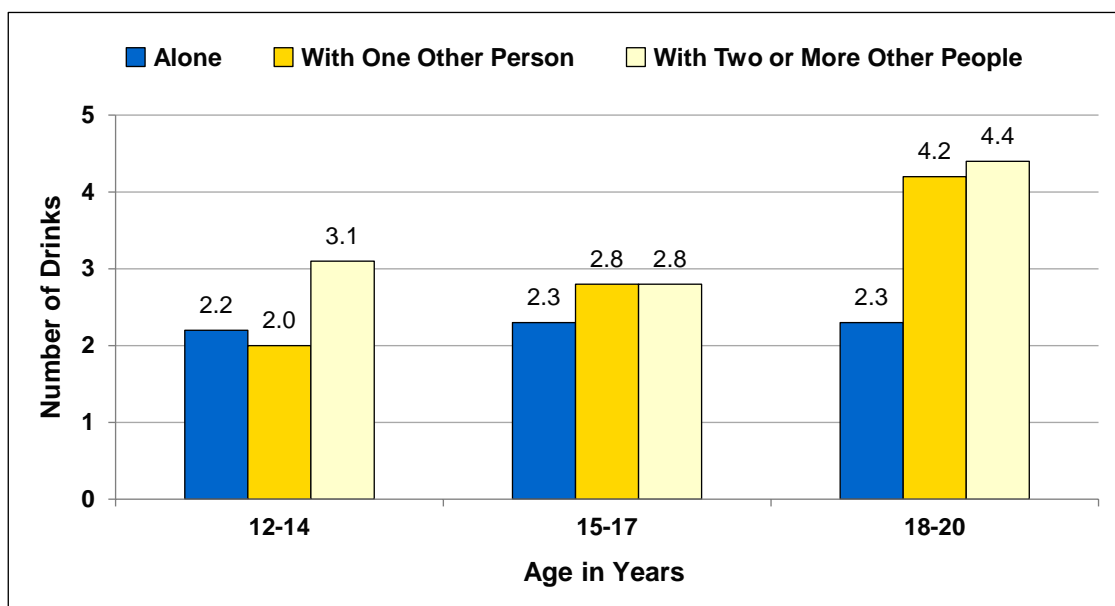
Most male and female underage drinkers were with two or more other people on their last drinking occasion (75.1 percent and 75.4 percent, respectively). However, male drinkers were more likely to drink alone (8.7 percent) than were female drinkers (5.1 percent).

Underage people who drank with two or more other people on the last occasion in the past month had more drinks on the last occasion on average (4.3 drinks) than did those who drank with one other person (2.8 drinks) or drank alone (2.7 drinks; Pemberton, Colliver, Robbins, & Gforerer, 2008; CBHSQ, 2017c).

Males consumed more drinks than did females for two of the three situations (drinking with one other person or drinking with two or more people). For example, when the last drinking occasion was with two or more other people, males averaged 5.0 drinks, whereas females averaged 3.7 drinks (CBHSQ, 2017c).²⁷ Number of drinks consumed by social context also varies by age group, as shown in Exhibit 2.18.

²⁷The discussion in this section combines data for 2015 and 2016.

Exhibit 2.18: Average Number of Drinks Consumed on Last Occasion of Alcohol Use in the Past Month Among Past-Month Alcohol Users Ages 12–20, by Social Context and Age Group: Annual Averages Based on 2015-2016 NSDUH Data (CBHSQ, 2017c)



Location of Alcohol Use

Most underage drinkers reported last using alcohol in someone else’s home (49.2 percent, averaging 4.4 drinks) or in their own home (35.9 percent, averaging 3.3 drinks).²⁸ The next most popular drinking locations were at a restaurant, bar, or club (8.0 percent, averaging 4.4 drinks); at a park, on a beach, or in a parking lot (5.0 percent, averaging 4.8 drinks); or in a car or other vehicle (4.0 percent, averaging 4.8 drinks).

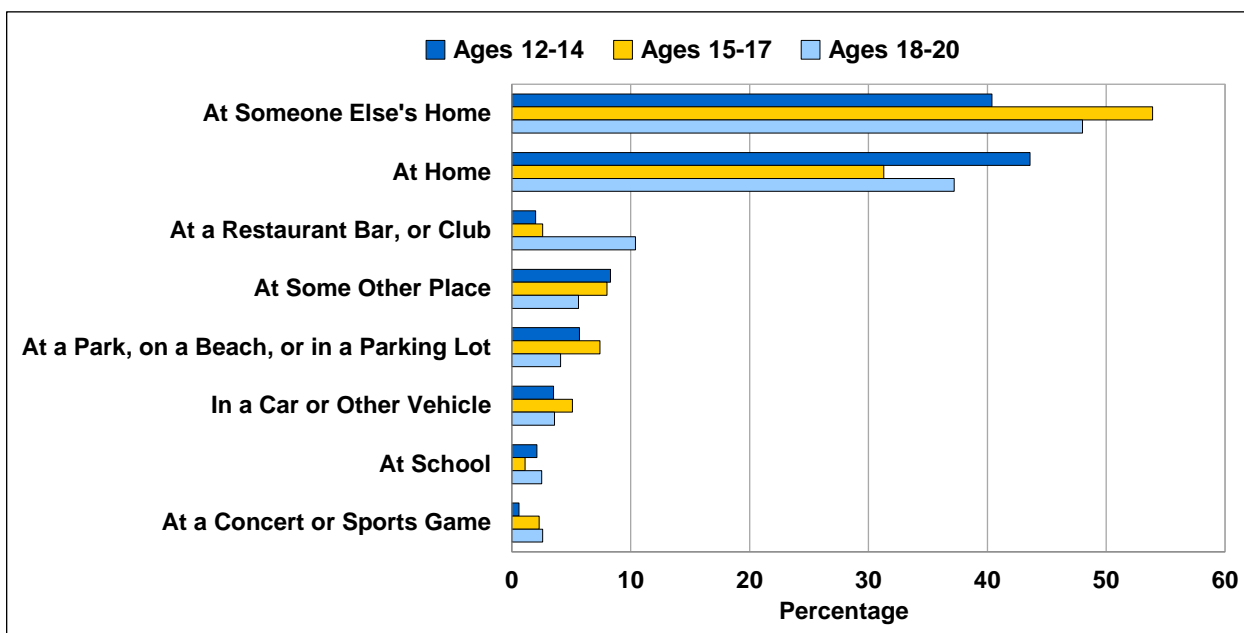
Current drinkers ages 12 to 20 who last drank at a concert or sports game (2.4 percent of all underage drinkers) consumed an average of 5.9 drinks (CBHSQ, 2016a). Thus, most young people drink in social contexts that appear to promote heavy consumption and where people other than the drinker may be harmed by the drinker’s behavior.

Drinking location varies by age. For example, drinkers ages 12 to 14 were more likely to have been in their own homes the last time they drank (43.6 percent) than were 15- to 17-year-olds (31.3 percent) or 18- to 20-year-olds (37.2 percent). By contrast, 12- to 14-year-olds were less likely to report being in someone else’s home the last time they drank (40.4 percent) than the 15- to 17-year-olds (53.9 percent).

Drinkers ages 18 to 20 were more likely than those in younger age groups to have been in a restaurant, bar, or club on their last drinking occasion (10.4 percent for those ages 18 to 20 versus 2.0 percent for those ages 12 to 14, and 2.6 percent for those ages 15 to 17; Exhibit 2.19). Female current alcohol users ages 12 to 20 were more likely than males to have had their last drink at a restaurant, bar, or club (10.0 percent versus 6.1 percent; CBHSQ, 2016a).

²⁸For the analyses in this section, 2015 and 2016 NSDUH data are combined to provide sufficient sample sizes.

Exhibit 2.19: Drinking Location of Last Alcohol Use Among Past-Month Alcohol Users Ages 12–20 by Age Group: Annual Averages Based on 2015–2016 NSDUH Data (CBHSQ, 2017c)



Underage Drinking Parties

Data cited above suggest that underage drinking occurs primarily in a social context (with three or more drinkers) at private residences. Such drinking occasions include parties at which large numbers of youth are present. Drinking parties attract those 21 and over as well as significant numbers of underage drinkers (Wells, Graham, Speechley, & Koval, 2005). For this reason, parties are a common environment in which young drinkers are introduced to heavy drinking by older and more experienced drinkers (Wagoner et al., 2012).

Parties are settings for binge drinking and other patterns of consumption leading to high BACs (Clapp, Min, Shillington, Reed, & Ketchie Croff, 2008; Clapp, Reed, Holmes, Lange, & Voas, 2006; Demers et al., 2002; Paschall & Saltz, 2007; Usdan, Moore, Schumacher, & Talbott, 2005; Wagoner et al., 2012). Factors that increase the risk of high BACs include the size of the party and the number of people drinking (Wagoner et al., 2012), drinking games (Clapp et al., 2006, 2008), “bring your own booze” policies (Clapp et al., 2006), parties sponsored by fraternities (Paschall & Saltz, 2007), and parties where illicit drugs are available (Clapp et al., 2006).

Demers and colleagues (2002) suggested that large parties have a greater facilitative effect on men’s drinking than on women’s. Drinking parties are also often settings for aggression, including serious arguments, pushing, fights, and sexual assault (Wagoner et al., 2012). Because large numbers of youth are drinking outside their own homes, drinking parties may significantly increase the risk of driving after drinking (Gonzales, Largo, Miller, Kanny, & Brewer, 2015).

Drinking parties pose serious problems for law enforcement officers. These include breaking up parties without allowing drinkers to flee to their cars (Pacific Institute for Research and

Evaluation [PIRE], 2000), processing large numbers of underage offenders (PIRE, 2000), and identifying the individuals who have furnished alcohol to minors (Wagoner et al., 2012).

Paschall, Lipperman-Kreda, Grube, & Thomas (2014) rated social host policies, which impose liability on adults who host underage drinking parties, for comprehensiveness and stringency. They found a small but significant negative relationship between the strength of the policies and underage drinking at parties among past-year drinkers. For information on party-related enforcement practices and relevant state legal policies, see the State Performance and Best Practices.

College Environment

In its landmark 2002 report, *A Call to Action: Changing the Culture of Drinking at U.S. Colleges* (NIAAA Call to Action), NIAAA noted the following:

The tradition of drinking has developed into a kind of culture—beliefs and customs—entrenched in every level of college students’ environments. Customs handed down through generations of college drinkers reinforce students’ expectation that alcohol is a necessary ingredient for social success. These beliefs and the expectations they engender exert a powerful influence over students’ behavior toward alcohol.²⁹

Campus drinking culture persists. Although college-bound 12th-graders are consistently less likely than non-college-bound counterparts to report heavy drinking, individuals in college³⁰ report higher rates of binge drinking than do same-age youth who are not attending college (Johnston et al., 2017a; Exhibit 2.20).

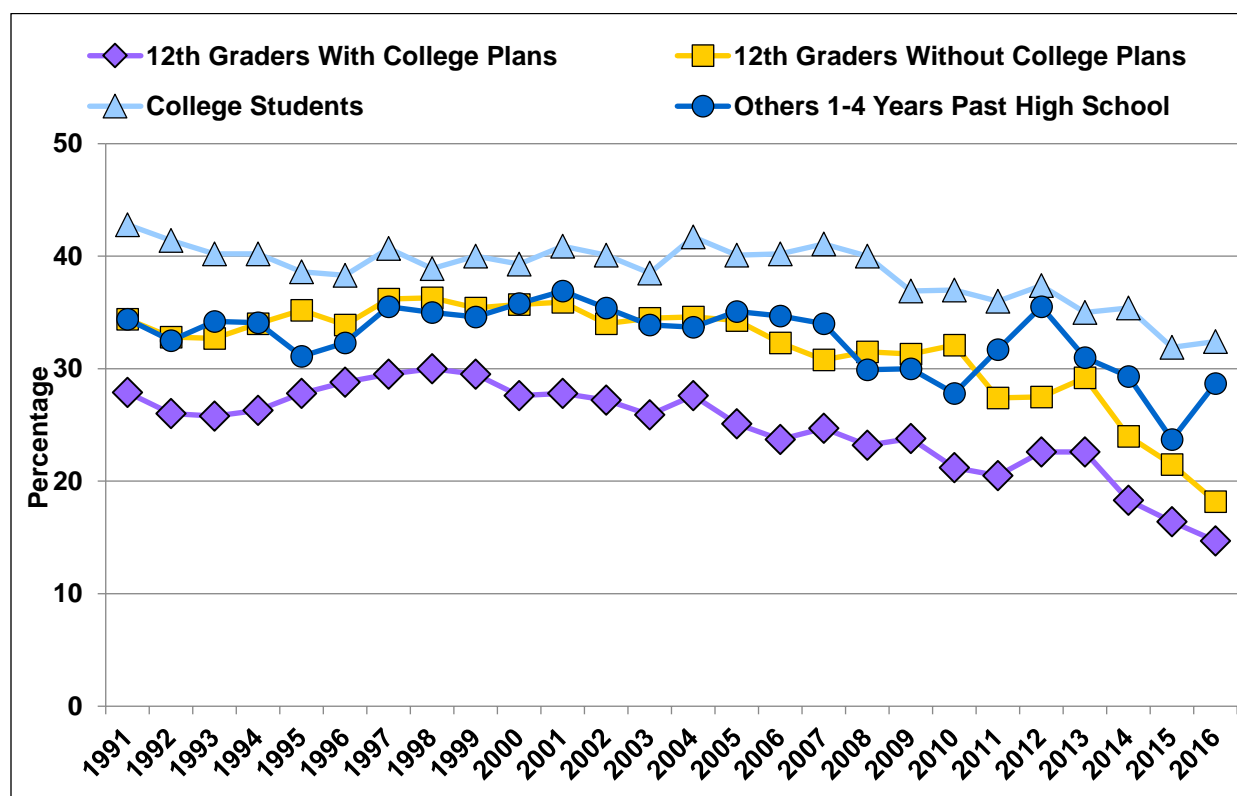
Colleges and universities vary widely in their student drinking and binge drinking rates; however, overall rates of college student drinking and binge drinking exceed those of same-age peers who do not attend college, although data show an increased rate of binge drinking in 2016 for those not in college. Of college students, 63.2 percent drink currently, compared with 59.2 percent of those of the same age and not in college; 40.8 percent report having been drunk in the past month, compared with 30.4 percent of their non-college peers (Schulenberg et al., 2017).

These findings suggest that college environments influence drinking behaviors (Hingson, Heeren, Levenson et al., 2002; Kuo, Wechsler, Greenberg, & Lee, 2003; LaBrie, Grant, & Hummer, 2011). However, as Carter and colleagues noted, college attendance is only one factor potentially influencing alcohol consumption during this period of emerging adulthood (Carter, Brandon, & Goldman, 2010).

²⁹For many students, alcohol use is not a tradition. Students who drink the least attend 2-year institutions, religious schools, commuter schools, and historically Black colleges and universities (Meilman, Leichliter, & Presley, 1999; Meilman, Presley, & Cashin, 1995; Meilman, Presley, & Lysterla, 1994).

³⁰College students are defined as those follow-up MTF respondents 1 to 4 years past high school who report that they were taking courses as full-time students in a 2- or 4-year undergraduate college at the beginning of March of the year in question. Non-college same-age peers are follow-up MTF respondents 1 to 4 years past high school who do not report taking courses. Both groups include a percentage of individuals who have reached the legal drinking age. Underage college students drink about 48 percent of the alcohol consumed by students at 4-year colleges (Wechsler, Lee, Nelson, & Kuo, 2002).

Exhibit 2.20: Prevalence of Binge Drinking in the Past 2 Weeks by 12th Graders With and Without College Plans, College Students, and Others 1 to 4 Years Past High School: 1991–2016 MTF Data (Johnston et al., 2017a)



Binge-drinking rates among college students have declined from 40.2 percent in 1993 to a current rate of 32.4 percent; however, drinking patterns remain a concern. Some college students far exceed the binge criterion of five drinks per occasion (Wechsler, Molnar, Davenport, & Baer, 1999; Wechsler & Nelson, 2008). According to 2012 through 2016 MTF data, 10.1 percent of college students (16.5 percent of males, 6.2 percent of females) reported consuming 10 or more drinks in a row in the past 2 weeks. In comparison, for non-college peers, 10.5 percent (17.6 percent of males and 4.7 percent of females) reported consumption of 10 or more drinks (Schulenberg et al., 2017).

Availability and Access to Alcohol

Ease of concealment, palatability, alcohol content, marketing strategies, media portrayals, parent modeling, and economic and physical availability may all contribute to the quantity of and settings for consumption. Beverage preferences may also affect the policies and enforcement strategies most effective in reducing underage drinking (Centers for Disease Control and Prevention [CDC], 2007).

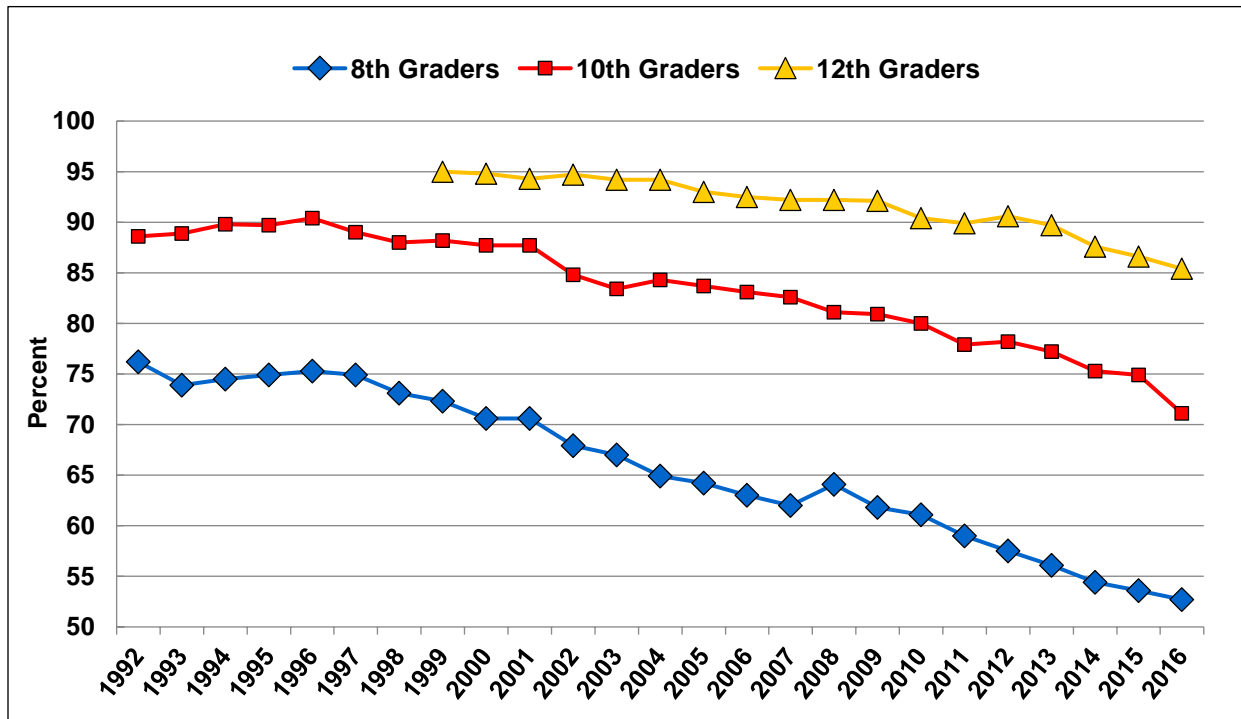
Alcohol is Perceived as Readily Available by the Underage Population

The relationship among alcohol availability, levels of consumption, and occurrence of alcohol-related problems is well documented in the *Surgeon General's (OSG's) Call to Action* (HHS, 2007). As shown in Exhibit 2.21, most teens see alcohol as readily available. In 2016, 52.7

percent of 8th graders, 71.1 percent of 10th graders, and 85.4 percent of 12th graders said alcohol would be “fairly easy” or “very easy” to get (Miech et al., 2017). Perceived availability, however, has declined (Exhibit 2.21).

These reductions in perceived availability may be attributable in part to the policies and enforcement practices described in the State Performance and Best Practices. Continued attention to these policies and practices may lead to further reductions.

Exhibit 2.21: Changes Over Time in Percentage of 8th, 10th, and 12th Graders Who Say Alcohol Is Fairly Easy or Very Easy to Get: 2016 MTF Data (Miech et al., 2017)



Alcohol Is Available From a Variety of Sources

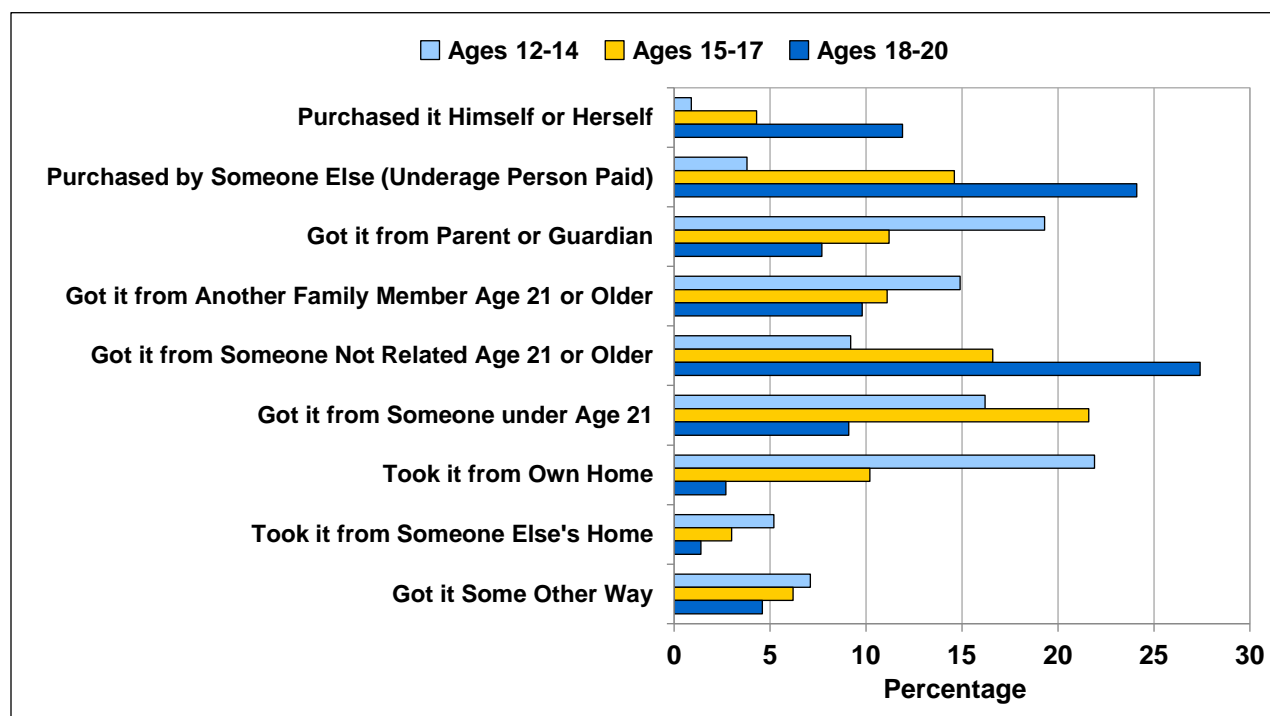
NSDUH divides sources of last alcohol use into two categories: the underage drinker paid (he or she purchased it or gave someone else money to do so) or did not pay (he or she received it for free from someone or took it from his or her own home or someone else’s home). Combined data from 2015 and 2016 show that among all underage current drinkers, 30.5 percent paid for alcohol the last time they drank, either purchasing the alcohol themselves or giving money to someone else to do so.

Those who paid for alcohol themselves consumed more drinks on their last drinking occasion (average of 5.1 drinks) than those who did not (average of 3.4 drinks). This difference is at least partially explained by the fact that older underage drinkers are more likely to pay for alcohol and to drink more (CBHSQ, 2016).

Among all underage drinkers, 69.5 percent did not pay for the alcohol the last time they drank. A total of 23.9 percent were given alcohol for free by an unrelated person age 21 or older, 9.1 percent got the alcohol from a parent or guardian, 10.3 percent got it from another family member age 21 or older, and 5.4 percent took it from their own homes (CBHSQ, 2017c).

The most common sources of alcohol varied substantially by age as shown in Exhibit 2.22. For youths ages 12 to 14, the most common sources were receiving it free from another family member age 21 or older (14.9 percent), or from a parent or guardian (19.3 percent), or taking it from their own home (21.9 percent). For youths ages 15 to 17, the most common sources were receiving it free from someone under age 21 (21.6 percent) or from an unrelated person age 21 or older (16.6 percent) or giving somebody else money to purchase the alcohol (14.6 percent; CBHSQ, 2017c).

Exhibit 2.22: Source of Last Alcohol Used Among Past-Month Alcohol Users Ages 12–20, by Age Group: 2015–2016 Combined Data NSDUH (CBHSQ, 2017c)



Among 18- to 20-year-olds, most current drinkers either received alcohol for free from an unrelated person age 21 or older (27.4 percent) or gave someone else money to purchase the alcohol (24.1 percent). Older underage people were more likely to have paid for alcohol themselves (either purchasing it themselves or paying someone else to purchase it) on their last drinking occasion: 36.2 percent of 18- to 20-year-olds did so, compared with 19.1 percent of 15- to 17-year-olds and 5.5 percent of 12- to 14-year-olds. Male underage drinkers were more likely to have paid for alcohol themselves on their last drinking occasion (35.8 percent) than their female counterparts (25.2 percent; CBHSQ, 2017c).³¹

Enforcement of furnishing laws is one key to reducing youth access to alcohol. A 2013 multi-community study found significant associations between the level of underage drinking law enforcement in the intervention communities and reductions in both 30-day use of alcohol and binge drinking (Flewelling et al., 2013).

³¹More detailed information can be found in the special report by Pemberton, Colliver, Robbins, and Gforerer (2008).

Alcohol Use by Beverage Type

Different alcohol beverage types are likely associated with different patterns of underage consumption. Tracking young people's beverage preferences is thus an important aspect of prevention policy. Since 1988, MTF data indicate beverage choices have shifted markedly for both male and female 12th graders (Exhibit 2.23). In 1988, beer was the beverage of choice for both sexes by a large margin. However, by 2011, for males, consumption of beer had declined and consumption of distilled spirits had increased, such that the two were equally reported that year. In subsequent years, choice of beer slightly exceeded choice of spirits. For females, a similar change occurred earlier (in 2005); females continue to choose distilled spirits over beer by a slight margin.

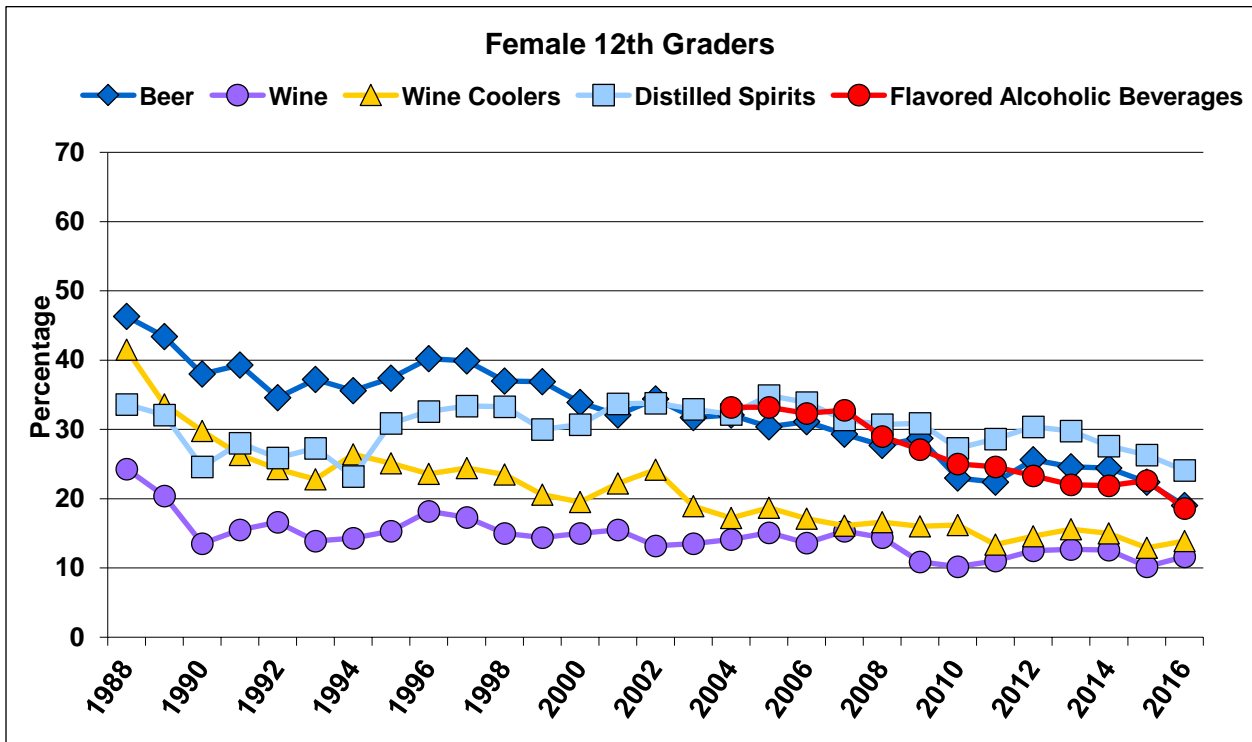
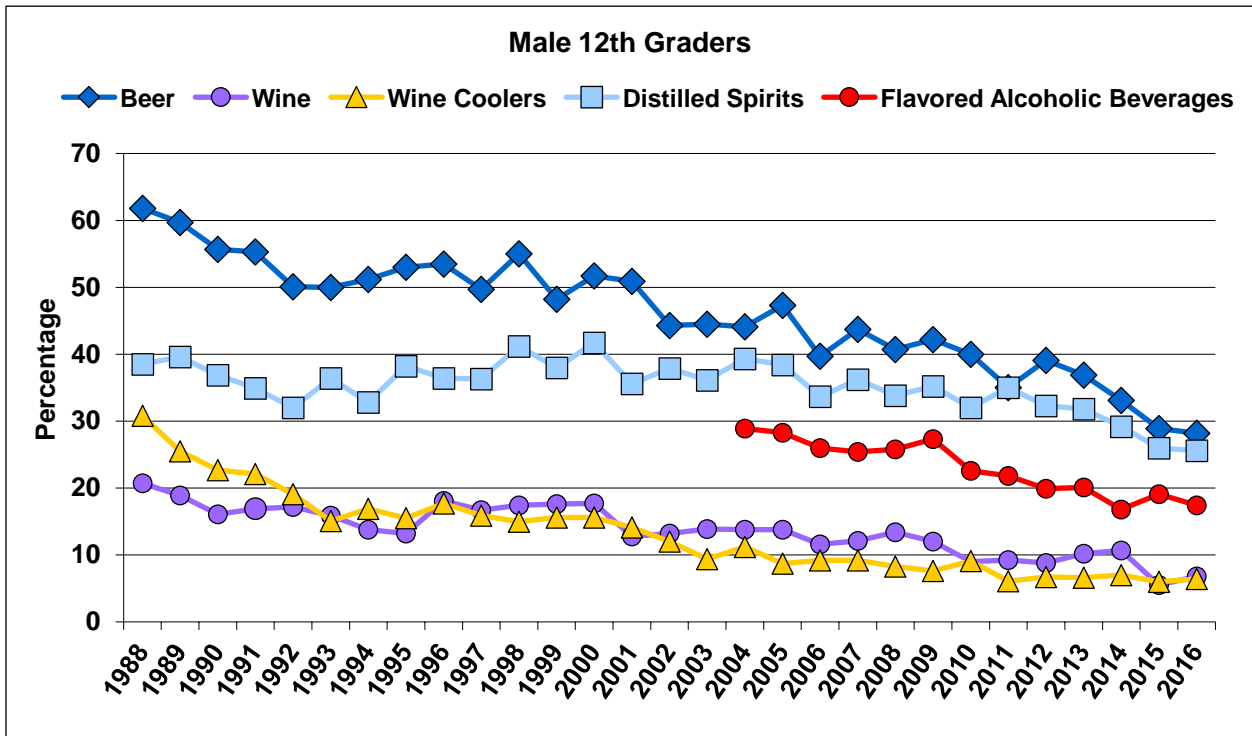
In 2004 (the first year that flavored alcoholic beverages were included in the survey), female choice of beer, distilled spirits, and flavored alcoholic beverages was about the same. Female consumption of flavored alcoholic beverages has declined steadily since then. Male consumption of flavored alcoholic beverages, which has not been as high as female consumption, also declined during this period.

Data from eight states (a subset of YRBS data) indicate that, among students in 9th to 12th grades who reported binge drinking, distilled spirits were the most prevalent beverage type (Siegel, Naimi, Cremeens, & Nelson, 2011). In a study of a nationally representative sample of youth ages 13 to 20 who had consumed at least one alcoholic drink in the past 30 days, distilled spirits accounted for 43.8 percent of binge-drinking prevalence, the highest percentage for any beverage type (Naimi, Siegel, DeJong, O'Doherty, & Jernigan, 2015).

Several studies (Albers et al., 2015; Fortunato et al., 2014; Naimi et al., 2015; Siegel et al., 2013) focused on underage drinkers' brand preferences, consistently finding that underage drinkers prefer a limited number of brands. Naimi and colleagues (2015), using a nationally representative Internet panel, found that the 25 brands consumed most frequently during binge drinking account for 46.2 percent of all binge drinking reports. Siegel and colleagues (2013) found that the top 25 brands account for about half of all alcohol consumption by volume.

Although high-potency grain alcohol products have a reported market share among youth of 0.7 percent, their retail availability is of considerable concern (Siegel et al., 2013). These products are cheap, and given that they are twice as strong (151 to 190 proof) as standard spirits products (80 to 101 proof), underage consumers may find it very difficult to gauge their alcohol consumption, increasing the likelihood of injury. Epidemiologic data on the use of high-potency

Exhibit 2.23: Trends in the Percentage of Male and Female 12th Graders Using Specific Types of Alcoholic Beverages in the Past 30 Days: 1988–2016 MTF Data (Johnston et al., 2017a)



grain alcohol is currently limited. Siegel and colleagues (2013), utilizing an Internet panel of youth ages 13 to 20, found that 5.8 percent reported consuming high-alcohol-content grain alcoholic beverages in the past 30 days. Naimi and colleagues (2015) reported that when underage drinkers consume grain alcohol, they are significantly more likely to binge.

Given the dangers of high-potency grain alcohol, some states have banned its sale.³² Improved data on these products, including underage use and related injury, would help policymakers evaluate appropriate responses.

Exposure of Underage Populations to Messages Regarding Alcohol in Advertising and Entertainment Media

The STOP Act requires the Report to Congress to include measures of the exposure of underage populations to messages regarding alcohol in advertising and the entertainment media, as reported by the Federal Trade Commission (FTC). To date, FTC has conducted four formal studies of the exposure of those under 21 to alcohol advertising. In each case, FTC issued compulsory process orders to companies representing 70 percent or more of alcohol marketing dollars and required them to provide demographic data about the audience for each individual ad disseminated during the study period.

These studies have resulted in significant improvements in industry self-regulation over time. For example, FTC's 1999 Alcohol Report revealed that industry self-regulatory codes permitted as much as half of the audience for individual ads to consist of persons under 21. Even then, only half of the companies were able to demonstrate compliance with this weak standard (Evans & Kelly, 1999). The agency recommended that the industry raise its placement standard.

In 2003, FTC reported that the alcohol industry had come into substantial compliance with the prior 50 percent adult standard. More significantly, the agency announced that the alcohol industry had agreed to modify its voluntary codes to require that adults (21+) constitute at least 70 percent of the audience for each individual alcohol ad, based on reliable data. To facilitate compliance, the revised codes of the beer and spirits industries required members to conduct periodic post-placement audits and promptly remedy any identified problems (FTC, 2003).

In its 2008 Report, FTC data showed that 92.5 percent of advertising placements in magazines, newspapers, radio, and television during the study period (the first half of 2005) complied with the 70 percent standard; furthermore, because placements that missed the target were concentrated in smaller media, more than 97 percent of total alcohol advertising "impressions" (individual exposures to advertising) were due to placements that complied with the standard. In total, 86.2 percent of the alcohol advertising audience consisted of legal-age adults (FTC, 2008).

The FTC's 2014 Alcohol Report evaluated industry compliance with the 70 percent standard, as well as Internet and social media marketing. Data for the study period (the first half of 2011) showed that 93.1 percent of the companies' placements in measured media met the 70 percent standard (FTC, 2014; measured media refers to TV, radio, magazine, newspaper, and Internet websites whose audience characteristics, including age, are measured by demographic services).

³²Maryland (MD Code, Art. 2B, § 16-505.2), California (West's Ann.Cal.Bus. & Prof.Code § 23403), and Florida (West's F.S.A. § 565.07) have all enacted such laws.

When data were aggregated across companies and media, 85.4 percent of alcohol advertising impressions (individual ad exposures) were seen by adults (21+), and 14.6 percent were seen by underage persons. The overall audiences for major social media (Facebook, Twitter, and YouTube) exceed 70 percent age 21+; Facebook further limits alcohol ad viewing to people who previously registered as 21+, and Twitter and YouTube offer age-gating technologies. The report also announced that in mid-2011, pursuant to an earlier FTC recommendation, the industry had adopted a 71.6 percent adult audience composition standard for future ad placements (reflecting 2010 U.S. Census data on the percentage of the age 21+ population).

As previously noted, many factors influence youth drinking decisions. Although evidence of a causal relationship is lacking, some research indicates that youth exposure to alcohol advertising is associated with initiation of alcohol consumption by youth and with increased alcohol consumption by youth who drink. A systematic review showed that of 13 longitudinal research studies examined, 12 studies demonstrated an association between youth exposure to alcohol advertising and the initiation of alcohol consumption by youth as well as increased alcohol consumption by youth who had already initiated alcohol use (Anderson, Bruijn, Angus, Gordon, & Hastings, 2009). A more recent review examined 12 different longitudinal studies published since 2008 and found significant associations between youth exposure and alcohol consumption in all 12 studies (Jernigan, Noel, Landon, Thornton, & Lobstein, 2017).

Others have noted that during 2001–2009, youth exposure to alcohol advertising on television in the United States, as measured by gross rating points, increased 71 percent. During the same period, adult (ages 21 to 49) exposure to alcohol advertising on television increased by 64 percent. This is largely attributable to increased alcohol advertising on cable television programs, particularly by distilled spirits companies (Jernigan, Ross, Ostroff, McKnight-Eily, & Brewer, 2013). In 2009, 13 percent of youth exposure on television came from advertising that was noncompliant with the industry’s voluntary placement standards (Center on Alcohol Marketing and Youth [CAMY], 2010; Jernigan et al., 2013).

This had led some advocates to propose additional limits on alcohol marketing. However, as noted by the Surgeon General, studies evaluating the relationship between alcohol advertising and youth consumption typically have not controlled for other factors known to influence underage drinking, such as parental attitudes and drinking by peers. Further, studies have yet to determine whether reducing alcohol marketing leads to reductions in youth drinking (HHS, 2016).

One study estimated that a 28 percent decrease in alcohol marketing in the United States could lead to a decrease in the monthly prevalence of adolescent drinking by 1 to 4 percent (i.e., from 25 percent to between 21 and 24 percent; Saffer & Dave, 2006). A separate study of alcohol advertising bans concluded that “there is a lack of robust evidence for or against recommending the implementation of alcohol advertising restrictions” (Siegfried et al., 2014).

Healthcare Provider Screening for Underage Drinking

Considerable literature has been published indicating that screening, brief intervention, and referral to treatment (often abbreviated as SBIRT), offered by a provider such as a physician, nurse, psychologist, or counselor, can be effective in reducing adolescent drinking and related

problems. Many reviews have been published on this topic (Scott-Sheldon, Carey, Elliott, Garey, & Carey, 2014; Tanner-Smith & Lipsey, 2015).

The importance of SBIRT was recognized by Congress in the 2016 reauthorization of the STOP Act, which authorizes grants to pediatric health care providers to improve the use of SBIRT, including via training and dissemination of best practices (Public Law No. 114-255). The law defines screening as “using validated patient interview techniques to identify and assess the existence and extent of alcohol use in a patient.”

“Brief intervention” is defined as “after screening a patient, providing the patient with brief advice and other brief motivational enhancement techniques designed to increase the insight of the patient regarding the patient's alcohol use, and any realized or potential consequences of such use, to effect the desired related behavioral change.”

Many young people are neither asked by medical providers about their drinking nor advised to reduce or stop drinking. A nationally representative study of 10th graders (the NEXT Generation Health Study) sponsored by the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development found that in the month prior to the survey, 36 percent reported drinking, 28 percent reported binge drinking, and 23 percent reported drunkenness. Of those who saw a physician in the year prior to the survey (82 percent), 54 percent were asked by their medical provider about drinking, 40 percent were advised about related harms, and 17 percent were advised to reduce or stop. Frequent drinkers, binge drinkers, and those who reported having been drunk were more often advised to reduce or stop. Nonetheless, only 25 percent of these individuals received that advice from physicians. In comparison, 36 percent of frequent smokers, 27 percent of frequent marijuana users, and 42 percent of frequent other drug users were advised to reduce or quit those behaviors (Hingson, Zha, Iannotti, & Simons-Morton, 2013).

CHAPTER 3

A Coordinated Federal Approach to Preventing and Reducing Underage Drinking

The 2006 Sober Truth on Preventing Underage Drinking (STOP) Act records the sense of Congress that “a multi-faceted effort is needed to more successfully address the problem of underage drinking in the United States. A coordinated approach to prevention, intervention, treatment, enforcement, and research is key to making progress. This Act recognizes the need for a focused national effort, and addresses particulars of the federal portion of that effort as well as federal support for state activities.”

A Coordinated Approach

The congressional mandate to develop a coordinated approach to prevent and reduce underage drinking and its adverse consequences recognizes that alcohol consumption by those under 21 is a serious, complex, and persistent societal problem with significant financial, social, and personal costs. Congress also recognizes that a long-term solution will require a broad, deep, and sustained national commitment to reducing the demand for, and access to, alcohol among young people. That solution must address not only the youth themselves but also the larger society that provides a context for that drinking and in which images of alcohol use are pervasive and drinking is seen as normative.

The national responsibility for preventing and reducing underage drinking involves government at every level; institutions and organizations in the private sector; colleges and universities; public health and consumer groups; the alcohol and entertainment industries; schools; businesses; parents and other caregivers; other adults; and adolescents themselves. This section of the present report focuses on the activities of the federal government and its unique role in preventing and reducing underage drinking. Through leadership and financial support, the federal government can influence public opinion and increase public knowledge about underage drinking; enact and enforce relevant laws; fund programs and research that increase understanding of the causes and consequences of underage alcohol use; monitor trends in underage drinking and the effectiveness of efforts designed to reduce demand, availability, and consumption; and lead the national effort.

All Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) agencies and certain other federal partners continue to contribute their leadership and vision to the national effort to prevent and reduce underage alcohol use. Each participating agency plays a role specific to its mission and mandate. For example, the National Institute on Alcohol Abuse and Alcoholism (NIAAA), part of the National Institutes of Health (NIH), supports biomedical and behavioral research on the prevalence and patterns of alcohol use and misuse across the lifespan and of alcohol-related consequences—including alcohol use disorder; injuries; and effects on prenatal, child, and adolescent development. This body of research includes studies on alcohol epidemiology, metabolism and health effects, genetics, neuroscience, prevention, and treatment. NIAAA and the Centers for Disease Control and Prevention (CDC) provide the research to promote an understanding of the serious nature of underage drinking and its consequences.

In general, the Substance Abuse and Mental Health Services Administration (SAMHSA), the National Highway Traffic Safety Administration (NHTSA), and the U.S. Department of Education (ED) conduct programs to reduce underage demand for alcohol, and the U.S. Department of Justice (DoJ), through its Office of Juvenile Justice and Delinquency Prevention (OJJDP), works to reduce underage consumption of and access to alcohol, as well as the

availability of alcohol itself. SAMHSA, CDC, NIAAA, and the National Institute on Drug Abuse (NIDA) conduct surveillance that gathers the latest data on underage alcohol use and the effectiveness of programs designed to prevent and reduce it. NHTSA, CDC, SAMHSA, NIAAA, and NIDA gather data on adverse consequences. As these agencies interact with one another, the activities and expertise of each inform and complement the others, creating a synergistic, integrated federal program for addressing underage drinking in all its complexity.

Federal Agencies Involved in Preventing and Reducing Underage Drinking

Multiple federal agencies are involved in preventing and reducing underage drinking. The 16 federal officials who make up the ICCPUD (see Appendix A) either lead or have designated responsibility to these agencies. Each sponsors programs that address or relate to underage alcohol consumption. The agencies and their primary roles related to underage drinking are as follows:

1. **U.S. Department of Health and Human Services (HHS)/Administration for Children and Families (ACF):** ACF is responsible for federal programs that promote the economic and social well-being of families, children, individuals, and communities. Many of these programs strengthen protective factors and reduce risk factors associated with underage drinking. *Website:* <http://www.acf.hhs.gov>
2. **HHS/Office of the Assistant Secretary for Planning and Evaluation (ASPE):** ASPE is the principal advisor to the HHS Secretary on policy development and is responsible for major activities in policy coordination, legislation development, strategic planning, policy research, evaluation, and economic analysis. The Division of Behavioral Health and Intellectual Disabilities Policy (BHIDP) focuses on financing, access/delivery, organization, and quality of services and supports for individuals with severe and persistent mental illnesses or severe addictions and individuals with intellectual disabilities. Topics of interest include coverage and payment issues in Medicaid, Medicare, and private insurance; quality and consumer protection issues; programs and policies of the Centers for Medicare and Medicaid Services (CMS), SAMHSA, and the Health Resources and Services Administration (HRSA) as they affect individuals with mental and substance use disorders; and prevention of mental health conditions and substance misuse, including prevention of underage drinking. *Website:* <http://www.aspe.hhs.gov>
3. **HHS/Centers for Disease Control and Prevention (CDC):** CDC's mission is to promote health and quality of life by preventing and controlling disease, injury, and disability. Consistent with that mission, CDC is involved in strengthening the scientific foundation for the prevention of underage and binge drinking. This includes assessing the problem through public health surveillance and epidemiological studies of underage drinking and its consequences. CDC also evaluates the effectiveness of prevention policies and programs and examines underage drinking as a risk factor through programs that address health problems such as injury and violence, sexually transmitted diseases, and fetal alcohol spectrum disorders (FASDs). CDC trains new researchers in alcohol epidemiology and builds state public health system capacity. CDC also conducts systematic reviews of what works to prevent alcohol-related injuries and harms. *Website:* <http://www.cdc.gov>
4. **HHS/Indian Health Service (IHS):** IHS is responsible for providing federal health services to American Indians and Alaska Natives (AI/AN). IHS is the principal federal healthcare

provider and health advocate for AI/AN, and its goal is to raise their health status to the highest possible level. IHS provides a comprehensive health service delivery system for approximately 2 million AI/AN who belong to 566 federally recognized tribes in 36 states. *Website:* <http://www.ihs.gov>

5. **HHS/National Institutes of Health (NIH)/National Institute on Alcohol Abuse and Alcoholism (NIAAA):** NIAAA’s mission is to generate and disseminate fundamental knowledge about the effects of alcohol on health and well-being, and apply that knowledge to improve diagnosis, prevention, and treatment of alcohol-related problems, including alcohol use disorder, across the lifespan. *Website:* <http://www.niaaa.nih.gov>
6. **HHS/NIH/National Institute on Drug Abuse (NIDA):** NIDA’s mission is to “advance science on the causes and consequences of drug use and addiction and to apply that knowledge to improve individual and public health.” NIDA supports most of the world’s research on the health aspects of drug abuse and addiction and carries out programs that ensure rapid dissemination of research to inform policy and improve practice. *Website:* <http://www.drugabuse.gov>
7. **HHS/NIH/Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD):** NICHD funds research on parenting/risk reduction programs with substance/alcohol abuse as one of the multiple health-related outcomes. In addition, NICHD’s intramural division conducts research on the risk-taking behaviors of teenage drivers and potential interventions. *Website:* <http://www.nichd.nih.gov>
8. **HHS/Office of the Assistant Secretary for Health (OASH)–Office of Disease Prevention and Health Promotion (ODPHP), Office of the Surgeon General (OSG), and Office of Adolescent Health (OAH):** Several ODPHP-led initiatives address underage drinking. The Substance Abuse Topic Area of the Healthy People 2020 initiative monitors measures for underage alcohol consumption, including binge drinking and riding with drivers who consumed alcohol. Healthfinder.gov offers reliable guidance for consumers on how parents can talk with their kids about the dangers of alcohol. Additionally, the *Dietary Guidelines for Americans* provide guidance on alcohol consumption, including policies from other agencies on who should not drink. *Websites:* <http://www.healthypeople.gov>, <http://www.health.gov>, <http://health.gov/dietaryguidelines>

The Surgeon General (SG), the nation’s chief health educator, provides Americans with the best available scientific information on how to improve their health and reduce the risk of illness and injury. The OSG oversees the approximately 6,000-member Commissioned Corps of the U.S. Public Health Service and assists the SG with other duties. *Website:* <http://www.surgeongeneral.gov>

OAH coordinates HHS efforts related to adolescent health, communicates adolescent health information to health professionals and groups, supports and evaluates the evidence-based Teen Pregnancy Prevention program, and implements the Pregnancy Assistance Fund. OAH is also the convener and catalyst for the development of a national adolescent health agenda. *Website:* <http://www.hhs.gov/ash/oah>

9. **HHS/Substance Abuse and Mental Health Services Administration (SAMHSA):** SAMHSA’s mission is to reduce the impact of substance misuse and mental illness on America’s communities. SAMHSA works toward underage drinking prevention by supporting state and community efforts, promoting the use of evidence-based practices

(EBPs), educating the public, and collaborating with other agencies and interested parties.
Website: <http://www.samhsa.gov>

10. **Department of Defense (DoD):** DoD coordinates and oversees government activities relating directly to national security and military affairs. Its alcohol-specific role involves preventing and reducing alcohol consumption by underage military personnel and improving the health of service members' families by strengthening protective factors and reducing risk factors in underage alcohol consumption. *Website:* <http://www.defense.gov>
11. **Department of Education (ED)/Office of Safe and Healthy Students (OSHS):** OSHS administers, coordinates, and recommends policy to improve the effectiveness of programs providing financial assistance for drug and violence prevention activities and for activities that promote student health and well-being in elementary and secondary schools and institutions of higher education. Activities may be carried out by state and local educational agencies or other public or private nonprofit organizations. OSHS supports programs that prevent violence in and around schools; prevent illegal use of alcohol, tobacco, and drugs; engage parents and communities; and coordinate with related federal, state, school, and community efforts to foster safe learning environments that support student academic achievement. *Website:* <http://www2.ed.gov/about/offices/list/oese/oshs/aboutus.html>
12. **U.S. Department of Justice (DoJ), Office of Juvenile Justice and Delinquency Prevention (OJJDP):** OJJDP provides national leadership, coordination, and resources to prevent and respond to juvenile delinquency and victimization. OJJDP supports states and communities in their efforts to develop and implement effective, coordinated prevention and intervention programs and to improve the juvenile justice system's ability to protect public safety, hold offenders accountable, and provide treatment and rehabilitation services tailored to the needs of juveniles and their families. OJJDP's central underage drinking prevention initiative, Enforcing Underage Drinking Laws (EUDL), was a nationwide state- and community-based multidisciplinary effort that sought to prevent access to and consumption of alcohol by those under age 21, with a special emphasis on enforcement of underage drinking laws and implementation programs that use best and most promising practices. The breadth of focus changed significantly in Fiscal Year (FY) 2014 because of a reduction in funding for the EUDL initiative. FY 2014 EUDL funding supported underage drinking prevention activity led by Healing to Wellness Courts in five selected tribes. By FY 2015, all funding to support EUDL efforts was discontinued.
13. **Department of the Treasury/Alcohol and Tobacco Tax and Trade Bureau (TTB):** TTB's mission is to collect the taxes on alcohol, tobacco, firearms, and ammunition; protect the consumer by ensuring the integrity of alcohol products; and prevent unfair and unlawful market activity for alcohol and tobacco products. *Website:* <https://www.ttb.gov>
14. **Department of Transportation (DOT)/ National Highway Traffic Safety Administration (NHTSA):** NHTSA's mission is to save lives, prevent injuries, and reduce traffic-related healthcare and other economic costs. NHTSA develops, promotes, and implements effective educational, engineering, and enforcement programs to reduce traffic crashes and resulting injuries and fatalities and reduce economic costs associated with traffic crashes, including underage drinking and driving crashes. *Website:* <http://www.nhtsa.gov>
15. **Federal Trade Commission (FTC):** FTC is the only federal agency with both consumer protection and competition jurisdiction in broad sectors of the economy; in total, it has enforcement or administrative responsibilities under more than 70 laws. As the enforcer of

federal truth-in-advertising laws, the agency monitors alcohol advertising for deceptive or unfair practices, brings law enforcement actions in appropriate cases, and conducts studies of alcohol industry compliance with self-regulatory commitments. *Website:* <http://www.ftc.gov>

16. **Office of National Drug Control Policy (ONDCP):** The principal purpose of ONDCP is to establish policies, priorities, and objectives for the nation’s drug control program. The goals of the program are to reduce illicit drug use, manufacturing, and trafficking; drug-related crime and violence; and drug-related health consequences. Part of ONDCP’s efforts relate to underage alcohol use. *Website:* <http://www.whitehouse.gov/ondcp>

The following section highlights current initiatives to prevent and reduce underage drinking and its consequences. Further details about departmental and agency programs to prevent and reduce underage drinking appear later in this chapter under “Inventory of Federal Programs for Underage Drinking by Agency.”

How Federal Agencies and Programs Work Together

The STOP Act requires the HHS Secretary, on behalf of ICCPUD, to submit an annual Report to Congress summarizing “all programs and policies of federal agencies designed to prevent and reduce underage drinking.” ICCPUD aims to increase coordination and collaboration in program development among member agencies so that the resulting programs and interventions are complementary and synergistic. For example, ICCPUD-sponsored town hall meetings (now called “Communities Talk: Town Hall Meetings to Prevent Underage Drinking”), have been held every other year since 2006, in every state, the District of Columbia, and most of the territories. They are an effective way to raise public awareness of underage drinking as a public health problem and mobilize communities to take action. At these meetings, communities used CDC, NHTSA, NIAAA, and NIDA statistics, videos, and other resources produced by SAMHSA and training materials developed by OJJDP through the EUDL program. ICCPUD agency members recommend grantees and other community-based organizations as event hosts and encourage them to make use of ICCPUD agency resources to create comprehensive action plans for community change.

In addition, NIAAA, CDC, SAMHSA, and other federal agencies collaborate with private groups, such as CADCA (Community Anti-Drug Coalitions of America) and Mothers Against Drunk Driving (MADD), in efforts to reduce underage drinking.

A Commitment to Evidence-Based Practices

At the heart of any effective national effort to prevent and reduce underage drinking are reliable data on the effectiveness of specific prevention and reduction efforts. With limited resources available and human lives at stake, it is critical that professionals use the most time- and cost-effective evidence-based approaches known to the field. Efficacy has been ensured through practices that research has shown to be effective instead of those based on convention, tradition, folklore, personal experience, belief, intuition, or anecdotal evidence. The term for practices validated by documented scientific evidence is evidence-based practices, or EBPs.

Despite broad agreement regarding the need for EBPs, there is currently no consensus on the precise definition of an EBP. Disagreement arises not from the need for evidence, but from the kind and amount of evidence required for validation. The gold standard of scientific evidence is

the randomized controlled trial, but it is not always possible to conduct such trials. Many strong, widely used, quasi-experimental designs have produced and will continue to produce credible, valid, and reliable evidence—these should be relied on when randomized controlled trials are not possible. Practitioner input is a crucial part of this process and should be carefully considered as evidence is compiled, summarized, and disseminated to the field for implementation.

The Institute of Medicine (now the Health and Medicine Division of the National Academies), for example, defined an EBP as one that combines the following three factors: best research evidence, best clinical experience, and consistency with patient values (IOM, 2001). The American Psychological Association adopted a slight variation of this definition for the field of psychology, as follows: EBP is “the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences” (APA Presidential Task Force on Evidence-Based Practice, 2006).

The federal government does not provide a single, authoritative definition of EBPs, yet the general concept of an EBP is clear: some form of scientific evidence must support the proposed practice, the practice itself must be practical and appropriate given the circumstances under which it will be implemented and the population to which it will be applied, and the practice must have a significant effect on the outcome(s) to be measured. For example, OSHS requires that its grantees use EBPs in the programs they fund, and NHTSA has produced a publication titled “Countermeasures That Work” for use by State Highway Safety Offices (SHSOs) and encourages SHSOs to select countermeasure strategies that have either proven effective or shown promise.

Evidence-Based Practices Resource Center

In 2018, SAMHSA launched a new Evidence-Based Practices Resource Center, which aims to provide communities, clinicians, policy-makers and others in the field with the information and tools they need to incorporate evidence-based practices into their communities or clinical settings. The Resource Center contains a collection of scientifically-based resources for a broad range of audiences, including Treatment Improvement Protocols, toolkits, resource guides, clinical practice guidelines, and other science-based resources.

The Resource Center is part of SAMHSA’s new comprehensive approach to identifying and disseminating clinically sound and scientifically based policies, practices, and programs. This approach enables SAMHSA to more quickly develop and disseminate expert consensus on the latest prevention, treatment, and recovery science; collaborate with experts in the field to rapidly translate science into action; and provide communities and practitioners with tools to facilitate comprehensive needs assessment, match interventions to those needs, support implementation, and evaluate and incorporate continuous quality improvement into their prevention, treatment, and recovery efforts.

The Resource Center website was designed with an easy to use, point-and-click system to enable users to quickly identify the most relevant resources for their particular needs. Users can search by topic area, resource type (e.g., Toolkit, Treatment Improvement Protocol, Guideline), target population (e.g., youth or adult) and target audience (e.g., resource for clinicians, prevention professionals, patients and policymakers).

The Guide to Community Preventive Services (The Community Guide)

CDC supports the use of an evidence-informed approach for its broad range of recommendations, guidelines, and communications. This approach calls for transparency in reporting the evidence that was considered and requires that the path leading from the evidence to the recommendations or guidelines be clear and well described, regardless of the strength of the underlying evidence or the processes used in their development. The Guide to Community Preventive Services (The Community Guide) provides the model for CDC's evidence-informed approach (<http://www.thecommunityguide.org>).

Under the auspices of the independent, nonpartisan, nonfederal Community Preventive Services Task Force (CPSTF), the reviews found on The Community Guide website systematically assess all available scientific evidence to determine the effectiveness of population-based public health interventions and the economic benefit of all effective interventions. The CPSTF reviews the combined evidence; makes recommendations for practice and policy; and identifies gaps in existing research to ensure that practice, policy, and research funding decisions are informed by the highest quality evidence.

CDC's Alcohol Program works with The Community Guide, SAMHSA, NIAAA, and other partner organizations on systematic reviews of population-based interventions to prevent excessive alcohol consumption, including underage and binge drinking and related harms. To date, the CPSTF has reviewed the effectiveness of various community-based strategies for preventing underage and binge drinking, including limiting alcohol outlet density, increasing alcohol excise taxes, dram shop liability, limiting days and hours of alcohol sales, electronic screening and brief intervention (e-SBI) for alcohol misuse, enhancing enforcement of minimum legal drinking age (MLDA) laws, lowering blood alcohol concentration (BAC) laws for younger drivers, and offering school-based instructional programs for preventing drinking and driving and for preventing riding with drunk drivers.

Strategies recommended by the Community Preventive Services Task Force for preventing excessive alcohol consumption include:

- **Promoting dram shop liability**, which allows the owner or server of a retail alcohol establishment where a customer recently consumed alcoholic beverages to be held legally responsible for the harms inflicted by that customer.
- **Increasing alcohol taxes**, which, by increasing the price of alcohol, is intended to reduce alcohol-related harms, raise revenue, or both. Alcohol taxes are implemented at the state and federal levels and are beverage-specific (i.e., they differ for beer, wine, and spirits).
- **Maintaining limits on days of sale**, which is intended to prevent excessive alcohol consumption and related harms by regulating access to alcohol. Most policies limiting days of sale target weekend days (usually Sundays).
- **Maintaining limits on hours of sale**, which prevents excessive alcohol consumption and related harms by limiting the hours of the day during which alcohol can legally be sold.
- **Regulating alcohol outlet density** to limit the number of alcohol outlets in a given area.
- **Using e-SBI** to reduce excessive alcohol consumption and related harms, by means of electronic devices such as computers, telephones, and mobile devices, to facilitate delivery of key elements, including (1) screening individuals for excessive drinking and (2) delivering a

brief intervention, which provides personalized feedback about the risks and consequences of excessive drinking.

- **Recommending against privatization of retail alcohol sales**, because privatization results in increased per capita alcohol consumption, a well-established proxy for excessive alcohol consumption. Further privatization of alcohol sales in settings with current government control of retail sales is recommended against.
- **Enhancing enforcement of laws prohibiting sales to minors** by initiating or increasing the frequency of retailer compliance checks for laws against the sale of alcohol to minors in a community.

The Community Preventive Services Task Force also recommends the following interventions for preventing alcohol-impaired driving:

- **0.08 percent BAC and above laws**, making it illegal for a driver's BAC to equal or exceed 0.08 percent.
- **Lower BAC laws for young or inexperienced drivers**, which apply to all drivers under age 21. Among states, the illegal BAC level for young drivers ranges from any detectable BAC to 0.02 percent.
- **Maintain current MLDA laws**, which specify an age below which the purchase or public consumption of alcoholic beverages is illegal. In the United States, the age in all states is 21.
- **Publicized sobriety checkpoint programs**, where law enforcement officers stop drivers to assess their level of alcohol impairment. These programs are publicized in advance.
- **Mass media campaigns** intended to reduce alcohol-impaired driving and designed to persuade individuals to either avoid drinking and driving or prevent others from doing so.
- **Multicomponent interventions with community mobilization**, where communities implement multiple programs and policies in multiple settings to influence community members to reduce alcohol-impaired driving.
- **Ignition interlocks**, or devices that can be installed in motor vehicles to prevent operation of the vehicle by a driver who has a BAC above a specified level (usually 0.02 to 0.04 percent).
- **School-based instructional programs** to reduce alcohol-impaired driving and riding with alcohol-impaired drivers.

More information on these recommended interventions for preventing alcohol-impaired driving can be found at <http://www.thecommunityguide.org>.

Underage Drinking–Related Goals

The HHS Healthy People 2020 program provides science-based, national, 10-year objectives for improving health. It was developed by the Federal Interagency Workgroup, which includes representatives from numerous federal departments and agencies. SAMHSA and NIH served as co-leaders in developing Healthy People 2020 objectives for substance misuse, including underage drinking.³³

³³ For details regarding these substance use-related objectives, go to: <http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=40>

A number of the programs listed below in the “Inventory of Federal Programs for Underage Drinking by Agency” will advance the following Healthy People 2020 objectives related to underage drinking:

- Increase the proportion of adolescents who have never tried alcohol
- Increase the proportion of adolescents who disapprove of having one or two alcoholic drinks nearly every day and who perceive great risk in binge drinking
- Reduce the proportion of underage drinkers who engage in binge drinking
- Reduce the proportion of adolescents reporting use of alcohol or any illicit drugs during the past 30 days
- Reduce the proportion of adolescents who report that they rode, during the previous 30 days, with a driver who had been drinking alcohol

A smaller set of Healthy People 2020 objectives called Leading Health Indicators has been selected to communicate high-priority health issues and actions that can be taken to address them. These include the following indicator for underage drinking: “Adolescents using alcohol or any illicit drugs during the past 30 days.” For more information on Healthy People 2020, please visit: <http://www.healthypeople.gov/2020/topicsobjectives2020>.

Inventory of Federal Programs for Underage Drinking by Agency

As required by the STOP Act, this section of the report summarizes major initiatives underway throughout the federal government to prevent and reduce underage alcohol use in America.

Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD)

Activities Specific to Underage Drinking

ICCPUD, established in 2004 at the request of the HHS Secretary and made permanent in 2006 by the STOP Act, guides policy and program development across the federal government with respect to underage drinking. ICCPUD is made up of 16 federal officials identified in the STOP Act who either lead or have designated responsibility to these agencies: DoD, ED/OSHS, FTC, HHS/ACF, HHS/ASPE, HHS/CDC, HHS/IHS, HHS/NIH/NIAAA, HHS/NIH/NIDA, HHS/OASH/OSG, HHS/SAMHSA, DoJ/OJJDP, DOT/NHTSA, ONDCP, and Treasury/TTB. (See Appendix A for a list of ICCPUD members.)

The ICCPUD’s mission is twofold:

1. To facilitate collaboration among the 15 federal member agencies, state and local governments, private and public national organizations, and agencies with responsibility for the health, safety, and wellbeing of America’s children and youth.
2. To provide resources and information on underage drinking prevention, intervention, treatment, enforcement, and research.

Underage drinking has declined substantially since ICCPUD was created in 2004. Much of this decline is due to efforts at the state and community levels, where enforcement of underage drinking laws and promotion of positive community norms has occurred. There has been

significant support for a number of federal initiatives provided to communities and states to assist and reinforce these efforts.

Federal support has been provided for activities that include identification of evidence-based strategies, grant programs to enhance implementation of such strategies, public awareness campaigns, community meetings to identify needs and build consensus, webinars and other means to share best practices, and monitoring of alcohol advertising.

For example, the national adult-oriented media public service campaign “Talk. They Hear You.” has drawn public attention to the importance of preventing and reducing underage drinking.

In communities in every state, the District of Columbia, and most U.S. territories, ICCPUD has supported almost 10,000 Town Hall Meetings to prevent underage drinking since 2006. These events helped to raise awareness of underage drinking as a public health problem, and to support communities in the implementation of evidence-based prevention.

Department of Defense (DoD)

Activities Specific to Underage Drinking

Youth Program: Building health and life skills increases young people’s capacity to engage in positive behaviors. Through affiliation with the Boys & Girls Clubs of America, programs such as SMART Moves® (Skills Mastery and Resistance Training) help young people resist alcohol, tobacco, drugs, and premature sexual activity. This year-round program, provided in Military Youth Programs worldwide, encourages collaboration among staff, youth, parents, and representatives from community organizations.

DoD Education Activity (DoDEA):

- *Health Education Curriculum:* This curriculum focuses on developing health literacy, health promotion, and disease prevention concepts, including the impact of underage drinking.
- *Red Ribbon Week:* Sponsored by the National Family Partnership, Red Ribbon Week provides DoDEA schools and families an opportunity to discuss the dangers of drug abuse and the benefits of living a healthful and drug-free lifestyle.
- *Substance Abuse and Violence Prevention:* This program focuses on applying specific skills to increase personal and community health; safety and injury prevention; nutrition and physical activity; mental health; and prevention of alcohol, tobacco, and drug use.

Law Enforcement: DoD ensures enforcement of underage drinking laws on all federal installations.

Activities Related to Underage Drinking

DoD has a series of substance use disorder prevention efforts, including universal, selective, and indicated prevention strategies. The placement of behavioral health personnel in primary care medical settings is intended to combat stigma associated with receiving behavioral health care and provides an opportunity to improve early screening, identification, and intervention of many behavioral health conditions.

Addictive Substances Misuse Advisory Committee (ASMAC): Established by the Under Secretary of Defense for Personnel and Readiness under the provisions of DoD Instruction 5105.18, ASMAC serves as a central point for information analysis and integration, program coordination, identification of policy needs, and problem-solving challenges with regard to legal and illegal addictive substance use and substance use disorders in those served by the Military Health System. ASMAC provides expert advice on the promotion of healthy behaviors—including alcohol use—and the identification, prevention, and treatment of other substance use disorders.

Active Duty and Reserve Component Health-Related Behaviors (HRB) Survey: DoD conducts the HRB survey every 1 to 3 years to measure over 17 health-related behaviors for Active Duty and Reserve Component Service members. Examples of data collected are the age of first substance use, binge drinking, and the prevalence and frequency of substance use.

Alcohol Abuse Countermarketing Campaign: DoD's Defense Health Agency launched "That Guy" in 2006 as an integrated marketing campaign targeting enlisted Service members ages 18 to 24 across all Service Branches. Based on research and behavior change marketing best practices, the campaign uses a multimedia, peer-to-peer approach to raise awareness of the negative short-term social consequences of excessive drinking. "That Guy" is credited with contributing to reductions in binge drinking and is now actively deployed around the world. Select achievements to date include the following:

- As of August 2017, an average visit length per user on the "That Guy" website was 9:43 minutes
- As of November 2017, more than 74,000 fans on Facebook
- As of November 2017, more than 29,500 downloads of the "That Guy" Buzzed mobile game
- As of August 2017, more than 5.6 million branded materials disseminated to all services
- More than 7,400 points of contact (POCs) engaged across the globe
- Millions reached pro bono through video and radio PSAs broadcast around the world through Armed Forces Radio and Television Service, Army and Air Force Exchange Service, and community stations

Furthermore, "That Guy" (www.thatguy.com) has received 39 awards for excellence in categories that include poster and web design, animation, gaming, marketing, and research. The 2016 Status of Forces Survey (SOFS; the most recent survey release that measured awareness of the campaign) reveals the "That Guy" campaign has achieved a 60 percent awareness rate among DoD Active Duty members E1-E4.

Service-Level Prevention Programs

Marine Corps Substance Abuse Program (SAP): The U.S. Marine Corps (USMC) SAP provides plans, policies, and resources to prevent consequences of substance misuse. Specific program efforts are based on the Health and Medicine Division of the National Academy of Sciences prevention continuum and focus on the common risk and protective factors framework. The USMC SAP's efforts include:

- *Establishment of a Coordinated Continuum of Care:* The Navy Bureau of Medicine and Surgery and the USMC Marine and Family Programs have a Memorandum of Understanding (MOU) establishing a formal continuum of coordinated mental illness and substance abuse prevention and care services.
- *Universal Training:* Unit Marine Awareness and Prevention Integrated Training (UMAPIT) educates all Marines about behavioral health risk factors and warning signs, including alcohol use and misuse. UMAPIT incorporates protective factors and skill-building techniques to ensure that Marines understand their responsibility to intervene when a fellow Marine shows signs/symptoms of alcohol misuse and other behavioral health concerns.
- *Selected Training:* USMC adopted the evidence-based motivational intervention called “PRIME for Life” (PFL) as their educational program for substance misuse education, which teaches Marines to self-assess high-risk behaviors and influence changes in attitudes, beliefs, and behaviors around alcohol consumption. It is designed to target populations at high-risk for substance misuse (e.g., 17- to 25-year old Marines).
- *Indicated Training:* PFL 16 hours (PFL 16.0) is an evidence-based, indicated prevention intervention course designed to teach Marines who have been involved in an alcohol-related incident about the dangers and risks involved with alcohol misuse. PFL is facilitated by Substance Abuse Counseling Center (SACC) certified prevention specialists who provide Marines with increased substance use awareness and with new skills for making lower-risk decisions.
- *Deterrence:* The Alcohol Screening Program (ASP), initiated in 2013, supports the 21st Century Marine and Sailor Initiative and seeks to identify alcohol misuse and direct appropriate intervention before a career- or life-altering incident occurs. The ASP uses random Breathalyzer testing of Marines and Sailors to screen for underage drinking and alcohol use while in a duty status.
- *Case Identification and Treatment:* The USMC model supports an integrated approach while maintaining adherence to the scope of practice delineated in the aforementioned MOU. This model includes standardized screening instruments, employs warm hand-offs for referrals, and emphasizes ease of access.
- *Substance Abuse Counseling Centers (SACCs):* USMC SACCs are fully accredited by the Commission on Accreditation of Rehabilitation Facilities (CARF) and provide multiple levels of evidence-based services including education, care coordination, group therapy, and individual and family support.
- *Collaboration with Sexual Assault Prevention and Response (SAPR):* SAP collaborates with SAPR to create effective prevention messaging in response to the correlation between alcohol and sexual assault. SAP and SAPR work together using social media messaging and awareness campaigns to increase knowledge about the risks associated with alcohol misuse and sexual assault.

- *Collaboration with Suicide Prevention:* SAP collaborates with Suicide Prevention to create effective prevention messaging in response to the correlation between alcohol and suicide. SAP and Suicide Prevention join efforts leveraging social media messaging and awareness campaigns to educate Marines and their family members on the risks associated with alcohol misuse, suicide, and suicide prevention.
- *Installation-Specific Prevention Planning:* SAP collects an installation Prevention Plan by January 1 of every calendar year in support of SAP efforts throughout USMC. To facilitate professional development and increase prevention efforts, SAP provides training throughout the year to SACC staff via an online webinar approved by the United States Navy Certification Board (USNCB) with a continuing education hour in alcohol, tobacco and other drugs (ATOD). SAP utilizes the Strategic Prevention Framework (SPF) developed by SAMHSA to support the development of annual installation integrated prevention plans and training.
- *Protect What You've Earned (PWYE) Initiative:* Developed and implemented to start the "health, safety and well-being" conversation among Marines in choosing low-risk life decisions in keeping with Marine Corps standards. Though PWYE initially focused on alcohol misuse, it expanded to emphasize good decision-making in all aspects of a Marine's life. PWYE reinforces a Marine's inherent desire to safeguard their most-valued and hard-earned achievements by promoting individual accountability.
- *Marine Expeditionary Force (MEF) Prevention Capability:* The Embedded Behavioral Health Prevention Capability (EBHPC) staff support the Marine Expeditionary Force (MEF) Prevention Capability. Civilian behavioral health personnel are placed in Active Duty Operating Forces to assist the Commander in executing behavioral health prevention program requirements. The goal of the MEF Prevention Capability is to execute and evaluate MEF-based strategic prevention plans and coordinate efforts with installation behavioral health personnel
- *Review and Revise Alcohol Policies:* SAP staff provides subject matter expert reviews to ensure policies and plans improve safety and reduce the risks associated with alcohol.
- *Research/Development and Data Collection in Measuring Program Effectiveness:* SAP staff reviews installation-provided data in collaboration with Research/Development and Data Surveillance to measure program effectiveness.

Navy Alcohol and Drug Abuse Prevention (NADAP): The Navy's comprehensive substance abuse prevention program supports fleet readiness by combating alcohol and drug abuse. NADAP's efforts include marketing responsible use, education and training, early intervention, substance abuse rehabilitation, and accountability.

- *Keep What You've Earned:* A campaign that encourages responsible drinking among sailors by celebrating the achievements in their Navy careers. Through recognition of their hard work and dedication, sailors are reminded of their accomplishments and how much they have to lose if they make poor choices regarding alcohol.
- *Shot of Reality:* This 90-minute improvised show focuses on alcohol awareness and the pitfalls of alcohol and drug abuse to help sailors make better decisions and take care of shipmates.
- *Street Smart:* This 90-minute interactive presentation by firefighters and paramedics reminds sailors of the dangers of drinking, drunk driving, illegal drug use, and not wearing seat belts.

- *Comedy Is the Cure*: This 60-minute stand-up comedy show highlights the dangers and risks of alcohol and drug abuse and sexual assault and harassment.
- *Alcohol Aware Program*: This program is a command-level alcohol abuse prevention and responsible use course designed for all hands. Each participant is asked to anonymously evaluate his or her own pattern of drinking to determine whether it is appropriate and, where necessary, make adjustments.
- *Alcohol Impact Program*: Alcohol Impact is the first intervention step in the treatment of alcohol abuse. It is an intensive, interactive educational experience designed for personnel who have challenges with alcohol. The course is primarily an educational tool; however, objectives within the course could identify the need for a higher level of treatment.
- *Alcohol and Drug Abuse Managers/Supervisors (ADAMS) for Leaders*: Commanding Officers, Officers in Charge, Executive Officers, Command Master Chiefs, Chiefs of the Boat, and as applicable, other senior command personnel complete ADAMS for Leaders.
- *Alcohol Server Training for Morale, Welfare, and Recreation Personnel*: Personnel employed in Navy recreation facilities who are responsible for selling or serving alcoholic beverages complete appropriate training to ensure compliance with Navy and local regulations and statutes, enforcement of policies related to underage drinking, knowledge of alternatives, and a full understanding of designated driver programs.
- *Personal Readiness (PR) Summits*: PR Summits are conducted throughout the year in fleet-concentrated areas. A PR Summit may also offer some or all of the following topics often associated with alcohol abuse: sexual assault prevention and response (SAPR), domestic violence prevention, equal opportunity, substance abuse prevention, preventing domestic violence, nutrition and physical readiness, suicide prevention, and behavioral health.
- *Alcohol Detection Devices (ADD)*: ADD is an education and awareness tool to assist a command in promoting responsible use of alcohol. This tool helps identify members who may not be fit and ready for duty as a result of their alcohol use decisions, and may be useful in referral decisions regarding a substance abuse rehabilitation program.

Army Substance Abuse Programs (ASAP): ASAP establishes, administers, and evaluates substance abuse prevention training and professional training programs for all Army personnel worldwide within the Active Component, National Guard, and Army Reserve. The goal of ASAP is to provide soldiers, command, Department of Army civilians, contractors, and family members with the education and training necessary to make informed decisions about alcohol and drugs. The following programs are currently provided by ASAP to meet the needs of soldiers seen by the Army:

- *Alcohol and Drug Abuse Prevention Training (ADAPT)*: ADAPT is an educational/motivational intervention that focuses on the adverse effects and consequences of alcohol and other drug abuse. Its curriculum consists of a minimum of 12 hours of course material. For the ADAPT curriculum, the Army utilizes Prime for Life (PFL), a motivational intervention used in group settings to provide early intervention and prevent alcohol and drug problems. PFL is an evidence-based program that provides measurable outcomes and effectiveness. It provides soldiers with the ability to self-assess their own high-risk behaviors and influence change in attitude, belief, and behavior.
- *Adolescent Support and Counseling Services (ASACS)*: ASACS is a school-based program that provides alcohol/drug abuse counseling services and alcohol/drug abuse and deployment support prevention services to eligible adolescent family members at 17 locations outside the

contiguous United States. ASACS employs evidence-based feedback informed therapy (FIT) to keep adolescents engaged in treatment. The ASACS-Army provided an estimated 18,591 counseling hours and over 6,533 prevention contact hours in FY 2017 for military families outside of the continental U.S. (OCONUS) with 21 counselors on hand, reducing the early return of families from overseas for these issues.

Army Campaigns: The Army campaign division of ASAP recognizes and endorses campaigns that go beyond alcohol or other drug abuse problems. Installations are required to conduct two campaigns a year. Headquarters, Installation Management Command collects after-action reports and shares best practices regarding the campaigns across the enterprise.

- *Red Ribbon Campaign:* Red Ribbon Week is the oldest and largest drug prevention campaign in the country. The mission of the Red Ribbon Campaign is to present a unified and visible commitment to the creation of a drug-free America.
- *Summer Safety Impaired Driving Prevention Campaign:* The 101 Critical Days of Summer (Memorial Day through Labor Day) safety campaign is intended to remind the Army that it cannot afford to lose focus on safety either on- or off-duty.
- *National Drunk and Drugged Driving (3D) Prevention Month/Campaign:* December is annually designated as 3D Prevention Month to recognize the risks and reduce the prevalence of driving under the influence of alcohol and other drugs.
- *Drive Sober or Get Pulled Over* is a nationwide impaired-driving prevention campaign.

United States Air Force (USAF) Substance Use Disorder Prevention Program: The USAF Alcohol and Drug Abuse Prevention and Treatment Program (ADAPT) encourages healthy and safe alcohol use (and nonuse for underage people) as the normative lifestyle choice for young USAF personnel. The USAF takes a collaborative approach, working with other prevention and resiliency programs, in coordination with the violence prevention integrators (VPIs), to address underage drinking, alcohol misuse, occurrence of alcohol related misconduct, and illicit drug use. The USAF utilizes a comprehensive community-based approach with four levels: strong leadership support, individual-level interventions, base-level interventions, and community-level interventions. The USAF's Alcohol Brief Counseling (ABC) Program is a targeted prevention effort that follows a brief counseling, education, and intervention format, using evidence-based motivational interviewing techniques, paired with patient and provider manuals to allow for individualization of the program. The goal of the ABC Program is to go beyond educating individuals about alcohol-related facts, to increase their ability and desire to think critically in examining their drinking patterns to ultimately implement harm reduction skills.

Department of Homeland Security/U.S. Coast Guard (USCG) Substance Abuse Program: The USCG's global mission is to protect the public, the environment, and U.S. economic interests—in the nation's ports and waterways, along the coast, in international waters, or in any maritime region as required—supporting national security (<http://www.uscg.mil>).

In 2014, after careful consideration of alcohol's negative influence on readiness and proficiency of the force, as well as the direct correlation between age of onset of drinking and negative consequences related to alcohol, the USCG established age 21 as the minimum drinking age, regardless of the Service member's duty location. The USCG is restructuring its policies to reflect this and many other changes related to alcohol use and the delivery of treatment services. Prevention- and treatment-seeking behaviors are being strengthened and encouraged. The

USCG's Health Promotion policy was officially promulgated on July 9, 2015 and updated on June 12, 2017. The USCG implemented an Addiction Orientation for Healthcare Providers course, a 1-week course that trains all Medical Officers on how to conduct, screen, and refer patients with substance abuse disorders to the appropriate level of treatment. Substance abuse assessment and screening training compliance for Medical Officers has approached and is stable at 90 percent (with rotations, retirements, and relocations, this standard should be considered met).

Department of Education (ED)

Activities Specific to Underage Drinking

National Center on Safe Supportive Learning Environments (NCSSLE): NCSSLE is funded by ED to help schools and communities address issues that affect conditions for learning, such as bullying, harassment, violence, and substance abuse. In 2013, NCSSLE offered a series of webinar events that provided constructive information and strategies that colleges and surrounding communities could use to strengthen their learning environments and address problems of violence, mental health, and substance use. This series included *Community Coalitions Working Collaboratively Across Secondary and Postsecondary Education to Address Underage Drinking*, a webinar hosted by ED as a part of the underage drinking series sponsored by ICCPUD, available at <https://safesupportivelearning.ed.gov/events/webinar/community-coalitions-working-collaboratively-across-secondary-and-postsecondary>. Publications and other resources hosted on this site can be used to assist administrators and other prevention professionals at colleges and universities to help prevent violence and substance abuse on their campuses and in the surrounding communities.

Activities Related to Underage Drinking

ED's School Climate Transformation Grant—Local Educational Agency Grants Program: In FY 2014, ED awarded the first round of grants under the School Climate Transformation Grant—Local Education Agency Grants program. These FY 2014 grant awards provided more than \$35.8 million to 71 school districts in 23 states, Washington, D.C., and the U.S. Virgin Islands. Funds are being used to develop, enhance, or expand systems of support for implementing evidence-based, multitiered behavioral frameworks for improving behavioral outcomes and learning conditions for students. ED has developed a variety of measures to assess the performance of the School Climate Transformation Grants, including measures related to the decrease in suspensions and expulsions of students for possession or use of drugs or alcohol.

ED's Safe and Supportive Schools News Bulletin: The *Safe and Supportive News Bulletin* is used by the ED OSHS to provide weekly email updates to grantees and other stakeholders in the education community on work related to OSHS and on topics related to school safety, school climate, substance abuse, violence prevention in education, and promotion of student health and well-being. The bulletin also highlights other federal funding opportunities related to these topics (including underage drinking prevention).

Federal Trade Commission (FTC)

Activities Specific to Underage Drinking

Consumer Education: In 2017, FTC continued its “We Don’t Serve Teens” (WDST) program, promoting compliance with the legal drinking age of 21 (see www.DontServeTeens.gov). Recognizing that most youth ages 12 to 20 who drink obtain access to alcohol for free (from family or friends, or by taking it without permission from their home or someone else’s), this program urges parents and other adults to stop teens’ easy access to alcohol and lets them know why this is an important goal. Available in English and Spanish, the program provides information about the risks of underage drinking, tips for fighting easy teen access to alcohol, and talking points to rebut common myths about the legal drinking age. The site includes free downloadable radio PSAs, radio announcer text, and artwork for posters, billboards, and transit ads. FTC has leveraged this program by working with private partners that use these materials to promote the WDST message around the country at no cost to the government.

Activities Related to Underage Drinking

Alcohol Advertising Program: In 2014, FTC published its fourth major report on alcohol advertising and youth, including industry compliance with self-regulatory commitments to reduce youth exposure to marketing (FTC, 2014). The report provided data on youth drinking rates and risks; alcohol marketing expenditures in 22 categories; industry compliance with the then-current commitment to ensure that at least 70 percent of the audience for each ad consists of adults 21+; and product placement in entertainment media. The report also provided recommendations for improvement. In 2014, 2015, and 2016, FTC staff made presentations to industry members, regulators, and others about the report, its recommendations for improvement, and the importance of continued progress in self-regulatory efforts. In 2017, FTC staff continued to promote compliance with, and improvements to, alcohol industry self-regulatory practices.

Administration for Children and Families (ACF)/HHS

Activities Related to Underage Drinking

Runaway and Homeless Youth (RHY) Program: The Family and Youth Services Bureau (FYSB) provides funding to local communities to support young people, particularly runaway and homeless youth and their families. Basic Center Program grants offer assistance to at-risk and runaway youth (under age 18) in need of crisis intervention and immediate, emergency shelter. BCP shelters provide family and youth counseling, referrals to services such as substance use disorder treatment, and family reunification, when appropriate. Through the Street Outreach Program, FYSB awards grants to public and private nonprofit agencies to conduct outreach that builds relationships between grantee staff and street youth to help them leave the streets. The Transitional Living (TLP) Program/Maternity Group Home (MGH) Program supports projects that use trauma-informed services and a positive youth development framework to provide longer term shelter and supportive services to homeless youth ages 16 to under 22 for up to 18 months who cannot live safely with their families. These services help to successfully transition young people to independent living. TLPs/MGHs enhance youths’ abilities to make positive life choices through education, awareness programs, and support. They include evidence-driven services such as substance use education, life skills training, recovery, and counseling. The MGHs provide shelter and services to meet the needs of pregnant and

parenting homeless youth to promote long-term economic independence in order to ensure the well-being of the youth and their children. Grantee sites are all expected to be alcohol-free. All participants are expected to participate in program activities that would prepare them to make healthy choices regarding alcohol and drug use. All RHY programs are expected to provide or to refer youth to substance use education or treatment services, as needed. FYSB has several RHY programs that have extensive experience in this area. For more information, visit <http://www.acf.hhs.gov/programs/fysb>.

Family Violence Prevention and Services: The Family Violence Prevention and Services Act (FVPSA) provides the primary federal funding stream dedicated to the support of emergency shelter and supportive services for victims of domestic violence and their dependents. FVPSA is located in FYSB, a division of the Administration on Children, Youth and Families in ACF. FYSB administers FVPSA formula grants to states, territories, and tribes; state domestic violence coalitions; and national and special-issue resource centers. First authorized as part of the Child Abuse Amendments of 1984 (P.L. 98–457), FVPSA has been amended eight times. It was most recently reauthorized in December 2011 for 5 years by the CAPTA Reauthorization Act of 2010 (P.L. 111-320 42 U.S.C. 36 10401, et seq.). The statute specifies how most of the appropriated funds will be allocated, including three formula grants and competitive national resource center grants. The remaining discretionary funds are used for competitive grants, technical assistance, and special projects that respond to critical or otherwise unaddressed issues. In 2015, the appropriation level was \$135,000,000. The FVPSA program also administers the National Domestic Violence Hotline.

FVPSA formula grants are awarded to every state and territory and more than 270 tribes. These funds reach 1,250 domestic violence shelters and 257 nonresidential programs, providing both a safe haven and an array of supportive services to intervene in and prevent abuse. Each year, FVPSA-funded programs serve 1.2 million survivors and their children and respond to 2.6 million crisis calls. FVPSA-funded programs do not just serve survivors but also reach their communities; in 2014, programs provided more than 180,000 presentations reaching 4.7 million people, of which almost half were youth. For more information, visit <http://www.acf.hhs.gov/programs/fysb/programs/family-violence-prevention-services>.

Sexual Risk Avoidance Education Programs: FYSB provides support for sexual risk avoidance education programs through discretionary grants from the General Department Sexual Risk Avoidance Education Grant Program, Competitive Sexual Risk Avoidance Education Grant Program and formula grants to states under Section 510 Title V State Sexual Risk Avoidance Education Program. These programs focus on educating young people and creating an environment within communities that supports teen decisions to refrain from non-marital sexual activity. Programs are encouraged to be welcoming and inclusive of all sexual minority youths. They use evidence-based, medically accurate interventions to promote risk avoidance behaviors that lead to poor health outcomes, including substance misuse and underage drinking, unplanned pregnancy, and sexually transmitted infections. Grant programs must use a trauma-informed approach and positive youth development framework when serving youth. For more information, visit <http://www.acf.hhs.gov/programs/fysb>.

Personal Responsibility Education Programs (PREP): FYSB supports healthy decision-making through projects funded to states, tribes, and community organizations to implement pregnancy prevention programs. PREP funds formula and discretionary grants to educate adolescents on both abstinence and contraception to prevent pregnancy and sexually transmitted infections and the implementation of at least three of six congressionally mandated “adulthood preparation subjects” (APS). The six APS include: adolescent development, healthy life skills, healthy relationships, financial literacy, parent-child communication, and education and career success. Several APS topics—adolescent development, healthy life skills, and healthy relationships—address healthy decision-making skills, which encompass substance and alcohol prevention messaging. For example, in North Carolina, PREP funded school-based clubs that collect pledges from their peers in schools and the community promising to not engage in underage drinking as part of community service learning projects during prom season.

Evaluation and Data Collection: Since 2011, FYSB has engaged in a 7-year, multisite evaluation effort of PREP programs. FYSB is currently concluding a federal-led evaluation of four sites, which include adolescent males, pregnant and parenting teens, rural youths, and youths in alternative educational settings. For more information on PREP, visit <http://www.acf.hhs.gov/programs/fysb>.

Centers for Disease Control and Prevention (CDC)/HHS

Activities Specific to Underage Drinking

Reducing Youth Exposure to Alcohol Marketing: The CDC Alcohol Program within the National Center for Chronic Disease Prevention and Health Promotion funds the Center on Alcohol Marketing and Youth (CAMY) at the Johns Hopkins Bloomberg School of Public Health to conduct public health surveillance of youth exposure to alcohol marketing and improve adherence to voluntary industry standards on the placement of alcohol advertising, with the ultimate goal of decreasing youth exposure to alcohol marketing and decreasing excessive alcohol consumption, including underage drinking. For more information on CAMY, see <http://www.camy.org>.

Activities Related to Underage Drinking

Alcohol-Related Disease Impact (ARDI): ARDI is an online application that provides national and state estimates of average annual deaths and years of potential life lost (YPLL) due to excessive alcohol use. The application allows users to create custom data sets and generate local reports on these measures as well. Users can obtain estimates of deaths and YPLL among people under age 21 attributed to excessive alcohol use.

Behavioral Risk Factor Surveillance System (BRFSS): BRFSS is an annual random-digit-dial telephone survey of U.S. adults ages 18 years and older in all 50 states, the District of Columbia, Guam, Puerto Rico, the U.S. Virgin Islands, American Samoa, Palau, and the Federated States of Micronesia. It includes questions on current drinking, number of drinking days, average number of drinks per day, frequency of binge drinking (≥ 4 drinks per occasion for women; ≥ 5 per occasion for men), and the largest number of drinks consumed on a drinking occasion. CDC’s Alcohol Program has also developed an optional, seven-question binge drinking module that can

be used by states to obtain more detailed information on binge drinkers, including beverage-specific alcohol consumption and driving after binge drinking. CDC also worked with national and international experts to develop an optional module to assess the delivery of screening and brief intervention (SBI) for excessive alcohol use in clinical settings. This optional module was implemented in 17 states and DC for the 2014 BRFSS and in 13 states and DC for the 2017 BRFSS. In 2011, BRFSS introduced changes to address the growing effects of cellphone-only households, resulting in higher estimates in many states for certain chronic disease indicators and risk behaviors, including binge drinking. For more information, see <http://www.cdc.gov/brfss>.

Youth Risk Behavior Surveillance System (YRBSS): The YRBSS monitors priority health risk behaviors among youth and young adults. It includes a biennial, national school-based survey of 9th- through 12th-grade students that is conducted by CDC, and state and local surveys of 9th- through 12th-grade students conducted by education and health agencies. These surveys include questions about number of drinking days, current drinking, frequency of binge drinking (≥ 4 drinks per occasion for female students; ≥ 5 per occasion for male students), the largest number of drinks consumed on a drinking occasion, age of first drink of alcohol, and usual source of alcohol. States and local agencies have the option to include additional alcohol questions on their questionnaires, such as type of beverage usually consumed and usual location of alcohol consumption. The YRBSS also assesses driving after drinking alcohol and other health risk behaviors (including sexual activity and interpersonal violence) that can be examined in relation to alcohol consumption. Additional information on the YRBSS is available at <http://www.cdc.gov/yrbs>.

School Health Policies and Practices Study (SHPPS): SHPPS is a national survey periodically conducted to assess school health policies and practices at the district, school, and classroom levels. It includes information about school health education on alcohol and drug use prevention, school health and mental health services related to alcohol and drug use prevention and treatment, and school policies prohibiting alcohol use. Additional information is available at <http://www.cdc.gov/SHPPS>.

Pregnancy Risk Assessment Monitoring System (PRAMS): PRAMS is a population-based mail and telephone survey of women who have recently delivered a live-born infant. It collects state-specific data on maternal attitudes and experiences before, during, and shortly after pregnancy. It also includes questions on alcohol consumption, including binge drinking during the preconception period and during pregnancy, along with other factors related to maternal and child health. For more information, see <http://www.cdc.gov/prams>.

National Violent Death Reporting System (NVDRS): NVDRS is a state-based active surveillance system in 40 states, the District of Columbia, and Puerto Rico that collects risk factor data on all violence-related deaths, including homicides, suicides, and legal intervention deaths (i.e., deaths caused by police and other people with legal authority to use deadly force, excluding legal executions), as well as unintentional firearm deaths and deaths of undetermined intent. Alcohol-related information collected includes (1) alcohol dependence or problem (whether the victim was perceived by self or others to have a problem with, or to be addicted to, alcohol); (2) alcohol use suspected (whether alcohol use by the victim in the hours preceding the incident was suspected, based on witness or investigator reports or circumstantial evidence, such as empty alcohol containers around the victim); (3) alcohol crisis (whether the victim had a crisis related to their alcohol problem within 2 weeks of the incident or an impending crisis within 2

weeks of the incident); (4) tested for alcohol (i.e., whether the victim's blood was tested for the presence of alcohol); (5) alcohol test results (recorded as present, not present, not applicable [i.e., not tested], or unknown); and (6) BAC measured in mg/dL. For more information, see <http://www.cdc.gov/ViolencePrevention/NVDRS>.

Preventing Alcohol-Exposed Pregnancies: CDC's National Center on Birth Defects and Developmental Disabilities (NCBDDD) has a number of activities supporting the prevention of fetal alcohol spectrum disorders (FASDs) among women of childbearing age (18–44 years). NCBDDD continues to monitor alcohol consumption (any use and binge drinking) among women of childbearing age (18–44 years) in the United States, using the BRFSS. Recent BRFSS data reveal that 1 in 10 pregnant women ages 18 to 44 report drinking any alcohol and 1 in 33 report binge drinking (defined as consuming 4 or more drinks on an occasion) in the past 30 days. NCBDDD, in collaboration with the National Center for Health Statistics (NCHS), added four additional alcohol questions to the National Survey of Family Growth (NSFG). The NSFG data provide population-based estimates on alcohol consumption among women of reproductive age and their risk for alcohol-exposed pregnancy. A recent CDC Vital Signs Report on Alcohol and Pregnancy states that three in four women who want to get pregnant as soon as possible report drinking alcohol.

NCBDDD funds six FASD Practice and Implementation Centers and five national partner groups to prevent FASDs and risky drinking. Through strategic collaborations with national organizations, medical societies, academic centers, and a variety of practitioners from six health disciplines (family medicine, medical assistance, nursing, obstetrics and gynecology, pediatrics, and social work), partners work to impact healthcare practice at the systems level and enhance FASD prevention opportunities nationally for women of reproductive age and their support networks.

CHOICES, an evidence-based intervention for nonpregnant women of reproductive age, aims to reduce the risk for an alcohol-exposed pregnancy by reducing risky drinking, using effective contraception, or changing both behaviors. CHOICES training materials are available at <https://www.cdc.gov/ncbddd/fasd/guidelines-training.html>. Two training and technical assistance centers have worked to increase capacity to implement alcohol screening and brief intervention and CHOICES in primary care settings serving AI/AN populations. A tailored version of CDC's *Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use* specifically for tribal communities is in development.

CDC and ACF are working together to improve the health and developmental outcomes for children with prenatal exposure(s) to alcohol and other drugs within the child welfare system. This project seeks practice change and improvement to facilitate appropriate identification, referral, interventions, and family education that can reduce the risk of poor developmental outcomes and potential cycles of abuse/neglect.

Alcohol Screening and Brief Intervention (SBI) in Primary Care: A recent CDC study indicates two-thirds of adults report being asked about their alcohol use. However, most adults who drink at risky levels and were asked about their alcohol use during a checkup did not receive advice to drink less from their providers. NCBDDD continues to promote use of alcohol SBI in primary care settings. NCBDDD worked with the American Academy of Pediatrics to assess pediatricians' use of alcohol SBI with adolescent patients, which informed the development of an

implementation guide on substance use screening and brief intervention for use in pediatric settings. The guide is available at https://www.aap.org/en-us/Documents/Substance_Use_Screening_Implementation_Final.pdf. In addition, questions about provision of alcohol SBI are included in the National Ambulatory Medical Healthcare Survey, providing population-based data on physician practices regarding alcohol SBI. Data will be analyzed in 2018. CDC and SAMHSA are collaborating on a 2-year quality improvement learning collaborative project to advance implementation of a new Healthcare Effectiveness Data and Information Set (HEDIS) measure, *Unhealthy Alcohol Use Screening and Follow-up*, in select health plans, and are planning to promote the release of this measure to healthcare providers, health systems, and insurers.

Indian Health Service (IHS)/HHS

The IHS Division of Behavioral Health (DBH) is responsible for the Alcohol and Substance Abuse Program (ASAP) through funding of federal, urban, and tribally administered programs. Funding for tribal programs is administered pursuant to the Indian Self-Determination and Education Assistance Act (ISDEAA), 25 U.S.C. §§ 5301 *et seq.* Nearly 85 percent of the ASAP budget is administered under ISDEAA contracts or compacts made directly with tribally administered programs, which aim to provide community-based, holistic, and culturally appropriate alcohol and substance use prevention and treatment services. ASAP is unique in that it is a nationally coordinated and integrated behavioral health system that includes tribal and federal collaboration to prevent or otherwise minimize the effects of alcoholism and drug dependencies in AI/AN communities. The aim of ASAP is to achieve optimum relevance and efficacy in delivery of alcohol and drug dependency prevention, treatment, and rehabilitation services, while respecting and incorporating the social, cultural, and spiritual values of Native American communities.

Activities Related to Underage Drinking

Alcohol abuse in AI/AN communities is recognized as a high-risk public health behavior. Alcohol effects can begin in early stages of prenatal development and continue across the lifespan. Programs are therefore focused on family-oriented prevention activities rooted in the culture of the individual tribes and communities in which they operate. In recognition of this shifting dynamic of local control and ownership of ASAP in Native American communities, the IHS DBH has shifted focus from direct-care services to a technical assistance and supportive role.

Youth Regional Treatment Centers (YRTC): IHS currently provides recurring funding to 11 tribally and federally operated YRTCs to address the ongoing issues of substance misuse and co-occurring disorders among AI/AN youth. Through education and culture-based prevention initiatives, evidence- and practice-based models of treatment, family strengthening, and recreational activities, youths can overcome challenges and recover their lives to become healthy, strong, and resilient leaders in their communities.

YRTCs provide a range of clinical services rooted in a culturally relevant holistic model of care. Services include clinical evaluation; substance misuse education; group, individual, and family psychotherapy; art therapy; adventure-based counseling; life skills; medication management or

monitoring; evidence-based/practice-based treatment; continuing care relapse prevention; and posttreatment follow-up services.

A new YRTC serving the Southern California area opened on March 1, 2017. Two additional YRTCs will open soon—the Portland YRTC is slated to open in late 2018 and the Northern California YRTC is in the permitting process.

Methamphetamine and Suicide Prevention Initiative (MSPI): The IHS MSPI is a nationally coordinated program focusing on providing much-needed methamphetamine and suicide prevention and intervention resources for AI/AN communities. This initiative promotes the use and development of evidence- and practice-based models that represent culturally appropriate prevention and treatment approaches to methamphetamine abuse and suicide prevention from a community-driven context. Goals of the MSPI are to:

- Increase tribal, Urban Indian Health Program (UIHP), and federal capacity to operate successful methamphetamine prevention, treatment, and aftercare, as well as suicide prevention, intervention, and postintervention services, through the implementation of community and organizational needs assessment and strategic plans.
- Develop and foster data-sharing systems among tribal, UIHP, and federal behavioral health service providers to demonstrate efficacy and impact.
- Identify and address suicide ideations, attempts, and contagions among AI/AN populations through the development and implementation of culturally appropriate and community relevant prevention, intervention, and postintervention strategies.
- Identify and address methamphetamine use among AI/AN populations through the development and implementation of culturally appropriate and community-relevant prevention, treatment, and aftercare strategies.
- Increase provider and community education on suicide and methamphetamine use by offering appropriate trainings.
- Promote positive AI/AN youth development and family engagement through the implementation of early intervention strategies to reduce risk factors for suicidal behavior and substance misuse.

This initiative supports 159 MSPI projects across Indian Country, consisting of 124 tribal awardees, 18 urban grantees, and 17 federal awards benefiting direct service tribes. A total of 91 MSPI projects are focused on AI/AN youth to prevent suicide and substance use.

Addressing Fetal Alcohol Spectrum Disorder: IHS supports the Northwest Portland Area Indian Health Board FASD training project with the University of Washington Fetal Alcohol Drug Unit, a research-based project that focuses on FASD interventions available to tribal sites throughout the United States but is primary to sites in Oregon, Idaho, and Washington. Also, in collaboration with the University of Washington, the Northwest Tribal FASD Project provides education and training on FASD and community readiness and assists communities in Idaho, Oregon, and Washington to set up an all-systems-based response to FASD.

Indian Children's Program: IHS also funds the Indian Children's Program (ICP), which provides services to meet the needs of AI/AN children 0–18 years old with special needs, including FASD, residing or attending school in the southwest region of the United States. The TeleBehavioral Health Center of Excellence (TBHCE) has begun revamping ICP into a

nationwide resource center. This revised ICP will focus on training clinicians on developmental and neurobiological issues that can affect AI/AN children, and providing expert consultation to help clinicians successfully diagnose, manage, and treat these conditions. The TBHCE ICP provided 152 hours of training on autism spectrum disorders. Regarding FASD, several trainings were provided, for a total of 369 hours of training via six webinars. A formal FASD training series will start in FY 2017 in addition to the expert consultation clinic. In addition, IHS participates in the Interagency Coordinating Committee on FASDs (ICCFASD), an interagency task force led by NIAAA that addresses multidisciplinary issues relevant to FASD.

National Institute on Alcohol Abuse and Alcoholism (NIAAA)/HHS

Activities Specific to Underage Drinking

Underage Drinking Research Initiative: The Underage Drinking Research Initiative (UDRI) is a key program of NIAAA. The goal of this initiative is to better understand the factors that compel youth to begin, continue, and escalate drinking, and for some, progress to alcohol use disorder. This initiative seeks to understand and address underage drinking within the context of overall development, and considers the biological, psychological, and social processes occurring during adolescence. This paradigm shift, along with advances in epidemiology, developmental psychopathology, and the understanding of human brain development and behavioral genetics, provided the scientific foundation for the *Surgeon General's Call to Action to Prevent and Reduce Underage Drinking* (OSG, 2007). The developmental approach continues to inform the work of ICCPUD and the related efforts of its member federal agencies and departments, including the work of the Behavioral Health Coordinating Council, and provides the theoretical framework for NIAAA's underage drinking programs.

Developing Screening Guidelines for Children and Adolescents: Data from NIAAA's National Epidemiologic Survey on Alcohol and Related Conditions (NESARC; see Appendix B) indicate that people between ages 18 and 24 have the highest prevalence of alcohol use disorder in the U.S. population—meaning that, for most, drinking started in adolescence. These data, together with those from other national surveys (SAMHSA's National Survey on Drug Use and Health [NSDUH], Monitoring the Future [MTF], and CDC's YRBSS [see Appendix B]) showing the popularity of binge drinking among adolescents, prompted NIAAA to produce a guide for screening children and adolescents for risk for alcohol use, alcohol consumption, and alcohol use disorder.

The screening guide for children and adolescents, *Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide*, which became available in 2011, was developed by NIAAA in collaboration with a working group of experts. As part of a multiyear process, the working group heard from a number of research scientists, analyzed data from both cross-sectional national surveys and proprietary longitudinal studies, and worked with pediatricians from general pediatrics as well as pediatric substance misuse specialty practices. The process culminated in the development of an easy-to-use, age-specific, two-question screener for current and future alcohol use. The *Guide* also provides background information on underage drinking and detailed supporting material on brief interventions, referral to treatment, and patient confidentiality. The screening process enables pediatric and adolescent health practitioners to provide information to patients and their parents about the effects of alcohol on the developing body and brain in addition to identifying those who need any level of intervention. The *Guide* was produced in

collaboration with the American Academy of Pediatrics, which recommends screening all adolescents regarding alcohol use and which endorsed the *Guide*. As of 2017, about 220,000 copies of the *Guide* have been distributed.

In 2011, NIAAA issued a Funding Opportunity Announcement (FOA) titled “Evaluation of NIAAA’s Alcohol Screening Guide for Children and Adolescents” to solicit applications to evaluate the new NIAAA alcohol screener for youth. Although the questions were empirically developed, were based on a vast amount of data from national surveys as well as numerous prospective studies, and had high sensitivity and specificity in the sample studied, it is important that the precision of the screener be evaluated in practice. Applications were sought that would evaluate the two-question screener in youth ages 9 to 18: (1) as a predictor of alcohol risk, alcohol use, and alcohol problems including alcohol use disorder and (2) as an initial screen for other behavioral health problems (e.g., other drug use, smoking, conduct disorder). Six 5-year projects were funded to evaluate the guide in a variety of settings, including primary care, a network of pediatric emergency rooms, juvenile justice, and the school system, and with youth who have a chronic health condition. Published results from these and other studies that have evaluated the screening guide support the utility of the NIAAA two-question screening tool for identifying youth at risk, youth who have an alcohol use disorder, or both.

In 2013, NIAAA issued an online training course based on its very popular Youth Alcohol screening guide. The course helps train healthcare professionals to conduct rapid, evidence-based alcohol SBI with youth. NIAAA produced the course jointly with Medscape, a leading provider of online continuing medical education. The course presents three engaging case scenarios of youth at different levels of risk for alcohol-related harm. The scenarios illustrate the streamlined, four-step clinical process outlined in NIAAA’s guide. More than 37,700 healthcare providers received continuing medical education credit for completing the course. The course is no longer available for credit from Medscape; however, the content is available at <http://www.medscape.org/viewarticle/806556>.

Research on Underage Drinking: NIAAA supports a broad range of underage drinking research, including studies on the epidemiology and etiology of underage drinking, the neurobiology of underage drinking, the prevention of underage drinking, and the treatment of alcohol use disorder among youth. Studies also assess short- and long-term consequences of underage drinking. A high-priority area described in more detail below is alcohol’s effects on the developing adolescent brain.

NIAAA staff have collaborated with the National Institute on Child Health and Human Development’s NEXT Generation Health Study, a 7-year longitudinal assessment of a representative sample of U.S. adolescent and young adults starting at grade 10. Several papers on underage drinking have been published from the study’s data (Li, Simons-Morton, & Hingson, 2013; Li, Simons-Morton, Brooks-Russell, Ehsani, & Hingson, 2014; Li, Simons-Morton, Gee, & Hingson, 2016; Li, Simons-Morton, Vaca, & Hingson, 2014; Hingson, Zha, White, & Simons-Morton, 2015; Simons-Morton, Haynie, Liu, Chaurasia, Li, & Hingson, 2016).

Research on the Impact of Adolescent Drinking on the Developing Brain: The powerful developmental forces of adolescence cause widespread, significant changes to the brain and nervous system, including increased myelination of neural cells (presumably reflecting enhanced brain connectivity) and normal “pruning” of infrequently used synapses and neural pathways in

specific regions of the brain. A key question is the extent to which adolescent drinking affects the developing human brain. A range of studies including research on rodents, studies of youth with alcohol use disorder, and recent longitudinal work beginning with youth before they begin drinking, suggest that alcohol use during adolescence, particularly heavy (frequent bingeing) use, can have deleterious short- and long-term effects.

NIAAA supports the Neurobiology of Adolescent Drinking in Adulthood (NADIA) Consortium to elucidate the persistent brain and behavioral changes that follow adolescent alcohol exposure and identify the neurobiological mechanisms underlying these effects. The consortium consists of collaborative research projects that use animal models to understand the long-term neurobehavioral consequences of alcohol exposure during adolescence.

In 2011, NIAAA followed the completion of a series of initial human pilot studies with an FOA titled “Longitudinal Studies on the Impact of Adolescent Drinking on the Adolescent Brain” soliciting applications to more fully address the following issues: (1) what are the long-term and shorter term effects of child and adolescent alcohol exposure on the developing human brain; (2) what are the effects of timing, dose, and duration of alcohol exposure on brain development; (3) to what extent do these effects resolve or persist over time; (4) how do key covariates factor into alcohol’s effects on the brain; and (5) the potential identification of early neural, cognitive, and affective markers that may predict alcohol use disorder and onset or worsening of mental illness during adolescence and adulthood. Seven projects were funded in FY 2012 under this FOA, collectively the National Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA). NCANDA successfully enrolled more than 800 participants during the first funding period and NIAAA recently renewed the consortium for a second period of funding.

Building on NCANDA results, NIAAA, NIDA, and other NIH Institutes launched the Adolescent Brain Cognitive Development (ABCD) study. This large, multisite, longitudinal study will follow a nationally representative sample of 10,000 children ages 9 and 10 into early adulthood, and will use noninvasive neuroimaging and cognitive, academic, social, emotional, and biological assessments to determine how childhood experiences interact with children’s changing biology to affect brain development and other outcomes. On September 25, 2015, 13 awards were made, including for a coordinating center, a data analysis and informatics center, and 11 research project sites across the country. Recruitment of subjects for ABCD is ahead of schedule, with 5,830 subjects recruited as of early November 2017.

College Drinking Prevention Initiative: The work of this initiative, which began more than a decade ago, continues to support and stimulate studies of the epidemiology and natural history of college-student drinking and related problems. Its ultimate goal is to design and test interventions that prevent or reduce alcohol-related problems among college students. NIAAA continues to have a sizable portfolio of projects that target college-age youth. Importantly, NIAAA convened a new College Presidents’ Working Group in 2010 to (1) provide input to the Institute on future research directions, (2) advise the Institute about what new NIAAA college materials would be most helpful to college administrators and in what format, and (3) recommend strategies for communicating with college administrators.

In response to the College Presidents’ Working Group’s request that NIAAA develop a “matrix” to help college administrators and staff navigate the many interventions available for addressing alcohol misuse on college campuses, NIAAA commissioned a team of experts to develop such a

decision tool. The tool, launched in September 2015, provides information about individual- and environmental-level strategies that have been or might be used to address alcohol use among college students. For each strategy, information is provided about the amount and quality of available research; estimated effectiveness; estimated cost and barriers related to implementation; and time to implement—factors that may be relevant to campus and community leaders as they evaluate their current approaches and as they consider and select additional strategies to address college-student drinking using a comprehensive approach. An interactive web presence for the College Alcohol Intervention Matrix (CollegeAIM) was launched at the same time as the print version. Since its launch in FY 2016, the CollegeAIM website has received almost 50,000 visitors, nearly 15,000 print copies of the CollegeAIM booklet have been distributed, and the booklet has been downloaded more than 8,600 times. CollegeAIM is the result of a multiyear collaboration and an extensive review of decades of research, much of it funded by NIAAA. NIAAA's goal is to provide science-based information in an accessible and practical way to facilitate its use as a foundation for college drinking prevention and intervention activities. CollegeAIM will be updated periodically to keep current with new research findings.

Building Health Care System Responses to Underage Drinking: The overarching goal of this program was to stimulate primary care health-delivery systems in rural and small urban areas to address the critical public health issue of underage drinking. This was a two-phase initiative (both phases now complete). In the first phase, systems strengthened their capacity to become research platforms for evaluating the extent of underage drinking in the areas they serve and increased their ability to reduce it. In the second phase, the systems prospectively studied the development of youth alcohol use and alcohol-related problems in their service areas, and implemented interventions and evaluated their effectiveness in reducing underage drinking. Four Phase I awards were made, and subsequently two 5-year Phase II awards were made. The findings of one of the two Phase II projects led to a new NIAAA-supported 5-year study focused on preventing alcohol, tobacco, and other drug misuse, as well as driving under the influence, in an American Indian rural community. Initial findings from this study indicate that intervening against underage drinking with these youths can result in reduced drinking, prevention of initiation of drinking, and other positive behavioral outcomes.

Brief Intervention Research: Brief interventions are short, therapeutic encounters intended to reduce underage and harmful drinking and the progression to alcohol use disorder. Brief interventions are usually combined with screening and referral to treatment (referred to as SBIRT). Brief interventions have been well studied in college populations, where the prevalence of underage and harmful drinking and their consequences is high but amenable to change. One example of such an approach is Brief Alcohol Screening and Intervention for College Students (BASICS). Other evidence-based brief interventions for delivery in college settings exist (see NIAAA's College Alcohol Intervention Matrix [CollegeAIM]).

Recent literature reviews indicate brief screening and counseling interventions can reduce alcohol use and related problems among underage and college age individuals (Tanner-Smith & Risser [2016], which looked at 190 studies, and Scott-Sheldon et al. [2014], which looked at 41 studies). Another study indicated that brief interventions are not widely implemented among persons under age 21, particularly college students (Hingson et al., 2015). For example, according to this study, 14–15 percent of underage college students were advised to reduce or stop drinking compared with 26–30 percent not in college, and 30 percent of college students

who reported being drunk at least six times in the past month received this advice compared with 43 percent not in college.

Adolescent Treatment Research Program: Since its inception in 1998, NIAAA’s adolescent treatment research program has funded more than 40 NIH grants across several important areas of inquiry, most of which have been randomized, controlled clinical trials. These include behavioral intervention trials, pharmacotherapy trials, implementation and health services studies, and investigations into the recovery and relapse risk process. The main objective of the program is to design and test innovative, developmentally tailored interventions that use evidence-based knowledge to improve alcohol treatment outcomes in adolescents. Results of many of these projects will yield an integrated perspective on the efficacy and mechanisms of action of family systems-based, cognitive-behavioral, brief motivational, recovery-based, and guided self-change interventions across diverse subpopulations of adolescents within a range of treatment settings. Furthermore, these projects will provide a greater understanding of the recovery and relapse risk process as well as inform treatment providers about options available for adolescents with alcohol problems.

Multicomponent Community Interventions for Youth: In 2011, NIAAA funded a project titled “Cherokee Nation Prevention Trial: Interactive Effects of Environment & SBIRT,” which is creating, implementing, and evaluating an integrated community-level intervention to prevent underage drinking and the associated negative consequences among American Indian and White youth in rural high-risk communities in northeastern Oklahoma. Recent findings from the study showed that high school students exposed to either a school-based universal alcohol screening and brief intervention or a community-organized policy approach to underage drinking prevention reported reduced alcohol consumption compared with controls.

Publications: NIAAA issued a screening guide for children and adolescents for use by healthcare practitioners titled *Alcohol Screening and Brief Intervention for Youth: A Practitioner’s Guide* in 2011, which the Institute continues to distribute broadly. NIAAA also disseminates information about prevention of underage drinking for a range of audiences through a variety of other publications, including factsheets (e.g., on underage drinking [http://pubs.niaaa.nih.gov/publications/UnderageDrinking/Underage_Fact.pdf], on college drinking, and on *Parenting to Prevent Childhood Alcohol Use* [2010]); an updated and expanded version of its booklet *Make a Difference—Talk to Your Child About Alcohol* (English and Spanish); two issues of *Alcohol Research & Health: Alcohol and Development in Youth: A Multidisciplinary Overview* (2004/2005) and *A Developmental Perspective on Underage Alcohol Use* (2009); and several *Alcohol Alerts*, including *Underage Drinking: Why Do Adolescents Drink, What Are the Risks, and How Can Underage Drinking Be Prevented?* (2006) and *A Developmental Perspective on Underage Alcohol Use* (2009); and a number of seasonal factsheets focusing on underage drinking issues surrounding high school graduation, and the first weeks of college.

With respect to drinking by students in U.S. colleges and universities, key resources include the widely cited report from NIAAA’s college drinking task force, *A Call to Action: Changing the Culture of Drinking at U.S. Colleges* (NIAAA, 2002); a brief update on college drinking titled *What Colleges Need to Know Now: An Update on College Drinking Research* (2007); and the CollegeAIM guide and website launched in 2015 (<http://www.collegedrinkingprevention.gov/collegeaim>).

NIAAA also sponsored and edited a special 2008 supplement to the journal *Pediatrics* titled *Underage Drinking: Understanding and Reducing Risk in the Context of Human Development*. Additional publications include a special July 2009 supplement to the *Journal of Studies on Alcohol and Drugs* on NIAAA's rapid response initiative to reduce college drinking and *Update on the Magnitude of the Problem*; a 2009 article in the journal *Alcohol Research & Health* titled "A Developmental Perspective on Underage Alcohol Use"; and the lead article in the December 2010 issue of the *American Journal of Preventive Medicine*, "Alcohol risk management in college settings: The Safer California Universities Randomized Trial."

In addition, two issues of NIAAA's webzine, the *NIAAA Spectrum*, highlight underage and college drinking:

http://www.spectrum.niaaa.nih.gov/archives/v4i1Feb2012/media/pdf/NIAAA_Spectrum_Newsletter_Feb2012.pdf and

<http://www.spectrum.niaaa.nih.gov/archives/v4i3Sept2012/default.html>.

NIAAA Website: The NIAAA website (<http://www.niaaa.nih.gov>), provides information and resources on the science and prevention of underage drinking, including links to NIAAA's college website (which includes CollegeAIM) and its youth-targeted website:

- **College Drinking Prevention Website:** NIAAA's website addressing alcohol use among college students (<http://www.collegedrinkingprevention.gov>) was recently redesigned and updated to permit easier navigation by topic or by audience. Updated features include new statistics, recent research papers, and presentations from task force participants along with a new section on choosing the right college.
- **CollegeAIM:** Located on the College Drinking Prevention website, NIAAA's CollegeAIM is available in an interactive format with (1) matrices that allow users to compare intervention options and create custom printouts of selected strategies and related references and potential resources; (2) a form-fillable PDF of the strategy planning worksheet for ready comparison of ratings of current and possible new strategies; and (3) detailed, practical answers to many frequently asked questions.
- **Cool Spot Website for Kids:** This website (<http://www.thecoolspot.gov>), targeted to youth ages 11 to 13, provides information on underage drinking, including effective refusal skills. Recent upgrades include a wide range of new sound effects and voiceovers throughout the site, a dedicated teacher and volunteer corner for use in middle-school classrooms or afterschool programs, and innovative ways to teach young people about peer pressure and resistance skills through a guided reading activity, along with two lesson plans that accompany the site's interactive features.

Activities Related to Underage Drinking

Alcohol Policy Information System (APIS): APIS is an electronic resource that provides authoritative, detailed information on alcohol-related policies in the United States at both state and federal levels. Designed primarily for researchers, APIS encourages and facilitates research on the impact and effectiveness of alcohol-related policies. Although not dedicated to underage drinking policies, APIS does provide information on policies relevant to underage drinking (e.g., retail alcohol outlet policies for preventing alcohol sales and service to those under age 21). Recognizing the changing legal environment, NIAAA has expanded APIS to include policies related to recreational use of marijuana. APIS continues to be used by researchers. For example,

a recent study by Fell et al. (2016) used it to examine the impact of MLDA laws on the ratio of fatal traffic crashes involving drivers under age 21 that involved alcohol compared to fatal crashes not involving alcohol.

The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC): In 2012, NIAAA conducted NESARC III, the third NESARC survey, which captured information on alcohol use disorder and other related mental health conditions from a large, nationally representative sample of the U.S. population. DNA samples were also collected and are being stored for future analyses. Data analyses based on NESARC, which includes people ages 18 to 21, could potentially enhance understanding of the etiology, extent, and consequences of underage alcohol consumption, in particular the role of comorbid conditions in this behavior.

National Institute on Drug Abuse (NIDA)/HHS

Activities Related to Underage Drinking

Strong African American Families (SAAF) Program: SAAF is a family-centered risk behavior prevention program that enhances protective caregiving practices and youth self-regulatory competence. SAAF consists of separate parent and youth skill-building curricula and a family curriculum. Evaluations have confirmed SAAF's efficacy for 11-year-olds in preventing, across several years, the initiation of risk behaviors, including alcohol use; enhancing protective parenting practices; and increasing youth self-regulatory capabilities. The program was effective when primary caregivers had clinical-level depressive symptoms and when families reported economic hardship; it can also ameliorate genetic risk for involvement in health-compromising risk behaviors across preadolescence. A randomized controlled trial of SAAF that targeted African American adolescents in high school ($N=502$) found that 22 months after baseline, the intervention had a significant impact on substance use and substance use problems (including alcohol), conduct problems, and depression symptoms for youth in the intervention condition, compared with youth in the control condition (Brody et al., 2012). Two randomized trials of SAAF examined the impact of the intervention in the context of genetic risk for increased alcohol use (Brody, Chen, & Beach, 2013). Results revealed that youth at increased genetic risk who did not receive SAAF intervention (control condition) showed greater increases in alcohol use over a 2-year period, compared with youth with genetic risk who did receive SAAF and youth without genetic risk who were assigned to either condition. Thus, SAAF was found to moderate genetic risk for alcohol use.

Adults in the Making (AIM): AIM is a drug abuse prevention intervention designed for rural African American adolescents during their high school years and their families. The six-session program supports the transition to adulthood by focusing on family protective factors and self-regulatory processes to increase resiliency, decrease alcohol use, and decrease the development of substance use problems during young adulthood. A randomized controlled trial of AIM for older adolescents (average age 17) and their families was conducted ($N=347$). Assessments were completed at baseline, 6.4, 16.6, and 27.5 months post baseline. AIM had a significant impact on reducing escalation of alcohol use and development of substance use problems for the intervention condition, compared with the control condition, for participants who were at higher risk at baseline (Brody et al., 2012). Reductions in risk-taking, intentions, and willingness to use alcohol and drugs, and perceptions of peers who use substances accounted for the effects of the intervention on outcomes for the higher risk youth (Brody et al., 2012).

After Deployment: Adaptive Parenting Tools (ADAPT): Adapted from an evidence-based Parent Management Training-Oregon (PMTO) model intervention, Parenting through Change, the ADAPT program is designed for military families with a parent reintegrating from the conflicts in Afghanistan and Iraq. ADAPT is a modified version of PMTO that is enhanced with web-based supports and is specific to military families and culture. ADAPT uses small-group parenting sessions that provide support and skills for positive parent–child interactions, emotion regulation, and effective parenting practices. Previous research on PMTO interventions for families from universal and high-risk populations (e.g., divorcing families, low-income families, youth with early-onset conduct problems) has demonstrated that the program is effective in reducing coercive parenting and increasing positive parenting. Longitudinal follow-up studies have shown positive effects of PMTO on a broad array of outcomes, including child and parent adjustment, youth substance use and related behavior problems, and other areas of family functioning.

A study of the ADAPT model was recently conducted with 400 reintegrating Army National Guard (ARNG) families with 6- to 12-year-old children to test the effectiveness of the intervention for improving parenting and reducing child risk for substance use and related behavior problems and satisfaction with the program. An article describes the need for programs such as ADAPT, the PMTO evidence base supporting the program, and recommendations for providers for supporting parenting among military families as a way to reduce youth risk factors and promote well-being (Gewirtz, Erbes, Polusny, Forgatch, & Degarmo, 2011). Early findings from the study testing ADAPT with integrating ARNG families, among the first 42 families assigned to the program, are that participation rates were high for both mothers and fathers and satisfaction was high across all 14 sessions of the intervention. These preliminary findings suggest the program is both feasible and acceptable (Gewirtz, Pinna, Hanson, & Brockberg, 2014). Early findings based on the team’s examination of characteristics of parents who may be most likely to use online components or attend face-to-face meetings revealed that use of different delivery options varied by participant characteristics (e.g., received incentives, level of education, number of months of deployment, deployed mother vs. deployed father). The findings imply that parents may be drawn to delivery options of a parenting program (online vs. face-to-face sessions) depending on education level, incentives to engage, and military experience (Doty, Rudi, Pinna, Hanson, & Gewirtz, 2016).

Family-Based Substance Use Prevention Program: This is a family-based, Internet-delivered substance use prevention program for early adolescent Asian American girls. The intervention focused on enhancing mother–daughter communication and increasing maternal monitoring while also increasing girls’ resilience to resist substance use. The program included nine interactive sessions delivered online, which included interactive modules for the girls and mothers to complete together. For this study, 108 Asian American mother–daughter dyads were recruited through online advertisements and from community service agencies and randomly assigned to the intervention described or to a test-only control arm. At the 2-year follow-up, mother–daughter dyads who participated in the intervention had higher levels of mother–daughter closeness and communication and higher levels of maternal monitoring and family rules against substance use compared with the controls. Girls in the intervention arm showed sustained improvement in self-efficacy and refusal skills and lower intentions to use substances in the future. Of importance, girls in the intervention arm reported fewer instances of alcohol and marijuana use and prescription drug misuse, compared with girls in the control arm (Fang &

Schinke, 2013). In a follow-up study, the effect of the intervention on adolescent girls' substance use outcomes through family relationships and adolescent self-efficacy over 2 years was examined using path models. Findings showed that receiving the intervention produced a positive effect on girls' family relationships at 1-year follow-up. This improvement was associated with girls' increased self-efficacy, which in turn led to decreased alcohol use, marijuana use, and future intention to use substances among girls at the 2-year follow-up (Fang & Schinke, 2014).

Coping Power: Coping Power is a multicomponent child and parent preventive intervention directed at preadolescent children at high risk for aggressiveness and later substance misuse and delinquency. The Coping Power Child Component is derived from an anger coping program primarily tested with highly aggressive boys and shown to reduce substance use. It is a 16-month program for children in the 5th and 6th grades. Group sessions usually occur before or after school or during nonacademic periods. Training focuses on teaching children how to identify and cope with anxiety and anger; control impulsiveness; and develop social, academic, and problem-solving skills at school and home. Parents are also trained throughout the program. Efficacy and effectiveness studies show Coping Power to have preventive effects on youths' aggression, delinquency, and substance use (including alcohol use). In a study of the intensity of training provided to practitioners, greater reductions in children's externalizing behaviors and improvements in children's social behaviors and academic skills occurred for those whose counselors received more intensive Coping Power training than for those in the basic Coping Power training or control conditions (Lochman et al., 2009).

NIDA funded a study of Coping Power comparing the child component delivered in the usual small-group format with a newly developed individual format to determine whether the latter will produce greater reductions in substance use, children's externalizing behavior problems, and delinquency at a 1-year follow-up assessment. This study included 365 4th-grade children randomly assigned by their school to group coping power (GCP) or individual coping power (ICP). Analyses of longitudinal assessments of teacher and parent reports of behavior collected from baseline through 1-year follow-up revealed that children in both conditions reduced teacher- and parent-reported externalizing behavior problems and internalizing problems by the end of the 1-year follow-up. However, the findings revealed that improvement in teacher-reported outcomes were significantly greater for children receiving the individual version of the program. In addition, the findings showed children with low initial levels of inhibitory control to respond poorly in teacher-rated outcomes to group intervention compared with those who received the individually delivered intervention (Lochman et al., 2015). NIDA is also supporting an adaptation study of Coping Power with fewer in-person child and parent sessions that are augmented by multimedia, Internet-based intervention content.

EcoFIT (previously Adolescent Transitions Program; also referred to as Family Check-Up [FCU]): This tiered intervention targeted to children, adolescents, and their parents recognizes the multiple environments of youth (e.g., family, caregivers, peers, school, neighborhood). EcoFIT in schools uses a tiered approach to provide prevention services to students in middle and junior high school and their parents. The universal intervention level, directed to parents of all students in a school, establishes a Family Resource Room to engage parents, establish parenting practice norms, and disseminate information about risks for problem behavior and substance use. The selective intervention level uses the FCU, which offers family assessment

and professional support to identify families at risk for problem behavior and development of youth substance use and mental health problems. The indicated level, the parent-focused curriculum, provides direct professional support to parents to make the changes indicated by the FCU. Services may include behavioral family therapy, parenting groups, or case management services. Findings showed that the EcoFIT model reduced substance use in high-risk students 11 to 14 years old (grades 6–9), with an average of 6 hours of contact time with the parents. Adolescents whose parents engaged in the FCU had less growth in substance use and problem behaviors from ages 11 to 18, including arrests (Connell, Dishion, Yasui, & Kavanagh, 2007; Stormshak & Dishion, 2009).

Another study of the FCU on outcomes through grade 9, delivered in middle school with a sample of ethnically diverse families, found that youth whose parents engaged in the program had significantly lower rates of growth in behavioral health problems from grades 6–9 compared with a matched control group. This included lower rates of growth in involvement with deviant peers and alcohol use (Van Ryzin, Stormshak, & Dishion, 2012).

The FCU has been consistently associated with reductions in youth antisocial behavior, deviant peer group affiliation, and substance use. In a more recent study, the proximal changes in student-level behaviors that account for links between implementation of the FCU and changes in youth problem behavior were explored using data from a randomized controlled trial efficacy study of the FCU with students followed from 6th through 8th grades. The findings were that assignment to the FCU intervention was related to increased levels of students' self-regulation from 6th to 7th grades, which in turn reduced the risk for growth in antisocial behavior; involvement with deviant peers; and alcohol, tobacco, and marijuana use through the 8th grade (Fosco, Frank, Stormshak, & Dishion, 2013). The *Eunice Kennedy Shriver* National Institute on Child Health and Human Development funded a study in 2012, with cofunding from NIDA, to examine the role of parent–youth relationships in late adolescence on substance use and abuse during the transition to adulthood. This study also evaluates the preliminary efficacy of a late-adolescence version of the FCU for preventing escalation of substance use during this developmental period and promoting positive behavioral health outcomes in early adulthood.

Strengthening Families Program for Parents and Youth 10–14 (SFP 10–14): SFP is a seven-session skill-building program for parents, youth, and families to strengthen parenting and family functioning and to reduce risk for substance misuse and related problem behaviors among youth. Program implementation and evaluation have been conducted through partnerships that include state university researchers, cooperative extension system staff, local schools, and community implementers. Longitudinal comparisons with control group families showed positive effects on parents' child management practices (e.g., setting standards, monitoring children, applying consistent discipline) and on parent–child affective quality. In addition, an evaluation of this program found delayed initiation of substance use at the 6-year follow-up. Other findings showed improved youth resistance to peer pressure to use alcohol, reduced affiliation with antisocial peers, and reduced levels of problem behaviors. Importantly, conservative benefit–cost calculations indicate returns of \$9.60 per dollar invested in SFP 10–14. A longitudinal study of SFP 10–14 and LST together and LST alone found that 5.5 years after baseline (end of grade 12), both interventions together and LST alone reduced growth in substance initiation. Both interventions also prevented more serious substance use outcomes among youth at high risk (use of at least two substances) at baseline. SFP (Iowa Strengthening Family Program, SFP

10–14), alone and in combination with other universal school-based prevention interventions, has also been found to have an impact on prescription drug use in late adolescence and young adulthood (Spoth et al., 2013). In addition, a study that used data from three randomized trials of SFP, delivered in middle school, found significant long-term effects on prescription opioid misuse and prescription drug misuse overall during late adolescence and young adulthood (Spoth et al., 2013). This study supports the potential for broad public health impact of universal prevention interventions.

A long-term follow-up was conducted of a randomized trial of the multicomponent SFP 10–14 plus LST compared with LST alone, or a minimal contact control condition, following youth during late adolescence and emerging adulthood to further understand the long-term public health impact of universal prevention. Findings from a replication randomized controlled trial to extend the earlier study to examine outcomes into young adulthood showed reduced substance misuse in young adulthood through delayed substance use initiation in adolescence and revealed greater intervention benefits for those at higher risk for substance misuse (Spoth, Trudeau, Redmond, & Shin, 2014, 2016).

Good Behavior Game (GBG): GBG is a universal preventive intervention that provides teachers with a method of classroom behavior management. It was tested in randomized prevention trials in 1st- and 2nd-grade classrooms in 19 Baltimore City public schools beginning in the 1985–1986 school year and was replicated in the 1986–1987 school year with a second cohort. The intervention was aimed at socializing children to the student role and reducing early antecedents of substance misuse and dependence, smoking, and antisocial personality disorder—specifically, early aggressive or disruptive behavior problems. Analyses of long-term effects in the first-generation sample (1985–1986) at ages 19 to 21 show that, for men displaying more aggressive and disruptive behaviors in 1st grade, GBG significantly reduced drug and alcohol abuse and dependence disorders, regular smoking, and antisocial personality disorder. Currently, NIDA is supporting a long-term second-generation (1986–1987) follow-up through age 25, including DNA collection for gene x environment analyses. NIDA supported a trial of GBG delivery in a whole-school-day context that emphasizes reading achievement, along with pilot research on models for implementing GBG in entire school districts. In addition, NIDA supported a pilot study for formative research on the large-scale implementation of GBG within a school district that could inform a system-level randomized trial on scaling up GBG. The pilot research focused on developing district partnerships; determining community-level factors that influence program implementation; and ensuring the acceptance, applicability, and relevance of measures and intervention design requirements for a large-scale trial. The conceptual framework guiding the development of the partnership and lessons learned are described in an article (Poduska, Gomez, Capo, & Holmes, 2012) that also addresses the implications for implementing evidence-based universal prevention programs such as GBG through research and practice partnerships.

LifeSkills Training (LST): LST addresses a wide range of risk and protective factors by teaching general personal and social skills, along with drug resistance skills and normative education. This universal program consists of a 3-year prevention curriculum for students in middle or junior high school, with 15 sessions during the first year, 10 booster sessions during the second year, and 5 sessions during the third year. The program can be taught in grades 6, 7, and 8 (for middle school) or grades 7, 8, and 9 (for junior high school). LST covers three major content areas: drug resistance skills and information, self-management skills, and general social

skills. The program has been extensively tested and found to reduce the prevalence of tobacco, alcohol, and illicit drug use relative to controls by 50 to 87 percent. NIDA currently funds a study examining the dissemination, adoption, implementation, and sustainability of LST.

Impact of the Minimum Legal Drinking Age on Alcohol-Related Chronic Disease Mortality:

The MLDA of 21 has been associated with a number of benefits compared with lower MLDAs, including long-term effects, such as reduced risk for alcoholism in adulthood. No studies have examined whether MLDA during young adulthood is associated with mortality later in life. Plunk and colleagues (2016) analyzed data from the 1990 through 2010 U.S. Multiple Cause-of-Death files combined with data on the living population. The authors conducted conditional analyses based on ever having attended college because prior work suggest that MLDA affects college students differently. Records on death from several alcohol-related chronic diseases were examined, employing a quasi-experimental approach to control for unobserved state characteristics and stable time trends. Individuals who reported any college attendance did not exhibit significant associations between MLDA and mortality for the causes of death examined. However, permissive MLDA for those who never attended college was associated with 6 percent higher odds for death from alcoholic liver disease, 8 percent higher odds for other liver disease, and 7 percent higher odds for lip/oral/pharynx cancers. The 21 MLDA likely protects against risk of death from alcohol-related chronic disease across the lifespan, at least for those who did not attend college. The finding is consistent with other work that shows that the long-term association between MLDA and alcohol-related outcomes is specific to those who did not attend college.

Community-Level Studies: Community-level studies address questions related to the dissemination and implementation of evidence-based substance use prevention programs. Examples include the following:

- ***Communities That Care (CTC):*** An operating system for quality implementation of evidence-based preventive interventions targeted to specific risk and protective factors within the community, CTC provides a framework for assessing and monitoring community-level risk and protective factors, training, technical assistance, and planning and action tools for implementing science-based prevention interventions through community service settings and systems. The Community Youth Development Study (CYDS) is testing CTC in 7 states with 12 matched pairs of communities randomized to receive the CTC system or serve as controls. CYDS targets youth in grades 6–12. Participating communities selected and implemented evidence-based prevention interventions based on their community profile of risk and protective factors. A panel of 4,407 5th graders was recruited and followed annually to assess impact of the CTC system on substance use and related outcomes. Annual surveys of youth in grades 6, 8, 10, and 12 were also conducted.

CTC has demonstrated significant effects on substance use outcomes and delinquency from grades 5 through 10, including alcohol outcomes. For example, from grades 5–8, youth in the intervention condition had lower incidences of alcohol, cigarette, and smokeless tobacco initiation and significantly lower delinquent behavior than those in the control condition (Hawkins et al., 2008, 2009). At grade 10, the odds of initiating alcohol use by this grade were significantly lower (38 percent lower) in CTC communities than in the control communities (Hawkins et al., 2012). Youth in CTC communities also had a lower prevalence of current cigarette use and past-year delinquent and violent behavior than youth

in control communities (Hawkins et al., 2012). At 12th grade, students in CTC communities were more likely to have abstained from drinking alcohol, smoking cigarettes, and any drug use than students in the control communities. There were no significant differences in the prevalence of past-month or past-year substance use for youth in CTC communities versus in the control communities. The findings at 12th grade suggest that the CTC system continued to prevent initiation of substance use through 12th grade, 8 years after implementation of CTC, but did not produce reductions in current levels of risk in 12th grade (Hawkins, Oesterle, Brown, Abbott, & Catalano, 2014).

Arthur, Hawkins, Brown, Briney, and Oesterle (2010) examined the implementation of core intervention elements by coalitions in CYDS and found that, compared with control coalitions, CYDS coalitions implemented significantly more of the CTC core elements (e.g., using community-level data on risk and protective factors to guide selection of effective prevention programs) and also implemented significantly higher numbers of tested, effective prevention programs. In addition, CTC communities had greater sustainability of tested and effective programs and delivered the programs to more children and parents than control communities (Fagan, Arthur, Hanson, Briney & Hawkins, 2011). Also, greater adoption of the CTC science-based approach to prevention was found to mediate the effects of CTC on youth outcomes in 8th grade (Brown et al., 2014). This finding supports use of the CTC model to impact youth outcomes at the community level. An economic analysis of CTC outcomes through 8th grade found a benefit–cost ratio of \$5.30 per dollar invested (Kuklinski, Briney, Hawkins, & Catalano, 2012). A more recent economic analysis of CTC outcomes through grade 12 found a benefit–cost ratio of \$8.22 per dollar invested (Kuklinski, Fagan, Hawkins, Briney, & Catalano, 2015). CTC materials are in the public domain and can be accessed at no cost through SAMHSA and through the Center for Communities that Care at the University of Washington.

- *PROmoting School/Community-University Partnerships to Enhance Resilience (PROSPER)*: An innovative partnership model for the diffusion of evidence-based preventive interventions that reduce youth substance use and other problem behaviors, the PROSPER partnership model links land-grant university researchers, the cooperative extension system, the public school system, and community stakeholders. A randomized trial of PROSPER was conducted in 28 school districts in rural and semiurban communities in Iowa and Pennsylvania, blocked on size, and randomly assigned to the PROSPER partnership model or to a usual programming control condition. Approximately 10,000 6th graders recruited across two cohorts were enrolled in the study along with approximately 1,200 students and their parents. In the PROSPER condition, communities received training and support to implement evidence-based prevention through the partnership and selected interventions from a menu of efficacious and effective universal prevention programs.

Analyses 18 months after baseline revealed significant effects, compared with the control condition, on lifetime/new-user rates of substance use, particularly reduced new-user rates of marijuana, methamphetamine, ecstasy, and inhalant use; lower rates of initiation of gateway and illicit substance use; and lower rates of past-year marijuana and inhalant use and drunkenness (Spoth et al., 2007). Similar results were found at 4.5 years past baseline, with youth in the PROSPER condition reporting significantly lower lifetime/new-user rates of marijuana, cigarettes, inhalants, methamphetamine, ecstasy, alcohol use, and drunkenness compared with the control condition (Spoth et al., 2011). At grades 11 and 12, significant

impacts on substance use were maintained for multiple substance use outcomes, and there were significantly greater impacts on youth at higher risk at baseline (Spoth et al., 2013).

In terms of alcohol outcomes, there was a significant effect on frequency of drunkenness at grade 11 and a marginal effect on frequency of driving after drinking at grade 11 for the overall sample. Both of these outcomes were significant for youth at higher risk at baseline (Spoth et al., 2013). A continuation study was funded in 2012 to understand the effects of PROSPER in emerging adulthood for participants who received evidence-based interventions in middle school. Reductions in substance misuse, antisocial behaviors, sexual risk behaviors, and improvements in healthy adult functioning are being examined. Effects of PROSPER through 6.5 years past baseline include reductions in conduct problem behaviors. Significant effects were found for students during 9th–12th grades. Somewhat stronger effects were found for the higher risk subsample who had initiated substance misuse prior to the intervention (Spoth et al., 2015).

- *PROSPER Effects on Adolescents' Alcohol Misuse Vary by GABRA2 Genotype and Age:* There is accumulating evidence that intervention effects on adolescent substance use may differ based on gene-by-intervention interactions. Russell and colleagues (2018) used a novel statistical method—time-varying effect modeling (TVEM)—to test an age-varying interaction between a single nucleotide polymorphism in the GABRA2 gene (rs279845) and PROSPER in predicting alcohol misuse in a longitudinal study of adolescents ages 11 to 20. The authors found a significant age-varying GABRA2 x intervention interaction from ages 12 to 18, with the peak effect size seen around age 13 (IRR = 0.50). The intervention significantly reduced alcohol misuse for adolescents with the GABRA2 TT genotype from ages 12.5 to 17 but did not reduce alcohol use for adolescents with the GABRA2 A allele at any age. Differences in intervention effects by GABRA2 genotype were most pronounced from ages 13 to 16—a period when drinking is associated with increased risk for alcohol use disorder. The findings provide additional evidence that suggest intervention effects on adolescent alcohol misuse may differ by genotype, and provide novel evidence that the interaction between GABRA2 and intervention effects on alcohol use may vary with age.
- *Community Monitoring Systems—Tracking and Improving the Well-being of America's Children and Adolescents:* *Community Monitoring Systems* is a monograph that describes federal, state, and local monitoring systems that provide estimates of problem prevalence; risk and protective factors; and profiles regarding mobility, economic status, and public safety indicators. Data for these systems come from surveys of adolescents and archival records. Monitoring the well-being of children and adolescents is a critical component of efforts to prevent psychological, behavioral, and health problems and to promote successful adolescent development. Research during the past 40 years has helped identify aspects of child and adolescent functioning that are important to monitor. These aspects, which encompass family, peer, school, and neighborhood influences, have been associated with both positive and negative outcomes for youth. As systems for monitoring well-being become more available, communities will become better able to support prevention efforts and select prevention practices that meet community-specific needs. This NIDA publication is available online at <https://www.drugabuse.gov/publications/community-monitoring-systems-tracking-improving-well-being-americas-children-adolescents>.

Preventing Drug Use among Children and Adolescents—A Research-Based Guide for Parents, Educators, and Community Leaders, 2nd Edition: This booklet is based on a literature review of all NIDA prevention research from 1997 through 2002. Before publication, it was reviewed for accuracy of content and interpretation by a scientific advisory committee and reviewed for readability and applicability by a Community Anti-Drug Coalitions of America (CADCA) focus group. The publication presents the principles of prevention; information on identifying and using risk and protective factors in prevention planning; applying principles in family, school, and community settings; and summaries of effective prevention programs. The booklet is available at https://www.drugabuse.gov/sites/default/files/redbook_0.pdf.

National Drug and Alcohol Facts Week (NDAFW): NDAFW is a health observance week for teens that aims to provide accurate information about alcohol, tobacco, and drug abuse. During this week, NIDA and NIAAA hold a Drug and Alcohol Facts Chat Day, where scientific staff from NIDA, NIAAA, and NIMH respond to questions and concerns from students on substance use and mental health topics. A companion NIDA publication, titled *Drug Facts: Shatter the Myths*, is also a resource for NDAFW. This publication answers teens' most frequently asked questions about alcohol, tobacco, and drug use. The 2017 NDAFW was held in January 2017. Information on NDAFW can be found at <https://teens.drugabuse.gov/national-drug-facts-week>.

Family Check-Up (FCU)—Positive Parenting Prevents Drug Abuse: NIDA developed a web-based tool demonstrating parenting skills that have been found to help prevent initiation and progression of drug use among youth. The tool presents five questions regarding specific parenting skills (e.g., communication with preadolescents) and provides a video clip for each that shows positive and negative examples of the skill. Additional videos and resources are provided for parents to practice positive parenting skills. This tool is based on research on the FCU conducted by Dr. Thomas Dishion and colleagues at Oregon State University and the Oregon Social Learning Center. The FCU tool is housed on the NIDA website: <https://www.drugabuse.gov/family-checkup>.

Monitoring the Future (MTF): MTF is an ongoing study of substance misuse (including alcohol) behaviors and related attitudes of secondary school students, college students, and young adults. Students in grades 8, 10, and 12 participate in annual surveys (8th and 10th graders since 1991, and 12th graders since 1975). Within the past 5 years, 45,000 to 47,000 students have participated in the survey each year. Follow-up questionnaires are mailed to a subsample of each graduating class every 2 years until age 35 and then every 5 years thereafter. Results from the survey are released each fall. Information on current findings from MTF can be found on the NIDA website at <https://www.drugabuse.gov/related-topics/trends-statistics/monitoring-future>.

Substance Abuse and Mental Health Services Administration (SAMHSA)/HHS

Activities Specific to Underage Drinking

Summit on Behavioral Health Issues Among College Students: On March 16–17, 2015, SAMHSA convened this summit to bring together SAMHSA staff and prevention practitioners from the field to discuss SAMHSA's Strategic Initiative on Prevention of Substance Abuse and Mental Illness and its implications for colleges and universities, as well as to inform future

potential products (e.g., funding, materials, training and technical assistance). Approximately 50 individuals representing institutions of higher education, states, national organizations, and federal agencies met to discuss current and emerging prevention issues related to underage drinking, prescription drug misuse, suicide, and mental health promotion related to college students.

“Talk. They Hear You.” (TTHY) National Media Campaign: SAMHSA’s Center for Substance Abuse Prevention (CSAP) continues with the national rollout of “Talk. They Hear You.” (TTHY), a national media campaign to prevent underage drinking among youth under age 21 by providing parents and caregivers with information and resources they need to start addressing the issue of alcohol with their children early. The campaign features a series of TV and print PSAs in English and Spanish that show parents “seizing the moment” to talk with their children about alcohol. By modeling behaviors through the PSAs, parents can see the many “natural” opportunities for initiating the conversation about alcohol with their children. TTHY continues to expand its reach, and to date has distributed the PSAs to outlets across the United States, including major airports, public transportation, billboards, broadcast and cable TV networks, radio stations, newspapers, and select magazines that reach parents. Since TTHY’s inception, PSAs have been distributed to all 50 states and more than 300 cities including the greater Washington, DC, area. TTHY has the support of more than 200 national groups, including CADCA and the National Parent Teacher Association, which are assisting SAMHSA in disseminating the campaign. TTHY is discussed in more detail in Chapter 4.

Underage Drinking Prevention Education Initiatives: This SAMHSA/CSAP effort provides resources, message development, public outreach and education, and partnership development for preventing underage alcohol use among youth up to age 21. The initiative provides ongoing support for the ICCPUD web portal and the nationwide Communities Talk: Town Hall Meetings to Prevent Underage Drinking initiative, Too Smart To Start (TSTS), the State/Territory Videos Project, and other national and community-based prevention initiatives conducted by SAMHSA and CSAP.

- **ICCPUD Web Portal:** SAMHSA, on behalf of ICCPUD, maintains a web portal (<http://www.stopalcoholabuse.gov>) dedicated to the issue of underage drinking. This portal consolidates comprehensive research and resources developed by the federal agencies of ICCPUD. It includes information on underage drinking statistics (i.e., prevalence, trends, consequences), evidence-based approaches, and other resources and materials that support prevention efforts. The web portal also contains on-demand copies of all webinars hosted by ICCPUD agencies about evidence-based prevention of underage drinking. Direct links are provided to federally supported websites designed to prevent substance misuse, including alcohol. Information is intended to serve all stakeholders (e.g., community-based organizations involved in prevention, policymakers, parents, youth, educators). During 2017, SAMHSA added a variety of news and research summaries to the ICCPUD web portal, reflecting the broad range of programs, products, services, initiatives, and research introduced or advanced by ICCPUD agencies throughout the year. SAMHSA continued to enhance the Communities Talk section of the ICCPUD web portal to improve the relevancy and accessibility of resources, and enhanced the layout to increase visual interest.
- **Town Hall Meetings:** In 2016, SAMHSA, as the lead agency for ICCPUD, supported a sixth round of Town Hall Meetings and renamed the initiative Communities Talk: Town Hall

Meetings to Prevent Underage Drinking. This placed a renewed emphasis on the initiative's focus, raising awareness of underage drinking as a public health problem and mobilizing communities around its evidence-based prevention. SAMHSA launched the newly named initiative with an event that was webcast nationally. The event attracted a broad audience, with 904 in-person and online attendees. Due to the successful launch, as well as expanded outreach and partnership development by SAMHSA, more than 1,500 Communities Talk events were held nationwide in 2016, with more than 1,420 communities registering to hold one or more events. As a result of expanded outreach to institutes of higher education (IHEs), more than 200 IHEs registered to hold Communities Talk events, doubling the number of IHE events from 2014 to 2016.

Feedback from host organizations, via a survey approved by the Office of Management and Budget, indicates that these events are an effective approach for raising public awareness of underage drinking as a public health problem and mobilizing communities around its evidence-based prevention. Most of the 2016 events focused on ways to reduce underage access to alcohol, such as through environmental prevention (e.g., compliance checks) and parental involvement. In addition, these events launched or strengthened collaboration among underage drinking prevention stakeholders. In planning Communities Talk meetings, most of the event organizers reported collaborating with other organizations, and more than two-thirds plan to collaborate with other agencies and programs in follow-up efforts to prevent and reduce underage drinking. SAMHSA developed a summary report on the 2016 Communities Talk events. The next round of Communities Talk events will occur in 2018.

Strategic Prevention Framework Network State Incentive Grant (SPF SIG) Program: This program is both an infrastructure and a service delivery grant program. SPF SIG supports an array of activities to help grantees build a solid foundation for delivering and sustaining effective substance misuse prevention services and reducing substance misuse problems. Following the SPF's five-step process, SPF SIG grantees develop comprehensive plans for prevention infrastructure and systems at the state and tribal levels. Ultimately, SPF SIG states/tribes assist and support selected subrecipient communities to implement effective programs, policies, and practices to reduce substance misuse and its related problems. Eighty-five percent of the SPF SIG grant award must be allocated to communities to address identified priority substance misuse problems. CSAP has awarded SPF SIGs to 50 states, the District of Columbia, 8 U.S. territories, and 19 tribes. Cohort I grants were awarded in FY 2004, Cohort II in FY 2005, Cohort III in FY 2006, Cohort IV in FY 2009, Cohort V in FY 2010, and Cohort VI in 2012. Cohort VI consists of Idaho, the final state to receive SPF SIG funding. The SPF SIG program provides the foundation for success of the SPF Partnerships for Success (PFS) Grant Program.

All SPF SIGs support the goals of the underage drinking initiative, because all grant tasks, including needs assessment, capacity building, planning, implementation, and evaluation, must be carried out with consideration for the issue of underage drinking. As of 2014, 77 of the 79 grantees funded in Cohorts I through VI had approved SPF SIG plans and had disseminated funds to communities. In FY 2013, 64.6 percent of grantee states in Cohorts I, II, III, IV, and V demonstrated a decrease in past 30-day use of alcohol among respondents ages 12 to 20, down from 78.0 percent in FY 2012. Likewise, 42.0 percent demonstrated a decrease for individuals age 21 or older, down from 56 percent in FY 2012.

Strategic Prevention Framework Partnerships for Success (SPF PFS) Program: The SPF PFS program was initiated in FY 2009 with the goals of reducing substance use–related problems; preventing the onset and reducing the progression of substance use disorders; strengthening prevention capacity and infrastructure at the state and community levels in support of prevention; and leveraging, redirecting, and realigning statewide funding streams for substance misuse prevention. Beginning in FY 2012, the PFS program concentrated on addressing two of the nation’s top substance use prevention priorities: underage drinking among youth and young adults ages 12 to 20 and prescription drug misuse among individuals ages 12 to 25. SAMHSA awarded 15 grants in 2012. In FY 2013, 16 grants were awarded, and in FY 2014, 21 PFS grants were awarded.

SPF PFS grantees are expected to meet several key requirements. First, states must use a data-driven approach to identify which of the substance use prevention priorities they propose to address using the SPF PFS funds. States must use SPF PFS funds to address one or both of these priorities. At their discretion, states may also use SPF PFS funds to target an additional, data-driven prevention priority in their state. Second, states must develop an approach to funding communities of high need (i.e., subrecipients) that ensures that all funded communities receive ongoing guidance and support from the state, including technical assistance and training. Grants awarded in FY 2014 included tribal applicants. These grantees were encouraged to address marijuana and heroin use as emergent priority issues. Of the 52 states/tribes awarded funding, 42 have chosen to target underage drinking. Nine of the 42 have chosen underage drinking as their sole priority.

Strategic Prevention Framework Partnerships for Success (SPF PFS) Program II: Over a 3-year period, the SPF PFS II is designed to address two of the nation’s top substance use prevention priorities: (1) underage drinking among people ages 12 to 20 and (2) prescription drug misuse among people ages 12 to 25. PFS II grantees are permitted to choose a subset of these respective age ranges for the two prevention priorities based on their data findings. The SPF PFS II is also intended to bring SAMHSA’s SPF to a national scale. These awards provide an opportunity for recipients of the Substance Abuse Prevention and Treatment Block Grant (SABG) that have completed a SPF SIG and are not currently funded through SAMHSA’s PFS grants to acquire additional resources to implement the SPF process at the state and community levels. Equally important, the SPF PFS II program promotes alignment and leveraging of prevention resources and priorities at the federal, state, and community levels.

SPF PFS II grantees are expected to meet several key requirements. First, states must use a data-driven approach to identify which of the substance use prevention priorities they propose to address using the SPF PFS II funds. States must use SPF PFS II funds to address one or both of these priorities. At their discretion, states may also use SPF PFS II funds to target an additional, data-driven prevention priority in their state. Second, states must develop an approach to funding communities of high need (i.e., subrecipients) that ensures that all funded communities receive ongoing guidance and support from the state, including technical assistance and training. Of the 15 states awarded funding, 11 have chosen to target underage drinking. Three of the 11 have chosen underage drinking as their sole priority.

STOP Act Grant Program: In December 2006, the STOP Act was signed into public law establishing the STOP Act grant program. The program required SAMHSA’s CSAP to provide \$50,000 per year for 4 years to current or previously funded Drug-Free Communities Program

(DFC) grantees to enhance implementation of evidence-based practices that are effective in preventing underage drinking. It was created to strengthen collaboration among communities, the federal government, and state, local, and tribal governments; enhance intergovernmental cooperation and coordination on the issue of alcohol use among youth; and serve as a catalyst for increased citizen participation and greater collaboration among all sectors and organizations of a community that have demonstrated a long-term commitment to reducing alcohol use among youth.

STOP Act grant recipients are required to develop strategic plans using SAMHSA's Strategic Prevention Framework process, which includes a community needs assessment, an implementation plan, a method to collect data, and the evaluation, monitoring, and improvement of strategies being implemented to create measurable outcomes. Grantees are required to report every 2 years on four core Government Performance and Results Act (GPRA) measures: frequency of use (past 30 days), perception of risk or harm, perception of parental disapproval, and attitude toward peer use across at least three grades from grades 6 through 12. SAMHSA's CSAP currently funds 97 community coalitions in 29 states across the United States. CSAP awarded 80 grants in Cohort III (which extends from FY 2012 to FY 2016) and 17 grants in Cohort IV (which extends from FY 2013 to FY 2017).

An evaluation of STOP grants from 2009 through 2013 showed that 1) underage drinking outcomes improved with the implementation of both DFC and STOP Act grants, showing the importance of funding such community grant programs; and 2) the largest impact on underage drinking outcomes was achieved when funds were used for both new individual and enhanced environmental strategies.

Activities Related to Underage Drinking

Substance Abuse Prevention and Treatment Block Grant (SABG): The SABG is a major funding source for substance use prevention and treatment in the United States, including prevention and treatment of alcohol use disorders among adolescents. SABG grantees are required to use at least 20 percent of their grant allotment on primary prevention services targeted to individuals not in need of substance use disorder treatment. Many grantees use prevention funding to target the prevention of alcohol use, particularly among youth. Almost all (98.3 percent) of SABG grantees reported that they planned to use 2015 SABG funding to target underage drinking, making alcohol use among youth the most targeted prevention priority among SABG grantees.

Partnership for Success (PFS): State and Community Prevention Performance Grant: PFS is designed to provide states with up to 5 years of funding to achieve quantifiable decline in statewide substance misuse rates, incorporating a strong incentive to grantees that have met or exceeded their prevention performance targets by the end of the third year of funding. Grant awards were made to states with the infrastructure and demonstrated capacity to reduce substance misuse problems and achieve specific program outcomes. The overall goals of the PFS are to reduce substance misuse-related problems; prevent the onset and reduce the progression of substance misuse, including childhood and underage drinking; strengthen capacity and infrastructure at the state and community levels in support of prevention; and leverage, redirect, and realign statewide funding streams for prevention. Four states were funded in Cohort I and one state was funded in Cohort II of the grant.

National Helpline (1-800-662-HELP): Individuals with alcohol or illicit drug problems or their family members can call the SAMHSA National Helpline for referral to local treatment facilities, support groups, and community-based organizations. The Helpline is a confidential, free, 24-hour-a-day, 365-days-a-year information service available in English and Spanish. Information can be obtained by calling the toll-free number or visiting the online treatment locator at <http://www.samhsa.gov/treatment>.

State Adolescent Treatment Enhancement and Dissemination (SAT-ED) Grant: SAT-ED brings together stakeholders across the state/territory systems serving adolescents (12–18 years old) to develop and enhance a coordinated network that will develop policies, expand workforce capacity, disseminate EBPs, and implement financial mechanisms and other reforms to improve the integration and efficiency of the treatment and recovery support system for adolescent substance use and co-occurring substance use and mental disorders.

State Adolescent and Transitional Aged Youth Treatment Enhancement and Dissemination (SYT-ED) Grant: SYT-ED brings together stakeholders across the state/tribal systems serving adolescents and transitional-age youth to develop and enhance a coordinated network that will develop policies, expand workforce capacity, disseminate EBPs, and implement financial mechanisms and other reforms to improve the integration and efficiency of the adolescent and transitional-age youth substance use and co-occurring substance use and mental disorders treatment and recovery support system. The population targeted is 12–24 years old.

Screening, Brief Intervention, Referral, and Treatment (SBIRT) Grants: SBIRT involves implementation of a system in community and specialist settings that screens for and identifies individuals with substance use-related problems. Depending on the level of problems identified, the system either provides for a brief intervention in a generalist setting or motivates and refers individuals with high-level problems and probable substance dependence disorder diagnoses to a specialist setting for assessment, diagnosis, and brief or long-term treatment. This includes training in self-management and involvement in mutual help groups as appropriate. SBIRT grants are administered by SAMHSA's CSAT. Several SBIRT grantees have developed programs that are available to individuals under age 21, and/or serve Native Americans and rural populations. In FY 2017, CSAT awarded 8 new state demonstration grants to states that had never been awarded a grant, and 13 new SBIRT Student Training grants situated across the country. In FY 2018, SAMHSA is proposing to fund up to seven new grants of up to \$950,000 per year for 5 years. This grant will expand the eligibility criteria to include nonprofit HMOs and PPOs as well as Federally Qualified Health Care systems and hospital systems. The grant will also encourage the provision of services to adolescents and emerging youth. Additional SBIRT information, including related publications, is available at <http://www.samhsa.gov/sbirt>.

Offender Reentry Program (ORP): This CSAT program addresses the needs of juvenile and adult offenders who use substances and are returning to their families and communities from incarceration in prisons, jails, or juvenile detention centers. ORP forms partnerships to plan, develop, and provide community-based substance use disorder treatment and related re-entry services for target populations. The juvenile ORP targets youths ages 14 to 18, and the adult ORP includes adults ages 19 to 20.

Program to Provide Treatment Services for Family, Juvenile, and Adult Treatment Drug Courts: By combining the sanctioning power of courts with effective treatment services, drug

courts break cycles of child abuse and neglect, criminal behavior, alcohol and drug use, and incarceration or other penalties. Motivational strategies are developed and used to help adolescents deal with the often powerful negative influences of peers, gangs, and family members. SAMHSA/CSAT funds Juvenile Treatment Drug Court grants to provide services to support substance use disorder treatment, assessment, case management, and program coordination for those in need of drug court treatment services.

Programs for Improving Addiction Treatment: SAMHSA/CSAT supports a variety of programs to advance the integration of new research into service delivery and improve addiction treatment nationally. For example, the Addiction Technology Transfer Center (ATTC) Network identifies and advances opportunities for improving addiction treatment. It assists practitioners and other health professionals in developing their skills and disseminates the latest science to the treatment community, providing academic instruction to those beginning their careers as well as continuing education opportunities and technical assistance to people already working in the addictions field. Ten ATTCs are located in the 10 HHS-designated regions, and 4 ATTCs focus on areas of specific issues in addiction treatment (Hispanic/Latino issues, AI/AN issues, rural and frontier issues, and SBIRT). For more information on the ATTC Network, including related publications and resources, see <http://www.ATTCNetwork.org>.

In addition, CSAT has produced several Treatment Improvement Protocols (TIPs) that address a wide array of concerns. These TIPs include TIP 16: *Alcohol and Drug Screening of Hospitalized Trauma Patients*; TIP 24: *A Guide to Substance Abuse Services for Primary Care*; TIP 31: *Screening and Assessing Adolescents for Substance Use Disorders*; TIP 32: *Treatment of Adolescents with Substance Use Disorders*; TIP 34: *Brief Interventions and Brief Therapies for Substance Abuse*; TIP 36: *Substance Abuse Treatment for Persons with Child Abuse and Neglect Issues*; and TIP 39: *Substance Abuse Treatment and Family Therapy*. Another relevant CSAT publication is the five-volume, evidence-based *Cannabis Youth Treatment* series.

Tribal Training and Technical Assistance (TTA) Center: The Tribal TTA Center provides TTA on mental and substance use disorders, suicide prevention, and promotion of mental health to federally recognized tribes, other AI/AN communities, SAMHSA tribal grantees, and organizations serving Indian Country. The TTA is culturally relevant, evidence-based, and holistic. It is designed to support Native communities in their self-determination efforts through infrastructure development and capacity building, as well as program planning and implementation. TTA includes targeted site visits, virtual learning communities, Gatherings of Native Americans, and Tribal Action Plan training.

Office of Indian Alcohol and Substance Abuse (OIASA): OIASA is responsible for aligning, leveraging, and coordinating with federal agencies and departments in carrying out the responsibilities delineated in the Tribal Law and Order Act. The office director chairs the Indian Alcohol and Substance Abuse Interagency Coordinating Committee. This committee coordinates across federal agencies responsible for addressing alcohol and substance use issues, including the Department of Interior's Bureau of Indian Affairs and Bureau of Indian Education, DOJ's Office of Justice Programs and Office of Tribal Justice, and HHS' IHS and other agencies in charge of assisting Indian Country.

Safe Schools/Healthy Students (SS/HS) Initiative: SS/HS seeks to create healthy learning environments that help students thrive, succeed in school, and build healthy relationships. A

central goal of the initiative is to prevent children from consuming alcohol and drugs, and the implementation of evidence-based programs such as Class Action, Family Matters, and Project Alert helps achieve this goal. The initiative also supports a variety of prevention activities involving families and communities such as “Safe Home Pledges” that ask parents to commit to maintaining a safe and alcohol-free environment (e.g., not serve alcohol to minors) and public forums and town hall meetings on drug and alcohol abuse. The results demonstrate that the initiative has been successful in reducing alcohol consumption among students at participating SS/HS school districts. Between year 1 and year 3 of the grant, the percentage of students who reported drinking declined from 25.4 percent to 22.4 percent (according to GPRA data). This represents a decrease from 27,521 students drinking in year 1 to 24,270 students drinking in year 3. Furthermore, more than 80 percent of school staff reported the SS/HS grant helped reduce alcohol and other drug use among students. Reported 30-day alcohol use decreased nearly 12 percent from year 1 to year 3 of the grant (25.4 percent to 22.4 percent) for the 2005–2007 cohorts. This correlates to approximately 3,250 fewer students drinking in year 3, enough to fill 130 classrooms.

National Survey on Drug Use and Health (NSDUH): Conducted annually by SAMHSA’s Center for Behavioral Health Statistics and Quality (CBHSQ), the NSDUH is a survey of the civilian, noninstitutionalized population of the United States age 12 or older. It is the primary national source of both national and state information on use of illicit drugs, alcohol, and tobacco. Estimates also include substance use disorders, substance use disorder treatment, mental health measures, mental health service use, and co-occurring substance use disorders. Approximately 68,000 persons are confidentially interviewed in NSDUH each year through in-person residential visits.

Behavioral Health Services Information System (BHSIS): BHSIS, conducted by SAMHSA’s CBHSQ, is the primary source of national data on substance use disorder treatment services. BHSIS offers information on treatment facilities with special programs for adolescents as well as demographic and substance use characteristics of adolescent treatment admissions. BHSIS comprises the following components:

- *Inventory of Behavioral Health Services (I-BHS)* is a list of all known public and private substance use and mental health treatment facilities in the United States and its territories.
- *National Survey of Substance Abuse Treatment Services (N-SSATS)* is an annual survey of all substance use disorder treatment facilities in the I-BHS. It collects data on location, characteristics, services offered, and usage. It is used to update the National Directory of Drug and Alcohol Abuse Treatment Programs and the online Behavioral Health Treatment Services Locator.
- *National Mental Health Services Survey (N-MHSS)* is an annual survey of all mental health treatment facilities. It collects data on location, characteristics, services offered, and usage. It is used to update the Behavioral Health Treatment Facility Locator.
- *Treatment Episode Data Set (TEDS)* is a compilation of data on the demographic and substance use characteristics of admissions to and discharges from substance use disorder treatment, primarily at publicly funded facilities. State administrative systems routinely collect treatment admission information and submit it to SAMHSA in a standard format.

Drug Abuse Warning Network (DAWN): Conducted by SAMHSA, DAWN was a nationally representative public health surveillance system that continuously monitored drug-related visits

to hospital emergency departments. DAWN ceased data collection at the end of 2011. Between 2012 and 2017, SAMHSA continued to analyze and report existing DAWN data.

In 2012, SAMHSA began a partnership with the National Center for Health Statistics (NCHS) to incorporate DAWN into the National Hospital Care Survey (NHCS). The NHCS combines two NCHS surveys, the National Hospital Ambulatory Medical Care Survey (NHAMCS) and the National Hospital Discharge Survey (NHDS), as well as DAWN. By moving DAWN into the NHCS, SAMHSA improved response rate with a large, nationally representative sample of hospital emergency departments, reduced cost, and expanded information collected (e.g., health insurance coverage information, diagnoses, treatment, ability to track emergency department patients admitted into the hospital through the emergency department). In addition, the NHCS will collect data on mental health–related emergency department visits. Under this new data collection effort, SAMHSA will publish drug- and mental-health-related visit data as SAMHSA’s Emergency Department Surveillance System (SEDSS). SAMHSA continues to work with NCHS to implement content and develop the survey methodology and statistical design. Currently, NCHS is working to recruit hospitals with publishable data.

Drug Free Communities Support Program (DFC): The DFC Program, created by the Drug-Free Communities Act of 1997, is the nation’s leading effort to mobilize communities to prevent youth substance use. DFC is a program of the Office of National Drug Control Policy administered by SAMHSA under an interagency agreement. DFC provides grants to community coalitions to strengthen the infrastructure among local partners to create and sustain a reduction in local youth substance use. Recognizing the fundamental concept that local problems need local solutions, the program requires funded coalitions to implement environmental strategies—broad initiatives aimed at addressing the entire community through adaptation of policies and practices related to youth substance use. Since 1997, the program has funded more than 2,000 community coalitions and mobilized community coalition members throughout the United States, the District of Columbia, Puerto Rico, American Samoa, and the Federated States of Micronesia (Palau).

To support the DFC goal of increased community collaboration regarding prevention of youth substance use, DFC grantees are required to engage community members from 12 sectors in order to conduct their work. Based on the median number of staff and active sector members from each community coalition, the FY 2013 DFC grantees mobilized approximately 25,000 individuals to engage in youth substance use prevention work. DFC grantees report core measures data every 2 years on four substances—alcohol, tobacco, marijuana, and illicit use of prescription drugs—for at least three grade levels between 6th and 12th grades. Grantees collect data on the following four measures: past 30-day use, perception of risk or harm of use, perception of parental disapproval of use, and perception of peer disapproval of use. Among the four core substances tracked by DFC, alcohol is reported by coalitions to be the most prevalent substance used at the high school level (92.7 percent of grantees) and at the middle school level (79.9 percent of grantees). In the past 10 years of program evaluation, DFC-funded communities have achieved significant reductions in youth substance use. The 2014 DFC National Evaluation Report found significant decreases in youth substance use across alcohol, marijuana, tobacco, and illicit use of prescription drugs, and generally found increases in youth perception of risk.

Prevention Technology Transfer Centers: SAMHSA is using cooperative agreements to establish a network of Prevention Technology Transfer Centers (PTTC) to provide training and

technical assistance services to the substance abuse prevention field including professionals/pre-professionals, organizations, and others in the prevention community. The PTTCs will work directly with SAMHSA and across the PTTC Network on activities aimed at improving implementation and delivery of effective substance abuse prevention interventions. PTTCs will provide prevention skills training and technical assistance services that are: tailored to meet the needs of recipients and the prevention field; based in prevention science and use evidence-based and promising practices; and leverage the expertise and resources available through the alliances formed within and across the HHS regions and the PTTC network.

Office of the Assistant Secretary for Health (OASH), Office of the Surgeon General (OSG), and Office of Adolescent Health (OAH)/HHS

Activities Specific to Underage Drinking

“Facing Addiction in America,” the Surgeon General’s Report on Alcohol, Drugs, and Health, and the Surgeon General’s 2007 Call to Action and Guides: In 2016, the first-ever *Surgeon General’s Report on Alcohol, Drugs, and Health* was released. This report reviews what is known about substance misuse, including underage alcohol use, and how that knowledge can be used to address substance misuse and related consequences. It is available at <https://addiction.surgeongeneral.gov>. In addition, the ICCPUD agencies continue to promote the 2007 *Surgeon General’s Call to Action* and the accompanying *Guides to Action* as key sources of information on addressing the national health problem of underage drinking. Both publications are available at: <http://www.surgeongeneral.gov/library/calls/index.html>.

Activities Related to Underage Drinking

National Prevention Strategy: America’s Plan for Better Health and Wellness: In June 2011, the National Prevention, Health Promotion, and Public Health Council announced the release of the National Prevention Strategy, a comprehensive plan to help increase the number of Americans who are healthy at every stage of life. The plan includes a section titled “Preventing Drug Abuse and Excessive Alcohol Use” that specifically addresses the need to prevent excessive alcohol use and underage drinking. Recommendations in this section include (1) more stringent alcohol control policies, (2) the creation of environments that empower young people not to drink, and (3) the use of SBIRT to screen for abuse. OSG continues to work with the 20 federal departments and agencies that compose the National Prevention Council to support implementation of the National Prevention Strategy. More information is available at <https://www.surgeongeneral.gov/priorities/prevention/strategy/index.html>.

Office of Adolescent Health Website: The OAH website provides resources for parents and adolescents who are struggling with alcohol use (<https://www.hhs.gov/ash/oah/adolescent-development/substance-use/alcohol/index.html> and <https://www.hhs.gov/ash/oah/resources-and-training/for-families/alcohol/index.html>). To obtain state-level data on adolescent alcohol use, visit: <https://www.hhs.gov/ash/oah/facts-and-stats/national-and-state-data-sheets/adolescents-and-substance-abuse/index.html>.

Adolescent Health: Think, Act, Grow® (TAG): OAH launched TAG in November 2014. OAH worked with 80 youth-related organizations to develop this national call to action to raise awareness about and promote adolescent health. The OAH website includes free TAG resources for youth-serving professionals, family members, and teens, including Five Essentials for

Healthy Adolescents, “TAG in Action” successful program strategies, TAG Playbook (with action steps and resources linked to the Five Essentials), a social media toolkit, a “TAG Talk” video series featuring adolescent health experts, webinars, and a series of one-page handouts. For more information about TAG, visit: <http://www.hhs.gov/ash/oah/tag>.

Office of Juvenile Justice and Delinquency Prevention (OJJDP), Department of Justice (DoJ)

Activities Specific to Underage Drinking

Enforcing the Underage Drinking Laws (EUDL): The EUDL block grant program provided national leadership in ensuring that states, territories, and communities have the information, training, and resources needed to enforce underage drinking laws since 1998. Because of reductions in funding for the EUDL initiative in FY 2014, the OJJDP was no longer able to support the block grant program. In FY 2014, OJJDP directed all available EUDL funding to support a new initiative, Tribal Healing to Wellness Court, that addressed underage alcohol access and consumption by Native American youth minors in five competitively selected tribes.

Office of National Drug Control Policy (ONDCP)

Activities Related to Underage Drinking

National Youth Anti-Drug Media Campaign: Through its teen brand “Above the Influence” (ATI), the National Youth Anti-Drug Media Campaign provided ongoing messaging and tools to prevent teen use of drugs and alcohol. Among the channels used to reach youth were an ATI Facebook page, an ATI website, and teen-targeted national media coupled with local outreach. In May 2014, the ATI Campaign was transitioned to the Partnership for Drug-Free Kids. The Partnership was a close collaborator of the ATI campaign since its launch in 2005 and is committed to maintaining teens’ awareness and engagement with the brand at the national level through donated and social media efforts and will continue to support local outreach activities at the following website: <http://www.ATIpartnerships.com>.

Drug-Free Communities (DFC) Support Program: The DFC Program, created by the Drug-Free Communities Act of 1997, is the nation’s leading effort to mobilize communities to prevent youth substance use and is directed by ONDCP in partnership with SAMHSA. The DFC Program is described in more detail under SAMHSA’s section above.

Demand Reduction Interagency Working Group (IWG): In 2009, ONDCP reinstated the IWG, comprising 35 federal agencies whose missions involve some connection to substance abuse. Agency leaders identified four major cross-cutting issues: prevention and education, prescription drugs, electronic health records, and data. These committees helped shape the 2010, 2011, 2012, and 2013 National Drug Control Strategies. The issue of underage drinking received significant attention in several of these IWG committees.

National Highway Traffic Safety Administration (NHTSA)/Department of Transportation (DOT)

Activities Specific to Underage Drinking

Programs Encouraging States to Enact Minimum Drinking Age and Zero Tolerance Laws:

NHTSA implemented congressionally mandated programs to encourage states to enact minimum drinking age and zero tolerance laws. Zero tolerance laws establish very low BAC limits of .02 g/dL or less for drivers under the MLDA of 21. Minimum drinking age laws make it unlawful for people under age 21 to possess alcohol. All 50 states and the District of Columbia have enacted both laws. NHTSA continues to monitor state compliance with these federal mandates. Failure to comply results in financial sanctions to the states.

Activities Related to Underage Drinking

NHTSA supports the work of national organizations to address underage drinking and driving prevention. Several examples follow:

National Organizations for Youth Safety (NOYS): Since 1994, NHTSA has supported a variety of NOYS-led efforts to build partnerships that save lives, prevent injuries, and promote safe and healthy lifestyles among all youth while encouraging youth empowerment and leadership. Specifically, NHTSA supports NOYS's annual Teen Driver Safety Summit, which convenes, educates, and engages youth leaders, and a Youth Correspondents Advisory Board that leads the development and delivery of peer-to-peer messages about traffic safety, including the prevention of underage drinking and driving.

Students Against Destructive Decisions (SADD): Under a cooperative agreement, the SADD National Student of the Year is eligible for a summer leadership opportunity at NHTSA. Additionally, NHTSA assisted SADD in developing and implementing education and enforcement activities to promote young driver safety and specifically to reduce underage drinking and driving.

State Highway Safety Funding: NHTSA provides federal funding to states and local communities through State Highway Safety Offices (SHSOs). Funds may be used for activities related to underage drinking and driving under the following programs: 402 (state and community programs), 405 (national priority safety programs including impaired driving and occupant protection incentive grants), 154 (open container transfers), and 164 (repeat offender transfers).

Youth Traffic Safety Media: NHTSA maintains Parents Central, which provides overviews, recommendations, and facts about teen driver safety, and is available at: <http://www.safercar.gov/parents/TeenDriving/teendriving.htm>.

The accompanying media campaign, 5 to Drive, shares tips, resources, and ideas for setting ground rules and specifying consequences related to alcohol, seat belts, speed, distraction, and extra passengers. Additional communications news, campaign materials, and marketing techniques are available at the Traffic Safety Marketing website: <http://www.trafficsafetymarketing.gov>.

To address the issue of underage drinking and driving, NHTSA joined with the Ad Council to launch a PSA campaign that targets new drivers 16 and 17 years old and is built around the idea of “Underage Drinking and Driving: The Ultimate Party Foul.” The campaign includes a TV ad, a Tumblr site, web banners, outdoor advertising, and a branded emoji keyboard that is available on both the iOS and Android platforms.

Exhibit 3.1: Expenditures by Select Interagency Coordinating Committee on Preventing Underage Drinking (ICCPUD) Agencies for Programs Specific to Underage Drinking

ICCPUD Agency	FY 2010 actual	FY 2011 actual	FY 2012 actual	FY 2013 actual	FY 2014 actual	FY 2015 actual	FY 2016 actual	FY 2017 actual
CDC	\$1,200,000	\$1,041,730	\$1,081,200	\$986,587	\$949,894	\$1,100,000	\$900,000	\$900,000
ED	\$40,580,995	\$8,782,000 ^a	— ^b	— ^b	— ^b	0	0	0
NIAAA	\$56,000,000 ^c \$2,000,000 ^d	\$57,000,000	\$62,000,000	\$62,000,000	\$59,350,175	\$52,190,438	\$55,177,270	\$51,000,000
SAMHSA ^e	\$62,542,390	\$63,779,872	\$67,953,616	\$84,555,315	\$89,422,285	\$103,104,523	\$104,332,643	\$104,497,445
OJJDP ^f	\$25,000,000	\$20,708,500	\$4,862,895	\$5,000,000	\$2,500,000	0	0	0
NHTSA	\$625,000	\$600,000	\$645,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
TOTAL	\$187,948,385	\$151,912,102	\$136,542,711	\$153,141,902	\$152,822,354	\$156,944,961	\$161,009,913	\$156,997,445

^a ED's Office of Safe and Drug Free Schools received significant budget cuts in FY 2011, and this figure represents continuation costs for the Grants to Reduce Alcohol Abuse program, which was eliminated in FY 2012. In FY 2011, ED also provided support (\$1,874,450) for the Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention, which focused in part on underage drinking on college campuses.

^b In FYs 2012 and 2013, ED consolidated the functions of the HEC Center into a new technical assistance center, the NCSSLE. However, the exact amount of funding of that Center specific to underage drinking cannot be determined. Similarly, although underage drinking prevention was one activity among many in certain grant projects funded by ED in FYs 2011, 2012, and 2013, the exact amount of funding specific to underage drinking cannot be determined. Not included, as in prior years, are estimates of SS/HS grant activity that focuses on alcohol abuse prevention.

^c NIAAA FY 2010 non-American Recovery and Reinvestment Act (ARRA) funding

^d NIAAA FY 2010 ARRA funding

^e FY 2010–2013 figures include SPF SIG, UAD, Adult Media Campaign, STOP Act grants, and ICCPUD. FY 2010–2013 figures also include PFS, which is a subset of SPF SIG.

^f OJJDP's EUDL program received significant budget cuts in FY 2012. Support for EUDL programming was \$25 million annually from FY 1998 until FY 2011, when there was a reduction to \$5 million, which resulted in the elimination of the EUDL block grant program for all states and territories.

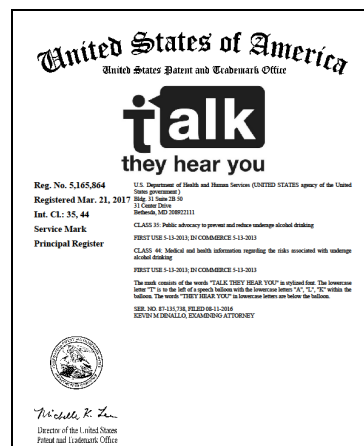
CHAPTER 4

Report to Congress on the National Media Campaign: “Talk. They Hear You.”

Background

“Talk. They Hear You.” (TTHY) is the Underage Drinking Prevention National Media Campaign of the Substance Abuse and Mental Health Services Administration’s (SAMHSA’s) Center for Substance Abuse Prevention (CSAP). The campaign is currently in its fifth year and has evolved to become as much an ongoing communication initiative as a well-recognized brand. In 2016, to bolster the credibility and consistency of the campaign, the U.S. Department of Health and Human Services (HHS) established a trademark for the TTHY logo.

Underage drinking remains a national public health issue with serious implications, especially among adolescents. SAMHSA is responsible for leading public health efforts to reduce the impact of substance abuse and mental illness on American communities. TTHY responds to directives set forth in Section 2(d) of the STOP Act, requiring the Secretary of HHS to fund and oversee a national adult-oriented media public service campaign and to report annually on the production, broadcasting, and evaluation of this campaign. The goal of TTHY is to reduce underage drinking by providing parents and caregivers of youth under age 21 with information and resources to discuss the issue of alcohol with their children.



“Talk. They Hear You.” service mark certificate

The literature on underage drinking prevention suggests that parental interaction with youth regarding underage drinking may provide a unique opportunity for early intervention and prevention. TTHY was designed to capitalize on this theory and to add to the current knowledge base about underage drinking prevention. It also empowers parents to address the issue by increasing their level of comfort with the topic and encouraging open communication with their children.

Officially launched in May 2013, TTHY campaign objectives include:

1. Increasing parent or caregiver *awareness of and receptivity to campaign messages* (knowledge)
2. Increasing parent or caregiver *awareness of underage drinking prevalence* (knowledge)
3. Increasing parent or caregiver *disapproval of underage drinking* (attitudes)
4. Increasing parent or caregiver *knowledge, skills, and confidence in how to talk to their children* about, and prevent, underage drinking (attitudes)
5. Increasing parent or caregiver *actions to prevent underage drinking* by talking to their children about underage drinking (behaviors)

The National Media Campaign Return on Investment

The “Talk. They Hear You.” earned media campaign has yielded more than an \$8 to \$1 return on investment for every dollar invested. Key strategies for the earned media campaign were to (1) secure prominent campaign coverage in several major media outlets, and (2) leverage regional relationships in communities with community engagements like “Town Hall Meetings” and public health observances such as “National Prevention Week” to further educate parents and caregivers of youth under age 21 about why and how they should talk about the dangers of underage drinking.

Since TTHY’s inception, initial investment costs for development and implementation of the campaign have been less than \$1,000,000 per year, totaling \$8,148,324 over a 9-year period. Earned media outreach efforts have generated an estimated \$74 million in earned media placements on major networks and affiliates—with television, print, and radio public service announcements (PSAs) collectively garnering 6.82 billion impressions in all 50 states and more than 300 cities. Distribution is augmented by community engagement with groups such as the Community Anti-Drug Coalitions of America (CADCA) and the National Prevention Network (NPN) that have direct access to parents and caregivers. Including partner engagement and outreach, TTHY has earned more than 20,760 in donated labor hours from community partners, which equates to approximately 10 full time employees (FTEs) and \$443,000 in estimated salary.

TTHY Target Audience

Alcohol use by those younger than the legal age of 21 remains a serious public health and safety problem, undermining the well-being of America’s youth. Although recent data on drinking behavior among 9- to 10-year-olds is not available, an analysis of multiple studies conducted in the 1990s (Donovan et al., 2004) found that 10 percent of 9- to 10-year-olds had already started drinking. More than 17 percent of underage drinkers begin drinking before age 13 (Kann et al., 2016). More than 7 percent of 14- to 15-year-olds used alcohol in the last month (CBHSQ, 2016c).

As noted, SAMHSA’s TTHY campaign focuses on encouraging parents to begin conversations about alcohol with children at an early age, when the likelihood of influencing children’s decisions about drinking is greatest (HHS, 2007). The campaign draws from social marketing and health education behavior theories, feedback from audiences across the country, and the latest scientific research.

Parents have a significant influence on young people’s decisions about alcohol consumption. Parental attitudes toward drinking, as well as parental communication, can have a substantial impact on adolescent alcohol use, particularly among younger adolescents (Ennett et al., 2001; Wood et al., 2004). Although most adults support public policy aimed at reducing youth access to alcohol, there is evidence to suggest that parents are unaware of the pervasiveness and risk of underage drinking (NRC & IOM, 2004).



After a visit with a friend.
A perfect moment to talk about alcohol.

Alarming numbers of pre-teens are drinking alcohol—which makes it urgent to find every opportunity to talk to your kids about the dangers of underage drinking. For tips on how—and when—to begin the conversation, visit:
www.underagedrinking.samhsa.gov

i talk
they hear you




Parents who know about underage alcohol use can take action to protect their children from many of the high-risk behaviors associated with it. Through a direct association with adolescent perceptions and cognition, parental beliefs and communication about the acceptability of underage drinking may positively impact use of alcohol in youth (Sieving, Maruyama, Williams, & Perry, 2000), suggesting that parental interaction with youth regarding underage drinking may provide a unique opportunity for early intervention and prevention.

To help parents/caregivers of youth see themselves and relate to the campaign, TTHY’s campaign products feature parents of diverse backgrounds interacting with their children. The campaign’s launch and other features are described in more detail in the following section.

TTHY Campaign Components

TTHY messages and materials are disseminated through radio, television, and print public service announcements (PSAs); social media; the campaign website; partner networks; and direct outreach. Campaign messages:

- Emphasize the importance of parents talking to their kids about underage drinking before they reach the age range when alcohol use typically begins (before age 15)
- Offer advice to parents about preparing children to deal with peer pressure issues that may lead to alcohol abuse
- Highlight underage drinking statistics that are likely to catch parents’ attention
- Focus on helping parents address the issue of underage drinking in a manner that emphasizes their children’s ability to make autonomous decisions
- Model behaviors and situations when parents can begin the conversation about the dangers of alcohol with their children

TTHY Public Service Announcements

TTHY PSAs show parents using everyday opportunities to talk with their children about alcohol and reinforce the importance of starting these conversations at an early age. PSAs direct viewers/listeners to the campaign’s website (<http://www.samhsa.gov/underage-drinking>) for additional information and tools, as well as for downloadable versions of video, radio, and print PSAs. A select number of these materials are currently available in both English and Spanish, with several Spanish-language versions released in 2016. A series of print PSAs directed at Native American audiences has also been distributed to markets in Alaska, Arizona, and Oklahoma.

In 2017, the TTHY campaign released a set of PSAs, which includes an extended-time English-language video PSA. This discussion-starter video, approximately 4 minutes long, illustrates the concerns and questions parents have about underage drinking, how to talk with their children about it, and how to model a meaningful and effective conversation. It is intended for use by community organizations, schools, healthcare providers, policymakers, and others concerned about underage drinking prevention.

In 2018, the TTHY campaign will release a collection of three PSAs with messages about underage drinking prevention, as well as separately funded PSAs about general substance use prevention. All of the PSAs address underage drinking and other substances that are often used

in combination with alcohol. One PSA in the collection will focus on military families, recognizing the increased risk factors faced by children with one or more parents in the military.

Since the campaign launched in 2013, TTHY television, radio, and print PSAs have collectively garnered more than 6.82 billion impressions. Distribution has generated an estimated \$74 million in free air time and ad space.

TTHY Partner Networks

The TTHY media campaign works with more than 200 local, state, and national partners to support outreach and dissemination of campaign materials across the United States. Partners include other government agencies as well as prevention, retail, healthcare, community, and school-based organizations.

In addition to PSAs, TTHY promotional materials include infographics, web banners, buttons, and a scannable quick response (QR) code for promoting the campaign on partner websites. These materials were created and provided to partners for display and distribution to parents and community members, along with talking points, fact sheets, infographics, draft social media messages, and email templates to ensure consistent outreach to parents and community members.

For example, between January and July 2016, coalitions in four neighboring Florida counties came together to roll out TTHY to parents and caregivers throughout central Florida. Collective prevention efforts included co-branding TTHY print, radio, and television PSAs and widely distributing them via channels that were more likely to hit the target demographic of parents and caregivers. These channels included billboards, gas pump advertising, window clings, movie theater trailer placements, public transportation advertising, and traditional print, radio and television PSA placements.

TTHY increased its total number of partners in 2017 by 107 percent, engaging 222 new national and local organizations at events such as SAMHSA's 14th Annual Prevention Day, the Pentagon's Great American Smokeout Wellness Fair, and the Community Anti-Drug Coalitions of America (CADCA) Mid-year Conference. This outreach resulted in distribution of more than 300 credit card flash drives with TTHY's full suite of materials such as postcards, wallet cards, and table tents.

Central Florida Cares Health System and four drug-free coalitions run the TTHY Campaign, using billboards as one channel to reach parents/caregivers in Central Florida.



In 2017, SAMHSA initiated meaningful partnerships for prevention with groups such as the 525 Foundation, the American Automobile Association, the Tanana Chiefs Conference, and the Easthampton Healthy Youth Coalition. The Easthampton Healthy Youth Coalition in

Easthampton, MA, expressed a need for materials that would resonate with their large LGBTQ community. With SAMHSA’s help, the coalition ran TTHY PSAs on local television and radio channels, conducted a four-postcard campaign targeting 8th-grade parents, ran a paid Facebook ad campaign, and utilized TTHY images on their website. SAMHSA also worked with the coalition to provide them with high-quality TTHY campaign photos that featured two moms and their son, which the coalition used to purchase billboard ad space in their county.

TTHY Website

The TTHY website provides a centralized resource for all campaign information and products. Materials and information are organized by visitor category: parent/caregiver, partner, or media. Educational and informational documents provide facts and statistics on the problems and consequences of underage drinking, risk factors, warning signs, and suggestions for actions parents and educators can take to help protect children and strengthen decision-making skills.

A Spanish version of the site (<http://www.samhsa.gov/hable-ellos-escuchan>) launched in March 2016.

Parents can use an interactive “create your own” action plan to generate tips on when and how to talk to their children about alcohol that are tailored to a child’s gender and age. They can also download a family agreement template that enables parents and children to pledge their commitment to avoid underage drinking together.

Other tools include answers to children’s frequently asked questions about alcohol and five primary conversational goals for parents emphasizing the importance of:

- Indicating disapproval of underage drinking
- Demonstrating concern for their child’s happiness and well-being
- Establishing themselves as a trustworthy source of information
- Showing their child that they are paying attention and will notice alcohol use
- Building their child’s skills and strategies for avoiding underage drinking

Collective promotional activities from January 1, 2017, through December 31, 2017, helped drive 63,302 visits to the TTHY website—a 10 percent increase from the prior year. Social



TTHY materials are available on the SAMHSA website.

media promotion has been especially effective in driving traffic to the site, with Facebook leading as a top referring website for 5 of the 12 months in 2017.

Mobile Application

Available to parents since July 2015, the mobile application ("Talk. They Hear You.") is available through Google Play™, the Windows® Store, and the App Store®. The application features an interactive simulation using avatars to help parents practice bringing up the topic of alcohol, asking relevant questions, and keeping the conversation going in a role-play environment. The app was downloaded 9,435 times as of October 2017 – 41 percent of downloads taking place between October 2016 and October 2017 alone.



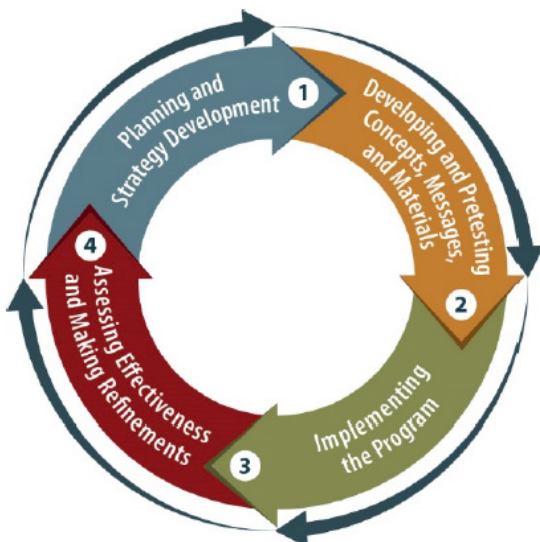
"Talk. They Hear You." mobile app

In 2017, SAMHSA posted 14 social media messages promoting TTHY mobile applications. These social media posts garnered 668 engagements (reactions, comments, shares, replies) and contributed to 2,478 visits and 5,157 page views to the www.samhsa.gov/underage-drinking/mobile-application.

In previous years, the TTHY campaign has utilized other social media promotion tools to promote the mobile application. More detailed information on these efforts can be found in the 2016 Report to Congress.

TTHY Campaign Evaluation and Refinement

The National Cancer Institute Health Communications Model



Best practices for implementing health communications campaigns also call for the application of psychology and social marketing theory to guide how campaigns will drive audiences to action with respect to influencing internal and external factors. For the TTHY campaign, SAMHSA develops products that are relevant, relatable, and resonate with the target audience. Formative research is critical because it alerts SAMHSA to audience preferences and motivators early in the planning process and applying this research to the campaign materials makes them appealing to the target audiences. Thus, following the National Cancer Institute model, SAMHSA pretests messages, materials, and concepts during their development. Summative evaluation is an important aspect of this development process, and while it happens at the end of the research cycle, it should not be viewed as an end

point. The findings from this phase of the research are leveraged to determine best practices, and where appropriate, forge new directions for a communications initiative. The process undertaken to develop and further hone the TTHY campaign was no exception.

Formative Evaluation

SAMHSA continues to invigorate the TTHY campaign by incorporating findings from ongoing research. During campaign development, parents, youth, and stakeholders provide feedback on all aspects of concept and message development. For instance, prior to the production of each campaign PSA, several concepts are focus tested with parents and caregivers around the country to gain feedback on the concepts, memorability of the campaign, and appeal of broader campaign messages and products. Typically, four focus groups are conducted for each PSA produced, and feedback from parents and caregivers is integrated into the campaign.

To these ends, SAMHSA conducted a national pilot program in 2012 to test and refine the campaign’s creative materials and objectives (for extensive details, see the 2016 Report to Congress). In the ongoing effort to refresh the campaign and reach new audiences, SAMHSA will hold four focus groups with families that have at least one parent in the military. The intent of this research will be to understand how underage drinking prevention is prioritized within this community and to inform the development of PSAs that target military families. Feedback received during these types of formative market testing efforts are incorporated into final campaign materials prior to launch.

Summative Evaluation

Equally important to campaign development and implementation is the summative evaluation of the campaign. Carefully measuring campaign outcomes helps us answer the question of how well the campaign is achieving its stated goals for change. Evaluation of the effectiveness of the TTHY media campaign relies on the establishment of a correlation between parent/caregiver exposure to campaign materials and a change in knowledge, attitudes, and behavior to affect the prevention of underage drinking. SAMHSA plans to conduct a large-scale national survey of parents/caregivers—in addition to conducting a quasi-experimental case study—to investigate whether such a correlation exists. To ensure competency, campaign evaluation tools and protocol also require careful development and refinement.

Research Instrument Development

To further inform the development of the research tool being designed for implantation in the Case Study and National Survey projects, a pilot test of this instrument was completed in January 2016. Findings from this research indicate that a national survey effort is feasible. SAMHSA also conducted the focus group research needed for additional short-term campaign evaluation; the five groups commenced in September 2016 and were completed in November of that year. A topline of research findings and recommendations for how to further refine both the national survey and the TTHY campaign materials and approach are detailed in the Campaign Evaluation Strategy section of the 2017 Report to Congress. Additional edits were made to the survey instrument based on those recommendations.

Since the publication of the 2017 Report to Congress, much additional research has been conducted to further the development and implementation of the TTHY campaign and the tools

designed to track the markers of change. For instance, final refinements to the survey instrument, which is being designed for use in both the Case Study and National Survey research project further described below, has been executed via an iterative process of review among subject matter experts in the survey design space, as well as a rigorous cognitive testing procedure.

Cognitive testing was conducted in August–September of 2017 among a small sample (N=8) of respondents falling within the campaign target audience. Small-scale cognitive testing studies, such as the type conducted for this effort, are the gold standard for ensuring valid research instrumentation, and are well-accepted among behavioral scientists and research practice professionals alike for helping to eliminate “unwarranted suppositions, awkward wordings, or missing response categories” (Presser et al, 2004).*

Based on the feedback from these interviews, final edits were made to the survey to decrease opportunities for priming respondents, improve survey clarity, decrease respondent burden, and fine-tune the specificity of the information gleaned. Specific revisions included tweaks to language, item order, style and formatting, and optimization for the online version of the survey. A full report of study procedures and recommendations are detailed in the archived Cognitive Testing Report available upon request. The final survey was then time-tested in September of 2017 to confirm that burden estimates were within the limits suggested in the OMB package submitted for this project. A full report of procedures and findings of the time testing can be found in the archived Time Testing Report (available at underageddrinking@samhsa.gov).

The 2016 pilot survey study, subsequent focus group research, iterative subject matter expert reviews of the survey instrument, and cognitive testing of the revised survey were all employed to develop the most robust survey of parents and caregivers possible, as well as to refine data collection procedures. Specific recommendations from the 2016 focus group research are provided in the full report, “Advancing the Evaluation of the ‘Talk. They Hear You.’ Initiative: A Formative Research Project Assessing the National Survey Effort to Determine Reach and Impact of SAMHSA’s Underage Drinking Prevention National Media Campaign.” Details of the additional optimization efforts are reported in the 2017 “Cognitive Testing Report.” A final additional data optimization exercise[†] will be conducted before launch of the National Survey effort in 2018.

The following bullets highlight only the most substantive edits resulting from the intensive, iterative process of subject matter expert review and cognitive testing reported above.

- In order to improve the recognition items for ad recall, a TTHY logo was included to improve the brand recall measurement.

* Note, in addition to cognitive-testing the research instrument, subject matter experts in research design and analytics further reviewed the survey for domain area relevance and data optimization. Iterative rounds of edits to word choice, question ordering and formatting to ensure clarity and quality data outputs were also executed both before, during and after the cognitive interview testing period.

[†] This process involves the counsel of a trained psychometrician who is well versed in analytics. Specifically, the survey data optimization process ensures that 1) stem questions and response options used in the final version of the survey are appropriate to the specifics of each study design, and 2) the data collected will allow for the greatest flexibility during analysis, thus yielding the greatest amount of information relevant to our research questions.

- To measure specific ad campaign exposure, a section was added that gauges recall for the most popular TTHY print copy, including a non-TTHY “sham” ad in order to account for false reporting.
- Significant additions were made to the original inquiry of the perceived importance of underage drinking. First, the stem question of the “most important issues” grid was refined to reflect the importance of *talking to their children* about the range of concerns listed. This edit was made because the perceived importance of *talking about underage drinking with one's child* is more in line with how behavior change is currently hypothesized in the TTHY evaluation’s program theory. *Having the conversation* is also a primary TTHY campaign objective.
- Conceptual clarifications and categorizations were made in the “important issues facing your child” grid, including distinct response options for electronics overuse, negative online influences, general physical health-related concerns, mental health concerns, and school-performance-related issues, including general academic achievement and attention-deficit hyperactivity disorder/attention-deficit disorder (ADHD/ADD), which was reclassified under “mental health” per DSM codification.
- A perceived response efficacy* question (i.e., believing that having a conversation with one’s children about underage drinking will make a difference in their underage drinking KABBs†) was added to the survey since thinking the issue is important may or may not correlate with believing that having the conversation will lead to reduced underage drinking behaviors. Another question about perceived importance of the underage drinking topic was also added.‡
- In attempting to quantify environmental effects on KABBs, a follow-up question was added to the campaign message awareness section to gauge if respondents have heard a similar message *outside of* TTHY exposures.
- A question regarding norms around alcohol consumption by gender was embedded to test whether disparities in the culture of drinking exist between men and women (potential probe for future research).
- A key item omitted from the original survey was added to capture TTHY campaign effects. Because the nature of social marketing efforts require repeated exposure over an extended period of time to effect behavior change, and the public health issues they are designed to impact are complex and thus challenging to achieve, measuring factors upstream of intended outcomes (i.e.: talking to one’s child about underage drinking) is best practice in measuring the effectiveness of social marketing evaluations. Furthermore, *intention to act* can be a more sensitive outcome than an already performed action, in part because of a lack of opportunity to act moderates campaign effects on action itself (e.g., the child has been with divorced dad for the summer, making it impossible to have the conversation). Thus, parents’

* “Behavioral efficacy” means one’s beliefs about the outcomes and effectiveness of a behavior.

† Knowledge, Attitudes, Beliefs and Behaviors.

‡ These questions were added to supplement the “degree of concern about UAD” question that comes later in the survey, since that item is difficult to interpret on its own. For instance, if someone is exposed to the campaign and becomes more concerned about youth driving, is that necessarily a good thing? Further, are respondents more likely to remember exposure if they were very concerned about UAD in the first place? And if they are exposed and as a result have either already had the recommended conversation with their child or now feel better able to do so, might they not be less concerned, and would that not be a good thing? A cross-sectional design would make it hard to tease out the sequence of exposure, change in concern, and action. Thus, this additional question was added regarding the outcome efficacy of talking to one’s child about UAD.

intention to discuss underage drinking (in this case, to have the underage drinking conversation) was added as a key survey item.

- Follow-up questions (one open- and one close-ended) were added to the question grid asking if key TTHY messages were emphasized among those having underage drinking conversations with their children: one that queried whether there was another point emphasized that is not reflected in the list, and another asking them to briefly detail that point. This additional inquiry was made because it yields important information about potentially detrimental messages that can be corrected and/or potentially helpful messages that parents use that could be leveraged in future TTHY messaging.
- Based on the time-testing exercise conducted during the survey development period, projected response time was edited to give respondents a more realistic expectation of time required for completion.
- The questionnaire was restructured to accommodate individual KABB for each child within the 9-15 age range. This allows for differentiated insights based on developmental age.

Tracking TTHY Outcomes

With the goal of tracking the effectiveness of TTHY, two major research studies have been designed and are in various stages of implementation. One is an annual National Survey, for which an OMB package is currently being developed and the research launch tentatively slated for mid-2018. The other is a quasi-experimental Case Study research project, which launched in Fall 2017 and for which OMB approval was achieved in Spring of 2017 (OMB No. 0930-0373 exp. 5/31/2020).

The purpose of the National Survey effort is to evaluate the national reach of the campaign, as well as to establish a correlation between parent/caregiver exposure to campaign materials and desired underage drinking-related behavioral outcomes (KABBs related to parent communications that impact underage drinking among youth under age 21). More specifically, this study will:

- Examine campaign reach and exposure to determine whether enough adults with children in the targeted age range have been exposed to campaign messaging and materials
- Evaluate whether parents exposed to campaign messaging and materials report increased knowledge and skills and/or changes in behavior regarding talking to their children about alcohol after seeing the materials

The design of the National Survey utilizes a repeat cross-sectional data collection effort of underage drinking and TTHY-related KABBs among parents/caregivers of middle-school-aged children, with the potential for an embedded longitudinal cohort sub-sample in years 2-4 of the research contract. SAMHSA will administer the nationally representative survey online in both English and Spanish using the Qualtrics[®] Survey Suite.

To supplement findings from the National Survey study, SAMHSA is also conducting a quasi-experimental Case Study (mentioned above). Whereas national survey data will provide an evaluation of overall campaign information exposure and retention across the United States, the Case Study will explore details of *how* exposure to the TTHY campaign affects parent and student attitudes and behaviors at the intervention site.

The Case Study utilizes a pre-post intervention study design with a comparison group of middle school-aged students and their parents/caretakers in two U.S. middle schools. Evaluation researchers designed a forced campaign exposure at the intervention school setting (Rundlett, NH). Findings from this site will be compared to a comparison site (Lutz, FL), which will not be receiving the intervention. The comparison site was matched with the intervention site on demographics known to have an impact on high-risk youth behaviors (e.g., race/ethnicity and percentage of student population receiving free or reduced-cost school lunch). Linking parent/student pre- and post-exposure surveys at both sites will allow SAMHSA to identify trends in correlations between changes in parent behavior and changes in youth behavior.

As part of the Case Study project, environmental scan interviews are also being held with key stakeholders at both sites to track potential influences on campaign outcomes outside of TTHY exposures. In order to account for *how* the campaign impacted KABBs among parents and caretakers, as well as to identify details on specific campaign content and its usefulness for discussing underage drinking with children, one-on-one interviews at the intervention site will also be conducted among participating parents/caregivers. Monthly environmental scan interviews with key stakeholder at each site will also be conducted to more fully explain any post-intervention differences found between sites, as well as to account for any influences on outcomes of interest to the study above and beyond TTHY campaign exposure.

Together, these sources of information will allow an estimation of overall campaign impact, as well as further inform development of the TTHY campaign materials and dissemination approach.

Campaign Expansion

During the course of the exploratory research conducted at the formative stages of TTHY campaign development, SAMHSA also learned that parents/caregivers are concerned about broader substance use prevention and want information on how to talk with their children about not using marijuana and opioids. As a result, in 2018, the TTHY campaign will receive separate funding to begin expanding the campaign with general substance use prevention messages. While STOP ACT dollars allow for continued development and reach of UAD prevention messaging, this additional funding allows for expansion into other substances that present comorbidity risks for alcohol users and continue to ravage U.S. populations nationwide. This campaign expansion is in direct response to feedback solicited from community-level needs assessments and dialogue with related professional groups. Thus, to inform the PSAs for the separately funded campaign expansion, six additional focus groups will be conducted in 2018 with parents/caregivers in states with high levels of opioid use and state or local marijuana policy changes. This additional research will help SAMHSA understand if these factors influence parents in talking with their kids about alcohol and substance use prevention, which is informative not only for the alcohol-focused TTHY messaging, but the externally-funded general substance abuse expansion of the campaign.

Conclusions

Supporting the development and justification of the TTHY campaign involves a complex interplay of formative, process and outcomes evaluation efforts. Preliminary research suggests that SAMHSA has met several markers for early success, including strongly resonating with intended TTHY audiences and researching these targets via a variety of venues. Further, in establishing the ties that connect campaign objectives with outcomes, SAMHSA has embarked upon an aggressive research plan that has recently launched and will continue to garner support for program efficacy over the next four years. Together, data from the National Survey and quasi-experimental Case Study will be used not only to estimate overall campaign reach and impact, but to ensure that the TTHY campaign evolves in ways that continue to resonate with its primary target audiences and meet the needs of the U.S. population at large.

APPENDIX A: ICCPUD Members

Jerome Adams, M.D., Ph.D.

Surgeon General
U.S. Department of Health and Human
Services

Alex M. Azar, II

Secretary
U.S. Department of Health and Human
Services

James W. Carroll, Jr.

Deputy Director
Office of National Drug Control Policy

Elaine L. Chao

Secretary
U.S. Department of Transportation

Betsy DeVos

Secretary
U.S. Department of Education

Caren Harp

Administrator
Office of Juvenile Justice and Delinquency
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U.S. Department of Justice

Lynn Johnson

Assistant Secretary
Administration for Children and Families
U.S. Department of Health and Human
Services

Heidi King

Deputy Administrator
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Administration

George F. Koob, Ph.D.

Director
National Institute on Alcohol Abuse and
Alcoholism
National Institutes of Health
U.S. Department of Health and Human
Services

James N. Mattis

Secretary
U.S. Department of Defense

**Elinore F. McCance-Katz, M.D., Ph.D.
(Chair)**

Assistant Secretary for Mental Health and
Substance Use
Substance Abuse and Mental Health Services
Administration
U.S. Department of Health and Human
Services

Robert R. Redfield, M.D.

Director
Centers for Disease Control and Prevention
U.S. Department of Health and Human
Services

Jeff Sessions

Attorney General
U.S. Department of Justice

Joseph Simons

Chair
Federal Trade Commission

Nora D. Volkow, M.D.

Director
National Institute on Drug Abuse
National Institutes of Health
U.S. Department of Health and Human
Services

APPENDIX B: Surveys

Information about underage alcohol use, abuse, and consequences primarily comes from three federally funded surveys—the National Survey on Drug Use and Health (NSDUH), Monitoring the Future (MTF; conducted pursuant to federal grants), and the national Youth Risk Behavior Survey (YRBS). Each of these surveys makes a unique contribution to our understanding of the nature of youth alcohol use. NSDUH assesses illicit drug, alcohol, and tobacco use among noninstitutionalized individuals age 12 and older and serves as the major federal source of nationally representative data on substance use in the general population of the United States. MTF examines attitudes and behaviors of 8th, 10th, and 12th graders with regard to alcohol, drug, and tobacco use and provides important data on substance use and the attitudes and beliefs that may contribute to such behaviors. YRBS examines risk behaviors among high school students and provides vital information on specific behaviors that cause the most significant health problems among American youth.

It is important to note that each of these surveys uses different methodologies, and for that reason, sometimes generate different prevalence estimates of youth substance use. To improve federal policymakers' understanding of the influence of methodological differences on those estimates, the Office of the Assistant Secretary for Planning and Evaluation within the Department of Health and Human Services (HHS) commissioned a group of recognized experts in survey design, sampling techniques, and statistical analysis to examine and compare the survey methodologies. The resulting papers and accompanying federal commentaries appeared in a special issue of the *Journal of Drug Issues* (Volume 31, Number 3, Spring 2001). Experts agreed that the overall methodology for each survey is strong and that observed differences are not the result of flaws or serious weaknesses in survey design. In fact, some differences are to be expected—such as those resulting from home- versus school-based settings. From a policy perspective, serious and complex issues such as youth alcohol use and related behavior often require examination and analysis from multiple perspectives. Because no one survey is absolute or perfectly precise, input from multiple sources is not only valuable, but necessary.

National Survey on Drug Use and Health (NSDUH)

As noted, NSDUH is the primary source of information on the use of illicit drugs, alcohol, and tobacco in the civilian, noninstitutionalized population of the United States age 12 or older. The survey also collects information on mental health and mental health service utilization among youth ages 12 to 17 and adults age 18 or older. Initiated in 1971 and conducted annually since 1990, questionnaires are administered to individuals who constitute a representative sample of the population through face-to-face, home-based interviews. The Substance Abuse and Mental Health Services Administration (SAMHSA) sponsors the survey, and it is planned and managed by SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ). RTI International collects data under contract. NSDUH collects information from residents of households and non-institutional group quarters (e.g., shelters, rooming houses, dormitories), and civilians living on military bases.

Since 1999, NSDUH has been conducted via computer-assisted interviews. Most questions are administered via audio computer-assisted self-interviewing, which provides respondents with a highly private and confidential means of responding to questions. This method increases the

level of honest reporting of illicit drug use and other sensitive behaviors. Less sensitive items are administered using computer-assisted personal interviews.

NSDUH provides estimates for each of the 50 states and the District of Columbia, as well as national estimates. Compared with the 1999 to 2013 design, the 2014 through 2017 sample design allocates more interviews to the largest 12 states, enabling greater precision for national NSDUH estimates. For the 2016 survey, 67,942 interviews were completed, for a weighted response rate of 68.4 percent. Due to improvements in the survey in 2002, the 2002 data constitute a new baseline for tracking trends in substance use (before 2002, NSDUH was called the National Household Survey on Drug Abuse [NHSDA]). For that reason, SAMHSA recommends that estimates from 2002 forward not be compared with estimates from 2001. In 2015, substantial changes were again made to data collection equipment, respondent materials, and the survey questionnaire used for NSDUH to improve quality and address changing research needs. Where noted, some trend data will not be available for several years.

Monitoring the Future Study (MTF)

MTF measures alcohol, tobacco, and illicit drug use, as well as perceived risk, personal disapproval, and perceived availability associated with each substance among nationally representative samples of students in public and private secondary schools throughout the conterminous United States. The National Institute on Drug Abuse (NIDA) supports MTF through a series of investigator-initiated grants to the University of Michigan's Institute for Social Research. Every year since 1975, a national sample of 12th graders has been surveyed. In 1991, the survey was expanded to include comparable numbers of 8th and 10th graders each year. Follow-up surveys are also administered by mail to a representative sample of adults from ages 18 to 55 from previous high school graduating classes. In 2016, completed questionnaires were obtained from 90 percent of all sampled students in 8th grade (n=17,643), 88 percent in 10th grade (n=15,230), and 80 percent in 12th grade (n=12,600). University of Michigan staff members administer the questionnaires to students, usually in their classrooms during a regular class period. Questionnaires are self-completed and formatted for optical scanning. In 8th and 10th grades, the questionnaires are completely anonymous. In the 12th grade, they are confidential (to permit longitudinal follow-up of a random subsample of participants). Extensive procedures are followed to protect the confidentiality of subjects and their data.

Youth Risk Behavior Survey (YRBS)

In the late 1980s, only a limited number of health-related school-based surveys such as MTF existed in the United States. To remedy this, the Centers for Disease Control and Prevention (CDC) developed the Youth Risk Behavior Surveillance System (YRBSS) to monitor six categories of priority health-risk behaviors that contribute substantially to the leading causes of death, disability, and social problems among youth and young adults. YRBSS includes biennial national, state, and local school-based surveys of representative samples of students in grades 9 through 12, as well as other national and special-population surveys. CDC conducts the national survey—YRBS—with a target population composed of all public and private high school students in the 50 states and the District of Columbia. Education and health agencies conduct state and local surveys. The national sample is not an aggregation of state and local

surveys, and state and local estimates cannot be obtained from the national sample. In 2015, the latest year for which data are available, 15,624 students provided usable questionnaires for the national YRBS for an overall student response rate of 68 percent.

Additional Surveys

Three additional federally supported surveys collect alcohol consumption and related information from a segment of the underage population—18- to 20-year-olds.

- *The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)* is a large nationwide household survey sponsored by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). NESARC assesses the prevalence and patterns of alcohol use, other drug use, and related disorders; related risk factors; and associated mental and physical disabilities based on a nationally representative sample of the civilian non-institutionalized population of the United States aged 18 years and older. The first NESARC survey was conducted in 2001-2002. The second survey was conducted in 2004-2005 among individuals who participated in the first NESARC survey. Both surveys were fielded by the U.S. Census Bureau. A third NESARC survey, NESARC-III, was cross-sectional and conducted in 2012-2013. Fieldwork was performed by Westat, Inc. through a contract under the data collection authorization of Title 42 USC 285n.
- Begun in the early 1980s and fielded every 2 to 4 years, the Department of Defense (DoD) *Survey of Health-Related Behaviors* measures prevalence of substance use and health behaviors among active-duty military personnel on U.S. military bases worldwide. In 2005, DoD expanded the scope of the survey to include the National Guard and Reserves, as well as other special studies. The most recent surveys are the 2014 Health Related Behavior Survey—Reserve Component, which was fielded beginning in September 2014, and the 2015 DoD Survey of Health-Related Behaviors Among Active Duty Military Personnel. The 2011 survey included the most extensive changes in the survey since its inception in 1980. For the first time, the survey was administered through a web-based format.
- Some substance use measures are better aligned with current national civilian health surveys, particularly the *National Health Interview Survey (NHIS)* conducted by the CDC. Begun in 1957, the NHIS is an annual, multistage probability sample survey of households by U.S. Census Bureau interviewers for the CDC National Center for Health Statistics (Pleis & Lethbridge-Cejku, 2007).

Information related to underage users of alcohol (ages 18 to 20) from these three surveys may be added to this report in the future.

Association versus Causation

In reviewing data related to risky behaviors and different categories of alcohol use, readers should keep in mind that association does not prove causation. Just because alcohol use is associated with other risky behaviors does not mean that it *causes* these other risky behaviors. Often, additional research is needed to establish alcohol as a causative factor.

Additional Methodological Caveats

When reviewing studies of the age of initiation of alcohol use, it is important to recognize that different researchers use different methods to describe initiation of drinking and to estimate the

average age at first use of alcohol. In some cases, this has resulted in large differences in estimates, primarily due to differences in how age groups and time periods are specified in the calculations. The following examples will help readers understand these methodological differences and the resulting statistical differences.

A popular method for computing average age involves restricting the age group of estimation to persons who are 12 to 17 years old or 12 to 20 years old, with no restriction on the time period. This method provides an estimate of the average age of first use among those in the age group who have used alcohol at some point in their lifetime, which typically results in a younger estimated average age of first use than other methods. This is because initiation occurring in older age groups is excluded from the calculation and also because the calculation gives too much weight to very early initiation. For example, 15-year-olds who will first use at age 17 are excluded, since they have not yet used alcohol at the time of data collection. Thus, the 2003 NSDUH average age of first use among lifetime alcohol users who are 12 to 20 years old is 14.0 years; among 20-year-olds, 15.4 years; and among all lifetime drinkers, 16.8 years.

The method has limited utility for assessing trends because estimates do not reflect a well-defined recent period. A 20-year-old may have first used alcohol at age 10, so an average age of first use among 12- to 20-year-olds would span a period covering as many as 10 years. In addition to not reflecting the most current patterns, year-to-year change in this average is typically negligible due to the substantial overlap in the covered periods. Trends in average age of initiation are best measured by estimating the average age among those who initiated alcohol use during a specific period (such as a calendar year or within the 12 months prior to interview) in a repeated cross-sectional survey. These estimates can be made with or without age restrictions; for example, the average age of first use among persons in 2003 who initiated within the past 12 months was 16.5 years, but restricting the calculation to only those who initiated before age 21 results in an average age of 15.6. Based on the 2003 NSDUH, an estimated 11 percent of recent initiates were 21 years or older when they first used.

Estimates of average age of first use among recent initiates based on the NSDUH sample of people 12 years old and older is biased upward because it does not capture initiation before age 12. The 2003 NSDUH estimated that 6.6 percent of alcohol initiates from 1990 to 1999 were 11 years old or younger. Excluding these early initiates from calculations inflates the estimate of average age by approximately half a year. This bias can be diminished by making estimates only for time periods at least 2 years prior (e.g., using the 2003 NSDUH, estimate the average age at first use for 2001, but not 2002), an approach used in previous NSDUH reports. Although this approach can provide interesting historical data, it does not give timely information about emerging patterns of alcohol initiation. Further, there are serious bias concerns with historical estimates of the number of initiates and their average age at first use constructed from retrospectively reported age at first use. Older respondents are more likely not to remember accurately when an event occurred. An event may be remembered as having occurred more recently than it actually did—a “forward telescoping” of the recalled timing of events. Evidence of telescoping suggests that trend estimates based on reported age at first use may be misleading.

For example, in the 2013 MTF, alcohol use by the end of 6th grade was reported by 13.2 percent of 8th graders but by only 4.6 percent of 12th graders. Several factors, including telescoping, probably contribute to this difference. Eventual dropouts are more likely than average to drink at

an early age; thus, they will be captured as 8th but not 12th graders. Lower grades also have lower absentee rates. Another factor relates to the issue of what is meant by first use of an alcoholic beverage. Students in 12th grade are more inclined to report use that is not adult-approved, and to not report having less than a glass with parents or for religious purposes. Younger students may be more likely to report first use of a limited amount of alcohol. Thus, 8th- and 9th-grade data probably exaggerate drinking, whereas 11th- and 12th-grade data may understate it.

Websites for Data on Underage Drinking

These federal websites can be useful to persons seeking data related to underage drinking:

- **Information from SAMHSA on underage drinking:**
<https://www.samhsa.gov/underage-drinking-topic>
- **Information from the YRBS:**
<https://www.cdc.gov/HealthyYouth/data/yrbs/>
- **Information from NHTSA on underage drinking and on drinking and driving:**
<https://www.trafficsafetymarketing.gov/get-materials/drunk-driving/underage-drinking-prevention>
<https://one.nhtsa.gov/Driving-Safety/Impaired-Driving>
- **Information from NIAAA on underage drinking:**
<https://www.niaaa.nih.gov/alcohol-health/special-populations-co-occurring-disorders/underage-drinking>
<https://www.niaaa.nih.gov/alcohol-health/special-populations-co-occurring-disorders/college-drinking>
- **Information from NIDA on underage drinking:**
<http://www.monitoringthefuture.org>

APPENDIX C: Abbreviations

Federal Departments and Agencies

Department of Defense

Army National Guard
 Education Activity
 U.S. Air Force
 U.S. Army Reserve
 U.S. Coast Guard
 U.S. Marine Corps
 U.S. Navy

DoD
 ARNG
 DoDEA
 USAF
 USAR
 USCG
 USMC
 USN

Department of Education

Office of Safe and Healthy Students
 Office of Elementary and Secondary Education

ED
 OSHS
 OESE

Department of Health and Human Services

Administration for Children and Families
 Family and Youth Services Bureau
 Agency for Healthcare Research and Quality
 Centers for Disease Control and Prevention
 Centers for Medicare & Medicaid Services
 Division of Behavioral Health
Eunice Kennedy Shriver National Institute of Child Health
 and Human Development
 Food and Drug Administration
 Health Resources and Services Administration
 Indian Health Service
 National Cancer Institute
 National Institute on Alcohol Abuse and Alcoholism
 National Institute on Drug Abuse
 National Institutes of Health
 Office of Adolescent Health
 Office of Disease Prevention and Health Promotion
 Office of the Assistant Secretary for Health
 Office of the Assistant Secretary for Planning and Evaluation
 Office of Public Health and Science
 Office of the Surgeon General
 Substance Abuse and Mental Health Services Administration
 Center for Mental Health Services
 Center for Substance Abuse Prevention
 Center for Substance Abuse Treatment
 Office of Applied Studies

HHS
 ACF
 FYSB
 AHRQ
 CDC
 CMS
 DBH

 NICHD
 FDA
 HRSA
 IHS
 NCI
 NIAAA
 NIDA
 NIH
 OAH
 ODPHP
 OASH
 ASPE
 OPHS
 OSG
 SAMHSA
 CMHS
 CSAP
 CSAT
 OAS

Department of Justice

DoJ

Drug Enforcement Administration	DEA
Office of Juvenile Justice and Delinquency Prevention	OJJDP
Office of Justice Programs	OJP
Department of Labor	DOL
Employment Training Administration	ETA
Office of Youth Services	OYS
Occupational Safety and Health Administration	OSHA
Federal Trade Commission	FTC
Office of National Drug Control Policy	ONDCP
Department of Transportation	DOT
National Highway Traffic Safety Administration	NHTSA
Department of the Treasury	
Alcohol and Tobacco Tax and Trade Bureau	TTB

Programs, Agencies, and Organizations

Above the Influence	ATI
Access to Recovery	ATR
Addiction Technology Transfer Center	ATTC
Adolescent Brain Cognitive Development Study	ABCD
Adolescent Health: Think, Act, Grow	TAG
Adolescent Support and Counseling Services	ASACS
Adults in the Making	AIM
After Deployment: Adaptive Parenting Tools	ADAPT
Alcohol and Drug Management Tracking System	ADMITS
Alcohol Detection Devices	ADD
Alcohol Policy Information System	APIS
Alcohol-Related Disease Impact	ARDI
Alcohol Screening Program	ASP
American Psychiatric Association	APA
Army Substance Abuse Programs	ASAP
Basic Center Program	BCP
Behavioral Risk Factor Surveillance System	BRFSS
Behavioral Health Services Information System	BHSIS
Birth Control and Alcohol Awareness: Negotiating Choices	
Effectively Project	BALANCE
Brief Alcohol Screening and Intervention for College Students	BASICS
Center for the Application of Prevention Technologies	CAPT
Center for Behavioral Health Statistics and Quality	CBHSQ
Center for Mental Health Services	CMHS
Center on Alcohol Marketing and Youth	CAMY
Collaborative Research on Addiction at NIH	CRAN
College Alcohol Intervention Matrix	CollegeAIM
Community Anti-Drug Coalitions of America	CADCA
Community Youth Development Study	CYDS
Communities that Care	CTC
Competitive Personal Responsibility Education Program	CPREP

Culture of Responsible Choices	CoRC
Drug Abuse Resistance Education	DARE
Drug Abuse Warning Network	DAWN
Drug and Alcohol Services Information System	DASIS
Drug Education for Youth	DEFY
Drug Free Communities Program	DFC
SAMHSA's Emergency Department Surveillance System	SEDSS
Employment Training Administration	ETA
Enforcing the Underage Drinking Laws	EUDL
European School Survey Project on Alcohol and Drugs	ESPAD
Family and Youth Services Bureau	FYSB
Family Check-Up	FCU
Fatality Analysis Reporting System	FARS
General Military Training	GMT
Girl-Specific Intervention	GSI
Good Behavior Game	GBG
Grants to Reduce Alcohol Abuse in Secondary Schools Program	GRAAP
Health Related Behaviors Survey	HRB
Healthy Base Initiative	HBI
Indian Children's Program	ICP
Institute of Medicine (now Health and Medicine Division of the National Academies)	IOM
Interagency Coordinating Committee on the Prevention of Underage Drinking	ICCPUD
International Association of Chiefs of Police	IACP
International Town and Gown Association	ITGA
Inventory of Behavioral Health Services	I-BHS
Inventory of Substance Abuse Treatment Services	I-SATS
Iowa Strengthening Families Program	ISFP
Life Skills Training	LST
Local Educational Agencies	LEAs
Marine Awareness and Prevention Integrated Training	MAPIT
Methamphetamine and Suicide Prevention Initiative	MSPI
Monitoring the Future Survey	MTF
Mothers Against Drunk Driving	MADD
National Academy of Sciences	NAS
National Alcohol Screening Day	NASD
National Association for Children of Alcoholics	NACoA
National Association of School Resource Officers	NASRO
National Center for Health Statistics	NCHS
National Center for Statistics and Analysis	NCSA
National Center on Birth Defects and Developmental Disabilities	NCBDDD
National Center on Safe Supportive Learning Environments	NCSSLE
National College Health Improvement Project	NCHIP

National Consortium on Alcohol and Neurodevelopment in Adolescence	NCANDA
National Drug and Alcohol Facts Week	NDAFW
National Epidemiologic Survey on Alcohol and Related Conditions	NESARC
National Health Interview Survey	NHIS
National Health and Nutrition Examination Survey	NHANES
National Hospital Ambulatory Medical Care Survey	NHAMCS
National Hospital Care Survey	NHCS
National Hospital Discharge Survey	NHDS
National Household Survey on Drug Abuse	NHSDA
National Liquor Law Enforcement Association	NLLEA
National Mental Health Services Survey	N-MHSS
National Organizations for Youth Safety	NOYS
National Prevention Network	NPN
National Research Council	NRC
National Survey of Substance Abuse Treatment Services	N-SSATS
National Survey on Drug Use and Health	NSDUH
National Survey on Family Growth	NSFG
National Violent Death Reporting System	NVDRS
Navy Alcohol and Drug Abuse Prevention	NADAP
Network for Employees of Traffic Safety	NETS
Offender Reentry Program	ORP
Office of Indian Alcohol and Substance Abuse	OIASA
Office of the Assistant Secretary for Planning and Evaluation	ASPE
Outreach to Children of Parents in Treatment	OCPT
Pacific Institute for Research and Evaluation	PIRE
Partnership for Drug-Free America	PDFA
Partnerships for Success	PFS
Personal Responsibility Education Programs	PREP
Pregnancy Nutrition Surveillance System	PNSS
Pregnancy Risk Assessment Monitoring System	PRAMS
PRIME for Life	PFL
PROMoting School/Community-University Partnerships to Enhance Resilience	PROSPER
Protecting You/Protecting Me	PYPM
Recording Artists, Actors and Athletes Against Drunk Driving	RADD
Robert Wood Johnson Foundation	RWJ
Runaway and Homeless Youth	RHY
Safe and Drug-Free Schools and Communities Act	SDFSCA
Safe Schools/Healthy Students	SS/HS
Screening, Brief Intervention, Referral, and Treatment	SBIRT
School Health Policies and Programs Study	SHPPS
Sexual Assault Prevention and Response	SAPR
Skills, Mastery, and Resistance Training	SMART
Sober Truth on Preventing Underage Drinking Act	STOP Act
State Adolescent Transitional Aged Youth Treatment Enhancement	

and Dissemination Grant	SYT-ED
State Adolescent Treatment Enhancement and Dissemination Grant	SAT-ED
State Highway Safety Offices	SHSOs
State Incentive Grant Program	SIG
Strategic Prevention Framework	SPF
Street Outreach Program	SOP
Strengthening Families Program	SFP
Strong African American Families Program	SAAF
Student Affairs Administrators in Higher Education	NASPA
Students Against Destructive Decisions	SADD
Substance Abuse Prevention and Treatment Block Grant	SABG
Substance Abuse Prevention Interagency Working Group	SAP IWG
Substance Abuse Prevention Skills Training	SAPST
Talk. They Hear You.	TTHY
Targeted Capacity Expansion Program	TCE
Techniques for Effective Alcohol Management	TEAM
Too Smart to Start	TSTS
Transitional Living Program	TLP
Treatment Coordination Group	TCG
Treatment Episode Data Set	TEDS
Treatment Improvement Protocols	TIPS
Underage Drinking Enforcement Training Center	UDETC
Underage Drinking Research Initiative	UDRI
Uniform Accident and Sickness Policy Provision Law	UPPL
Uniform Facility Data	UFDS
Unit Marine Awareness and Prevention Integrated Training	UMAPIT
United Indian Health Program	UIHP
Virginia Commonwealth University	VCU
We Don't Serve Teens	WDST
Web-based Injury Statistics Query and Reporting System	WISQARS™
Young Offender Reentry Program	YORP
Youth Offender Demonstration Project	YODP
Youth Opportunity Grants	YOGs
Youth Regional Treatment Centers	YRTC _s
Youth Risk Behavior Surveillance System	YRBSS
Youth Risk Behavior Survey	YRBS

Other Acronyms

Adult preparation subjects	APS
Air force base	AFB
Alcohol and drug abuse managers/supervisors	ADAMS
Alcohol use disorder	AUD
American Indian/Alaska Native	AI/AN
Blood alcohol content	BAC
Caffeinated alcoholic beverages	CABs
Concept of operations	CONOPs

Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	DSM-IV-TR
Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	DSM-V
Driving under the influence	DUI
Driving while intoxicated	DWI
Drug and alcohol program advisor	DAPA
Evidence-based practices	EBPs
Family Violence Prevention and Services Act	FVPSA
Fetal alcohol spectrum disorders	FASDs
Feedback Informed Therapy	FIT
Funding opportunity announcement	FOA
Graduated driver's licensing	GDL
Group coping power	GCP
Individual coping power	ICP
Institute of Higher Education	IHE
Interagency working group	IWG
Knowledge, attitudes, beliefs, and behaviors	KABBs
Lesbian, gay, bisexual, and transgender	LGBT
Memorandum of understanding	MOU
Minimum legal drinking age	MLDA
Personal readiness	PR
Practice and Implementation Centers	PICs
Public service announcement	PSA
Screening and brief intervention	SBI
Substance abuse counseling center	SACC
Substance abuse program	SAP
Training and technical assistance	TTA
Transitional living program	TLP
Underage drinking	UAD
Years of potential life lost	YPLL

APPENDIX D: References

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